OPERATIONAL PRIORITY KAPUT! : A VIEWPOINT

SP's

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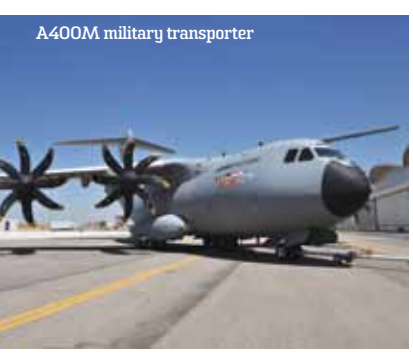

A400M military transporter

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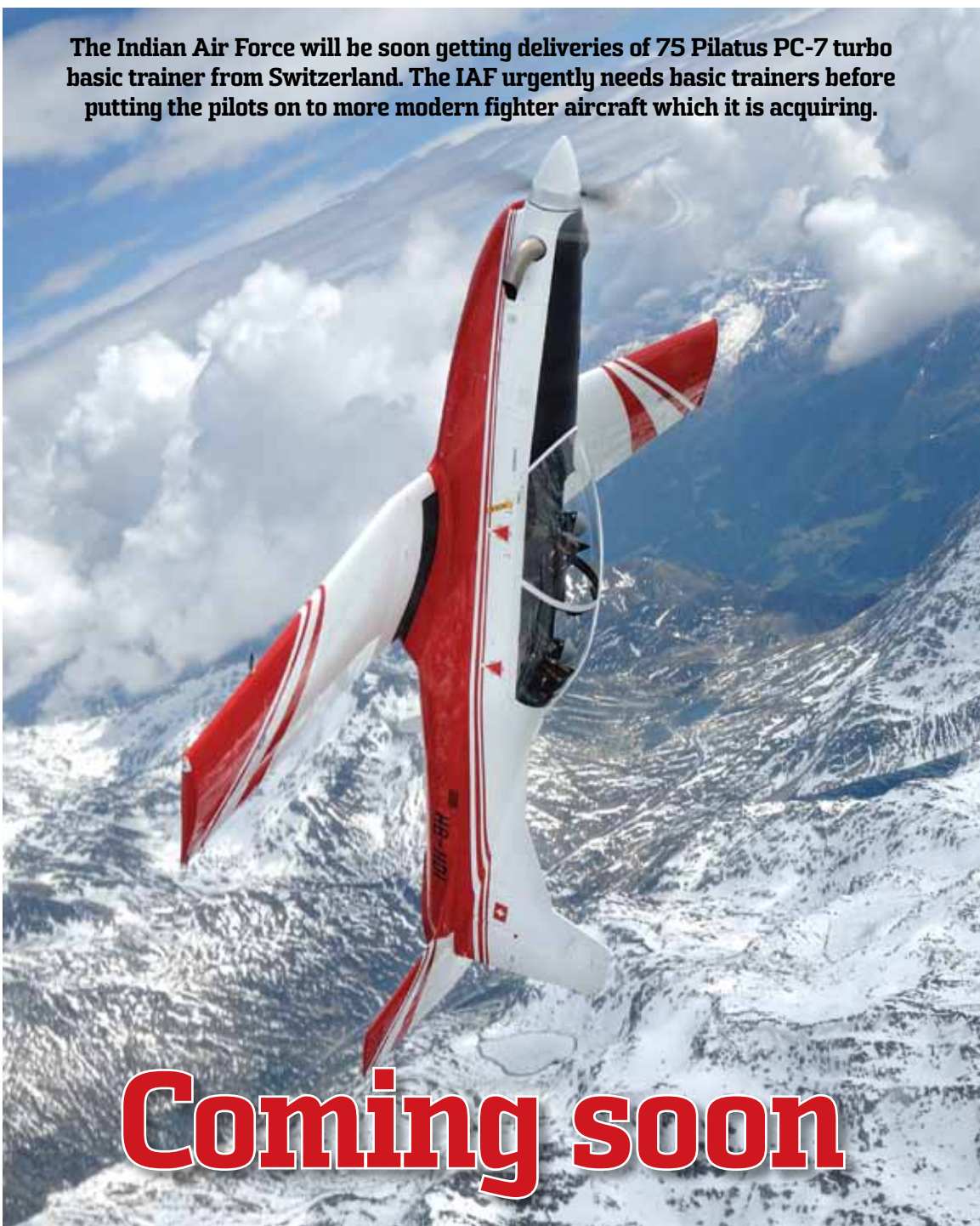
The Indian Air Force will be soon getting deliveries of 75 Pilatus PC-7 turbo basic trainer from Switzerland. The IAF urgently needs basic trainers before putting the pilots on to more modern fighter aircraft which it is acquiring.



Coming soon

Lockheed Martin's F-22 Raptor resumes test flights

Lockheed Martin's F-22 Raptor returned to the skies recently in a series of test and production flights, the first since a four-month fleet stand down was lifted on September 19, 2011, by the US Air Force.

Aircraft flown are preparing for delivery to the US Air Force. Specific delivery schedules and flight activities are being aligned in conjunction with customer specifications and testing parameters. F-22 final assembly line schedule was not impacted by the stand down and the team continues to roll out Raptors on time, with final aircraft completing in December 2011.

"It's exciting to see the F-22 Raptor back in the skies," said Jeff Babione, Vice President and General Manager

PHOTOGRAPH: USAF

of Lockheed Martin's F-22 programme. "We are dedicated to supporting our customer in return-to-flight activities. It takes a strong team to design, build, maintain and operate the Raptor. I'm proud to be part of such a team."

The F-22 Raptor entered service in 2005. As of May 2011, the US Air Force has fielded 170 of the aircraft. As America's primary air superiority weapon system, the F-22 has flown more than 300 missions in support of Operation Noble Eagle and deployed on a rotational basis to the Pacific region and Southwest Asia. F-22 overseas deployments support the Department of State's theatre security programme, formal arrangements with our foreign partners to establish defence cooperation, promote regional stability and deter potential aggression. SP

Cover:
The Indian Air Force will be soon getting deliveries of 75 Pilatus PC-7 turbo basic trainer from Switzerland. The IAF urgently needs basic trainers before putting the pilots on to more modern fighter aircraft which it is acquiring.

Cover image: Pilatus

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Pilatus, it is

The long overdue quest of the Indian Air Force (IAF) for a basic trainer aircraft is at last getting fulfilled. The IAF has finalised on Pilatus PC-7, crafted in Switzerland, from three of the down-selected contenders. Now only the nod of the Cabinet Committee on Security for the ₹2,900 crore deal is awaited. The IAF will be getting 75 basic trainer aircraft, with the first consignment of 12 aircraft to be delivered in about two years time.

The urgency for the trainers by the IAF has been understandable considering the modernisation process that it is undertaking and also due to the fact that HPT-32 Deepak, manufactured by the Hindustan Aeronautics Ltd (HAL), needed to be replaced after a series of crashes in 2009. It was then the government called for offers for trainer aircraft. Of the final three contenders – American Hawker-Beechcraft's T-6C Texan-II, Korean Aerospace's KT-1 and Pilatus, the last one emerged the cheapest. The aim of IAF is to procure 75 aircraft off the shelf and over 100 aircraft will be built by HAL under a joint venture agreement.

The IAF which will soon be getting multi medium-role combat aircraft (MMRCA) needs to have basic trainers before that. It is finding it difficult to train pilots ever since the HPT-32 trainers have been grounded and it is believed that the pilots are put on Hawk advanced jet trainers and HJT Kiran trainers, which may not be an ideal situation.

The need to modernise not just the IAF but the entire armed forces cannot be overstated, particularly with a disturbed neighbourhood, more so with China going aggressive on beefing up militarily the regions close to India. In his fortnightly column, Lt General (Retd) P.C. Katoch dwells on the growing tensions on the Sino-Indian border. Though the Indian think tank recommended that the Sino-Indian border be secured, this was largely ignored. Now with the Pentagon warning that the People's Liberation Army (PLA) was transforming itself into a modern formidable force, having upgraded missile cover in Tibet, India really needs to pull up its socks.

Meanwhile, efforts are on to secure the vast coastline of India, which runs up to 7,200 km and it truly is a gigantic task. Addressing a conference of Commanders of the Indian Coast Guard, the Defence Minister A.K. Antony pointed to the synergies that need to be built between different agencies as to remove the security vulnerabilities that exist of such a lengthy coastline.

In this issue, we have run a report on the business potential that exists in the defence optronics market. Vehicle-mounted optronic devices will be in demand in Afghanistan, Iraq and other theatres where there are disturbances. The report by Frost & Sullivan finds that the total market for land-based optronics is about $30 billion over 2010-16. India, with all its military modernisation plans, accounts for a substantial chunk of the huge pie that exists.

SP's M.A.I. has introduced a section on technology and we hope that the readers find it useful. Any feedback to help us improve is welcome. SP

SP Guide Publications' Publisher and Editor-in-Chief Mr Jayant Baranwal presents SP's Military Yearbook 2011-2012 (an annual feature since 1965) to Mr A.K. Antony, Defence Minister of India.

Jayant Baranwal
Publisher and Editor-in-Chief

LCA (Navy) has first engine ground run

The dream of India's first indigenous effort to build a carrier-borne Naval fighter aircraft got a fillip with the crossing of another significant milestone of the first engine ground run (EGR) of the LCA (Navy) prototype NP1 on September 26. The team steering LCA (Navy) project comprises, members of the Indian Navy, Indian Air Force, HAL, DRDO, CEMILAC, DGAQA, CSIR labs among other partners in the private sector.

The first EGR of NP1 aircraft was conducted with the primary objective of checking aircraft to engine integration and activation of the various systems like flight control, hydraulics, fuel, electrical, avionics, etc., which was successfully achieved.

The aircraft will now go through a phase of refinements based on feedback identified during the course of the build-up and also observed during the EGR, followed by a series of final integration checks and taxi trials before its maiden flight shortly. SP

India and UK sign defence research agreement

Under a new agreement, Indian and British scientists are to work together to develop cutting-edge technologies for defence and security. The UK MoD's Chief Scientific Adviser, Professor Sir Mark Welland, has signed a letter of arrangement in London with Dr V.K. Saraswat, Director General of India's Defence Research and Development Organisation (DRDO).

The two countries will pool their world-class science and engineering expertise to work on projects such as unmanned aerial vehicles, advanced explosives, and factors affecting human performance on the battlefield.

With a strong history of mutual cooperation, this important new agreement opens the way for collaboration between scientists from DRDO and UK's Defence Science and Technology Laboratory (Dstl). A number of projects are planned to begin in the coming months focused on the world-leading research facilities in Dstl and DRDO.

Sir Mark thanked Dr Saraswat for his efforts in working towards this milestone. He said: "I have seen the exceptional dedication, expertise and skill in the DRDO. I know that the UK can look forward to a productive and valuable co-operation with our great allies in India for many years to come."

The Minister for Defence Equipment, Support and Technology, Peter Luff, also praised the new agreement. He said: "Science and technology is one of the foundations of our bilateral relationship with India. The signing of this valuable agreement further demonstrates the strength of our long-standing alliance.

"I'm delighted that scientists from both countries will be able to share their impressive expertise in this field and have no doubt it will lead to even greater innovation in defence and security technology, benefiting both our nations."

In addition to developing new technologies for equipment, scientists will also explore better ways of defending against chemical and biological threats through protection, decontamination and medical countermeasures. SP

Saab and Wipro join hands for land-based APS

Saab and Wipro have signed a teaming agreement to jointly pursue opportunities for active protection system (APS) in the Indian market.

Wipro Ltd, a leading IT services company globally with a strong presence in niche market segments of infrastructure engineering and consumer products & lighting, has signed the agreement with Saab, a world leader in products, services and solutions ranging from military defence to civil security, to manufacture, deliver and market Saab's entire suite of the land electronic defence systems (LEDS) in India.

LEDS provides active protection to light and medium com-

PHOTOGRAPHS: DRDO, MoD UK

bat vehicles as well as to main battle tanks against engagement by weapons like the RPGs, anti-tank missiles, mortars and artillery shells. In this association, Saab brings in the unique competence and technological knowhow and Wipro supports in aligning this to the Indian requirements, creating a unique offer to the Indian market.

The announcement was made by Micael Johansson, Senior Vice President and Head of Saab's business area Electronic Defence Systems, and Pratik Kumar, President, Wipro Infrastructure Engineering.

Wipro and Saab will jointly pursue opportunities for LEDS in India with Indian defence establishments and original equipment manufacturers. Wipro will be involved in the development, adaptation and integration of the LEDS equipment and software for Indian customers. The components will be developed, manufactured and systems integrated by Wipro to address the Indian market for land-based APS systems. There is also the possibility of Saab leveraging the India advantage to market these systems manufactured by Wipro internationally as well. SP

Boeing CHAMP missile completes lst flight test

Boeing and the US Air Force Research Laboratory Counter-electronics High-power Microwave Advanced Missile Project (CHAMP) has successfully completed the missile's first flight test earlier this year at the Utah Test and Training Range at Hill Air Force Base.

CHAMP is a non-lethal alternative to kinetic weapons that neutralises electronic targets. It would allow the military to focus on these targets while minimising or eliminating collateral damage.

The CHAMP missile pointed at a set of simulated targets, confirming that the missile could be controlled and timed while using a high-power microwave (HPM) system against multiple targets and locations. The software used was identical to the software required for a vehicle with a fully integrated HPM system on board.

The three-year, $38-million joint capability technology demonstration programme includes ground and flight demonstrations that focus on technology integration risk reduction and military utility. More tests are scheduled for later this year. SP

Japanese naval ships in Port Blair

Japanese naval ship, JDS Uraga and JDS Tsushima, both mine counter measures vessels arrived in Port Blair on September 28. The Commanding Officer of the ships called on Lt General N.C. Marwah, Commander-in-Chief, Andaman & Nicobar Command (CINCAN).

The visit of JDS Uraga and JDS Tsushima provided useful insight into the functioning of Japanese Navy's marine clearance operations and will further strengthen the cooperation between armed forces of the two countries. The aim of the visit was to augment cooperation and mutual understanding between the two nations. SP

Prithvi-II ballistic missile successfully test-fired

On September 26, India successfully test-fired its nuclear capable Prithvi-II ballistic missile, with a range of 350 km, as part of user trial by the armed forces from Chandipur off Orissa coast, about 15 km from Balasore.

"The indigenously developed surface-to-surface missile was flight tested at around 8.50 a.m. from a mobile launcher from the Integrated Test Range (ITR) launch complex-III," ITR Director S.P. Dash said.

The trial, conducted as part of operational exercise, was "fully successful," he said.

The test firing of the short-range ballistic missile, which has already been inducted into

the armed forces, was a 'user trial', defence sources said.

The sleek missile is "handled by the specially raised strategic force command",. The missile has a length of nine metres and is one metre in diameter. It is propelled by two engines run on liquid fuel.

Prithvi, the first ballistic missile developed under the country's prestigious Integrated Guided Missile Development Programme (IGMDP), has the capability of carrying 500 kg of warhead.

The missile uses advanced inertial guidance system with manoeuvring trajectory. SP

Saudi Arabia, Creation UK join hands for Zephyr

Saudi Arabia's ERAF Industries has entered into an agreement with British company Creation UK to jointly develop and build the latter's family of Zephyr multirole vehicles in Saudi Arabia.

The two firms hope the arrangement will lead to contracts with the Saudi armed forces, which have a requirement for such vehicles. The joint venture will mark a leap into vehicle production for ERAF, which specialises in armoured vehicle upgrades and refurbishments.

Creation UK has been working on the development of the Zephyr for five years and submitted it for consideration in the British Army's light protected patrol vehicle programme, eventually awarded to Force Protection's Ocelot design.

A four-wheel-drive variant of the Zephyr will be delivered to ERAF by the end of this year under current plans, with a six-wheel variant to follow in 2012. SP

German Navy receives new RBS15 Mk3 missile

The official roll-out of the RBS15 Mk3 heavy anti-ship missile for the German Navy took place at a ceremony of the Federal Office of Defence Technology and Procurement. High-ranking representatives of the Federal Ministry of Defence, the Federal Office of Technology and Procurement, the German Navy as well as the industrial partners Diehl Defence and Saab Dynamics participated in the event at the naval base Kiel recently.

Diehl delivers the RBS15 Mk3 anti-ship missile as the main weapon system of the German Navy´s new K130 corvette. A special feature of this German-Swedish missile is its additional capability enabling precise engagement of land targets. The launch customers include the German Navy as well as Poland which is equipping its ORKAN class speedboats with RBS15 Mk3 missiles. The delivery of the first missiles began in March 2011.

The long-range, all-weather capable "Fire-and-Forget" missile tracks its target directly above the water surface over distances of more than 200 km. By means of programmed way points, the missile´s trajectory and flight altitude can be altered several times. RBS15 Mk3 is extremely resistant to countermeasures, providing high penetration capability against air defences with guided and tube weapons. The RBS15 Mk3 version is an upgrade of Saab's RBS15 Mk2 proven in the Swedish Navy and additional naval forces. SP

PHOTOGRAPHS: PIB, Creation UK, Saab Group

Land-based optronics market valued at $30 billion

Companies in the defence optronics market are set to witness growth in the future due to an increase in the number of land vehicle procurement programmes. The programmes are triggered, in turn, by the existing North Atlantic Treaty Organisation (NATO)-led operations in Afghanistan. Vehicle-mounted optronics devices will be acquired in the thousands, depending on the specific needs of local governments.

New analysis from Frost & Sullivan finds that the total market for land-based optronics will be valued at around $30.77 billion over 2010-16. This includes all soldier-mounted and vehicle-based optronics infrastructure. The research service covers Australia, France, Germany, the United Kingdom and the United States, and includes an examination of major modernisation programmes in India and parts of Europe.

"The land-based optronics market is perceived as being only marginally affected by reductions in defence spending," notes Frost & Sullivan Programme Manager Balaji Srimoolanathan. "Although soldier hand-held and man-portable optronics devices will be procured in large numbers, the majority of revenues will be generated by vehicle-mounted/integrated optronics solutions."

Reconnaissance, surveillance and target acquisition (RSTA) have become a critical part of armed forces' capability to ward off any potential threat from a variety of sources. Land-based optronics solutions will enjoy precedence over air- and navy-based optronics solutions in the near future due to the existing operations in Afghanistan.

"However, there will be high demand for navigation and surveillance equipment for reconnaissance and armed personnel vehicles from the emerging economies like India, Brazil, Russia, South Korea and others who are involved in huge fleet modernisation processes," remarks Srimoolanathan.

Power needs of hand-held and man-portable optronics equipment are expected to increase tenfold in the next five years. Overcoming the power problem, therefore, will emerge as a key challenge for suppliers in this market.

A number of countries in Europe use image intensification binoculars/monoculars for surveillance. Investments in thermal imaging technology have not been significant. In the next 5-8 years, parts of Europe, Asia and the Middle East are projected to witness a shift in trend, as these countries will try to reduce the capability gap existent with their land-based C4ISTAR.

"There is a huge disconnect between the market and policy makers in emerging economies, particularly in India, countries in the Middle East and a few in eastern Europe," cautions Srimoolanathan. "Understanding or foreseeing the need or demand of a particular nation becomes a formidable challenge for suppliers when they venture into these emerging markets. Strategic joint ventures/partnerships between two companies that complement each other in terms of products and services offered will be critical." SP

By Our Special Correspondent

Legacy military equipment becoming irrelevant

Legacy military equipments in most European armies are becoming irrelevant for present-day operations, as they demand special capabilities for operating in urban environments and asymmetric warfare. While there is an immediate need to acquire new equipment, affordability remains a concern with most European countries reeling under economic turmoil.

New analysis from Frost & Sullivan projects revenues at $4.52 billion in 2010 and it is expected to reduce to $2.01 billion in 2018. The reduction in revenues is mainly due to cuts in spending; however lack of visibility on future programmes that might arise after 2015 is also to be considered. The following market sectors are covered in the research: military land vehicles and unmanned ground vehicles.

"At present, urgent operational requirement (UOR) procurements represent an important market driver," remarks Frost & Sullivan Senior Research Analyst Mahendran Arjunraja. "Once the Afghan operations come to a halt, the market is anticipated to migrate from UOR towards planned modernisation programmes, which have been pending for some time."

Although European countries are curtailing their defence budgets due to the current economic turmoil, significant opportunities continue to exist in the military land vehicles market. The lessons learnt from recent conflicts will motivate armies to opt for advanced and more efficient equipment. Therefore, governments have been changing their focus from quantity to quality. Countries like France, Germany, the United Kingdom and Turkey would be the major markets during the forecast period.

"The noticeable trend in the European land combat vehicles market is the reduction of vehicle procurement numbers," notes Arjunraja. "In the future, defence suppliers will be unable to enjoy economies of scale unless they innovate. Focusing on other global emerging markets might be also a solution to keep the market share."

End-users have been emphasising the importance of low-cost, yet high-quality, equipment. Striking a balance between both and offering suitable solutions present a challenge for suppliers.

"Defence companies must ensure they develop cost-effective offering since absolute cost of equipment will be a key decision making factor," advises Arjunraja. "Companies which had been benefiting from UOR procurements should start focusing on opportunities in planned defence procurement programmes." SP

PHOTOGRAPH: USAF

LT GENERAL (RETD)
P.C. KATOCH

Operational priority kaput!

In the 1990s, Rand Corporation assessed that 2010 onwards China will begin military assertiveness. Indian think tanks recommended we sort out the Sino-Indian border before that and adopt an adequate deterrent posture but this was largely ignored. Raising two additional divisions and placing a couple of Sukhois in the Northeast hardly matters considering overall divisional voids in the Eastern Theatre are much more going by the norm of three Divisions per Corps. On August 25, 2011, three news items appeared: Pentagon warning PLA will transform into a modern formidable force by 2020, having already upgraded missile cover in Tibet with plans to position airborne forces in TAR, MoD (Finance) turning down Army's proposal to raise a Mountain Strike Corps costing ₹12,000 crore and Claude Arpi's article sighting PLA soldiers working in Northern Nepal hiding their faces when someone tried to photograph them. Media has already been mirroring hierarchical appreciation of a collusive China-Pak threat. Where then will the conflict occur if not in the mountains to begin with. But historically we only wake up after criticalities; raised 33 Corps post-haste after 1962 and 14 Corps courtesy the Kargil conflict. Hope we are not forced to raise the Mountain Strike Corps after Arunachal Pradesh is swarmed by Chinese.

Infrastructure development across the LAC should be of grave concern to India, provided the national hierarchy studies and analyses its vital implications; roads and tracks developed right up to the very border along each important valley and spur leading to every forward post and intended thrust line - synonymous to creeping up your very spine. Mobilisation and move of reserves is greatly telescoped. Conversely, communication infrastructure on our side is actually deteriorating including due incessant rainfall. Strategically important plateaus are easily accessible by the Chinese, but will take excruciatingly long from our side. Movement of mechanised forces is well nigh impossible unless focused efforts are made to improve infrastructure. Alternative, easier road alignments are available but are being stonewalled by concerned States on mundane grounds like tree cutting. The national hierarchy is making no move to dictate operational priorities. Chinese have been changing their claims to our territory periodically; starting with a 1959 Claim Line, another in the 1960s, yet another in 1975 and then in 1993. They merrily transgress borders, break bunkers on our side and we shrug it off saying it is as per "their perceptions". Why could they not be told in the first place that any discussion on the boundary issue is only possible as per their first claim line of 1959? Alternatively, why do we not lay claim to territories captured by Maharaja Ranjit Singh, Chandragupt Maurya, Ashoka and include Yatung where our military was stationed some decades back? James Lamont and Amy Kazmin quote K. Shankar Bajpai, Chairman of India's National Security Advisory Board and former Ambassador to US in the *Financial Times* of September 9, 2011, saying, "The instruments of State action have become dysfunctional. India's strategic interests extend between the Suez to Shanghai…but we have neither the manpower nor the strategic thinking to handle these challenges". Why do we acquiesce to our adversaries even when China's state TV shows Jammu & Kashmir not part of India? Is it so difficult to identify and exploit the Achilles heel and fault lines of our adversaries? Will our operational priorities remain kaput? SP

Infrastructure development across LAC should be of grave concern to India, provided the national hierarchy studies and analyses its vital implications

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

PHOTOGRAPH: Pilatus

Pilatus soon for IAF

Switzerland's Pilatus Aircraft is set to enter into the biggest contract yet for supplying 75 basic trainer aircraft at a cost of about ₹2,900 crore to the Indian Air Force. The Swiss company hopes to sign the contract soon, with the first consignment of 12 aircraft to be delivered in 24 months.

Following the government's decision to ground HP-32 Deepak, manufactured by the Hindustan Aeronautics Ltd, the Indian Air Force is understood to have pressed for an immediate replacement.

India had called for offers for trainer aircraft in 2009. The company supplied over 500 trainer aircraft largely to countries in the Middle East.

The ₹2,900 crore deal for acquiring 75 Swiss Pilatus PC-7 turbo basic trainers is in the final stages now, with the "note" prepared for the Cabinet Committee on Security being "vetted" by the Finance Ministry at present.

Though the Pilatus trainer had emerged the cheapest among other contenders like American Hawker-Beechcraft's T-6C Texan-II and Korean Aerospace's KT-1 after flight trials, it was dogged by some allegations of irregularities in the procurement process. But MoD has dismissed them, holding the negotiations were completed with the Swiss company based on "its absolutely valid commercial offer". SP

Performance of PC-7 MkII in the aerobatic configuration		
Take-off distance over 50 ft (15 m) obstacle at sea level	1,360 ft	(415 m)
Landing distance over 50 ft (15 m) obstacle at sea level	2,180 ft	(665 m)
Max. rate of climb, sea level	2,910 ft/min	(14.79 m/sec)
Max. operating speed (V_{mo})	300 KEAS	(556 km/h)
Max. level cruise speed (V_H) at sea level	245 KTAS	(454 km/h)
Max. range	810 NM	(1,500 km)
Weights		
Basic empty weight (depending on configuration)	3,771 lb	(1,710 kg)
Max. take-off weight, aerobatic	4,960 lb	(2,250 kg)
Max. take-off weight, utility	6,283 lb	(2,850 kg)

Source: www.pilatus-aircraft.com

Qatar gets four C-130J Super Hercules airlifters

Lockheed Martin officials formally delivered four C-130J Super Hercules airlifters to the Qatar on September 28. The Qatar Emiri Air Force's new Super Hercules are the longer fuselage or "stretched" variant of the C-130J. The aircraft will be used for humanitarian relief and military missions for the defence of Qatar. The new airlift fleet will ferry to Qatar in October.

"It is a historic day for both the Qatar Armed Forces and Lockheed Martin as we welcome Qatar into the global C-130 family," said Lorraine Martin, Lockheed Martin Vice President for C-130 programmes. "This acquisition of a fleet of C-130Js provides Qatar with a highly flexible airlift capability. As the first C-130J operator in the Middle East, Qatar takes a unique place in C-130 history."

This is Qatar's first experience with C-130s and Lockheed Martin is providing a complete solution package. "The package includes the four aircraft; aircrew and maintenance training; spares; ground support and test equipment; and a team of technical specialists who will be based in Qatar during an initial support period. SP

Boeing P-8I aircraft completes first flight

Boeing's first P-8I aircraft for the Indian Navy completed its initial flight on September 28, taking off from Renton Field at 12:02 p.m. Pacific time and landing two hours and 31 minutes later at Boeing Field in Seattle.

During the flight, Boeing test pilots performed airborne systems checks including engine accelerations and decelerations and autopilot flight modes, and took the P-8I to a maximum altitude of 41,000 feet prior to landing. In the coming weeks Boeing will begin mission systems installation and checkout work on the aircraft at a company facility near Boeing Field.

"The P-8I programme is progressing well and we are looking forward to this potent platform joining the Indian Navy as part of its fleet," said Rear Admiral D.M. Sudan, assistant chief of Naval Staff (Air), Indian Navy.

"The P-8I will provide India with the necessary speed and reliability to satisfy the Indian Navy's maritime reconnaissance and anti-submarine warfare requirements," said Dinesh Keskar, Boeing India president.

Based on the Boeing Next-Generation 737 commercial airplane, the P-8I is the Indian Navy variant of the P-8A Poseidon that Boeing is developing for the US Navy. In order to efficiently design and build P-8 aircraft, the Boeing-led team is using a first-in-industry, in-line production process that draws on the company's Next-Generation 737 production system.

The P-8I is the first of eight long-range maritime reconnaissance and anti-submarine warfare aircraft Boeing is building for India as part of a contract awarded in January 2009. An option for four additional P-8I aircraft was included in the original contract. SP

PHOTOGRAPHS: Boeing, Airbus Military

A400M passes key certification tests

The Airbus Military A400M new generation airlifter has passed a series of key tests recently as the aircraft continues to progress towards civil and military type certification.

On September 17, the aircraft (Grizzly 1) successfully performed the high-energy rejected take-off test which confirms the capability of the braking system to stop the aircraft safely following a rejected take-off at high speed and high weight. During the week the emergency evacuation tests were also carried out to demonstrate that the aircraft can be safely evacuated in a specified time when loaded with troops or other passengers in various configurations.

The high-energy rejected take-off test is one of the toughest in the programme and, because of the risk of damage to the aircraft, is among the last items performed before preparation of the aircraft flight manual. It was carried out on runway 14R at Toulouse airport and required the aircraft, loaded to the maximum take-off weight, to make a simulated take-off run which was aborted at the V1 decision speed. V1 is the maximum speed at which the pilot has to decide whether to continue a take-off or abort it.

As specified by the testing authorities the aircraft was then taxied clear of the runway and stopped for five minutes before firefighters were allowed to cool the brakes and wheels. As is typical in this test, three of the aircraft´s tyres deflated. There was no further damage and the test was highly successful.

The emergency evacuation tests were performed over several days at the A400M final assembly line in Seville using the fifth development aircraft which is mostly complete and due to fly before the end of the year. All the tests required for certification were passed. They were performed with, respectively, paratroopers, conventional troops, in a medical evacuation configuration, and in a mixed configuration of troops and cargo. SP

Lockheed Martin, Selex & Cobham down-selected for Marshall bid

Fusion Air Traffic Management, comprised of Lockheed Martin, Finmeccanica Company Selex Systems Integration and Cobham, has been down-selected for the next stage in the Project Marshall programme to provide military air traffic services for the UK Ministry of Defence (MoD). The decision reflects the strong pedigree, commitment and capability of the team and we now look forward to entering into competitive dialogue with the customer.

Project Marshall is the key air traffic management programme for MOD as it will provide the capability to support UK military flying and air deployed operations for the long term. These Air Traffic Services will provide air traffic control and air traffic management for all of the MoD's aerodromes and air weapon ranges both in the UK and overseas including those used for current deployed operations.

It will also ensure that obsolescence is removed from the current system and that the MoD complies with the legal requirements of managing an air traffic service and enable the safe operation of its aerial platforms. Project Marshall will be a "managed service" which will deliver savings over the lifetime of the programme through improved efficiencies, scale and innovation. Marshall will enable the MoD to continue to conduct flying operations, contributing to the protection of UK sovereign airspace including support to counter terrorism. SP

Afghan Air Force receives first fixed-wing trainers

The first three aircraft slated as initial trainers for the Afghan Air Force undergraduate pilot training programme arrived September 18, marking a milestone for the Afghan Flight School.

Three Cessna 182 Turbos are the first of six to be used as initial flight-training aircraft, with six additional Cessna 208B Caravans scheduled to arrive later as fixed-wing, follow-on trainers.

In addition there will be six MD 530 helicopters delivered later this year, officials said. These aircraft, along with six Mi-17 helicopters, will be used for advanced follow-on training. The initial training programme instructor cadre is staffed by air force, coalition and Afghan instructors.

"Six years ago, we had nothing, and today, we are receiving our first three training aircraft," said Major General Abdul Wahab Wardak, the Afghan Air Force commander. "I once looked out to see our air force scattered across Afghanistan; today, we have brought our air force back together here at Shindand (Air Base) — the only air force training base in Afghanistan."

Shindand AB will not only be the centre for pilot training but will eventually serve as the training centre for much of the AAF, officials said. Included in the training centre will be maintenance, language and professional military education, as well as training and support functions for nearly 1,400 Shindand Air Wing airmen. SP

PHOTOGRAPHS: af.mil, Alenia Aeronautica

C-27J's operational debut in Mexican skies

Mexico City recently hosted the traditional parade for the celebration of the Mexican Independence's anniversary in the presence of the country's top ranking personalities.

The C-27J, with the Mexican colours, was the guest of honour, and together with Alenia Aeronautica's C-27J 4033, has performed in a series of flights in formation with the whole fleet of the Mexican Air Force.

Last July 6, Alenia Aeronautica had announced the selection of its C-27J by Mexico: four aircraft ordered for a value of about $200 million.

"We are very pleased with the Mexican choice," Giuseppe Giordo, CEO of Alenia Aeronautica, had commented. "Thanks to this order, considering it is the first in Latin America and premise of further orders by other countries of the same area, the number of airplanes ordered to date goes up to 83, confirming the C-27J as best seller among the aircraft of its category".

The Mexican Air Force greatly enlarges, through the C-27J, its operational capability thanks to the load capability and to the suitability of the aircraft to carry out many mission types such as transport of troops, goods and medicines, logistical re-supply, Medevac (medical evacuation), air-drop operations, paratroopers' launches, search and rescue (SAR), firefighting, humanitarian assistance, release of liquids dispersing hydrocarbons in the sea in the event of accidents on oil platforms, and missions in support of homeland security. SP

Knowing in advance. Responding immediately.

Russian-made special technical assets guarantee total control of the land and maritime borders in the whole panoply of climatic and geographic environments. Their integration into single automated systems enhances the capabilities of the border guards many times over. Russia's wealth of experience in guarding huge territories is available to foreign customers now. Offered integrated approach implies both delivery of all relevant hardware and assistance in outfitting individual sections of the border, Border Guard posts, border crossings and in training top-notch personnel.

More drones to be deployed in Somalia and Yemen

Despite the deployment of unmanned aerial vehicles (UAVs) to check terrorism and piracy, emanating from Somalia and Yemen, terror activities go on unabatedly.

Concerned with this growing threat, the US has said it would expand the ring of bases for armed drones around the Indian Ocean, east Africa and the Arabian Peninsula.

According to a report in the *Washington Post*, new facilities for the MQ-9 Reaper UAVs are planned for Ethiopia and expanded bases in Seychelles and Djibouti. The report said that these drones, which have a maximum range of over 5,760 km, can be deployed in these two countries from Seychelles. They are the same drones which are used by the Royal Air Force in Afghanistan.

The US military has said that its drones already stationed in the Seychelles were there purely to run airborne reconnaissance missions to assist the international effort to beat Somali pirates. The Seychelles Government said it was fully supportive of the US expansion, despite fears it would make the island archipelago an increased target for Islamist radicals.

Meanwhile, *Sunatimes* from Mogadishu reported that Al-Shabaab militia in the Port city of Kismayo was displaying at Freedom Park a US spy drone that crashed in the city after it was allegedly hit by the militia.

The militia who made the announcement using loudspeakers mounted on a militia car ordered the locals to avail themselves at the park to witness the drone they claimed they shot down.

Abdirahman Sheikh Mudey, one of the Al-Shabaab leaders in the city claimed they shot down the drone while itf was taking photographs of parts of the city. SP

Saab avionics for Cassidian's Talarion UAV

Defence and security company Saab has signed a frame agreement and received a first order from the EADS company Cassidian to supply safety-critical avionics equipment for the new advanced UAV system Talarion.

The order includes design and development of the aircraft vehicle management computer (AVMC), communications computer (CC) and mission & payload management computer (MPMC) for Talarion.

The work will be carried out by the avionics division of Saab's business area Electronic Defence Systems, in Jönköping and Järfälla, Sweden, and deliveries of the first order will take place 2012-14.

"The selection of Saab to provide mission and flight critical avionics equipment for this new advanced platform verifies our position as a competitive supplier in the avionics market," said Micael Johansson, Senior Vice President and Head of Saab's business area Electronic Defence Systems.

PHOTOGRAPHS: af.mil, Wikipedia

Talarion is a European development programme to fulfill functional and operational capability for in-theatre ISTAR (intelligence, surveillance, target acquisition, and reconnaissance). Due to its specific design, Talarion is able to operate over its broad flight envelope spectrum thereby establishing persistent surveillance, precise adversary identification, localisation and real-time intelligence. SP

Successful flight of Argus One UAV

World Surveillance Group, a developer of lighter-than-air unmanned aerial vehicles (UAVs) and related technologies, has announced completion of additional tethered flight testing of its Argus One airship in Easton, Maryland.

The Argus One carried out aerodynamic exercises to test the newly improved and reinforced airship envelope as well as improvements to mechanical systems located in the airship's pod bay unit.

It is currently working with the test directors at the US Army's proving ground facility at Yuma, Arizona to reschedule the Argus One's flight test exercises and expects to return to Yuma in the near future. These rescheduled flight test exercises at Yuma are expected to include aerodynamic testing to demonstrate the Argus One's unique flight capabilities as well as payload integration testing to demonstrate the airship's platform capabilities.

In the interim, it intends to continue tethered flight testing of the Argus One in Easton. SP

Predator does 7,000 hours in Afghanistan

The Predator unmanned aircraft of task group 'Astore,' part of the Joint Air Task Force in Herat, Afghanistan, has reached the 7,000 flying hour mark, the result of 800 missions completed since 2007 that have decisively helped the country's transition process.

The Italian Air Force Predators, thanks to their characteristics that combine low visibility and long endurance over their target, are used increasingly for intelligence, surveillance and reconnaissance (ISR) missions.

In particular, their use has allowed the verification and control of development and security in Afghan territory and the cooperation with the International Security Assistance Force troops on ground operations. 'Astore' is part of the Joint Air Task Force based in Herat and commanded by Colonel Gianluca Ercolani.

The Predator is an unmanned airplane that can fly at altitudes of up to 8,000 metres for over 20 consecutive hours. It has onboard sensors that, remotely operated by personnel in the ground station, allow taping of electro-optical and infrared video footage of the area, which are then transmitted in real time to an operator for interpretation. SP

Northrop to 'weaponise' Fire Scout UAV

Northrop Grumman Systems is being awarded a $17 million cost-plus-fixed-fee contract for the rapid deployment capability weaponisation programme in support of the vertical takeoff and landing tactical unmanned aerial vehicle MQ-8B Fire Scout system.

This contract includes the installation, engineering, manufacturing and data development of the weapons systems, which include 12 stores management systems. SP

Z-5 debuts at Aviation China Expo

Codenamed Z-5, the advanced unmanned helicopter from China made its debut at Aviation Expo China, which was held from September 21 to 24. It was for the first time that the helicopter has been seen by the public at large.

The unmanned Z-5 helicopter, developed by the 60th Research Institute of PLA Headquarters of the Central Staff, is a military aircraft.

The unmanned helicopter integrates multiple advanced technologies, such as a measurement and control system, navigation technology, sensors, automatic control system as well as image transmission. It can be fixed in a particular point in the sky to do topographic and environmental investigations of a certain area or send out interference to enemy devices. This helicopter not only can be used in military investigations but also will play an important role in civilian fields like earthquake relief and land monitoring. SP

PHOTOGRAPHS: Northrop Grumman, USAF

Network of radars to secure coastline: Antony

The Minister for Defence A.K. Antony has said that all efforts are being made to secure the country's vast coastline with a network of radars. Addressing the 30th Annual Coast Guard Commanders' Conference in New Delhi recently, the Minister said that the project has been taken up on priority.

"An important project to tighten our coastal security is the establishment of 46 chains of static sensors atop the lighthouses along our coastline. Once the coastal security network system is in place, it will surely boost our real time maritime domain awareness", Antony said. "To begin with, 36 such radars will be installed in the mainland in the first phase that would be completed by 2012."

Pointing out that though the Coast Guard might be the youngest of the forces under the Defence Ministry, he said that it is the fastest growing force. "On the infrastructure front, the establishment of district headquarters at Kavaratti and commissioning of three stations at Minicoy, Ratnagiri and Mundra has taken place since last year. The total number of Coast Guard stations now stands at 31. There are plans to establish regional headquarters (Northeast), along with a station at Kolkata. Three more stations at Dahanu, Androth and Krishnapatnam are planned to be established soon. On the aviation front, there is a need to establish more air stations and air enclaves on a priority basis. About 156 boats are being built at various shipyards, both public and private, while the Coast Guard will get 12 more Donier aircrafts soon."

The Defence Minister also assured that the manpower needs of the Coast Guard were also being simultaneously raised. "Since 2009, our government has sanctioned more than 4,300 posts to further strengthen the Coast Guard. There has been a 27 per cent increase in the recruitment of personnel in the last three years. The Coast Guard too has taken steps to increase the intake of officers and personnel. It has also taken several other steps, such as increasing the number of selection centres, short service appointment of CPL holders and women officers, and fast track selection for officers and Yantrikis."

The Defence Minister called upon the Coast Guard Commander to achieve synergy with other stakeholders in tackling piracy. "The increasing incidences of piracy off Lakshadweep & Minicoy Islands call for a heightened security consciousness. The Coast Guard in coordination with the Navy has aptly responded to such situations. However, there is a need to build upon and further strengthen the synergy between Navy, Coast Guard and all other organisations in charge of coastal security", Antony said. "The Cabinet Committee on Security will soon take a decision on finalising a new policy on fighting piracy."

The Defence Minister also underlined the need for an effective mechanism to check environmental pollution in the seas. "The proactive efforts and response of the Coast Guard in containing oil pollution and assistance in removal of the stranded ships from the shores have been appreciated. There is a need to put in place an effective mechanism to ensure maximum environmental protection by all the concerned ministries, in coordination with the Coast Guard."

The Conference was attended by the Defence Secretary Shashikant Sharma; Special Secretary R.K. Mathur and the Director General Indian Coast Guard Vice Admiral Anil Chopra. SP

PHOTOGRAPH: PIB

DRS Technologies develops imaging camera for surveillance

DRS Technologies, announced that its Reconnaissance, Surveillance and Target Acquisition (DRS RSTA) Group has developed a compact, low power, digital thermal imaging camera, specifically developed for commercial applications.

The WatchMaster IP Elite is the newest addition to the WatchMaster™ IP family of thermal imaging cameras manufactured by the commercial infrared systems line of business of DRS RSTA, based in Dallas, Texas and Melbourne, Florida.

"Historically this thermal imaging technology has been cost prohibitive for many commercial applications and predominantly used in defence solutions," said Terry Murphy, President of DRS RSTA.

"Our recent expansion into high-volume, low cost manufacturing enables thermal imaging solutions to be adopted into traditional commercial security and surveillance applications. We are delighted to offer this latest evolution in digital thermal imaging for the protection of commercial establishments, institutions and other critical infrastructures."

Unlike many conventional video surveillance cameras like active DVT, CCTV or LED illuminated low light cameras, the WatchMaster IP Elite does not require any ambient light or illumination. It detects infrared (heat) waves to provide users with superior thermal images in challenging environments where obstacles are difficult to detect due to lighting constraints, such as complete darkness and over water.

The WatchMasterTM IP Elite meets FCC and UL certifica-

tions and is available with a 320 x 240 resolution. With a choice of three fully sealed and hard carbon-coated athermalised fixed lenses, the thermal imaging camera offers a horizontal field of view of 40°, 16° or 9° and is capable of 4X digital zoom with a detection range of up to one kilometre.

It is open network video interface forum (ONVIF) conformant to allow for networking into other commercial security and surveillance systems, and incorporates embedded memory to support storage and video analytics. The camera is ideal for outdoor use as it incorporates tamper resistance features and it is rated at IP66 —indicating protection against the ingress of dust and water.

It is also designed to mechanically interface with mounting hardware from multiple security vendors and can operate in a networked environment through a central office, a remote video management system or a DRS-provided web interface utility. SP

Disaster management measures

A review meeting was organised recently on 'Flood Early Warning System and Mitigation Measures' in Eastern Uttar Pradesh, chaired by M. Shashidhar Reddy, Vice Chairman, National Disaster Management Authority.

Reddy assured that the NDMA would provide full support to the states and the early warning agencies in meeting their demand in this critical area.

Flood prediction models of the Andhra Pradesh and the Mahanadi basin were also presented during the meeting. Both these systems have proved their usefulness in prediction of flood hazard and the same type of systems could be implemented in Eastern Uttar Pradesh and other States vulnerable to flood hazard. It was also discussed that there should be a better interface between the users and early warning agencies at the state level to design user-friendly warning system.

The meeting was attended by officials from Uttar Pradesh Regional Space Centre, Ministry of Science & Technology, Uttar Pradesh Irrigation Department, Andhra Pradesh State Remote Sensing Applications Centre, Central Water Commission and India Meteorological Department. SP

Rolls-Royce to supply water jets for Indian Coast Guard

Rolls-Royce, the global power systems company, has won a contract from Cochin Shipyard to supply 60 water jets for a new fleet of 20 fast patrol vessels (FPVs) for the Indian Coast Guard.

The contract will involve the supply of Rolls-Royce Kamewa 71S3np water jets (three per vessel), and associated equipment including a joystick control system which will enhance the manoeuvring capabilities of the vessels.

The 50-metre-long vessels, which are currently under construction, will reach speeds of 33 knots and will operate in Indian coastal waters and around island territories.

Their roles will include coastal patrolling, anti-smuggling missions, fisheries protection, as well as search and rescue duties. Water jets enable operation in shallow waters and offer higher speeds and better manoeuvrability than conventional propellers. SP

India, Bangladesh commence border discussions

For a week in Dhaka, officials of India and Bangladesh are discussing cross-border terror and effective patrolling of frontiers. A 21-member delegation led by Border Security Force (BSF) Director General Raman Srivastava is in Dhaka and the outcome of the meeting will be known on September 30.

The Indian delegation is meeting the Border Guard Bangladesh (BGB) officials led by chief Major General Anwar Hussain and discuss issues like presence of Indian insurgent groups in that country and their deportation. The officials will also take stock of their recent joint decision to deploy non-lethal weapons and granting of free access to Bangladeshi nationals in the 'teen-bigha' corridor along the Indo-Bangla border. BSF and BGB man the 4,096-km-long India-Bangladesh border. SP

Railway security review in J&K

The DIG Railways (Security) Jammu & Kashmir, A.K. Atri recently reviewed security along the Srinagar-Baramulla section. Atri traveled by train to Baramulla and paid a visit to GRP Police Station.

En route, the DIG interacted with SHO GRP Police Station Hamray, in charges of GRP Police Post Sopore and Police Post Pattan and stressed upon all the officers to ensure security of passengers, trains, stations and track.

He reviewed security arrangements of railway tracks at these locations, a release said adding that the in charge SDPO GRP Baramulla informed DIG Railways about security measures put in place. The DIG was accompanied by SP GRP Kashmir, Bakir Samoon and in charge SDPO Railway Baramulla, Farhat Jeelani. SP

PHOTOGRAPH: Wikipedia

Strong growth for embedded biometric security solutions

A new study says that the conditions are now right to create a strong market for mobile phone embedded biometric security solutions; the current global user base of four million users in 2011 is set to grow to 39 million users by 2015.

London-based Goode Intelligence, information security research and analysis specialist, has published a report "Mobile Phone Biometric Security Analysis and Forecasts 2011-15," investigating the market for mobile phone biometric security products and services.

Biometric technology in mobile phones has existed for over 10 years but has struggled to establish itself and gain significant adoption rates. The conditions are now right to create a strong market and Goode Intelligence forecasts that the current global base of four million users in 2011 is set to grow to 39 million by 2015.

Goode Intelligence predicts that initial growth will come from two technology groups: Embedded mobile biometrics (EMB), including fingerprint sensors embedded by device manufacturers; and third-factor authentication — mobile biometrics used in combination with multi-modal authentication solutions, in particular voice-based biometrics.

"There are an estimated 13 million mobile devices around the world that are already benefiting from embedded mobile biometrics in the form of fingerprint sensors," said Alan Goode, author of the report and founder of Goode Intelligence. "A significant number of these are being used in South-East Asia, particularly in Japan where consumers are benefiting from fingerprint-based biometric security to protect NFC payments at the physical point of sale (POS)."

The key drivers behind market growth and the adoption of mobile phone biometric security include:

- **Device security protection**: Protecting the device against unauthorised access is the biggest driver for mobile phone biometric security. This includes protection both of apps and the data that resides on the device
- **Mobile commerce**: The growth of mCommerce and the need to effectively secure the ecosystem on the mobile
- **NFC (near field communication):** The contactless technology that is reaching tipping point could well be a major driver
- **Convenient alternative to PINs and password:** Swiping a finger on a phone or providing a verbal 'voiceprint' can be an easier and far more convenient way to provide authentication than conventional technologies
- **As part of a multi-factor authentication solution**: With the recent attack on RSA, leading to vulnerabilities being exposed in its SecureID token technology, there is a pressing need for strong and agile authentication solutions – mobile phone-based biometric security can be a viable part of this solution
- **Military and law enforcement**: A cost-effective method for capturing biometric data and verifying identity in the field SP

US and Australia cyber defence pact

The United States and Australia announced a mutual defence treaty that declared a cyber attack on one would result in retaliation by both nations; this new agreement appears to be the first instance of a mutual defence treaty in the cyber realm.

The latest announcement comes as an addition to the Australia, New Zealand, United States Security Treaty (ANZUS), which commits the three nations to support one another if one is attacked. The treaty, signed 60 years ago, now includes cyber attacks as well as physical attacks. Beginning in 1985, New Zealand has not been an active partner of ANZUS.

Secretary of Defense Leon Panetta said the treaty highlights how the United States perceives cyber threats. "We're all going to have to work very hard not only to defend against cyber attacks but to be aggressive with regards to cyber attacks as well. And the best way to accomplish that is not only on our own but by working with our partners." SP

Enhanced secure network to protect government data

BSNL and MTNL have plans of further securing networks of government departments. According to a report in the *Economic Times*, the two public sector companies will operate and maintain a secure network being built to ensure confidentiality of about 5,000 government departments across the country.

The newspaper said that the project would be funded by the Centre and the telcos will run the network on a non-commercial basis. SP

Revolutionary aircraft

heralds rebirth of Africa's aerospace industry

Africa's aerospace industry has entered a new era with the launch of a ground-breaking multi-role aviation platform. This marks the first time in Africa's history that the continent has independently designed and manufactured its own aircraft. The market potential of the aircraft could add up to half a billion dollars to the industrial output of the South African economy.

This comes at a time of growing threats from terrorism, piracy, cross border incursions, climate change, natural disasters and drug trafficking that has fuelled the worldwide need for a low-cost aerial reconnaissance, surveillance and armed patrol system capable of supporting a wide range of operations.

The new category of aircraft will challenge the dominant Western manufacturers because of its low acquisition cost, reduced requirement for back-end support, extensive operational capabilities and greater degree of pilot situational awareness.

The project to develop an advanced high performance reconnaissance light aircraft (AHRLAC) is the initiative of South African defence and aerospace giant Paramount Group together with technical partner Aerosud, South Africa's largest aeronautical engineering company.

Ivor Ichikowitz, Executive Chairman of the Paramount Group, said: "The launch of AHRLAC marks a major milestone for Africa. For the first time in the history of the continent, Africa will be designing and manufacturing its own aircraft and can benefit from the jobs and economic growth associated with a vibrant domestic aerospace industry."

The launch occurs as Western governments are under pressure to cut defence spending, and developing nations seek out affordable aeronautical and defence technology to tackle a variety of emerging security challenges including terrorism, the effects of climate change and increased demand for peacekeeping and humanitarian relief operations.

Ichikowitz said: "The future of South Africa's economic development relies on the development of knowledge-based industries. AHRLAC is a clear indication of this capability. Today we have unveiled an aircraft with global relevance, which was conceived, designed, engineered and will be manufactured right here in South Africa.

"AHRLAC is a cost-effective, flexible, multi-role aviation platform that marks the first time a company has successfully bridged the gap between manned and unmanned aircraft."

Unmanned aerial vehicles (UAVs) have become increasingly popular over the last few years due to the absence of serious aerial threats in conflicts like Afghanistan and Iraq. These platforms are complex and expensive, lack multi-role flexibility and situational awareness, which could result in collateral damage.

Ivor Ichikowitz continues: "AHRLAC is a huge technological triumph for South Africa. The reality is that the technology behind UAVs has being oversold and that AHRLAC provides a far more comprehensive solution. For example, AHRLAC has strong defensive capabilities which mean that it can operate in hostile airspace, as well as the ability to carry out operations in domestic airspace because it is piloted.

"This makes it ideally suited to some of the long-term security issues facing the world such as drug trafficking control, piracy, patrol of exclusive economic zones, protection of fisheries and rainforests, coast guard and border surveillance and the monitoring of strategic installations such as oil pipelines.

"The cost effectiveness of this aircraft means that more countries than ever before will be able to access the kind of operational capabilities once restricted to only a handful of superpowers. AHRLAC has important political implications for South Africa in strengthening economic relations and helping the country to be recognised as a strong centre for aerospace innovation and technology. South Africa already leads the world in many fields such as sport and peacekeeping, now we will show the world that we can lead in the aerospace industry."

The development of the aircraft is symbolic of Africa's growing confidence and increasing economic and political profile on the world stage. Over the last 10 years Africa's economic pulse has quickened, with real GDP rising nearly 5 per cent per year from 2000 – more than twice the pace in the 1980s and 1990s.

Ichikowitz concluded: "ARHLAC's development will contribute to South Africa's industrial base by creating jobs, sharing skills and driving exports to foreign markets — all of which is particularly valuable at a time when the Government is pursuing strategies to boost the country's industrial capability and growth." SP

By Our Special Correspondent

PHOTOGRAPH: Paramount Group

Revision Military launches head protection system

Revision Military, the recognised global leader in ballistic and laser eye protection, launches into the head protection arena with the introduction of its new Batlskin head protection system. The first fully integrated and fully modular solution of its kind, the Batlskin head protection system combines groundbreaking technology and design, with new materials and innovative processes to deliver an all-new ballistic helmet shell, trauma liner, front mount, retention system, mandible guard and visor. The result is a single, fully integrated system that provides excellent protection from blunt force, blast and ballistic threats, with a lightweight wearability for peak performance. SP

Hagor's mine sandals

Hagor Industries has developed a unique product designed to enable soldiers to cross or work within a minefield. Using the MiCS, a soldier can perform mine detention activity or simply cross the minefield in order to move forward to other missions.

The MiCS prevents accidental mine activation. The sandal is made from a reinforced plastic surface. The plastic surface is attached to a canvas and nylon fabric envelope. This flexible envelope contains five compartments, each of which contains one air cushion. These cushions are connected to each other via connection tube and a flexible manifold.

The sandal is filled with air using a rubber tubes with an oral inflation valve. The upper part of the plastic surface is equipped with special straps that harness the soldier's shoe to the sandal. The MiCS can be used in all types of terrain without loss of efficiency. The product has no metal content allowing the unimpeded use of metal mine detectors and preventing the unintentional detonation of magnetic mines. SP

Harris introduces 'Smart Radio'

Harris Corporation, an international communications and information technology company, has introduced the RF-7800S-LR Leader Radio, the world's first soldier 'smart radio' – with embedded GPS, encryption and a personal digital assistant (PDA). The RF-7800S-LR provides unit leaders with combat-proven tactical communication and computing capabilities in a single, lightweight device for enhanced mission flexibility.

The Harris RF-7800S-LR combines a tactical radio with built-in computer to deliver voice, wideband data and networking and supporting applications such as mapping tools, messaging and video transmission. These capabilities allow deployed warfighters and their leaders to send and receive information critical to situational awareness, including the collection and streaming of full motion video.

The Leader Radio offers a variety of input/output options to connect to external devices, and serves as the core of the Harris Falcon Fighter™ — a modular Soldier System that seamlessly integrates C4 devices, sensors, networking components and power modules.

"The Leader Radio provides commanders more capabilities in a smaller and lighter radio, while maintaining the impressive range offered by the RF-7800S team radio," said Andy Start, president, International Business, Harris RF Communications. "With the RF-7800S-LR, commanders are connected to every member of their team via secure, digitised voice and data communications. By combining various technologies into a single device, the RF-7800S-LR dramatically reduces the soldier's load. It is the smallest, lightest and most integrated soldier communication and computing device available on the market today."

The Leader Radio is a modular upgrade to the Team Radio. The embedded PDA allows soldiers to remove excess cabling, batteries and weight.

The Leader Radio is software-defined, positioning the radio to address emerging requirements through updates. Likewise, FalconFighter™ is uniquely designed to accommodate products with open standards and interfaces—making it easier for users to customise the system to their needs. The Leader Radio can be purchased as part of the FalconFighter TM system, or as a standalone product, based on the needs of the mission. SP

RFI/RFP/TENDERS

Indian Army

Tender: **OFC backbone for Deolali firing range**
Branch: School of Artillery
Publication date: August 30
Last date: October 4

RFI: **25-ton flat bed truck**
Branch: E-in-C Br
Publication date: September 21
Last date: October 20

Indian Navy

RFP: **Consultancy for Naval Aviation Management System**
Naval Headquarters
Publication date: September 22
Last date: October 11

Indian Air Force

Tender: **Hydrogen gas**
Air Hqrs
Publication date: September 2
Last date: October 10

Tender: **Bird detection and monitoring radar**
Air Hqrs
Publication date: September 9
Last date: October 11

RFI: **Expendable air targets**
Air Hqrs
Publication date: September 16
Last date: October 16

Tender: **Spares for Mi-17 helicopters**
Air Hqrs
Publication date: September 20
Last date: October 19

Ministry of Home Affairs

Tender: **X-ray baggage screening (small)**
CISF
Publication date: July 19
Last date: October 11

PHOTOGRAPHS: Revision Military, Hagor Industries

MDL joint venture put on hold

Corporate rivalry forces joint venture between India's biggest state-owned warship builder, Mazagon Docks Ltd, and the private sector Pipavav to be put on hold. The joint venture was announced earlier this month to produce warships on the order books of MDL, where the production capacity is stretched. MDL is to deliver seven major warships and six submarines over the next few years to the Indian Navy. An order for another three submarines is expected soon. With the JV, India would have outsouirced construction of major warships to the Indian private sector for the first time. The JV would have processed order worth billions of dollars.

Defence Minister A.K. Antony said the decision to put MDL-Pipavav JV on hold follows complaints by some rival private shipyards. Engineering giant L&T has made substantial investment in developing a shipyard in Tamil Nadu, and has contested the JV.

Policy on JVs between defence PSUs and the private sector to be put in place first, says Antony. Also, JVs must compete for contracts and will not get these on a nomination basis. India has recently announced that all its warships shall henceforth be Made in India.

Antony said the ministry will study the complaints received from some private shipyards regarding the JV. 'The issue needs to be fully examined and settled before any forward movement takes place on this front. He also said that JVs must compete for contracts and should not get them on nomination basis. "We are treading on a new path and we would like to ensure that transparency is maintained at all levels." SP

By Vishal Thapar

United Technologies to acquire Goodrich

United Technologies Corp. announced it has reached agreement to purchase Goodrich Corporation for $127.50 per share in cash. This equates to a total enterprise value of $18.4 billion, including $1.9 billion in net debt assumed.

United Technologies expects to finance the transaction through a combination of debt and equity issuance. The equity component is expected to approximate 25 per cent of the total. Following completion of the transaction, United Technologies is expected to have worldwide sales of approximately $66 billion based on projected 2011 results. The combined company's increased scale, financial strength and complementary products will strengthen United Technologies' position in the aerospace and defence industry.

Goodrich is a global supplier of systems and services to the aerospace and defence industry. Its products include aircraft landing gear, aircraft wheels and brakes. Goodrich, with estimated 2011 sales of $8 billion, serves a global customer base with 27,000 employees worldwide. "Goodrich delivers on all of our acquisition criteria. It is strategic to our core, has great technology and people, and strengthens our position in growth markets," said United Technologies Chairman and Chief Executive Officer Louis Chenevert. "We are very excited to bring the capabilities of two great companies together, making us more competitive and better able to provide value to both customers and shareholders."

"We are extremely pleased to have an agreement with United Technologies that delivers immediate cash value to our shareholders at a premium that reflects the strength of our business," said Marshall Larsen, Chairman, President and Chief Executive Officer of Goodrich. SP

Lockheed Martin aquires QTC Holdings

Lockheed Martin Corporation has completed its acquisition of QTC Holdings Inc. The company, based in Diamond Bar, California, is the largest provider of outsourced medical evaluation services to the US Department of Veterans Affairs (VA), processing more than 4,50,000 evaluations last year.

Founded in 1981, QTC provides IT-enabled case management services and health care expertise to the Department of Defense, the VA and other US Government agencies. The acquisition was originally announced on August 22, 2011. Terms of the transaction were not disclosed. SP

SECURITY EVENTS

Defence Exports 2011
3-4 October
Vienna, Austria
http://www.smi-online.co.uk/events/overview.asp?is=1&ref=3694

Soldier Modernisation India 2011
4-6 October
Hotel Oberoi
New Delhi, India
http://www.armedforces-int.com/exhibitions/soldier-modernisation-india-2011.html

India International Security Expo
12-15 October
Pragati Maidan, Delhi
http://www.biztradeshows.com/trade-events/international-security-expo.html

Armoured Vehicles Asia 2011
19-21 October
Swissotel, Singapore
www.armouredvehicleasia.com

Engineering Simulation for Military Technology
21-26 October
Vienna, Virginia, USA
http://www.simulationengineeringsummit.com/Event.aspx?id=532540

Maritime and Coastal Security, Africa
26-28 October
Cape Town, Western Cape, South Africa
http://www.maritimesecurityafrica.com

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Actor Mark Ruffalo on 'terror watch list'

In 2010, the US authorities reportedly placed Hollywood star Mark Ruffalo on a terror watch list after he organised screenings for a new documentary about natural gas drilling.

The Zodiac actor arranged showings for GasLand earlier in 2010 and spoke out about the dangers to the national water supplies. But his efforts to raise awareness and demand a stop to natural gas drilling attracted the attention of officials from Pennsylvania's Office of Homeland Security.

He later discovered his efforts had landed him on a terror alert watchlist.

The 43-year-old actor, who also starred in 2010 critical hit *The Kids Are All Right*, has not been stopped from flying but faces severe security checks from TSA airport officials. SP

TSA sacks officials for lax airport screening

The US Transportation Security Administration (TSA) recently sacked 28 employees after investigation revealed laxity in screening of checked luggage at the Honolulu airport.

The TSA found that in the latter half of 2010 there was improper screening of baggage. The TSA began investigation then after two employees informed that thousands of bags were not checked properly or screened for traces of explosives. In June 2011, the TSA had placed 36 of the workers on paid administrative leave, parallel to the process of sacking them. The Honolulu airport has almost 750 TSA employees. SP

Conman who posed as an MI5 spy

A conman who posed as an MI5 spy during a £1 million "odyssey of deceit" was jailed for life in 2005. Robert Hendy-Freegard, a 34-year-old semi-literate former car salesman nicknamed "The Puppetmaster", seduced and ruthlessly exploited his victims during a 10-year period.

He convinced some of his victims to go on the run from terrorists and swindled others for huge sums of money. Using a blend of "devious charm", claims that he was an MI5 agent and James Bond-type tales of shadowy IRA killers, he systematically shredded his victims' self-respect and turned most into virtual slaves.

At least seven of his victims were women, including a psychologist. In 2002, Scotland Yard and the FBI organised a sting operation. First, the FBI bugged the phone of an American psychologist's parents. Her mother told Hendy-Freegard she would hand over the money he demanded, but only in person. Hendy-Freegard met the mother at Heathrow airport where the police apprehended him. SP

PHOTOGRAPHS: sagawards.org, casino-edge.com

MIT students crack 'blackjack'

They used their brain power to make a clean sweep of some of the casinos in the US and they did it successfully. In one weekend, a group of math students of the world-famous Massachusetts Institute of Technology (MIT) had pickings of $4,00,000.

The brainy students knew that blackjack was the only beatable game in casino gambling and they studied hard and made good money. In the 1990s, they made regular trips to Las Vegas and were winning big.

Gordon Adams, a casino security investigator, said these students used their math expertise — and advanced computer models — to hone their skills to a devastatingly effective science. They wrote computer programmes to devise the best strategy for specific situations, then updated their data with real-life experience. Eventually, the casinos realised how they were breaking into their business and banned the MIT student members. SP

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