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Skeldar V-200 successfully completes flight test milestones

Defence and security company Saab has verified a number of key capabilities of its Skeldar V-200 vertical lift UAS through flight campaigns at different sites in US and Sweden demonstrating the system's performance for both land and sea based operations. A number of successful customer demonstration flights have also been conducted.


High complexity flight envelopes such as fully autonomous flights were conducted in both day and night conditions demonstrating convoy shadowing capability, EO/IR sensor utilisation, precision landing as well as long-range missions using tactical hand-over between ground control stations using Saab's flexible stationary and mobile ground control station.

In addition, a heavy fuel engine has now been verified through extensive flight trials and an upgraded next-generation version of the original design aviation fuel engine has been delivered and is now cleared for flight test.



"The Skeldar V-200 has passed yet another important milestone in the programme with these key capabilities verified and demonstrated to various customers," says Mikael Franzén, Director of Saab's Product Area Tactical UAS.

The unmanned system's built-in safety functionality confirmed contingency behaviours in case of link loss including autonomous navigation in accordance to predefined parameters as well as auto landing and shut down.

"The combination of two alternative engine types, a modular payload design, and the ability to incorporate and utilise a variety of data link systems, provides a true multi-mission capability for the Skeldar V-200 and a flexibility that enables the customer successfully meet their mission objectives on land or at sea," concludes Mikael Franzén. 



Cover:

The Boeing P-8I is armed with anti-ship Harpoon missiles, Mark-54 anti-submarine torpedoes and Mark-82 depth bombs and was handed over to India in Seattle in December 2012.

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Indian Navy, AgustaWestland

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Nawaz Sharif... will he be able to clear the mistrust?

The return of Nawaz Sharif as the Prime Minister of troubled state Pakistan is seen by political analysts as a good sign for the region. Even before he was sworn in as the Prime Minister for the third time in his chequered political career, Sharif has reached out to India, stating that he wants to end the mistrust which has been dogging India-Pakistan relations. That is indeed a good beginning.

But that is the political side of Pakistan. And Pakistan's polity, however, democratically elected it may be, seemingly has never been free of military influence, if not domination.

While Sharif may want to iron out the issues between Pakistan and India, the military and also the non-state players, will not go along with his line of thinking and that seems to be clear. The fact that Sharif's party garnered 118 of his 126 seats from the Punjab province and that the Pakistan People's Party with 31 seats has been termed as a 'Sindhi' party. And Imran Khan's 29 seats come from pockets of Khyber-Pakhtunkhwa, FATA and northern Punjab. The results reflect a fractured Pakistani society. And doing a balancing act for Sharif is not going to be easy.

Explaining the developments are two of our distinguished experts. First, in his analysis, Air Marshal (Retd) Anil Chopra traces the nature of Pakistan's political and military structures and how the latter overrides most institutions. He has rightly pointed out that Sharif's immediate concern should be to recover Pakistan from a debt-ridden economy and take decisive calls on terrorism. For that he has to strengthen civil supremacy over the Army. He has to positively engage with India.

In his forthright column, Lt General (Retd) P.C. Katoch states if Sharif has the power and wants to truly have good relations with India, he should make the Inter-Services Intelligence (ISI) answerable to the Pakistani Parliament, control his military and dismantle the anti-India terrorist infrastructure in Pakistan. He could signal his

sincerity by releasing all Indian military prisoners considering that India returned 93,000 Pakistan prisoners post 1971 War. Indeed, it is a tall order.

Moving away from Pakistan, we note that there is some headway in the contract negotiations with regard to the medium-multi role combat aircraft (MMRCA) deal with the Dassault Aviation. That the Ministry of Defence is hoping to wrap up negotiations and begin work on a draft agreement by August-September is welcome.

Continuing on acquisitions, the Indian Navy received the first of the eight Boeing P-8I long-range maritime reconnaissance and anti-submarine warfare aircraft which is expected to greatly enhance India's maritime surveillance capability in the Indian Ocean region.

In this issue, we have an article on how military helicopters dominate the world helicopter market and what the top global manufacturers offer and how they are strategising to expand their reach.

We solicit feedback from our valued readers on *SP's M.A.I.*, our continuous effort to update you on the latest in the defence, aerospace and security world, every 15 days.

Jayant Baranwal
Publisher & Editor-in-Chief

IAF for six more C-130Js, type crosses million flight hours globally

The Indian Air Force cannot wait to get its next six Lockheed-Martin C-130J Super Hercules medium transport aircraft, a deal that is in its final stages of confirmation. Coming as a boost to C-130J customers worldwide, the type soared past the one million flight hours mark this month. "Thirteen countries operating C-130Js, and members of Lockheed Martin's Flight Operations and the US Government's Defense Contract Management Agency (DCMA) teams contributed to this achievement. Hours were tracked beginning with the C-130J's first flight on April 5, 1996, through the end of April 2013," said Lockheed-Martin in a statement. George Shultz, Vice President and General Manager of C-130 programmes at Lockheed Martin Aeronautics Company, said, "Not only is this milestone a testament to the capability of the C-130J Super Hercules, it's also a reflection of the dedication displayed by crews and maintainers each day they fly a C-130J. Once again, the Super Hercules family continues to prove why the C-130J's flexibility and versatility remains without equal."

The C-130J has come in for high praise in Indian service, with the fleet deployed across theatres across missions and in all-weather conditions. The fleet's availability has also proved to be a great reassurance to its pilots and operators. The type has been fielded in every major exercise since its induction, and continues to be the first response aircraft now for humanitarian relief missions.

Elsewhere, according to Lockheed-Martin's statement, "C-130Js currently are deployed in two combat theaters and are operating at a very high tempo efficiently and reliably. In non-combat—but equally harsh environments—C-130Js are often the first to support humanitarian missions such as search and rescue, aerial firefighting in the US, and delivering relief supplies after earthquakes, hurricanes, typhoons and tsunamis around the world. Countries with C-130Js contributing to these flight hours include (in order of delivery) the United Kingdom, United States, Australia, Italy, Denmark, Norway, Canada, India, Qatar, Oman, Iraq, Tunisia and Israel (now in flight test for a summer 2013 delivery). In the US, C-130Js are flown by the Air Force, Air Force Reserve Command, Air National Guard, Marine Corps, and Coast Guard units. Fifteen countries have chosen the C-130J as an airlifter of choice—including Kuwait and the Republic of Korea, which will join the fleet with C-130J deliveries in 2014." **SP**



Indian Navy for five new fleet support ships

In line with expanding responsibilities, a sharp increase in number of vessels over the next few years, and a larger mandate in the Indian Ocean Region, the Indian Navy has announced an effort to acquire five new fleet support ships under the 'global buy' category. The Navy has stipulated that it requires ships with displacement of 40,000 tonnes in fully loaded condition, 200-metres long and a maximum beam of 25-metres.



The Navy also requires its new ships to be capable of speeds "not less than 20 knots of maximum continuous speed, at ambient temperatures upto 40°C, in the fully laden condition upto Sea State 3 and while less than six months out of dock". With a projected complement of 190 sailors and 24 officers, the ship will need to handle one multi-role helicopter. The Indian Navy last commissioned two Fincantieri-built tankers, INS Deepak and INS Shakti, into its fleet, with both vessels praised for their capabilities. **SP**



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Indian Air Force for new assault rifle

The Indian Air Force (IAF) is looking for a modern assault rifle for its special units (Garud), that should be compact, foldable, easy to carry, handle, operate, simple to maintain and with high range. The requirement joins a raft of tenders already active for other weapons including assault rifles for the Indian Army, sniper rifles for special units (including the MARCOS), 9mm small arms for the Army, etc. The Army is also in the process of replacing the INSAS rifle in service. The Garud commando force of the IAF currently operates with the INSAS and AK-47, and the new tender appears to be a move towards replacing those arms with new generation weapons in line with the other two special units of the other two services. The procurement of new small arms for the Indian forces is also in line with the overarching doctrinal move towards lighter, smaller arms with modular architecture, allowing a greater number of accessories and easier storage, less maintenance (with possibility of simple on-field maintenance) and part replacement. **SP**



IAF for shoulder-fired weapon simulator

The Indian Air Force (IAF) is scouting for an indigenously developed and built shoulder-fired weapon simulator for the in-service 9K38 IGLA for training purposes. The system needs to include a hardware/software system as well as the combat equipment simulator itself. The simulator is to be designed for (a) training of IGLA gunners in combat operating skills and (b) practice aimed at maintaining and improving acquired skills. This IAF has stipulated that the system should be

capable of imitating the firing environment covering the entire gamut of the IGLA's launch envelope till the target is destroyed. The vendor will have to provide the source code for all the software developed in connection for this project. The Intellectual Property Rights for the developed software will rest jointly with the vendor and the IAF. The IGLA combat simulator is likely to be the first of the many simulators that the IAF is looking to acquire for new and upgraded weapon systems. Bharat Electronics Ltd and a slew of private Indian firms are likely to receive the request for proposal (RFP) for this fully Indian programme. **SP**

Indian Army for SR-UAV

In an effort to augment its fleet of tactical surveillance unmanned aerial vehicles (UAVs), the Indian Army is on the lookout for an unspecified number of short-range UAV (SR-UAV). The Army currently operates a small fleet of IAI Searcher Mk.2 drones. Incidentally, the first batch of indigenously developed Nishant UAVs, currently in their final phase of trials, will begin operations with Army units this year. The specifications laid down by the Army mirror those of the in-service IAI-built systems. The Army is looking for an all weather, day/night short-range system capable for operations over all terrain, including high-altitude and desert. The Indian Army's UAV operations have expanded dramatically in



the last few years, most recently to keep tabs on the Chinese incursion in Ladakh. Pictures taken from a Searcher Mk.2 of the intrusion were circulated during high-level briefings between the Army and Prime Minister's Office and NSA. Doctrinally too, with each service looking to bolster its fleet of unmanned systems, the Army will look towards long-range systems like the Navy and IAF. At this time, the Army is also looking for a stand-off loitering weapon. **SP**

Indian Navy's MiG-29K squadron commissioned

Three years after they began arriving in the country, the Indian Navy's MiG-29K/KUB shipborne multi-role fighters finally have a home squadron: INAS 303 'Black Panthers' at INS Hansa, Dabolim.

Commanded by Captain A.D. Theophilus, a veteran Sea Harrier pilot and naval aviator, the new squadron will spend the next eight months continuing training and routing flying from the Dabolim airfield before beginning shipborne operations on the INS Vikramaditya early next year after the ship is delivered. The Indian Navy has ordered 45 MiG-29K/KUBs—enough for two squadrons of the frontline maritime fighter. A second squadron will be raised once deliveries are complete. Operations will also begin off the shore-based test facility shortly. **SP**



MMRCA negotiations "back on track"

After weeks of being stalled, commercial negotiations for the medium multi-role combat aircraft (MMRCA) are back on track and in full flow, top sources confirm. Since March, negotiations had been held up on multiple counts, including a tussle over contractual modalities, a split contract between the Dassault Aviation and the Hindustan Aeronautics Limited (HAL) for flyaway and licence-built aircraft, transfer of technology and offsets. Sources in Dassault inform that mutual discussions have yielded a way forward.

HAL Chairman R.K. Tyagi had made a presentation during Aero India 2013 (a month before troubles began in the CNC) detailing the potential problems ahead in terms of absorbing technology from Das-

sault, Snecma and Thales. The Indian Air Force (IAF) officials are also breathing a sigh of relief that it has been made clear that the request for proposal (RFP) obligations will have to be met, and that none can be altered at this stage. The IAF has also sent out a message by insisting publicly that it has no "back-up plan" for the MMRCA, following reports that more Su-30MKIs were being considered as an emergency measure in case the MMRCA did not fructify. As things stand, the Ministry of Defence is hoping to wrap up negotiations and begin work on a draft agreement by August-September 2013, about three months behind schedule as per the IAF's expectations. **SP**



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Nawaz Sharif

Man of the moment

[By **Air Marshal (Retd) Anil Chopra**]

When Pakistan went to polls on May 11, 2013, to elect members of the National Assembly and the four provincial assemblies, it was for the first time in its history a civilian government after completing its full five-year tenure would hand over to a democratically elected new government. Nearly 60 per cent of Pakistanis who form 86 million eligible voters cast their ballot. The election commission was in reasonable charge. A caretaker government was in place for the elections.

The main contest was between incumbent Asif Ali Zardari-led Pakistan People's Party (PPP), Nawaz Sharif-led Pakistan Muslim League (PML(N)) seeking a third time mandate, and the first-timer Pakistan Tehreek-e-Insaf (PTI) of Imran Khan. Interestingly Pervez Musharraf's candidature was rejected on various legal grounds and he was put under house arrest two weeks before elections. Elections were marred by pre-election violence killing 130 people. Pro-American parties were mostly targeted. Pakistan received praise from the world community for holding a fair election. Praise also came for Pakistan Army for allowing a smooth back-to-back second election. The United States had announced in advance that it does not favour any particular electoral outcome and prefers free and fair ballot.

PML(N) emerged the clear winner with 130 seats, nearly four times the number of seats vis-à-vis the second party PPP (35) and 70 additional seats in the reserved category would be allotted in the ratio of winnings. Nawaz Sharif, who returns to the helm after 14 years, will be the third-time Prime Minister. In his opening remarks he said: "We will fulfill all promises we have made. We have programmes to change the state of Pakistan".

The 63-year-old, Amritsar born, Kashmiri-Punjabi lawyer, Sharif carries years of political experience. Initially propped up during General Zia-ul-Haq's regime, he has been the Prime Minister in two earlier tenures (both less than three years, but the second with a historic two-thirds majority), been leader of opposition in the national assembly and also two consecutive terms as Chief Minister of the most significant state, Punjab. As the owner of Ittefaq Group, he is also one of the country's wealthiest men. He has retained close links with the Army and Inter-Services Intelligence (ISI).

His second term was significantly full of action. He stripped the powers of the President by passing the 13th constitutional amendment. The nuclear tests were conducted in his tenure. Pakistan

became the first Muslim country and seventh nation to become a nuclear power. He even dared to force out the Army Chief, Jehangir Karamat, and replace him with a relatively junior and later his bête noire Pervez Musharraf. The ill-conceived Kargil War was thrust upon him by Musharraf whom he thereafter tried to sack but the resultant Army coup ousted his government and he went into exile to Saudi Arabia. He returned in 2007. His party then regained Punjab where he is popularly called 'The Lion of Punjab'. He thereafter actively supported Musharraf's impeachment and reinstatement of the Chief Justice Iftikhar Chaudhry.

His immediate concern would be to recover Pakistan from the debt-ridden economy and take calls on terrorism. He would have to strengthen civilian supremacy over the Army. Indian Prime Minister

Dr Manmohan Singh has extended an invitation to him before he has even taken over. In his earlier tenures his focus was on improving the nation's infrastructure, growth of digital telecommunication, bank and industrial privatisation, encouraged and pushed Islamisation and conservatism initiated by Zia, and introduced Islamic laws. On foreign policy issues, he sided with the UN resolution on Iraq. He worked closely with the Saudi Royal family who came to his rescue when he was ousted. Unlike the late Prime Minister Benazir Bhutto, Sharif's nuclear policy was seen less aggressive towards India and focused the atomic programme for the benefit of public usage and civil society. Besides Zulfikar Ali Bhutto, no leader has enjoyed his level of popularity. In 1999 he signed a bilateral agreement with the Indian Prime Minister Atal Bihari Vajpayee, popularly known as the Lahore declaration, and Pakistanis fully backed him. Sharif also pushed for setting up anti-terrorism courts. But all the gains were lost



because of the Kargil War.

About 45,000 Pakistanis, including 7,000 security personnel, have died in terrorist violence since 2001. There have been 300 suicide bombings. Karachi is a virtual battlefield. Pak military bases have been under attack. Pakistan also remains a state sponsor of terror. Three of the America's five most-wanted terrorists live in Pakistan. The mastermind of the Mumbai massacre and head of Lashkar-e-Toiba, Hafeez Saeed, makes no effort to hide. He is feted by the army and the political elite, appears on television and calls for the destruction of India and jihad against America and Israel. The head of the Afghan Taliban Mullah Omar shuttles between ISI safe houses in Quetta and Karachi. The Amir of Al-Qaeda, Ayman Zawahiri, is probably hiding in a villa not much different than the one his predecessor was living in. Pakistan also has the fastest growing nuclear arsenal in the world, bigger

than Great Britain's. The nukes are in the hands of the Generals, the civilian government only has nominal control. Civilian government has little influence over the ISI.

Will there be an end to Pak Army, controlled state-sponsored terrorism against India, or will the two countries keep sharing sweet-nothings, only time will tell. India will have to keep a close watch as it itself goes into national elections. Significant dialogue can take place only one year hence. General Ashfaq Parvez Kayani finishes his tenure in six months and good for Nawaz, he seems disinterested in politics. He has to be careful in not selecting another Musharraf.

The Economist has tagged Sharif as the best bet for Pakistan. Two-thirds of 185 million Pakistanis are under 30, and 40 million of the 70 million 5 to 19 years old are not in school. Less than one million Pakistanis paid taxes last year. Power blackouts are endemic. Clean water is increasingly scarce. Growth is three per cent, too little to keep up with population demand.

Even as Americans shuns them, US aid to Pakistan goes on. The military has received 18 F-16 jet fighters, 20 Cobra attack helicopters, six C-130 transport aircraft and a Perry class frigate and much more in the last decade alone. It must be unfortunate for the Pakistanis to learn that a recent survey of 21 countries by the United States-based Pew Research Center found their main ally, China, and many Muslim countries including Egypt, Tunisia, Jordan and Lebanon, see Pakistan as a rogue state. Army continues

to be popular among the masses. Nearly 78 per cent Pakistanis believe that India is a greater threat than Taliban and Al-Qaeda. India already has a 2,430-km-long fence to prevent bad elements crossing over. Similarly, Iran is building a 700-km fence, and that will make Pakistan the most fenced state of the world. About 80 per cent Pakistanis have poor opinion of the United States, the country that is preventing them from becoming a failed state by giving billions of dollars in aid.

Today, India's economy is eight times larger than Pakistan and by 2030, it will be 16 times larger. But an increasingly prosperous Indian middle class does not want a failed neighbour. New Delhi will have to closely follow the political machinations in Islamabad and Rawalpindi in 2013. The tag "Most countries have an Army, but Pakistani Army has a country" remains. Will Nawaz Sharif be able to use this opportunity to wrest control of domestic, foreign and security policy from the Army? National consensus will be required to revive the economy, restore foreign exchange reserves and combat terrorism. Critical event ahead is the American withdrawal from Afghanistan in 2014. China's concerns on Islamic terrorism will have to be addressed. Nawaz Sharif is likely to let his business acumen decide his dealing with the Americans. There is pressure from Saudis and Americans to review the Iran pipeline deal. He will have to engage with the US and India without compromising Pakistan's national interests. He will have to take a call. **SP**

Singaporean Minister of Defence inaugurates IMDEX Asia 2013

Singapore's Minister of Defence Dr Ng Eng Hen presided the opening ceremony of the ninth International Maritime Defence Exhibition & Conference (IMDEX) Asia 2013 at the Changi Exhibition Centre, Singapore. Sixty-one delegations from the navies, air forces and maritime enforcement agencies of 48 countries and 194 exhibitors from around the world, are participating in this year's exhibition.

Speaking at the opening ceremony, Dr Ng said that IMDEX Asia is "a key platform for defence professionals to exchange views and enhance cooperation in the maritime domain". Noting the importance of seaborne trade to the global economy, he stressed the need for closer collaboration by the international community to deal with the evolving maritime threats, in order to achieve "peaceful seas and continued prosperity for all". Dr Ng highlighted that countries need to take a more collaborative approach anchored on three principles: First, platforms for dialogue and cooperation had to be open and inclusive. Second, disagreements between states should be settled peacefully and in accordance with international law. Finally, countries must strengthen practical cooperation in areas of shared interest to build understanding, if not trust.

After the opening ceremony, Dr Ng visited some of the foreign warships taking part in the IMDEX Asia 2013 Warships Display at Changi Naval Base. A total of 15 warships from nine countries are taking part in this year's IMDEX Asia 2013 Warships Display, which is hosted by the Republic of Singapore Navy (RSN) from May 14 to 16, 2013.

In conjunction with IMDEX Asia 2013, the RSN will also host the Maritime Information-Sharing Exercise (MARISX) 2013 and the Fourth Western Pacific Naval Symposium Multilateral Sea Exercise (4th WMSX) at the Multinational Operations and Exercises Centre located in the Changi Command and Control Centre. **SP**



Indian Navy's first Boeing P-8I aircraft delivered



Indian and American teams with the aircraft; (below, left to right) Vice Admiral Bimal Verma with Commodore PK. Bahl, CO Rajali and Commander H.S. Jhajj; P-8I delegation presenting Vice Admiral Verma with a banner signed by his team members and Vice Admiral Verma, Chief of Staff, Eastern Naval Command receiving Commander H.S. Jhajj, Officer-in-Charge, P-8I Cell.



The first of the eight Boeing P-8I long-range maritime reconnaissance and anti-submarine warfare aircraft of the Indian Navy arrived at the Naval Air Station Rajali, Arakkonam, Tamil Nadu, on May 15. Vice Admiral Bimal Verma, Chief of Staff, Eastern Naval Command, presided over the induction ceremony that was attended by Commodore Puneet Bahl, Commanding Officer, INS Rajali, representatives from the Command and Integrated Headquarters and the Ministry of Defence (Navy).

The P-8I aircraft, based on the Boeing 737-800 (NG) airframe, is the Indian Naval variant of the P-8A Poseidon that Boeing has devel-

oped for the US Navy. The aircraft is equipped with both foreign as well as indigenous sensors for maritime reconnaissance, anti-submarine operations and electronic intelligence missions. The aircraft is fully integrated with state-of-the-art sensors and highly potent anti-surface and anti-submarine weapons.

These LRMR/ASW aircraft have been procured under the contract signed in 2009. The Indian Navy is in the process of acquiring an additional four P-8I aircraft under the option clause. The induction of the P-8I aircraft into the Indian Navy would greatly enhance India's maritime surveillance capability in the Indian Ocean region. **SP**

Coastal Security Plan Phase-II must be finished on time: Antony

The Defence Minister A.K. Antony called upon the top brass of the Indian Navy and the Indian Coast Guard to ensure timely implementation of measures envisaged under Phase-II of the Coastal Security Plan.

Addressing the Naval Commanders' Conference in New Delhi on May 14, he said the National Command Control, Communication and Intelligence Network Project is to become operational later this year. This real-time link between the Operations Rooms of the Navy and the Coast Guard will surely synergise coastal security operations.

Referring to strengthening Navy's maritime support infrastructure, especially in the islands, Antony said, the construction of additional bases and naval air stations in the Andaman and Nicobar Islands and the Lakshadweep and Minicoy Islands is necessary to further extend India's operational reach. Antony complimented the Indian Navy for checking piracy in the Gulf of Aden to some extent and for ensuring that the menace does not spread towards Indian waters.

Complimenting the Navy for its indigenisation efforts of defence production, he said 46 of the 48 naval platforms, currently under construction, are being built in India. "Indigenisation of equipment, especially weapons and sensors, in association with the Defence Research and Development Organisation (DRDO) through the 'Buy & Make (Indian)' route is an initiative that needs to be carried forward strongly and replicated in other spheres."

He said there are some operational constraints regarding conventional submarines, ship-borne helicopters and mine counter measure vessels. The Defence Minister reiterated that funds will never be a constraint for capital acquisition and will be made available, but they should be used in the most judicious manner.



Defence Minister A.K. Antony at the Naval Commanders' Conference 2013 in New Delhi on May 14, 2013. The Defence Secretary Shashikant Sharma and the Chief of the Naval Staff Admiral D.K. Joshi are also seen.

Antony said the security environment prevailing in our neighborhood, security of national as well as physical security of our bases, dockyards, ships, submarines, aircraft, etc. cannot be ignored at any cost.

A highlight of the conference was that for the first time ever, it was held by "Telepresence" between New Delhi and Naval Commands, thus doing away with travel of the participating Commanders and supporting staff. The Indian Navy has thus become the first Service to conduct a conference of this magnitude through video conferencing. The site at Naval Headquarters in New Delhi was linked seamlessly with the Command Headquarters at Mumbai, Vizag and Kochi using a secure video and data link.

Admiral D.K. Joshi, Chief of the Naval Staff, noted the high tempo of operations maintained by all naval units and observed that the induction of ships and submarines would be primarily indigenous in the coming years. Naval aviation was also poised for major growth. **SP**

Navy keen on self-reliance in technology: Satish Soni

The Indian Navy is committed to promoting self-reliance in military technology," said Vice Admiral Satish Soni, Flag Officer Commanding-in-Chief, Southern Naval Command, while inaugurating a Naval technology seminar organised by the Bharat Electronics Limited (BEL) at the Southern Naval Command.

"The momentous economic growth of the nation has to be sustained by suitable security measures. Accordingly, the Maritime Capabilities Perspective Plan lays down a force level of 200 ships, 600 aircraft and about 20 submarines apart from shore-based assets and infrastructure," said the Admiral.

Elaborating the increasing role of the Navy in the context, the Admiral said that patrolling the region between east coast of Africa and the Malacca Straits, frequent forays into the Gulf and Red Sea as also establishing a reach in the Mediterranean, South China Sea and beyond, has become

vital. While lauding BEL for customer engagement initiatives, Admiral Soni also sought good waterfront support infrastructure backed by a sound fault find-



ing and repair system as well as adequate spares inventory.

Anil Kumar, Chairman and Managing Director of BEL, said that BEL is proud to partner in Indian Navy's blue water aspirations. Three new SBUs for missiles, satellites and communication systems have been set up. He also reminded the audience of the fruitful partnership with the Naval Physical and Oceanographic Laboratory (NPOL) at Kochi which resulted in the production of a number of new-generation sonars for the ships and submarines of the Navy. Coastal surveillance system project by BEL has already been commissioned in Kerala, Gujarat, Maharashtra and Andhra Pradesh. "BEL is also involved in setting up similar infrastructure at Mauritius and Seychelles. Product Support Centre for NPOL Cochin Shipyard and Naval Ship Repair Yard Kochi, is already functioning from KINFRA Kochi."

Latest communication equipment, night vision devices, modern commando information systems and other electronics intensive hardware were on display at the product exhibition. BEL has been conducting such customer engagement initiatives since 2010. **SP**



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Military helicopters dominate market

[By R. Chandrakanth]

Military helicopters have played critical roles in many a combat situation worldwide. And when in 2011 the celebrated US Navy SEALs team (ST6) undertook one of the most covert special operations mission, to eliminate terrorist Osama bin Laden, it was the 'stealth' helicopter that gave the ST6 a decisive advantage. The Sikorsky MH60 (K/M version) highlighted 'stealth' among other roles.

Helicopters have come a long way from the most common use of military – transportation of troops. They have been modified or converted to perform missions such as combat search and rescue (CSAR), airborne command post, attack, etc. Stealth combined with lethality is at recent feature, responding to the varied needs of the military.

The military helicopter market is growing rapidly and Frost & Sullivan predicts that military will account for more than 60 per cent of the global helicopter demand over the next 10 years (in terms of market value), generating revenues of nearly \$200 billion, and creating orders of nearly 9,000 platforms between 2011 and 2020. This demand for military helicopters is driven not only by a desire to obtain new, modern helicopters but mostly by the need to replace/upgrade a large global fleet of ageing helicopters.

Global players

The military helicopter industry is dominated by major Western European manufacturers such as AgustaWestland and Eurocopter group; the three large US companies—Boeing, Bell Helicopter and Sikorsky Aircraft; and Russian Helicopters. They fall in Tier-1 category of global players. In the Tier-II category are regional players with global aspirations and the companies include India's Hindustan Aeronautics Limited (HAL); China's Changhe Aircraft Industries; Korea Aircraft Industries (KAI); Kawasaki Heavy Industries; Mitsubishi Heavy Industries. In the Tier-III category, there are local players such as Denel; Robinson Helicopter company; Enstrom Helicopter Corporation; Helibras; Schweizer Aircraft Corporation; IAR Brasov and PZL Swidnik, SA. Let us look at some of the top companies and how they have panned out globally.

AgustaWestland's lethal range

AgustaWestland is a wholly-owned subsidiary of Italian

conglomerate Finmeccanica, producing a wide range of military and civil helicopters. In 2012, it reported revenues of Euro 4,243 million, an increase of Euro 328 million from the previous year. The key military helicopter products from AgustaWestland include Apache AH1; A129 Mangusta; Chinook ICH-47F; AW101; NH90; and AW149.

The Apache AH1 is a licensed version of the Boeing AH-64D Longbow Apache attack helicopter produced for the British Army. The A129 Mangusta is an attack helicopter used by the Italian Army. An improved version called the T129 is being developed by the Turkish Aerospace Industries for the Turkish Army, along with rights to export.

The Chinook ICH-47F is a licensed version of the Boeing CH-47F Chinook heavy-lift helicopter. The AW101 is a medium-lift 15 to 16-tonne class helicopter. The NH90 is a medium-lift 10-tonne class helicopter produced as part of the NH Industries consortium; with maritime and troop transport versions. And the AW149 which is under development is an 8-tonne class utility helicopter that can transport up to 12 troops along with two gunners and two pilots.

Eurocopter at the forefront of innovation

The Eurocopter group is a 100 per cent subsidiary of EADS. For over 50 years, Eurocopter has been at the forefront of innovation and its ambition is to launch a new helicopter, a new version or a technology demonstrator every year. Its 2012 revenues rose 15 per cent to EUR 6.3 billion. Its order book (both military and civil) stood at EUR 5.4 billion end 2012.

From its stable are Fennec; AS532; Tiger; Cougar; Panther; EC635 and EC645. The AS550 C3e Fennec is Eurocopter's 2-tonne class answer to armed forces requirements. It is said to be easy to operate in extreme and harsh conditions; incredibly manoeuvrable and agile, the Fennec is designed to perform combat flight. The Fen-

AgustaWestland's AW101 helicopter

The AW101 combines the most advanced technologies, mission systems and manufacturing expertise with a proven aircraft design. With the largest cabin in its class and with stand-up head room, excellent safety features and incorporating the latest in vibration reduction technology the AW101 is ideally suited to both the VVIP Head of State transport and to commercial roles including long-range search and Rescue and disaster relief.





NH Industries NH90 helicopter

NH90 uses the latest technology to increase capability, reduce workload, and simplify maintenance through life.

The primary technologies are composite airframe; composite rotor blades; fly-by-wire flight control system; advanced FADEC engines and air intake system; integrated avionics suite and glass cockpit; advanced mission system and advanced digital design techniques.

and numerous other maritime helicopter missions. The H-92 helicopter is based on the proven Black Hawk technology. The SuperHawk offers even greater space and performance for maximum mission flexibility. The CH-53; light turbine; PZL Mielec and H-30 are versatile helicopters, addressing various needs of the military.

Boeing choppers for strike, mobility and reconnaissance

Aerospace and defence major, Boeing has products for strike, mobility and reconnaissance. The AH-64D Longbow is a multi-mission next-generation aircraft. With its fire control radar, the aircraft is known as the AH-64D Apache. Without the radar, the combat proven aircraft

is naturally stealth and nap of the earth increases its protection against military threat. The AS532 AL is a long version of the Cougar family. It can carry up to 25 combat-ready troops and can be equipped with pod-mounted cannons, rocket-launchers or side firing cannon. The AS565 MB is the naval version of the Panther family of helicopters. This all-weather, multi-role light helicopter can be operated from ship decks or offshore to cover a vast array of naval missions such as maritime surveillance, search and rescue, vertical replenishment, offshore patrolling and counter-terrorism. It is the ideal complementary asset for anti-submarine warfare and anti-surface warfare tasks. The EC645 T2 is a medium-sized military multi-role helicopter, offering great power, range, endurance and payload capacity, when operating at 6,000 feet altitude. The versatile EC645 T2 is based on the ruggedness, low operating cost and high mission reliability of the certified EC145. As far as the EC635, its strengths are stealth and no-hear distance, a crucial aspect for surveillance and reconnaissance operations.

Sikorsky helicopters active in combat and peace times

Sikorsky Aircraft Corp. is a United Technologies Corp company and a world leader in helicopter design, manufacture and service, offering a broad range of defence solutions in combat and peace times.

The products are the famed Black Hawk; SeaHawk; H-92; CH-53 and light turbine helicopters. The Black Hawk is a proven helicopter in various missions across the world. The SeaHawk, on the other hand, is a sophisticated, high integrated aircraft for anti-submarine warfare, search and rescue

is called the AH-64D Apache. The AH-64 Apache has been developed since its inception using incremental technology insertions at regular intervals to ensure that the world has the most capable multi-role combat helicopter that meets the needs of the war-fighter today and in the future.

In terms of mobility, Boeing's Chinook is a multi-mission, heavy-lift transport helicopter. Its primary mission is to move troops, artillery, ammunition, fuel, water, barrier materials, supplies and equipment on the battlefield. Its secondary missions include medical evacuation, disaster relief, search and rescue, aircraft recovery, fire-fighting, parachute drops, heavy construction and civil development. The Chinooks operated in the Gulf War, and they continue to be the standard for the US Army in the global campaign against terrorism.

The Bell Boeing V-22 Osprey is the first aircraft designed from the ground up to meet the needs of the Defence Department's four US

Eurocopter's Tiger helicopter

The Tiger has the distinction of being the first all-composite helicopter developed in Europe, and incorporates other advanced features such as a glass cockpit, stealth technology and high agility in order to increase its survivability. Improved variants have also entered service, outfitted with more powerful engines and compatibility with a wider range of weapons. Since the type's introduction to service, Tigers have been used in combat in Afghanistan, Libya, and Mali.





Sikorsky's Black Hawk helicopter

Sikorsky Aircraft is currently in development of an Optionally Piloted Black Hawk (OPBH) in collaboration with the US Army AMRDEC. The modified Black Hawk will fly a fully autonomous cargo mission, from take-off through picking up a load and flying a route, to returning for the next pickup. Unmanned resupply is an early application of Sikorsky's optionally piloted concept.

armed services. The tiltrotor aircraft takes off and lands like a helicopter. Once airborne, its engine nacelles can be rotated to convert the aircraft to a turboprop airplane capable of high-speed, high-altitude flight.

Russian Helicopters steady growth

Russian Helicopters is the sole Russian rotorcraft designer and manufacturer and one of the few companies worldwide with the capability to design, manufacture, service and test modern civilian and military helicopters. Although Russian Helicopters was established only in 2007, some of its key enterprises date back more than 60 years. According to the company data, there are over 8,500 Russian Helicopters (both military and civil) currently operated in over 100 countries around the world, representing 14 per cent of the global helicopter fleet.

Russian Helicopters enterprises produced around 35 per cent of global combat helicopter fleet and nearly 17 per cent of the ultra-heavy helicopter fleet worldwide, as well as 56 per cent of global helicopter fleet with MTOW from 8 to 15 tonnes.

Some of the key military products are the Ka-226T, a light multi-mission helicopter, designed for operation in hard-to-reach high conditions, warm climate and over-sea, reconnaissance, targeting and monitoring, cargo transportation (up to 1,500 kg), transportation of seven troopers. The Ka-31 is a radar surveillance helicopter designed for protection of warship units operating beyond coastal radars and ERW (early radar warning) aircraft coverage against air strikes. The Mi-26, the world's best line production helicopter in terms of load capacity, is unrivalled in cost-performance parameters. The Mi-26 are transportation of troops and equipment, including oversize equipment. The Mi-26 is capable of carrying up to 82 full armed troopers or up to 20 tonnes of cargo inside the

fuselage or on external sling. The Ansat-U is the light training helicopter which is designed for effective training of military pilots and special authority pilots.

HAL's global aspirations

HAL's involvement with rotary-winged aircraft dates back to June 1962 when, to meet the Indian Air Force's requirement for light helicopters, the Government of India signed a licence agreement with Sud-Aviation (presently Eurocopter, France). The first helicopter type to be built at HAL Bangalore was the Alouette III, later named Chetak, a multi-role, seven-seater helicopter. Armed with missiles and torpedoes, it also caters to the exacting requirement of anti-submarine and anti-tank warfare. The Cheetah is

a lightweight high performance helicopter and excels in observation, surveillance, logistics support and rescue operations. The Lancer is a light-attack helicopter and is cost-effective airmobile area weapon system, optimised for anti-insurgency operations, close air support, suppression of enemy fire, attack on vehicular convoys, destruction of enemy machine gun positions and anti-armour applications.

With a proven track record and established technology for manufacture of helicopters and its components, HAL commenced series production of Dhruv (advanced light helicopter) in 2000-01. The ALH is a multi-role, multi-mission helicopter in 5.5-tonne class, fully designed and developed by HAL. Built to FAR 29 specifications, Dhruv is designed to meet the requirements of both military and civil operators globally.

There is intense competition in the military market with US and European companies battling out with Russian and even some regional players. The growth and expansion strategies of global companies are getting more pronounced, of late, with building of local and regional hubs, and partnerships with local service companies. SP

Boeing's Apache AH-64D helicopter

The radar-equipped AH-64D Apache Longbow features numerous enhanced capabilities, including: longer-range weapons accuracy and all-weather/night fighting; detection of objects (moving or stationary) without being detected; classification and threat-prioritisation of up to 128 targets in less than a minute; integrated sensors, networking, and digital communications for situational awareness and management of the combat arena in real time.



Italian Army gets NH90 TTH Helicopter



AgustaWestland announced that the first NH90 tactical transport helicopter (TTH) in final operational capability (FOC) configuration for the Italian Army has been delivered recently at AgustaWestland's Venice Tessera plant in the presence of Gen. Giangiacomo Calligaris, Commander of Italian Army Aviation, and Gen. Francesco Langella, ARMAEREO.

This delivery brings to 21 the number of NH90 TTHs delivered to the Italian Army from an order for 60. This latest delivery marks another major milestone for the Italian Army NH90 programme. Five aircraft currently deployed in Afghanistan have now flown 470 flight hours with outstanding performance, reliability and mission effectiveness in the extreme and demanding environmental, weather and operational conditions there.

The NH90 TTH variant is a 11-tonne class helicopter configured to perform tactical transport missions in all environments by day and night. The NH90 TTH helicopter's

mission flexibility allows its users to perform additional roles such as internal/external load transport, heliborne operations, special operations, search and rescue, casualties evacuation and training missions. **SP**

First upgraded Tornado ECR delivered to Italian Air Force

Alenia Aermacchi, in collaboration with BAE Systems and Cassidian, its Panavia consortium partners, has delivered the first upgraded Tornado ECR (electronic combat/Reconnaissance) to the Italian Air Force. Alenia Aermacchi, as technical and programme leader, is in the process of upgrading the avionics and systems of 15 Tornado ECR.

The Tornado ECR MLU is the upgraded version of the ECR currently in use by the Italian Air Force. Its main function is to localise and suppress hostile air defence radar emitter sources by anti-radar missiles.

The aircraft upgrade includes several subsystems and functionality additions as well as modifications to the on-board systems, avionics equipment and mission software. The Tornado ECR MLU features an integrated IN-GPS navigation system supported by a multi-mode receiver (MMR) system for approaches and ILS blind landings.

The new communication and identification system embodies the latest standards of secure communication capacities as well as a data transmission/reception capacity via Data-Link (MIDS), which integrates TACAN navigation functionalities.

The pilot and navigator cockpits feature new multi-function display suites that improve man-machine interface and



reduce crew workload; the navigator cockpit features new TVTAB LCD colour displays that replace former monochromatic display and the internal and external lighting systems are compatible with NVG night vision goggles. **SP**

US Coast Guard acquires CN235

The US Coast Guard (USCG) Aviation Logistics Center has purchased the prototype CN235 aircraft and plans to transform it into an HC-144A maintenance training unit. The HC-144A is based on the Airbus Military CN235 tactical airlifter. More than 230 CN235s are in service around the world.

The transformation will configure the CN235 with systems from the HC-144. The systems will have built-in faults that will allow maintenance personnel the opportunity to learn troubleshooting on actual HC-144 aircraft.

"It is very satisfying to see this airframe being used as an integral part of the HC-144A programme," said Sean O'Keefe, EADS North America Chairman and CEO. "We look forward to its performing many years of service in training the technicians who will keep the fleet safe in the air." **SP**

Ospreys delivered to Marine Presidential helicopter squadron

The helicopter squadron responsible for carrying the President of the United States and his staff, Marine Helicopter Squadron One, received its first of 12 MV-22 Ospreys to be assigned to its fleet, recently at Marine Corps Base Quantico in Virginia.

The Ospreys will conduct presidential support missions, which means these aircraft will carry presidential support staff and news media representatives travelling with the President. The Osprey mission at HMX-1 does not include carrying the President of the United States.

Flight operations at HMX-1 began April 26, but flights carrying presidential support staff and news media representatives in the Ospreys assigned to HMX-1 will not begin until later this year. **SP**



Northrop Grumman X-47B UCAS completes first catapult launch

Northrop Grumman Corporation and the US Navy have launched a new chapter in the history of unmanned systems, carrier-capable unmanned aircraft, by successfully catapulting the X-47B unmanned combat air system (UCAS) demonstrator from the deck of the USS George HW Bush (CVN-77).

The launch occurred at 11:18 a.m. on May 14, while the carrier was under way off the coast of Virginia. The tailless, strike-fighter-sized aircraft flew autonomously back to Naval Air Station Patuxent River where it landed safely 65 minutes later. "Today's catapult launch of the X-47B is a momentous feat for naval aviation," said Captain Jaime Engdahl, Navy UCAS Program Manager for the Naval Air Systems Command. "It proves that the Navy's goal of operating unmanned systems safely and effectively from aircraft carriers is well on its way to becoming a reality."

Northrop Grumman is the Navy's prime contractor for the UCAS Carrier Demonstration (UCAS-D) programme. The company designed, produced and is currently flight testing two X-47B air

vehicles for the programme. Air Vehicle 2 completed the catapult shot. "Catapulting the unmanned X-47B off the USS George H.W. Bush is an event as historic as the Navy's first catapult of a manned aircraft, which occurred in November 1915 from the armoured cruiser USS North Carolina (ACR-12)," said Carl Johnson, Vice President and Navy UCAS Program Manager for Northrop Grumman. "We are delighted to help launch this new era of naval capability."

The X-47B catapult launch occurred a day after the USS George H.W. Bush departed from Naval Air Station Norfolk, Virginia. The current at-sea period is the second such test period for the UCAS-D programme. In December 2012, the programme hoisted an X-47B aircraft aboard the USS Harry S. Truman (CVN-75), then demonstrated that the aircraft could be manoeuvred safely and precisely on the ship's flight deck, in its elevators and in its hangar bay.

In preparation for the launch, the UCAS-D programme successfully completed a series of shore-based catapult shots at Naval Air Station Patuxent River between November and March. The air vehicle was transported by barge from Patuxent River to Naval Air Station Norfolk in early May, then hoisted aboard the ship. **SP**



US Navy forms first unmanned helo squadron



Helicopter Maritime Strike Squadron (HSM) 35 became the first composite expeditionary helicopter squadron to include both the world's most technologically advanced helicopter; the MH-60R Seahawk and the MQ-8B Fire Scout vertical take-off and landing tactical unmanned aerial vehicle (VTUAV); during an establishment ceremony recently on Naval Air Station, North Island.

As the Navy's first operational squadron with both manned and unmanned aircraft, HSM 35 heralds a new era for Naval Aviation. The squadron, designated the "Magicians," adopted the call sign of Helicopter Anti-Submarine Squadron Light 35, which

was decommissioned on NAS North Island in 1992, after 19 years of service.

"The reestablishment of this squadron is exceptional as it points towards the future for our Naval Aviation forces," said Commander, Naval Air Forces, Vice Admiral David H. Buss. "The actions today represent a clear line dividing what Naval Aviation once was and what it will be." **SP**

X-51A WaveRider sets record with successful fourth flight

A Boeing X-51A WaveRider unmanned hypersonic vehicle achieved the longest air-breathing, scramjet-powered hypersonic flight in history on May 1, flying for three-and-a-half minutes on scramjet power at a top speed of Mach 5.1. The vehicle

flew for a total time of more than six minutes.

"This demonstration of a practical hypersonic scramjet engine is a historic achievement that has been years in the making," said Darryl Davis, President, Boeing Phantom Works. "This test proves the technology has matured to the point that it opens the door to practical applications, such as advanced defence systems and more cost-effective access to space."

A US Air Force B-52H Stratofortress from Edwards Air Force Base released the X-51A from 50,000 feet above the Point Mugu Naval Air Warfare Center Sea Range at 10:55 a.m. After the B-52 released the X-51A, a solid rocket booster accelerated the vehicle to about Mach 4.8 before the booster and a connecting interstage were jettisoned. The vehicle reached Mach 5.1 powered by its supersonic combustion scramjet engine, which burned all its JP-7 jet fuel. The X-51A made a controlled dive into the Pacific Ocean at the conclusion of its mission. The test fulfilled all mission objectives.

The flight was the fourth X-51A test flight completed for the US Air Force Research Laboratory. It exceeded the previous record set by the programme in 2010.

The X-51A programme is a collaborative effort of the Air Force Research Laboratory and the Defense Advanced Research Projects Agency, with industry partners Boeing and Pratt & Whitney Rocketdyne. **SP**





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Will Pakistan change?

If Sharif has the power and wants to truly have good relations with India, he should make the ISI answerable to the Pakistani Parliament, control his military and dismantle the anti-India terrorist infrastructure in Pakistan

PHOTOGRAPH: Wikimedia

There is considerable euphoria over Nawaz Sharif having topped recent elections in Pakistan, him stating that Kargil and 26/11 will not be repeated and inviting Indian Prime Minister Dr Manmohan Singh to visit Pakistan. It would be prudent to view developments and ground realities in Pakistan pragmatically rather than be carried away by utopian euphoria that everything will suddenly turn hunky-dory.

Nawaz Sharif heads a political party which is sans strong presence in provinces other than Punjab. Moreover, he will have to tread with caution in dealing with his military considering his past experience. His biggest handicap will be that the Pakistan's prime intelligence agency, ISI is 100 per cent answerable to the military and not to the political authority. There is no change to the situation from Sharif shaking hands with Prime Minister Atal Bihari Vajpayee at Lahore and General Pervez Musharraf organising mass intrusions in Kargil.

It should be remembered that Asif Ali Zardari on becoming President had ordered the ISI to be brought under the Ministry of Interior but the military made him eat his words within 24 hours. There is no change in the ground situation in Pakistan and the army chief can keep Nawaz Sharif in the dark. Sharif may say that he has the authority to appoint the next army chief, of which there is no doubt. But it is also certain that he will go by seniority to avoid any showdown.

Preliminary report by the team investigating Musharraf stating he cannot be tried under the Anti-Terrorism Act Sharif may also be unable to take any worthwhile action against Musharraf in order to not annoy the military. The fact that Sharif 'had' some information if not all about Kargil intrusions cannot be ignored as Prime Minister. The question now is why should the Pakistani military continue to fish in troubled waters in India?

Pakistan military's private business-corporate-industrial complex was pegged at \$20.7 billion way back in 2007. That is the reason they need tensions with neighbours least they be asked to return to barracks and

lose all that power over Pakistan and more importantly the moolah. The relevance of the Pakistani army chief may be gauged from the fact that when the US wants to discuss Afghanistan bilaterally or multilaterally, General Pervez Kayani is called and not the President or Prime Minister of Pakistan. There is no doubt that the military is realising the economic abyss that Pakistan is going into that necessitates better economic ties with India. That is the reason he was harping on the need to better relations but simultaneously engineering withdrawal from Siachen perhaps on China's behest.

India should tread cautiously and improve economic ties without recourse to any withdrawal from Siachen or any territorial concessions for that matter. Recent statement by the US Ambassador

to Pakistan that the military is no more thinking of strategic depth in Afghanistan also should be taken with a pinch of salt with at least south and east Afghanistan post-2014 going under the Taliban influence, automatically granting Pakistan strategic depth.

Robert Kaplan writes in his book *The Revenge of Geography*, "An Afghanistan that falls to Taliban sway threatens to create a succession of radicalised Islamic societies from the Indian-Pakistani border to Central Asia... giving Pakistan's ISI the ability to create a clandestine empire composed of the likes of Jallaluddin Haqqani, Gulbuddin Hekmetyar, and the Lashkar-e-Toiba—able to confront India in the manner that Hezbollah and Hamas confront Israel".

If Sharif has the power and wants to truly have good relations with India, he should make the ISI answerable to the Pakistani Parliament, control his military and dismantle the anti-India terrorist infrastructure in Pakistan. He could signal his sincerity by releasing all Indian military prisoners including those dumped in foreign prisons considering that India returned 93,000 Pakistan prisoners post-1971 War and considering they were looked after so well. SP

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



CAPFs CRPF deployed in LWE-affected states

The Union Government has deployed the Central Armed Police Forces (CAPFs) including Central Reserve Police Force (CRPF) in the left-wing extremism (LWE)-affected states to assist the state police in conducting anti-Naxal operations.

The deployment of CAPFs is a dynamic process and is based on requirements projected by the state governments, availability of force and the security situation in a particular location. The deployment of CAPFs keeps changing from time to time. However, at present a total number of 532 coys of CAPFs have been deployed

in the LWE-affected states, according to the Minister of State for Home Affairs R.P.N. Singh.

Some of the LWE-affected states including Chhattisgarh, Jharkhand and Odisha have demanded additional battalions of CAPFs, including CRPF. The decision on deployment of additional battalion in the LWE-affected states is taken on the basis of requirement of the state governments, availability of force and other ground realities. Recently, taking into consideration the requests of the state governments, a decision has been taken by the Ministry of Home Affairs to provide 10 additional battalions of CAPFs including five battalions of CRPF to Jharkhand, Odisha, Bihar and Chhattisgarh. **SP**

DNA profiling technology

The Indian Government has set up DNA profiling technology at the Centre and state levels to nab criminals in the country. At the Central level, three Central Forensic Science Laboratories located at Chandigarh, Hyderabad and Kolkata are under the administrative control of the Directorate of Forensic Science Services and one Central Forensic Science Laboratory at New Delhi is under the administrative control of the Central Bureau of Investigation.

At the state level, 14 State Forensic Science Laboratories are located at Agartala, Bengaluru, Dehradun, Gandhinagar, Guwahati, Hyderabad, Jaipur, Junga (Himachal Pradesh), Karnal, Lucknow, Mumbai, Delhi, Ranchi and Sagar (Madhya Pradesh), which are having the facility of DNA profiling. All Forensic DNA profiling centres are equipped with state-of-the-art facilities. Apart from this, there is one Centre for DNA Fingerprinting and Diagnostics, Hyderabad under the Ministry of Science and Technology. The laboratories having DNA profiling facilities are examining cases referred to them by various law enforcement agencies and courts of law on regular basis, said Mullappally Ramachandran, Minister of State in the Ministry of Home Affairs. **SP**



AP opposes 'unprecedented intrusion' into news network

The Associated Press (AP) has termed the US Justice Department's tapping of its telephone records as a "massive and unprecedented intrusion" into the news organisation's news work. The Department secretly gathered two months worth of telephone records of the agency's reporters and editors.

The government collected the information for 20 phone lines in April and May 2012. The AP says it is not known how many journalists used the phone lines at the company's offices in New York, Washington, D.C., and Hartford, Connecticut, but it may well be that more than 100 journalists used these lines during that period.

AP President and CEO Gary Pruitt sent an angry letter to Attorney General Eric Holder, demanding the return of the phone records and destruction of all copies.

"There can be no possible justification for such an overbroad collection of the telephone communications of The Associated

Press and its reporters. These records potentially reveal communications with confidential sources across all of the newsgathering activities undertaken by the AP during a two-month period, provide a road map to AP's newsgathering operations and disclose information about AP's activities and operations that the government has no conceivable right to know," Pruitt said. **SP**

Saudi man with pressure cookers arrested at Detroit airport

The Hussain Al Khawahir, a Saudi Arabian national, was arrested recently at Detroit Metropolitan Airport after CBP agents found two pressure cookers in his luggage, and a page missing from his Saudi passport.

Later, his nephew, Nasser Almarzooq, who is studying mechanical engineering at the University of Toledo in Ohio, said it was all a misunderstanding. He said he had asked his uncle to bring the pressure cookers with him because he liked to cook lamb in a pressure cooker, and that the pressure cooker he bought in the United States were just not good enough.

Al Khawahir first told the agents that he bought the pressure cooker for his nephew because pressure cookers were not sold in the United States. The federal agents said that Al Khawahir's passport had a page missing, and that he could not explain why the page was torn from the passport. **SP**

CISF personnel training in profiling airline passengers

To improve security standards at Delhi's Indira Gandhi airport, Central Industrial Security Force (CISF) personnel are getting training in profiling passengers from experts from Israel—some of the best in business.

Profiling a passenger helps security personnel zero in on people who betray suspicious behaviour and is usually employed to nab drug traffickers. A timely intervention may help the personnel grab a potential peddler or terrorist before he boards a plane.

"We are taking the help of experts in improving the security standards at airports. Profiling is the most important factor in security as you cannot check each and every person before he/she reaches the security area. Under the new system, a passenger comes under scrutiny as soon as he/she arrives at the terminal," said a senior CISF official, requesting anonymity.

The intelligence team of CISF identify suspicious passengers outside the terminal and inform their colleagues about the suspect's details on a wireless set. **SP**



Khalil Rahman, CEO
Atlas Elektronik India

We would like to integrate India into global supply chains: Atlas

Its official, Atlas Elektronik now has a subsidiary in India. At a formal gathering in New Delhi, Khalil Rahman, Chief Executive Officer, Atlas Elektronik India, announced that besides intensifying the already existing partnerships in India, the company will now create and foster relationships with the research and manufacturing facilities of India's Ministry of Defence as well as private industries. Atlas Elektronik India, set up in March this year, will hence be the contact point for the German company in India.

"We would like to integrate India into global supply chains," said Rahman, and added that the company strives to build a coalition of partners in India, both in the public and private sector, in order to help the Indian industry develop localised solutions suited to the needs of the Indian Navy's modernisation programme. "Our objective is to make long-term investments in the Indian market and remain com-

mitted to the indigenisation needs of the Indian Government."

Atlas Elektronik's business relationship with India dates back to the 1980s and the company has provided four command and weapon suites for the Indian Navy's Shishumar class submarines. The company is now looking forward to providing torpedoes and sonars for the Indian Navy, and also participate in the Project 75-I submarine programme. Headquartered in New Delhi, Atlas Elektronik India will deal with market research, analysis, supply chain management and provide technical and logistical support to customers and the parent company in Germany.

Focke Schwarzer, Chief Operating Officer, Atlas Elektronik India said that with strengthened presence, the company will be able to fulfill its ongoing and future projects in the country smoothly as well as offer new support services.

Atlas officials also informed that they are in talks with the Defence Research and Development Organisation (DRDO) and are actively working to develop Indo-German naval systems. Besides offering new generation sonars, combat systems and torpedos for the Indian Navy, the company is also putting forward its interest in upgrading the old submarines. "Building on an experience and know-how of German technology, Atlas Elektronik India is your local partner to support this effort," said Rahman. "We are negotiating contracts for Delhi and Talwar class frigates. We are also working on a transfer of technology (ToT) with the Bharat Elektronik Limited."

On being asked about the company's experience working with the Indian establishment, the official said that the Indian Navy is very professional, but slow decision-making is frustrating. **SP**

—By Sucheta Das Mohapatra

Turkish industry joins common submarine missile project

The Turkish company Roketsan and the German firms Thyssen-Krupp Marine Systems and Diehl Defence signed a cooperation agreement to develop and supply the submarine-launched interactive defence and attack system for submarines (IDAS) missile.

The accord was inked at the IDEF International Defence Industry Fair in Istanbul. The signature ceremony took place in the presence of Eberhard Pohl, Ambassador of the Federal Republic of Germany in Turkey, Thomas Kossendey, Member of the German Parliament (Deutscher Bundestag) and Parliamentary Secretary of the Federal Minister of Defence as well as the German Armament Director Detlef Selhausen.

IDAS provides new self-defence and asymmetric warfare capabilities for submerged submarines to engage threats from the air, naval vessels as well as coastal targets. The submarine can launch the multi-role missile from a torpedo tube under water by means of a launching container. Aided by an innovative fibre-optic data link, the operator in the submarine is capable of controlling the missile during the entire flight offering the opportunity of target change, correction of the target impact point or mission abort. The system can also be refitted into existing submarines with minor effort.

Currently the IDAS Consortium is conducting an initial development programme (IDP) with the objective of developing a verified product. Verification will be proven with successful firings from a submerged submarine scheduled for 2014. According to the cooperation agreement, Roketsan will be responsible for development, qualification and series production of the IDAS warhead, support testing of CAS (control actuation system), participate in system level design activities and perform a work share in the series production

of the CAS. A further partner is the Norwegian company Nammo, which is developing and producing the rocket motor.

IDAS has performed successful test firings from an underwater test facility in Northern Germany as well as from a class 212A submarine of the German Navy in the Baltic Sea. The project was awarded the Technology Prize of the German defence industry. **SP**

Northrop Grumman to appoint Andrew Tyler as chief executive in UK and Europe

Northrop Grumman Corporation has announced that it will appoint Andrew Tyler Chief Executive for the United Kingdom and Europe, effective July 1. In this new position, he will play a leading role in supporting the company's current programmes, developing strategies for growth and identifying new business opportunities for the company's activities in the UK and Europe, including NATO countries.

Tyler joins Northrop Grumman from Siemens' Marine Current Turbines where he was Chief Executive Officer. Prior to that he was Chief Operating Officer at the Defence Equipment & Support (DE&S) in the UK Ministry of Defence, the organisation responsible for the procurement and support of all the equipment used by the British armed forces. Tyler has more than 20 years' of experience leading and managing science, engineering and technology businesses and international business development within a variety of markets including offshore oil and gas, commercial maritime, environmental and defence. **SP**

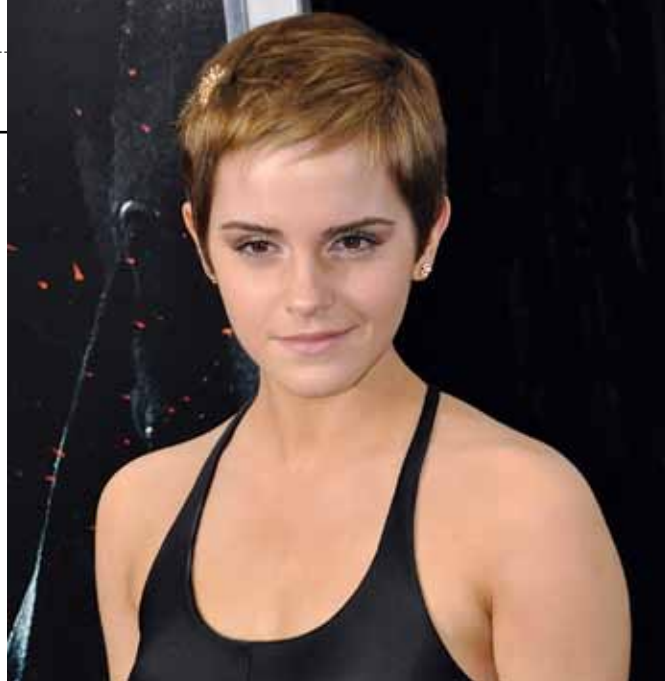


JFK airport stops Emma Watson, thinks she is a minor

Actress Emma Watson of Harry Potter fame was left red-faced at an airport when she was stopped by officials who thought she was too young to be travelling alone.

The 22-year-old Harry Potter star was travelling in December 2012 when the embarrassing incident occurred at the John F. Kennedy International Airport in New York, and she reveals it is not the first time she has been mistaken for an unaccompanied minor, usually deemed to be children under the age of 14.

In a series of posts on Twitter.com, she wrote, "Passport control: 'Unaccompanied minor?' Me: 'Sorry?' Passport control: 'Where is ur (your) guardian?' Me: 'I'm 22!!!!!!' Never wearing a backpack again... The really sad thing is that this is not the first time this has happened." **SP**



Srinagar airport security breached

The Jammu and Kashmir (J&K) Police recently blamed the Indian Air Force personnel for the breach of security that led to two youths driving up to the tarmac of the highly protected airport. The duo had taken their vehicle to the runway in the technical area, declared out of bounds even for VVIPs except for the President and the Prime Minister.

The youths—Parvaiz Ahmad Dar and Mudasir Ahmad Mir of Handwara in Kupwara district—entered the heavily guarded airport on May 9 around 3 p.m. through Rangreth gate, manned by IAF personnel, SP (Budgam), Uttam Chand, said. "However, we let them off a day later after being convinced that they had no intention to cause any harm," he said. However, the defence spokesperson of Northern Command said the Army had asked for a report from those who were on security duty at the technical area at that time.

The vehicle was spotted near the runway by men from the anti-hijacking squad of J&K Police soon after a flight from Delhi landed, SP (anti-hijacking squad), Abdul Rashid, said. "During questioning, the duo said they had entered through the military gate not knowing the entrance to the passenger terminal. We had handed them over along with their guests—Khalid Farooq Bhat and Mohammad Shafi Bhat—to police," he said. **SP**

Defence contractor's girlfriend, a spy?

A defence contractor is accused of passing on national security secrets to his young Chinese girlfriend. Benjamin Pierce Bishop is charged with sharing classified military intelligence while working at the US Pacific Command in Hawaii. Whether investigators believe the unidentified woman is a Chinese spy remains a secret.

Benjamin Pierce Bishop, 59, a former US Army officer who works as a civilian employee of a defence contractor at US Pacific Command in Oahu, was arrested recently. He is charged with one count of willfully communicating national defence information to a person not entitled to receive it, and one count of unlawfully retaining documents related to national defence. If convicted, he faces a maximum of 20 years in prison.

The case is being investigated by the FBI's Honolulu Division and the Naval Criminal Investigative Service in coordination with US Pacific Command and the US Army. **SP**

Attack exposes security lapse at national heritage

An armed accused stormed into Iqbal Manzil, Sialkot in Pakistan, the birthplace of poet of the East, located in the city's congested Kashmiri muhallah and damaged rare photos, Qalam, Dawat, furniture and other rare things related to Allama Iqbal and his other family members.

Iqbal Manzil in-charge Riaz Hussain Naqvi said, Ghulam Abbas of Rangpura-Sialkot went to Iqbal Manzil after its closure time and insisted to visit Iqbal Manzil. However, the staff refused to entertain him.

Upon this, the accused became infuriated and forced his entry into the Iqbal Manzil at gunpoint. He made the staff of Iqbal Manzil hostage and badly damaged the frames, photos, Huqqa, Qalam, Dawaat (pen and inkpot of Allama Iqbal), the bed on which Iqbal had taken birth, other wooden furniture and other important related thing related to Allama Iqbal and his family. After this the accused also abused and tortured the staff of Iqbal Manzil and fled away from the scene. Later, the police were called in, who arrested the fleeing accused. **SP**

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