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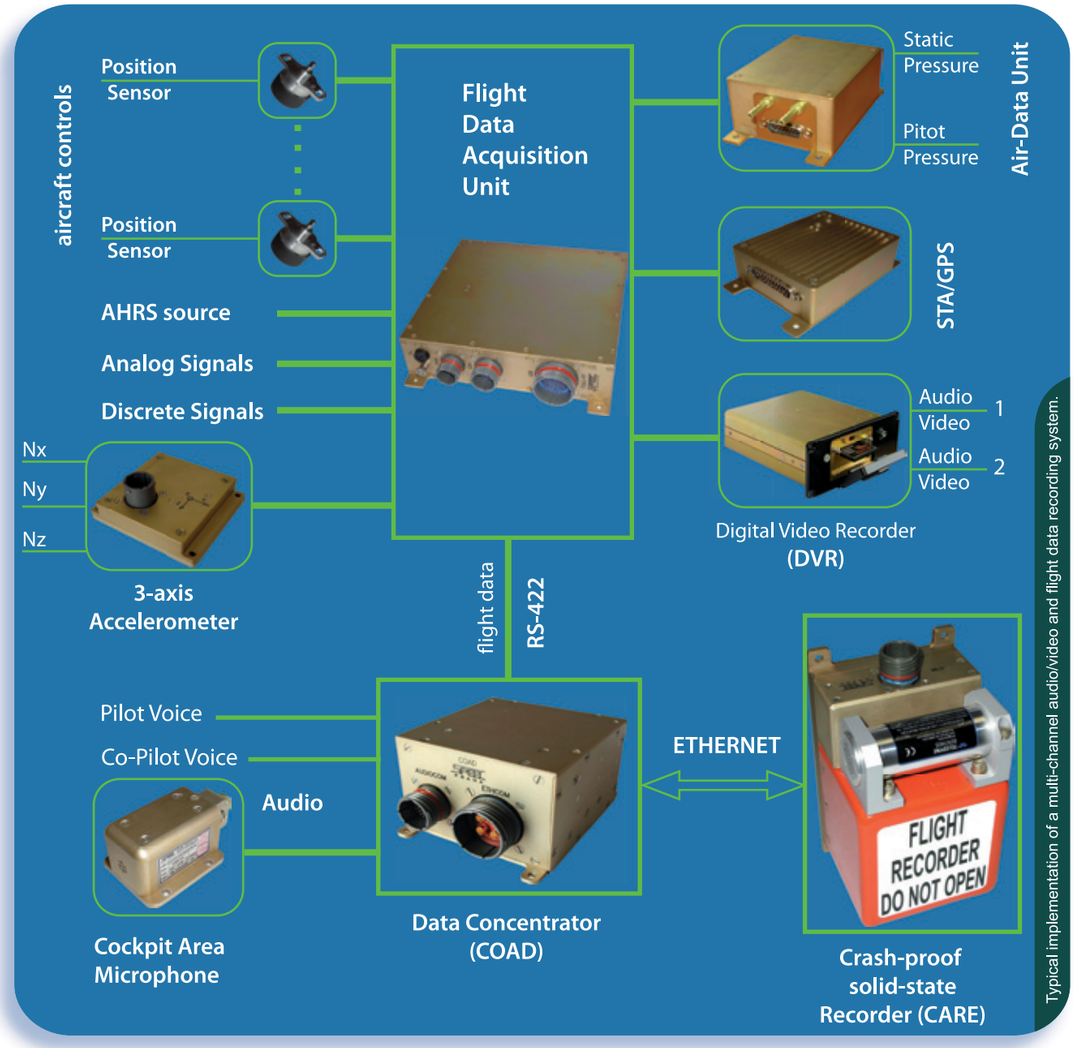

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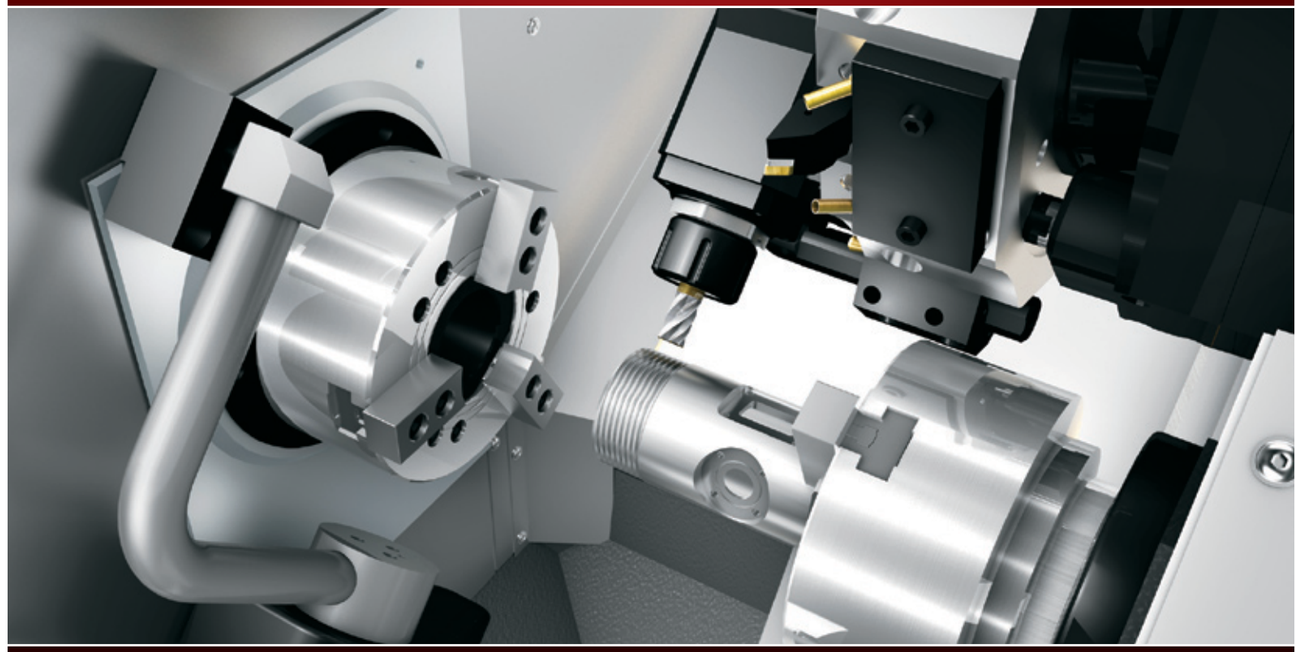

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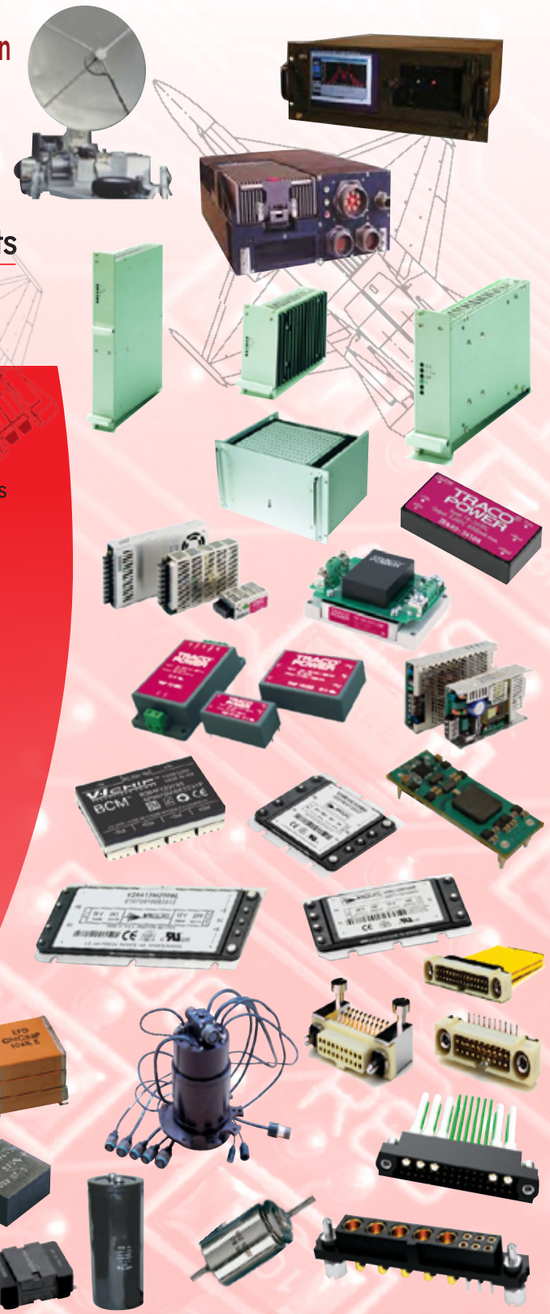

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Create capacity outside DPSUs

The demand for offset for commercial aircraft purchase was spearheaded by HAL, Aeronautical Society of India as well SIATI, among other key players. The first draft paper on National Aeronautical Policy and setting up of an Aerospace commission was prepared when Dr. A.P.J.Abdul Kalam was the President of the Society and it was submitted to government, which included recommendations to introduce Offset in both Commercial and Military Aircraft purchase.

Offset for Defence and Commercial Aircraft purchase in the country is a big boost for the growth of Indian Defence and Aerospace Industry. In order to make offset policy more practical to implement and to involve more Indian industries including those manufacturing civil Aerospace, homeland security and safety equipment, the government has made revisions in DPP.

While there is considerable potential for enhancing the technology and manufacturing service for export under the offset policy, the major constraint is that most of the Indian companies who have been doing the aerospace and defence business are in the small and medium sector. They have built the capabilities over the years.

Considerable capacity outside HAL and other DPSUs needs to be created in the private sectors, with the involvement of the large private sector industry and also enhancing the resources and capacity of SMEs through collaboration and financial support. There is a need for removal of defence Industrial licence with retrospective effect for orders placed from 2005.

To expand manufacturing and technology base in Defence and Aerospace Industry, and take up manufacture of components, systems and assemblies equipments for export to meet the growing offset.

A list of required advanced technologies must be drawn up and value the same and separately negotiate with offset credits. Another impediment is lack of reciprocity on quality certification between DGCA and FAA. While what is certified by FAA or its European/Russian Equivalent are freely imported and used in India and the reverse is not true.

There are several more impediments which need to be listed after interactions with the stakeholders, namely Indian Public and Private sector Industries, Overseas Industries, Supplier Industry, CII, SIATI, FICCI and ASSOCHAM. All of them must join together to interact with Overseas Aerospace Defence Industry, who have a stake in India and practical solutions should be proposed to speed up the capability building and efficiency in implementing the offset policies.

What we need is more joint ventures and strategic long collaborations with Indian and overseas industry to expand our manufacturing base in defence and aerospace industry.

Airshows and defence exhibitions throw up good opportunities for identifying potential partners and forming strategic long term collaborations. I wish Indian and overseas companies participating in the Dubai Airshow all success.

Warmly,

Dr CG Krishnadas Nair
Honorary President, SIATI

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Distinct Progress in India-Russia defence cooperation

Indian Defence Minister A K Antony and Russian Defence Minister A E Serdyukov signing an agreement at the ‚Eleventh meeting of the India-Russia Intergovernmental Commission on Military at Moscow.

In a spirit of a cooperation and understanding, India and Russia recently held their annual meeting to review the defence ties in Moscow and expressed 'readiness to take all necessary measures to further expand the cooperation on a mutually beneficial basis'.

In a Protocol signed after the Eleventh meeting of the India-Russia Inter-governmental Commission on Military Technical, co-chaired by the Defence Minister A K Antony and his Russian counterpart A E Serdyukov, the two sides noted with satisfaction that various diligent steps have been taken 'to deepen interaction in the development of defence technologies, modernisation of military equipment and joint manufacture of military-purpose products'.

'Such cooperation involves the strengthening of interactions between the Armed Forces, defense industry enterprises and research agencies of the two countries', the Protocol noted.

Visibly happy at the outcome, Antony said after the talks: "Distinct improvements have taken place in the pace of progress of many critical projects in the last one year. We value our friendship a great deal. Together we would like to consolidate our relationship and take it forward".

At the talks, the Indian delegation included the Defence Secretary Shashikant Sharma, Secretary Defence Production Shekhar Aggarwal, Indian Ambassador Ajai Malhotra, Lt Gen MS Buttar, Air Marshal R K Sharma, Vice Admiral N N Kumar, Chief Controller of Research & Development of DRDO Dr. Avinash Chander, HAL Chairman Ashok Nayak and DG Acquisition Vivek Rae.

Speaking at the meeting, Antony said India-Russia defence relationship has grown both in content and scope over the years. He said India highly values the time tested, strong and multi- faceted relationship with Russia.

'There is a strong impulse, both at the level of the Government and among the people of India to further strengthen our special strategic partnership which is based on mutual trust and complimentarity of interests. The world in general and our region in particular, are witnessing significant developments which have an impact on regional and global security. In the evolving scenario, the special strategic partnership between our two countries assumes even greater significance. Both our countries must continue to strengthen our joint efforts to address these challenges'.

Listing some of the projects where both sides have put in years of effort to bring success, Antony said, 'The project for joint development and production of the Fifth Generation Fighter Aircraft, BrahMos missile system, licensed production in India of T-90 tanks and SU-30 MKI aircraft are proud examples of our strong relationship. We are sure that the success of these projects would be models for the implementation of several other projects of mutual interest', he said.

Referring to planned delivery of Aircraft Carrier INS Vikramaditya, Antony said, 'We are keenly awaiting the induction of the Aircraft Carrier into the Indian Navy. This project has attracted considerable public attention in India. We hope that the induction will take place, on schedule, by end 2012. We also hope that all activities on the MiG-29K are completed to achieve synchronisation with the aircraft carrier'.

Nevertheless, Antony drew the attention of the Russian side to the vexing issue of delayed export clearances for vital repair equipment for already contracted weapons systems. This has been affecting supplies of defence equipment and spares.

The Russian side assured the Indian side that the matter was receiving attention at highest levels in the Russian Government and efforts would be made to institutionalise measures to avoid such delays in future.

Antony expressed India's concern at the tardy progress made in the design and development of the Multi-Role Transport Aircraft (MTA). The two sides agreed to accelerate the progress of this Project.

With regard to the Fifth Generation Fighter Aircraft (FGFA), being jointly designed and developed by India and Russia, both sides noted that the first stage of the preliminary design contract has been successfully completed and the second stage of the PD Contract is to be finalised before September, 2012.

The training programme for the Indian engineers covering nearly 20 courses was completed in July, 2011. Both sides agreed to continue discussions for finalization of the R&D contract as per the agreed time lines of the general contract signed in December, 2008.

In his address, the Russian Defence Minister Mr Serdyukov described India-Russia defence tie as a 'stable and promising relationship'.

Eurocopter eyes new growth opportunities in India

Eurocopter is looking at India as a developed and high potential market and keen to to enhance its presence in this country in future. The company which is having decades of association with Indian Aviation Industry is ready to transfer its technology for manufacturing helicopters in India, says Mr Michael Rudolph, Director Market Development – Public Services & Heli-Emergency Medical Services.

But Indian regulations need change for the growth of Helicopter Industry, said Mr Rudolph, who was in India to represent Eurocopter, the world's largest helicopter manufacturer, at the National Seminar on 'Use of Helicopters on Airborne Law Enforcement' organised by the RWSI at Delhi Flying Club, in an exclusive interview with Aeromag Asia.

"Like Open Sky policy in Europe, Indian regulation needs changes, for Helicopter service in more routes. The use of Helicopter for Police service and Air Ambulance in now limited to only some dedicated corridors in India", he noted. Rudolph is a pilot, who also headed Militarization Programme Light Helicopters for EADS between 2004 and 06. He was also head of the ILS Training & Simulation – for NH 90 / Tiger helicopter.

India is offering huge opportunities to Eurocopter, since it has highly skilled and educated labour with engineering and IT capabilities. India and China are the two countries which is having growth potential.

Air Ambulance and Police are two key potential markets which Eurocopter is now focusing in India. "We are closely watching the market and trying to tap the potential, Mr. Rudolph said. "Government service, Civil, Military Airborne systems, Police, Public service, Oil and Natural gas service are also big markets in India".

Since India is already an emerged market, Eurocopter is patiently waiting new opportunities, said Mr Rudolph, who is Eurocopter's representative for Security and EU related projects across all EADS Divisions. Eurocopter has already opened its new centre of excellence in Mumbai after its presence Delhi and Bangalore and is planning to increase the Assembly line and Maintenance centres in India. For this Eurocopter is ready to partner with Indian companies.

Since the life of the Helicopters is 15-20 years, maintenance centres also need modification. The fully owned subsidiary of Eurocopter is doing business with Pawan Hans. In other segments, Eurocopter is watching the developments in the Indian market. "Since we are the market leaders in the Helicopter Industry, we can provide better service to India", said Rudolph.

Eurocopter officials spoke on the company's lead in providing specifically modified choppers to meet the demands of homeland security and rescue operators. Eurocopter enjoys 50 per cent share of the Public Services market which includes police, border patrol, coast guard and law enforcement missions.

SMCEL

to enhance capability

SM Creative Electronics Ltd (SMCEL) is an Aerospace and Defence products manufacturing company established in 1992. A public limited company, it employs close to 300 employees with eight wholly owned subsidiary companies across the globe.

SMCEL is one of India's most respected manufacturers of Switch Mode Power Supplies and Power Conversion Systems. It undertakes design, development and manufacture of complex Power Conversion systems fully complied to critical functional, environmental and design constraints. These include airborne systems, ground and ship-borne Systems.

The Research & Development team applies state-of-the-art technology in its product design combined with a team of highly skilled engineers. SMCEL has successfully delivered Power Conversion products for Missile – Astra, K15 ; Torpedo-Transmitter and Receiver Power Supplies for TAL, Takshak, Varunastra ; Airborne-MMR, IFF, Mission Computer, Jammer, Solid State Radar, Electronic Warfare system etc., Missile Launcher Power Systems for Agni, 3D Surveillance Radar – Rohini, Revathi etc.,

SMCEL has successfully developed and supplied world class VME Power Supply as a joint development with Centre for Airborne Systems (CABS) and delivered more than 150 units of a fully Mil-Standards qualified product.

The company has set a goal to increase its revenue from domestic and export market by 100 per cent in FY 2011-12.

SMCEL specialises in offering Build to Print & Build to Specs products for Defence Offset, serviced with its manufacturing facility in Gurgaon and Baddi.

SMCEL has custom designed, developed and manufactured more than 180 types of Mil grade Switch Mode Power Supplies and Power Conversion systems for a range of DRDO Programmes - Airborne Radar, Onboard Missile System, Torpedo, Ground 3D Surveillance Missile Launcher Sonar, Communication system, Navigation Systems etc.

These systems are designed and developed by thorough design analysis- mechanical and electrical engineering design, thermal analysis and environmental specifications requirements of shock and vibration etc.,

SMCEL is certified by CEMILAC and also DGAQA approved. SMCEL has been awarded Industrial Licence for facilitating Defence Offset. Currently, it's negotiating Defence Offset contracts with few major European manufacturers.

The company's vision is to emerge as a global player for Power Conversion Systems and Digital Electronics in the Aerospace & Defence Market.

Subramanian Bhaskaran
General Manager-Marketing

SMCEL design services are targeted at new product development for niche market segment covering Aerospace, Military, Nuclear, Industrial and Railway market segments.

SMCEL's recent remarkable achievements are the design, development, Qualification and supply of complex Multi-Output Power Conversion system for DRDL – Astra Missile Power Supply and for Launcher Control Power Supply for ASL.

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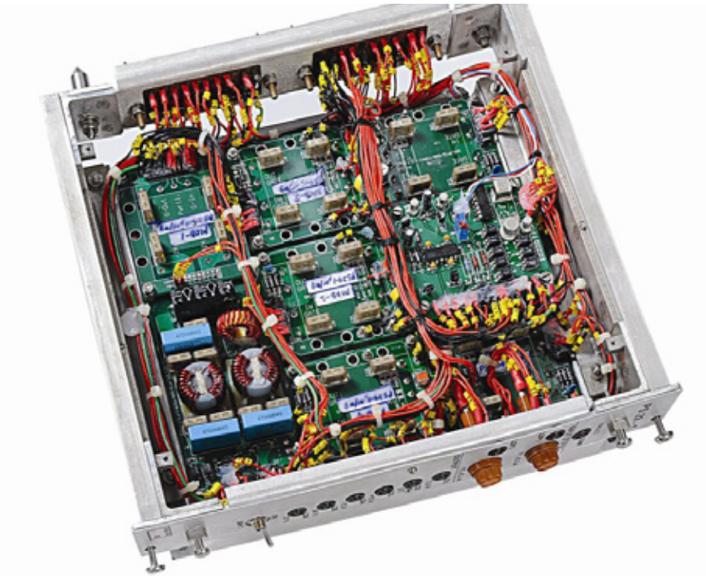

It is constantly working on improving its product technology, quality, delivery and long term product support.

SMCEL is currently in the process of implementing AS9100C, Aerospace and Defence Quality Standard Certification.

Stefan Krol
President of BTC

Bofors eyes Asia for growth

Bofors Test Centre (BTC), Sweden, with all testing facilities for Arms and Ammunitions, is looking towards Asian countries for grow its business. The company has a wide range of test facilities.

"We are the only company with all test facilities for Ammunitions and Explosives in Europe. We came to India with BAE Systems for some projects. There are lots of opportunities for Testing in India for Arms and Ammunition.

The third party test is mandatory for this. We have Wind tunnel facility, Chemical Analysis, Metallurgical analysis, Missile and Gun test. Missiles should not explode while transportation. So fragment, impact and drop test is necessary for assessing its quality. We have a 100 sq. km area of test centre", said Stefan Krol, President of BTC.

BTC performs qualified testing, primarily of weapons, ammunition and other products within the field of explosive substances, service life extension as well as destruction of explosive substances.

It possesses large field of operations (approx. 200 square km) with six permanent test sites with direct firing capability of 600 – 1000 m and four of them with an indirect firing capability of 26 – 28 km. All of these are equipped with Permanent protection for personnel and measurement equipment, thermal treatment chambers (temperature range -54°C to +76°C), bullet catchers (stone but, concrete bunkers).

Bofors assists manufacturers of both civilian products and defence material in solving problems through testing. It can test everything from component parts to complete systems.

Over the years, BTC has become a major player on the international market.

As an impartial organisation, the company has carried out several major qualifying tests for companies such as Rheinmetall, Lockheed Martin, MBDA/ TDW and BAE Systems.

In Environmental testing, the company can find out exactly how the products and materials perform when subjected to rigorous climatic and mechanical tests. BTC possesses direct firing special facilities, indirect firings, long range indirect firings, full range tracking, impact registration and ammunition.

BTC establishes a complete IM signature by carrying out a full range of tests with a complete testing and evaluation like Bullet impact test, fragment impact test, shaped charge jet impact test, sympathetic reaction test, slow cook-off test and fast cook-off test.

In terms of measurements and recordings, BTC offers transient recorders, radar for measuring muzzle velocity up to 35 km, High speed video, HD video, Optical tracking system, telemetry, Sound station and open jet wind tunnel.

MBDA eyes missile contract in India

India is looking to replace its Strela and Igla surface to air systems and therefore has issued an RFP (Request For Proposals). With its Mistral air defence having already won a competition to arm India's ALH Dhruv helicopters, MBDA has been keen to propose all the advantages that the missile offers as a ground-based air defence weapon.

An added advantage of course lies in the supply logistics as well as the service and maintenance benefits associated with a multiple use missile.

Loïc Piedevache, head of MBDA's India office points out, "Our stated strategy in India has always been to work with local industry and to advance technology transfer wherever feasible. We are actively discussing with Indian partners right now on how to advance the country's own defence technology and industrial capabilities. So we are exceptionally well positioned to get local production capability of Mistral up and running as soon as required. This could of course be a single Mistral production line in India for both the Dhruv and for the surface to air requirement should it be selected".

When a missile system can boast a truly unmatched kill probability of 96% achieved after well over 4,000 firings, it is hardly surprising that its customers have remained exceptionally faithful over the years. In fact, not one Mistral customer has elected to discontinue its use since the weapon's first inception nearly a quarter of a century ago.

Mistral has indeed been chosen by 39 customers in 27 countries to provide air defence against a wide spectrum of air targets from UAVs and helicopters to cruise missiles and combat jets flying at supersonic speeds. It is probably the most versatile missile in MBDA's product range with applications from tripod, vehicle, naval platform and helicopter mounted launchers.

To understand why so many countries have put their faith in Mistral, one only needs to look at the missile's very special features. It is these features that have seen the French armed forces depend on Mistral during its various deployments around the world. Campaigns in Lebanon, Djibouti, Ivory Coast, the Gulf, former Yugoslavia and Kosovo all saw French forces protecting themselves from air attack with Mistral - the most unequivocal of customer endorsements. The Ariane launch centre in Kourou (the European Space Agency's rocket launch centre in French Guyana) is also protected by Mistral systems.

Interestingly, South Korea, a country which has its own home-developed and manufactured VSHORAD (very short range air defence) system, has nevertheless chosen to put its faith in Mistral. The weapon will in due course be providing portable air defence for the Korean Navy's patrol boats. Following live fire drills and as recently stated in the press, the Navy and the state-run Agency for Defence Development (ADD) confirmed that Mistral showed an outstanding performance against not only aircraft but also floating objects and warships.

Since entering service in 1988, Mistral has, like most MBDA weapons, undergone continuous evolutions to meet developing customer requirements in the face of developing and perceived threats. In each case, MBDA has made sure that customer logistics and user training are not compromised. Significantly, Mistral was first conceived as a firing post/launcher system missile with all the features and capabilities that this implies (unlike some shoulder-mounted systems that have attempted subsequent upgrades for tripod launch). All these features are packed into a lightweight missile that weighs only 18.7kgs and is therefore easily deployed as a man portable system.

MBDA's Mistral offers all the necessary features to meet the range of air threats that could be confronted by today's surface forces. The Mistral MANPADS system is easily portable by two operators, one carrying the missile and the other the firing unit. Should a threat manifest itself suddenly, the system can be brought into action rapidly and the target quickly engaged. The optional IFF (identification, friend or foe) interrogator installed in the launcher operates while the target is being tracked.

Critically, with its passive IR seeker (the passive seeker makes Mistral very hard to detect by the intended target) it is fire-and-forget, a vital feature when more than one in-coming target has to be confronted as is the weapon's ability to be rapidly re-loaded. It can be deployed night and day and its 3kg warhead, proximity fuze and high supersonic speed (mach 2.5) will ensure that any intended target at ranges up to and beyond 6km will be successfully neutralised.

To enhance Mistral's air defence capabilities, MBDA can also provide a highly mobile Mistral coordination post, MCP/IMCP to enable day and night coordination and monitoring of up to 12 various Mistral missile equipped ground based air defence units.

IAF on modernisation drive

The threat scenario is periodically reviewed by the Indian Air Force and steps are taken to meet any eventuality. This includes induction of new aircraft and air defence assets as well as upgrade of the operational capability of existing assets.

The IAF has prepared a comprehensive Long Term Prerspective Pan (LTPP) till the year 2027 for modernisation of its fleet to meet the security challenges. The IAF is in the process of inducting various types of fighter aircraft like Medium, Multi Role Combat Aircraft (MMRCA), Light Combat Aircraft (LCA), SU-30 MK1 and Fifth Generation Fighter Aircraft (FGFA). The Government has allocated adequate funds for the purpose.

The Defence Minister A K Antony has said funds allocated for modernisation of the Armed Forces must be utilised in such a manner that wastage and duplication are avoided. Antony also called upon the Defence Scientists to evolve ways to skip the intermediate steps in the country's quest for attaining the level of modernisation achieved by developed countries.

"Funds will not be a constraint for the modernisation process. However, the allocated funds must be utilised optimally and judiciously. While the drive for modernisation must not suffer, we must be ever mindful for economy and avoid waste and duplication. At the same time, we must ensure that the twin processes of modernisation and indigenisation proceed apace simultaneously", Antony said, urging the scientific fraternity to think of ways and means to attain the levels of modernisation achieved by advanced states, without necessarily having to follow all the intermediate steps".

Antony called upon the top brass of Indian Air Force that while steps must be taken to hasten the procurement process 'to plug gaps in our defence preparedness', it is imperative that procurement procedures are followed diligently. As the gestation period for the induction of new equipment is rather long, the Defence Minister stressed the need to breakdown perspective plans for modernisation into short-term and long-term objectives taking into account our strategic requirements.

The Defence Minister assured the top brass of Indian Air Force that the Government will take all measures to ensure that the IAF's capabilities are in consonance with India's stature, aspirations and threat perceptions.

"Our endeavour is to significantly enhance not only the strategic reach of IAF, but also attempt a fusion of potent capabilities in terms of space-based assets, air defence, surveillance, modern aircraft and advanced weapon systems. I am sure that such initiatives will help IAF to evolve into a dominant aerospace power. We must also conceptualise and build asymmetric capabilities to match superior forces. This would act as a deterrent and help in preserving our integrity and sovereignty", he said.

It was also noted that in the face of rapid technological advancements and induction of new generation equipment in Indian Air Force, indigenisation and modernisation of maintenance infrastructure has assumed a very significant role.

IAF is on look out for modern repair facilities right from tools, testers, automation in repairs to material handling equipment for keeping it a highly vibrant and agile force. Indigenisation of weapon system and modernisation of maintenance facilities are closely inter-related and form the guiding principle for self reliance, self sufficiency and reduction of dependency on sources abroad. The industry has a very significant role to play in this regard.

The IAF vision for indigenisation is not limited to only a one-to-one replacement of imported items, but aims at improving upon operational efficiency and reliability through re-engineering, ab-initio design and technology enhancement. IAF is more than willing to extend full support to the entrepreneur or established industry in their contribution towards indigenisation and modernisation.

At the same time, IAF is endeavoring to expand the range of indigenisation to include complex and high cost items, which may generate substantial business for the industry. It is now for the industry to make use of this opportunity to collaborate and consolidate their gains. In the longer run, the growth and additional opportunities would far outweigh the difficulties involved in the process, and in doing so, industry would not only be finding new avenues but, will also contribute towards the national objective of self-reliance.

Emerging industries within India have carved a niche for research and development and production of international quality products in the recent years. The cherished mission of IAF to make it self reliant is feasible only with the support and participation of Indian industry and in fact, today Indian industry has matured to take on this demanding role.

A.K. Mishra is Director (Finance) for HAL

Dr. Ashok Kumar Mishra has taken over the charge of Director Finance of HAL. Earlier, he was Executive Director (Finance) at HAL Corporate Office.

With more than 30 years of service, he is highly experienced in various facets of financial management. He is adept at utilizing corporate resources to drive and deliver financial and business growth.

He joined HAL as Deputy General Manager (Finance) in 1994 and got elevated to the current post of Director (Finance), due to his professional experience and bringing in greater efficiency and profitability to the company.

Dr. Mishra, hailing from Madhbani district of Bihar (Village – Nahas Rupouli), did his graduation from City College from Calcutta university, CA from Eastern India Regional Council, Calcutta and Ph.D from Patna University.

Initially, he joined Bihar Police Building Constructions Corporation, Patna as Chief of Accounts and Secretary in 1983. Subsequently, he was with Bihar State Leather Industries as Chief Accounts Officer, Deputy General Manager (Financial Management) with Uttar Pradesh Development Systems Corpn. Ltd. Lucknow, and Chief Manager (Finance), Indian Telephone Industries (IT) at Mankapur.

He is a fellow member of the Institute of Chartered Accountants of India (ICAI).

Civil Aviation Minister Mr. Vayalar Ravi inaugurating the regional level Indian Civil Aviation Centenary celebration at Bangalore .Air Cmde J.Varkey,Secretary General SIATI, G.M.Rao, President Elect Aeronautical Society of India & Chairman GMR Group, E.K.Bharat Bhusan ,Director General ,Civil Aviation, P. Soundararajan, Managing Director, HAL Helicopter Complex, S.V. Ranganath,Chief Secretary, Govt of Karnataka,Dr CGKrishnadas Nair, President ,SIATI, G.V.K.Reddy, Chairman GVK Group,Air Marshal Dhiraj Kukreja, AVSM,VSM,ADC, AOC in C Training Command, IAF also seen.

Territorial Army completes 62 years

Territorial Army (TA) came into being after the Territorial Army Act was passed in September 1948. Since then TA has come a long way and today has strength of approximately 50,000 in 66 TA Battalions. TA is a unique organization with varied types of units like Infantry, Home and Hearth, Oil Sector (ONGC, IOCL, BPCL, HPCL) Railways, General Hospitals and Ecological Task Forces.

TA today is known for its spirit de corps, dedication and professionalism. Units of TA have participated in various operations and wars since 1951 with credit. Departmental TA units of Railways, Oil Sector, and General Hospitals have rendered yeoman service to the nation. Ecological Task Forces of the TA have carved a niche for themselves in the field of environment. The 135 Infantry Battalion (TA) Ecological, ASSAM was recently awarded with the Times of India Social Impact Award in the environment category.

The sizeable force of TA continues to be embodied in support of Regular Army in far flung and difficult areas contributing immensely to the cause of Nation's Security.

Army Chief, Gen VK Singh, was the chief guest at the function. Brig KP Singh Deo, (Retd), Ex Minister of the State for Defence and Minister of Information and Broadcasting, Maj DY Sema, the present Power Minister in the Government of Nagaland also attended the meeting . MS Dhoni who has been approved for grant of an honorary rank in the 'Citizen's Army' also graced the occasion.

Def-Expo 2012 from March 29 - April 01

The Ministry of Defence has decided to go for open bidding to select an event manager for the Seventh edition of Land, Naval and Internal Security System Exhibition (Def-Expo India 2012) scheduled to be held in Pragati Maidan, New Delhi from March 29 to April 01, 2012.

A Request for Proposal (RFP) in this regard has been put to on NIC's website www.tenders.gov.in on 03.10.2011. Information regarding exhibition is placed on www.defexpoindia.in. The event management companies owned by Indian and of Indian origin, not a subsidiary of any foreign company, which are interested to participate in bidding, may download a copy of RFP from the website (fill up the same) and submit their bids to the Joint Director, Defence Exhibition Organisation, Defence Pavilion, Pragati Maidan, New Delhi-110001 by 1400 hrs on 02 November 2011.

Dubai Airshow set to take off

The Dubai Airshow from 13 to 17 November at city's Airport Expo will be the biggest yet, attracting more than 55,000 trade visitors, and almost four percent increase from the previous show in 2009. F&E Aerospace, the organizer of the show says it is set to welcome up to 1,000 exhibitors to the event.

Alison Weller, Managing Director of F&E Aerospace, said that the main objective of the Airshow is to provide a platform for exhibitors to network with the aerospace industry and market in the Middle East. As the show grows and develops, this expands and now 20 percent of our visitor attendance comes from outside the region.

With more than 3,25,000 sqm, this Airshow is the largest trade show in Dubai and, in addition to covering three exhibition halls, includes 103 chalets, 11 pavilions and a large static aircraft display area for up to 100 aircraft of varying types and sizes. Innovation is also necessary to sustain growth, stressed Weller and she outlined new activities for November's Dubai Airshow. "As a platform for the industry, we are offering opportunities for participants to address key issues create debate and highlight the UAE's achievements. To this end, we have developed three new initiatives: first and foremost, we are celebrating the country's 40th anniversary. Following on from that, we are launching 'Futures Day', in co-operation with Rolls-Royce , Boeing and Dubai Air Navigation Services (DANS).

For the first time ever, and reflecting the 40th anniversary of the UAE, the flying display will open with the country's own aerobatic team – Al Fursan – which will fly Alenia Aermacchi aircraft. The display will also feature the Patrouille de France aerobatic team, flying Alpha jets.

The static park will display F18, F15, C17, C-130J aircraft and an Apache MH-60 from the US government and an array of business jets from Gulfstream, Bombardier and Cessna.

Helicopters are also making a big appearance at this year's show, with companies such as Russian Helicopters, Sikorsky, Bell and MD Helicopters are exhibiting.

The Dubai Airshow is organised under the patronage of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President & Prime Minister of the UAE and Ruler of Dubai, and in co-operation with Dubai Civil Aviation Authority, Dubai Airports and the UAE Armed Forces.

Economic growth to drive Indian aerospace industry: Pallam Raju

The economic growth in the country and rest of Asia will drive the Indian aerospace industry growth, said Mr M M Pallam Raju, Minister of State for Defence.

Other key drivers and enablers are huge domestic demand, defence offsets, Information Technology prowess of Indian industry and track record of honouring Intellectual Property Rights.

There exist a lot of potential for the Indian industry not only in the defence sector but also in the civil aerospace sector. Maintenance, Repair and Overhaul activities will further propel the growth of aerospace industry.

Indian Air Force expects life long commitment from the Indian Industry, according to Air Chief Marshal NAK Browne

The Chief of Air Staff observed that Indian Air Force expects life long commitment from the Indian Industry for its short term and long term requirements. "We cannot keep relying on the foreign Original Equipment Manufacturers forever. Therefore, Indian Industry has the support of the Indian Air Force as IAF is ready to lead the race".

By giving a special emphasis on the importance of Indian private sector industry's participation in the major upcoming projects, he said that IAF expects larger participation in the Multi-Role Transport Aircraft (MTA). He further said that MMRCA deal will most probably be signed by the end of this year. This deal will generate billions of dollars worth of opportunities for the Indian industry right from system integrator level to tier 2, 3 and 4 level.

Industry officials said out of Fortune 500 companies, 350 companies have their Research and Development bases in India. Defence Offsets have provided unique opportunity to the Indian Industry. "We need to learn to partner with appropriate players and take quicker and bolder decisions. Greater involvement of the industry in the Defence and Aerospace sector will only benefit the nation as a whole. There are several examples wherein Indian indigenized content had reached as well above the expected limit in a very short span of time", they said.

Mr Ajay Prasad, Former Secretary Civil Aviation, said that offsets in the civil aviation has benefited the Indian industry. Therefore, the criticism of the dilution of the defence offsets by extending it to civil aerospace and internal security does not hold any grounds. We should try to leverage defence offsets for the overall benefit of the Indian Industry.

According to officials, as India grows economically and takes on bigger challenges of ensuring peace and stability in the region, the country forever cannot rely on imports to meet its defence requirements. Therefore, private sector participation in the defence production will play the crucial role in achieving the larger national objectives. In our endeavour, we would require the support of the Armed Forces, Industry, academia and other stake holders.

BEL wins PSE excellence award

BEL has been conferred PSE Excellence Award (2011) for R&D, Technology, Development & Innovation by the Department of Public Enterprises (DPE), Government of India, and Indian Chamber of Commerce in the Maharatna and Navratna category.

PSE Excellence Awards have been instituted to recognise the remarkable work done by Central PSEs in various fields and contributions made to the economic uplift of the country.

THAAD achieves intercept of targets at pacific Missile range facility

The U.S. Army Test and Evaluation Command, the Missile Defense Agency and the U.S. Army conducted a flight test of the Terminal High Altitude Area Defense (THAAD) weapon system to track, detect and intercept two different targets utilizing two THAAD interceptors – a first for the system.

The flight test, known as FTT-12, was designated an Initial Operational Test and Evaluation test by the Director, Operational Test and Evaluation, Office of the Secretary of Defense. The Director, Operational Test and Evaluation and the Army Test and Evaluation Command will also independently evaluate the operational effectiveness of the system. It was conducted at the Pacific Missile Range Facility (PMRF) on Kauai, Hawaii.

During the mission, the first THAAD missile intercepted an air-launched short-range ballistic missile target. The second THAAD missile intercepted a sea-launched short-range ballistic missile target a short time later. Since 2005, the program has completed 12 flight tests, with nine-for-nine intercepts.

THAAD is the only missile defense system with the operational flexibility to intercept in both the endo- and exo-atmospheres to provide versatile capability to the warfighter.

A key element of the nation's Ballistic Missile Defense System (BMDS), THAAD is a Missile Defense Agency program, with the program office located in Huntsville, AL. The agency is developing the BMDS to defend the United States, its deployed forces and allies against ballistic missiles at all ranges and in all phases of flight.

Saab deepens its commitment with new Indian entity

Jan Widerström
Chairman of the board for
Saab India Technologies Pvt. Ltd

Saab has strengthened its commitment as a long-term partner to the Indian defence industry, armed forces and national security with its new Indian entity "Saab India Technologies Private Limited".

Saab has been a supplier to the Indian armed forces since decades. Saab signed its first license agreement in India very early in the relationship, which continues to be strengthened. Saab India Technologies Pvt. Ltd. is a result of a continuous presence in India together with the defence industry private and public sector as well as research and development organisations.

Saab India Technologies Pvt. Ltd. is a wholly owned subsidiary of Saab, establishing India as a strategic home market of the future. Saab provides world-leading products, services and solutions within the fields of defence, aviation and civil security. Saab offers its complete product range in India for all defence and aviation related business opportunities from underwater, land and aerospace.

Saab contributes, with its know-how and commitment, to development in India by strengthening an indigenous and independent defence base, transfer of technology and thus economic development enhancing civil security and thus social development.

"Our commitment to the security of the Indian society manifests through R&D investments, customised solutions and tailor made offset projects. We are intensifying our operations in India with a long-term perspective contributing with technological know-how to the Indian defence industry," says Jan Widerström, Chairman of the board for Saab India Technologies Pvt. Ltd.

"In Saab's ambition to enable India to develop a strong distinct position with its developing defence industry, the company continues to develop its competence in India with a growing organisation bringing in Swedish experienced personnel and hiring local Indian expertise. Saab India Technologies is the preferred employer for all competence and resources under the Saab umbrella", says Inderjit Sial, Managing Director for Saab India Technologies Pvt. Ltd.

Anil Kumar is CMD, BEL

Anil Kumar has taken over as the Chairman and Managing Director of Navratna Defence Public Sector Undertaking Bharat Electronics Limited (BEL). He succeeded Mr Ashwani Kumar Datt, who retired on superannuation.

Mr Anil Kumar was Director (Other Units) of BEL before his elevation as CMD. As Director (Other Units), he headed 8 of the 9 Units of BEL located at Ghaziabad, Panchkula, Navi Mumbai, Kotdwara, Pune, Hyderabad, Chennai and Machilipatnam.

Mr Anil Kumar joined BEL at Ghaziabad Unit in February 1975 after graduating in Mechanical Engineering from Punjab University in 1974.

He completed M.Tech from IIT Delhi in 1979 while in service. He has extensive experience in Development & Engineering, Production, Material Management and Installing and Commissioning of Radar and Communication systems.

Mr Anil Kumar has served as Chief Regional Manager at BEL's New York Regional Office for two years.

He has visited Russia, Poland, Belgium and France in connection with Technology Transfers and Project Work.

HAL eyes USD 6 billion turnover by 2016-17

HAL will achieve sales turnover of USD 6 billion during 2016-17 and ascend to 20th position among global defence companies, says the compay's Director (Human Resources), V M Chamola, in an exclusive interview to Aeromag Asia.

V M Chamola
Director (HR)
HAL

Could you elaborate on the HR Policy of HAL?

HR Policy of HAL dovetails HAL's vision "To become a significant global player in the aerospace industry". The company has chalked out plans and strategies to launch itself into the distinguished league of global companies in the aerospace arena.

Human Resources have been identified as thrust area along with Research & Development, Export promotion, Technology upgradation, Lean manufacturing practices and CRM. Self reliance in aircraft production and maintenance encompasses multi role fighter, trainer, transport and helicopter programmes slated for acquisition by the Indian Defence Services. HAL plays an important role in the modernisation of the Indian Air Force. The turnover is estimated to reach USD 6 billion by end of 12th Plan (2016-17).

The Business Model of the Company is constantly reviewed to achieve the targeted production. HAL has all along been providing third and fourth line maintenance and spares support to its customers. HAL now plans to increase the scope by providing seamless maintenance support encompassing first and second line support for aircraft and helicopters at customer bases. HAL offered to maintain the customers' assets in optimum flying condition for Hawk fleet of IAF. This support is being extended progressively to ALH and other platforms.

HAL's belief is that "People are key differentiators for sustained success". This belief drives the HR Policy. The objectives are: Availability of Total Quality People to meet the Organisational goals; Continuous improvement in Knowledge, Skills and Competence (Managerial, Behavioral and Technical); Development of Core Competence in High-Tech areas; Promote a Culture of Achievement & Excellence with emphasis on Integrity, Credibility and Quality; Maintain a motivated workforce through empowerment of Individuals and Teams; Ensure Organisational Learning; and play a role directly to enhance Productivity, Profitability and improve the Quality of Work Life.

To meet all the current and emerging challenges, the Company needs HR capabilities that support a technologically savvy world class Aviation Design & Manufacturing Organisation and total alignment of HR Policies with the core business of the Company.

Getting the best out of people is the primary thrust of HR, with facilitation mechanisms of Competency building, Knowledge Management, Coaching, Mentoring and Performance Management. The HR processes viz. Recruitment, Placement, Compensation, Career Growth & Succession Planning are linked to the current and future projects of HAL.

HAL reviews the suitability of HR Policies from time to time and fine tunes them by making suitable changes to align with the Business Strategy of the Company.

What's the total number of employees that HAL has now? Do you see excess flab in the company? Is there a proposal to rationalise the staff going forward?

The total number of employees in HAL as on 30.09.2011 is 33100 (Executives 9956 & Workmen -23544).

Overall Sanctioned Strength (OSS) of Manpower is assessed & released based on workload, on year to year basis. The strength of employees is well within the Overall Sanctioned Strength, which stands at 36316.

HAL is poised for a big growth in projects and revenue. The future projects like Light Combat Helicopter (LCH), Fifth Generation Fighter Aircraft, Multi-Role Transport Aircraft (MTA), Light Utility Helicopter (LUH), Medium Lift Helicopter (MLH), Basic Turboprop Trainer Aircraft (HTT – 40), Medium Multi-Role Combat Aircraft (MMRCA), Armed Variant of ALH with Weapons & Shakthi Engine, Jaguar DARIN – III Upgrade Programme are in the pipeline. With the current and future projects, the manpower requirement will grow up to 42670 during 2014-15, as per the Perspective Plan. These projections are after 20 per cent rationalisation of manpower with the introduction of revised incentive scheme. All efforts are put in place to ensure that the Organisation stays 'fit'.

There is a perception that HAL has an ageing staff. What's your take on that?

HAL is enriched with seven decades of experience in aviation industry. A cultural shift is progressing well across the company due to induction of young and bright Engineering graduates from Elite Institutes and Diploma & ITI holders. This helped us to maintain proper job-fit of the employees.

HAL is comfortable with the blend of rich experience of senior employees and knowledge / skill updates of young inductees, to ensure effective outcome in the project management.

As a result of induction of 13000 employees and superannuation of 7200 employees in the last 5 years, the average age of employees is reduced from 45 to 40 year and it is expected to reduce further in future.

What are the employee-friendly initiatives that you are planning to take?

HR processes have been streamlined and put in place various initiatives like Information dissemination through Intranet, service delivery of various benefits, hassle free administration of facilities, Mentoring, Knowledge Management etc. Various forums and competitive programmes like, Productivity Week, Quality Month, competition in Quality Control Circles, Suggestion Scheme, Service Awards etc. are created for the participation of Workmen and Executives.

Going forward, a structured Communication Policy for Top Down and Bottom up Communication is thought about. This will ensure the periodic interaction by senior executives in Open Forum, Open door communication at designated times. To motivate Executives and speedy realisation projects, R&D Awards and Excellence Awards for Workmen and Executives in Manufacturing and other functional areas are being contemplated. An e-enabled Performance Management System is also planned.

What's your strategy to retain and attract best talent to work for you? Is there variable pay structure in place? What's the differentiation that you bring to the table?

HAL recruits Management Trainees from open Market and Design Trainees through Campus Selection from IITs, NITs, BITS Pilani etc. Initiatives such as changes in compensation structure, introduction of performance related pay, introduction of fast track productions (IMS) & changes in induction & post induction training programs put in place for retaining the talent. The attrition rate was only 1.3% during 2010-11.

The company has variable pay in the form of Performance Related Pay (PRP) for Executives. Individual, Divisional & the company's performance is linked with PRP. Incentive Scheme for the Workmen is linked with deliverables of Components/ Subsystems.

Our focus will be to develop and strengthen a Performance and learning culture in the organisation. Various HR initiatives have been put in place in this direction.

Are there any plans to set up training academies or centres of excellence?

The Company is in the process of setting up an integrated campus for a 'Centre of Aerospace for Management Excellence and Leadership' in Bangalore which will cater to the growing needs of Competency Development and strengthening of the Leadership Pipeline. The Centre could be developed into a virtual university with tie-up with IITs, IIMs, National Law School of India University, Bangalore and other Institutions of Academic excellence in Technology, Management, Legal and other areas of Corporate Management.

There are Centres of Excellence for Blade Manufacturing, Landing Gear, etc. The Company also envisages transforming the technical training institutes into centres of excellence in specialised fields such as Aero Engines, Aircraft Structure, Avionics etc.

Do you see shortage of quality manpower in the marketplace? Are there serious impediments in this context?

In HAL's context, the market place is more for entry level Executives, as it is difficult to find middle and senior level talent suitable for our requirement, especially for technical skills. We are able find talent in the form of Management Trainees (MT) and Design Trainees (DT) and are groomed for our requirements. The company has put in place Induction Training for MTs/DTs which is intended to bridge the gap between the academics and Industry. The 52 week structured training consists of one Semester at IITs/AFTC to strengthen the technical skills and orientation towards Aeronautics. The training also has focus on Basic Management Training. To improve the technical, design and managerial capabilities, the company has a scheme for sponsoring Executives for Higher Education at Cranfield University-UK, IITs (Kanpur, Kharagpur, Madras & Roorkee), MDI- Gurgoan, IMI-New Delhi & XIME Bangalore.

Where do you want to see HAL five years down the line?

HAL is poised for a multi fold growth in the coming years. Presently, focus is given to deliveries of Hawk, SU-30MKI and ALH to meet the planned acquisition rate by IAF and ARMY. Production of Light Combat Aircraft (LCA) to the series production standard is planned to commence from this year.

Further, productionising of Light Combat Helicopter, Intermediate Jet Trainer and Light Utility Helicopter will be the focus. It is envisaged to establish new production facilities for LUH and IMRH.

In coming years, HAL will be a leading player in the modernisation of the Indian Armed Forces planned through future acquisition of Medium Multi-role Combat Aircraft (MMRCA), Fifth Generation Fighter Aircraft, Multi-role Transport Aircraft (MTA), Basic Turboprop Trainer (HTT-40), and through upgrade programs on the Mirage 2000, Jaguar DARIN aircraft. These plans provide opportunity for HAL to participate through indigenous design and development, co-development, licence production, public private partnerships & joint ventures. It is envisaged to establish new production facilities for manufacture of airframe of MMRCA, Engine of MMRCA and engine for LUH and MLH.

HAL will achieve sales turnover of USD 6 billion during 2016-17 and ascend to 20th position among global defence companies.

What are your focus areas currently? What are the short and medium term goals you have set for yourself as Director (HR)?

The growth profile of both Business and Manpower are brought out at above paragraphs. The focus is on enabling the execution of current projects and development of future projects. The approach is:

To develop a robust leadership pipe line with emphasis on Succession Planning;

To develop contemporary Technical Capabilities & Technology Pool and Skill Replenishment for superannuating critical skills.

To prepare the Organisation for the changing Business Model (Performance Based Logistics).

To enable process improvement with regard to planning / manufacturing / supply chain management by adopting globally recognised concepts, methods and achieve even flow of production;

To improve the level of employee engagement and building the work culture to enable high performance through ERP implementation; Performance Standards & Performance Management; Strengthening the implementation of Performance Related Pay & Internal Merit Scheme (IMS) for high fliers;

To improve compensation package and make Performance Pay significant;

From the information furnished above, it can be seen that a large number of employees inducted in the Company belong to the Generation 'Y'. These people are well informed, connected and have aspirations that are different from that of previous generations. Down the line 5 years, 75% of HAL's employees will belong to this category. It would mean a new HAL is getting built up. How do we induct amendments in the working culture of HAL to optimize their talents? Considering their energy, HAL needs to match the rhythm of organisational working/ decision making process, delivery schedules, quality programmes that would ensure prominent position in the Defence Aviation.

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Our Product Range

We have successfully indigenised tubes for the following segments, which has proved to be critical import substitute for the country.

S.No.	Aircraft	wheel size
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2.	HPT - 32 NOSE WHEEL	5.00 - 5
3.	KIRAN - NOSE WHEEL	6.00 - 4
4.	CHETAK - MAIN WHEEL	355 X 155
5.	CHETAK - NOSE WHEEL	355 X 155
6.	CANBERAA - MAIN WHEEL	43 X 12.5-21

Future Indigenisation Plans

The following tubes are in the process of indigenisation for other types of aircrafts, such as

- IL-76 (Transport Aircraft)
- AN 32 (Transport Aircraft)
- MI 8/ MI 17 (Helicopters)
- MI 25 / 35
- ISKARA (Light Aircraft)
- MIG 21 (Combat Aircraft)
- MIG 23 (Combat Aircraft)
- MIG 27 (Combat Aircraft)
- MIG 29 (Combat Aircraft)
- MIRAGE (Combat Aircraft)

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ILA 2012 to take place on new exhibition grounds

Eurofighter at Aero India 2008

Construction work is well under way for the new ILA grounds, which will be located directly next door to Berlin Brandenburg Willy Brandt, the capital's future airport, at a distance of only 30 minutes from central Berlin.

West of the airport new exhibition grounds are being built to host the Berlin Air Show. The grounds will adjoin the south runway and boast all the ILA's typical features, such as trade fair halls for the world's aerospace industry, outdoor sites for displaying aircraft of every type and size, chalets for catering exclusively to VIPs, and a control tower for the ILA fair management.

Other features will include numerous facilities providing services and catering, a conference centre with a large number of meeting rooms and a high-tech press centre. Compared with the ILA's previous location the new exhibition grounds will be more compact, shortening the distances visitors need cover. Concentrating individual aerospace sections in smaller areas will make it easier to directly target representatives of the industry.

Building of new exhibition grounds is fully on track

Meanwhile, ground leveling measures have been concluded. The pipes have already been laid down which later on will supply drinking water to the exhibition site and carry wastewater and rainwater. Overall, more than 11,000 metres of water pipes are being installed to carry drinking water, wastewater and rainwater. A layer measuring approximately 70 centimetres in height (comprising 41 cm of frost protection, 15 cm of ballast, 10 cm of asphalt, plus a 4 cm covering layer), will be laid down to pave over and seal the ground surface.

Construction work is due to be completed in spring 2012. The first event to be held at Berlin ExpoCenter Airport will be PANORAMA, a new fashion show due to take place from 4 to 6 July. The ILA Berlin Air Show will take place from 11 to 16 September 2012. An outdoor display area measuring 50,000 square metres, designated for aircraft displays and the Bravo taxiway, is currently being built on the airport grounds for the Berlin Air Show.

ILA covering all relevant market segments will include Commercial Air Transport, Space Flight, Defence and Security, Equipment, Engines and Materials, alongside the International Suppliers Center (ISC), the HeliCenter, the ILA Career Center, and a wide-ranging conference program.

Unmanned Aircraft Systems (UAS) are currently representing the most dynamic segment in aviation industry. Although UAS are still primarily used for military purposes, they are gaining increasing importance in the civil sector, for example in surveillance and border security operations, environmental protection, and disaster control. ILA supports dynamic growth in this industrial sector.

A brand-new UAS Plaza will be the focal point of the UAS segment at ILA. ILA also offers opportunities for placement of UAS in individual or joint exhibition stands.

The very successful International suppliers Center (ISC) will have two International Buyers' Days in 2012, dedicated to optimal match-making between high-ranking procurement managers from international OEMs and 1st tier suppliers, on the second and third days of the trade event. In 2010, more than 400 B2B meetings took place with 50 registered buyers from seven countries.

The first three days of the ILA (11 to 13 September) are reserved exclusively for trade visitors. The weekend open to the general public from 14 to 16 September will feature a spectacular programme of flying displays.

Defence Minister A.K. Antony and German Federal Chancellor Dr. Angela Merkel at ILA Berlin Air Show 2008

Exhibitor numbers at ILA 2010 were the highest in the event's 100-year history, with 1,153 exhibitors from 47 countries providing an impressive display of products and services from all parts of the aerospace industry. Attendance at the show was around 235,000, of whom 125,000 were trade visitors. Business deals and contracts worth a total of at least 16.5 billion dollars (approximately 14 billion euros) were concluded at the fair.

German Aerospace industry, ILA and India: a long tradition of close cooperation

Cooperation of both countries in aviation industry has a tradition of several decades, be it for helicopters or for fixed-wing aircraft. A number of German aerospace companies are already collaborating successfully with Indian firms. EADS/Airbus/Eurocopter and Diehl Aerospace for example are collaborating with Accord from India on developing software.

MTU Aero Engines has already been working together successfully with Indian airlines in MRO. RUAG and HAL are partners constructing the Dornier 228. Liebherr Aerospace has plans for future collaboration with Indian companies to build air-conditioning, flight control systems and undercarriage. In recent years other companies such as Tesat Spacecom, Hydro Gerätebau, Aerodata and Tennant Metall & Technologie have established partnerships with Indian airlines and service enterprises.

Lately, the Eurofighter – implying a strong commitment for industry cooperation - is a strong contender for the future Indian fighter aircraft and on the short list. It was presented by the German Air Force and its Former Air Chief at the Aero India 2008.

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Elbit's CoMPASS gains demand

Elbit Systems has been awarded contracts by several customers in Asia to supply many dozens of observation systems for maritime patrol aircraft, vessels and observation towers. The total value of these new contracts is approximately $20 million, to be supplied over three years.

These contracts follow another $20 million contract, awarded earlier this year, to supply an Asian country with dozens of CoMPASS payloads for maritime patrol aircraft.

Under the above mentioned contracts, Elbit Systems' Electro-optics Elop unit will deliver various payloads from the CoMPASS family, including the Micro CoMPASS, an extremely lightweight electro-optical system already in use by world-leading armies, as well as the DCoMPASS, a highly advanced system installed on board patrol aircraft, unmanned aircraft systems, coastguard vessels and frigates that provides users with exceptionally high resolution digital imagery for both day and night.

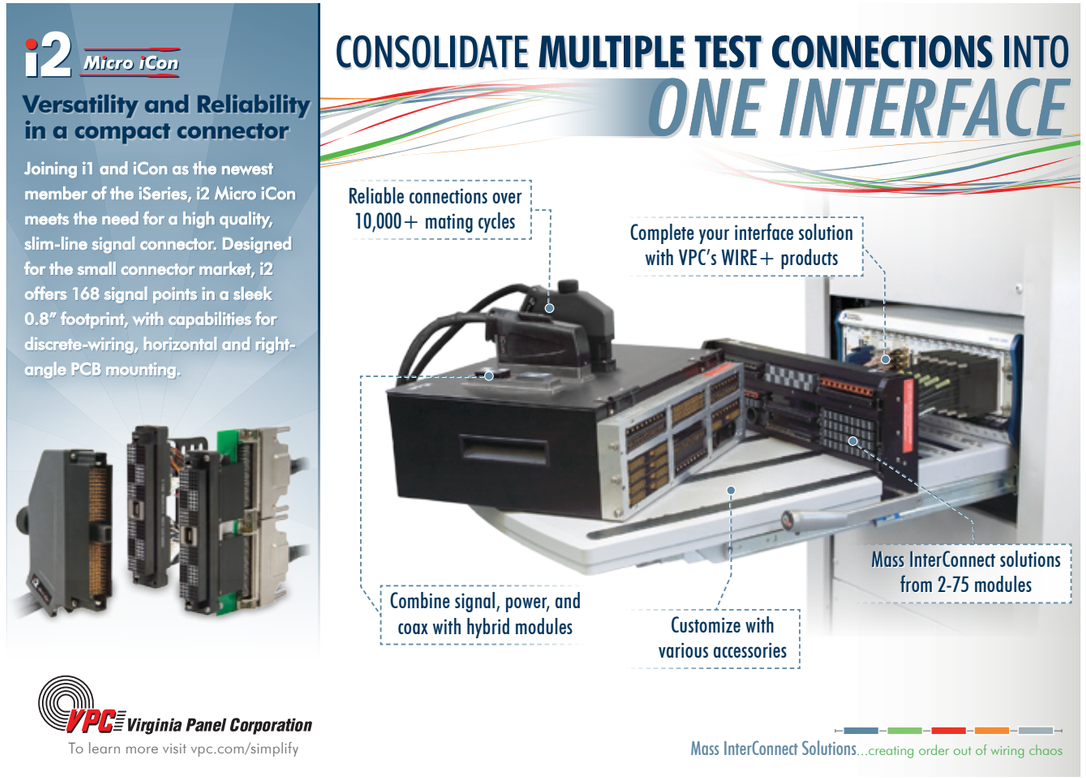
This demand has resulted in new orders from both existing and new customers, including orders for systems for new platforms.

Secure communications for UK Royal Navy

An infrared short-range mobile communications system from Link Microtek (Stand S3-160) has been installed on the UK Royal Navy's new Type 45 destroyers, providing officers on the bridge with a secure, interference free voice communications facility.

Other than the link from headset to battery pack, the system has no wires and therefore gives operators complete freedom of movement while enabling them to speak to each other or to link into the ship's main communications system via a central base station.

The system's low-level infrared digital encoding technology poses no health hazard, even though it is capable of covering areas up to 10,000m2.



Goodrich to provide SilMU02 for CIRIT

The Goodrich Corporation's facility in Plymouth, UK, has received a contract to supply its SilMU02 inertial measurement unit for Roketsan's CIRIT laser-guided rocket.

The CIRIT system is based on the 70mm (2.75in) aerial rocket, but Roketsan has developed a new warhead rather than modify existing rocket sections.

oketsan has developed CIRIT to arm attack helicopters, notably Turkey's T-129 ATAK fleet. The requirement to fit a guidance package into the confines of the 70mm rocket in turn produces a need for a very small inertial measurement unit (IMU). Using micro electro mechanical systems technology, SilMU02 is about a tenth the size of legacy IMUs, but provides very precise inertial measurement. Proven in operational service, SilMU02 also offers the flexibility for adaptation to Roketsan's mechanical and electrical interface needs.

Vasvik award presented

Dr. V. Bhujanga Rao, Distinguished Scientist and Chief Controller R&D, DRDO, and former Director, Naval Science and Technological Laboratory, Visakhapatnam, was presented the prestigious VASVIK Award for his pioneering work towards the successful design and development of various stealth technologies for warships, submersibles and submarine systems, and the indigenous cochlear implant device.

He received the award from Shri Narendra Modi, Chief Minister of Gujarat at Charotar University of Science and Technology, Anand, Gujarat.

The Vividhlaxi Audyogik Samshodhan Vikas Kendra (Vasvik) Industrial Research Awards are given away to distinguished scientists and professionals who have made outstanding contribution to the advancement of science and technology and provided leadership leading directly to national prosperity in India.The award of Rs. 1,00,000/-, and a citation were presented to Dr. V. Bhujanga Rao for his outstanding contributions in the field of Mechanical & Structural Sciences and Technology.

Raytheon completes tests for SM-3 Block 1B interceptor

Raytheon Missile Systems has completed the design and testing of a prototype dual-band datalink designed to enable interoperability between the Standard Missile-3 (SM-3) Block 1B ballistic missile interceptor and the APAR/SMART-L family of radars developed by Thales Nederland.

SM-3 Block IA interceptor uses an S-band datalink compatible with the US Navy's AN/SPY-1 radar (part of the Aegis anti-air warfare system). The same S-band datalink is baselined for the follow-on SM-3 Block 1B missile due to enter service in the 2015 timeframe.

The dual-band data link would allow APAR (which operates in X-band) to send uplink messages to the SM-3 Block 1B missile so as to provide course correction commands based on SMART-L track data. According to Kramer, the dual-band datalink would be a 'drop-in' replacement for the current S-band system.

Aero Sekur maintenance system for F-35

Aero Sekur, an Italian specialist manufacturer of safety systems and advanced flexible structures, has won a significant first order to supply an Inflatable Maintenance Enclosure and Climatic Controller to Northrop Grumman for field repairs to Lockheed Martin's Joint Strike Fighter (JSF), the F-35 Lightning II. Aero Sekur will develop a temporary inflatable field maintenance system for protecting the F-35. A climatic controller sourced by Aero Sekur will be integrated into the enclosure.

The JSF programme is expected to be the largest procurement of military aircraft, with approximately 3,000 F-35s planned for the US Air Force, Navy and Marine Corps; the UK Royal Air Force and Navy; Italian Air Force and Navy, and potentially six or more other countries.

BAe Systems provide MCTS to RN

BAE Systems has delivered a new generation synthetic training solution to enable the Royal Navy (RN) to train warfare operators and command teams. Known as the Maritime Composite Training System (MCTS), the new system will provide training at the Maritime Warfare School, HMS Collingwood, in Portsmouth and at HM Naval Base Devonport.

MCTS, which represents a total investment of £108 million, encompasses a complete curriculum of 85 warfare courses, and also provides continuation training to Fleet units. The RN provides trainees and instructors; all other aspects are provided by BAE Systems under a contract running until 2018.

EADS and RUSNANO to cooperate in the Nanotechnology field

European aerospace and defence group EADS and Russian Nanotechnology Corporation RUSNANO are planning to cooperate in the research and development of new technologies. The respective document was signed by Anatoly Chubais, CEO of Rusnano and EADS Chief Technical Officer Jean Botti. As a first step, the partners will identify relevant patents in EADS's portfolio which could be suited to develop new business in the Russian industry.

"As a global leader in aerospace and defence, EADS has technologies that can help our partners maintain their competitive edge," EADS CTO Jean Botti said. "Today's agreement establishes the ground for cooperation in different areas through the use and transfer of Intellectual Property and technology. We are pleased to partner with RUSNANO, a corporation at the forefront of innovation in Russia," Botti added.

"The advanced technologies of EADS complement well with the RUSNANO's strong position on Russian high-tech market," stated RUSNANO CEO Anatoly Chubais."Our cooperation paves the way for the progress in nanotech-related fields including energy efficiency, new materials, life science and security".

The technology licensing procedures in place at EADS reduce the time required for implementation, minimise risk of patent infringement and ensure that all controls and processes are applied. To facilitate the application and use of licensed technologies, the company offers training, engineering support and assistance in the establishment of processes and procedures.

EADS sees Russia as a major cooperation partner in the technology area. In 2003, the company has established a technology office to facilitate collaboration with the Russian research and development community. Since its opening, the RTO has already managed more than 100 cooperative research and technology programmes between EADS and Russian institutions. EADS is also participating in the Skolkovo Innovation Centre.

BAE's CV90120-T to blend in any surrounding

The BAE Systems Global Combat Systems CV90120-T tank is being shown for the first time fitted with a new adaptive camouflage system, new 120mm smoothbore gun and rubberband tracks.

The adaptive camouflage system has been developed by BAE Systems with some funding from the Swedish Defence Materiel Administration and takes advantage of a number of signature reduction measures carried out over the past 15 years. This is known as 'Adaptiv' and is based on sheets of hexagonal pixels, which can rapidly change temperature and allow the vehicle to blend in with its surroundings. Onboard cameras pick up the background scenery and display that infrared image on the vehicle, enabling the platform to match its surroundings.

The major change in the latest version of the CV90120-T is the replacement of the original RUAG Defence 120mm compact tank gun by the Rheinmetall Rh120 LLR L/47 smoothbore gun. This 120mm light low recoil gun has a calibre length of 47 and features a muzzle brake, fume extractor and thermal shield. It can fire the complete suite of 120mm ammunition developed by Rheinmetall.

Voyager ready for RAF

The Royal Air Force will take delivery of its first Airbus Military A330 Multi-Role Tanker/Transport. The RAF's aircraft was named Voyager in a ceremony at the Royal International Air Tattoo in July.

Powered by Rolls-Royce Trent 700 engines, the Voyager is being provided under a PFI contract by the AirTanker consortium, which comprises EADS, Cobham, Rolls-Royce, Thales and Babcock. The 14 aircraft are to replace VC10s and TriStars, and the contract runs for 24 years following first delivery.

The initial certificates cover the RAF's aircraft operating in a two-point refueling configuration, with Cobham's advanced 905E refueling pods under the wings. Following delivery, the aircraft will be used for training crews, maintainers and receivers. If all goes well, the first Voyagers could become operational as early as 2013, although the scheduled in-service date is 2014.

Unmanned K-MAX clears QRA

The Unmanned K-MAX team led by Lockheed Martin has successfully completed a five-day quick reaction assessment for the US Navy's Cargo Unmanned Aircraft Systems programme. The team hopes to field the Unmanned K-MAX during a six-month deployment to Afghanistan later this year.

Unmanned K-MAX is intended to provide a means of transporting equipment and supplies, thereby reducing the reliance on road transport and exposure to IEDs. It has already demonstrated the capability to deliver loads autonomously to multiple locations over long distances and to be retasked in flight.

ODU developed MINI-SAP for military use

ODU from Germany has developed a new extremely short connector within the Standard Push-Pull Series ODU MINI-SNAP.

The new "Super Shorty" connector is up to 20% shorter than a standard connector and consequently also lighter. The "Super Shorty" is currently available in size 0 (with an outside diameter of 9.4 mm) and size 1 (with an outside diameter of 12 mm). Contact arrangements with up to 14 positions are available as standards. The connectors have a black and matt chrome surface that makes them ideal for military use.

The new connectors are completely plug compatible with the standard receptacles from the familiar ODU MINI-SNAP series, which means that there is no need to exchange receptacles that have already been installed. The new Super Shorty can easily be used when inserted. The new connector's standard protection is IP 68 with respect to the terminal device's tightness. 360° EMC protection is also available upon request.

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Dornier Do 228NG - An aircraft for every application

It flies on every continent, at times fast, at times slow, operating from very short or even unpaved runways. It can carry anything that will fit into its spacious fuselage. And there is no aircraft quite like it. That is why RUAG is building the new Dornier Do 228NG (New Generation) aircraft.

In 2002, Swiss technology company RUAG took over most of the Dornier aircraft production facilities in Oberpfaffenhofen (Germany). This included the type certificate for the Do 228. In 2007, acting in response to a clamour of customer requests for an upgrade or even a new version of this tried and tested high-wing monoplane, RUAG commissioned an independent study to sound out the future market prospects of this transport aircraft which has been sold around the world. The study established that the bulk of the approx. 150 Dornier 228 aircraft still in service were outdated and the demand for an upgrade existed. RUAG thus decided to resume production of the Do 228, which had first flown on 28 March 1981.

Some 300 changes

RUAG applied for a supplemental type certificate (STC), which it duly received, thus enabling it to implement some 300 changes to the long-established Do 228 Classic. The most striking enhancements relate to the glass cockpit from Universal Avionics with its four multi-function displays. All four displays are interchangeable, and in addition imagery from the operator console in the cabin, which receives data from a range of sensors such as an infrared camera (FLIR), can also be presented on the displays.

The other, purely external and very obvious change compared with the original 228 relates to the two five-blade propellers. Operating in tandem with the more powerful Honeywell TPE 331-10 turbines, these produce more power while at the same time making the Do 228NG more environmentally friendly, i.e. quieter and more fuel-efficient.

The Do 228 Classic is still built in India under licence. It was therefore only natural that RUAG should have the basic structure of fuselage, wings and control surfaces for the new Do 228NG built by Indian manufacturer Hindustan Aeronautics Limited (HAL). As Alexander Müller, Head of RUAG Aviation's Military Aviation Germany business unit, points out, the two companies have been working well together. The Do 228NG airframe has a service life of up to 53,500 take-offs and landings.

Upgrade from the Do 228 Classic

The new cockpit and engines together with the five-blade propeller can also be retrofitted on the Do 228 Classic. RUAG has the appropriate supplemental type certificate, licensing it to perform this work. This will appeal particularly to customers who do not want to buy or cannot afford a new 228NG but still want to benefit from the substantial improvements of the NG standard.

Tough and special missions

Today, the Dornier 228NG is deployed in two main areas. The first of these is as a short-range commercial aircraft for 19 passengers. Here, customers benefit from the short take-off and landing potential of the robust high-wing monoplane, which can also land on unpaved airstrips or even in tall grass. Alexander Müller mentions Nepal as a typical example, the Do 228NG being one of only two aircraft types permitted to use Lukla airport with its sloping runway in the Himalaya Mountains.

The second main application area is special missions on behalf of governments or the military. The almost square fuselage cross-section of the 228 is extremely well suited for installing all manner of measurement equipment, cameras or other systems that are required for such special flights.

Great interest worldwide

To achieve the ambitious goals in this program, the entire production process will be relocated to a new, larger hangar in Oberpfaffenhofen. Alexander Müller expects demand to increase over the next few years. Not only is there a lot of interest in the upgraded Do 228, but a number of aircraft of this class around the world will need to be replaced and there are virtually no used aircraft on the market.

Bloomberg UTV
Airport Summit

Inspiring Better
Airports
August 26, 2011, New Delhi

Bloomberg UTV PULSE CONFERENCES | SUMMITS

To provide an engaging platform for members from the aviation community, Bloomberg UTV Pulse Conferences and Summits recently held the Airport Summit, 2011 in New Delhi. The forum witnessed an overwhelming response from solution providers, decision makers, and business buyers in the aviation segment.

The proceedings of the event were initiated by a welcome address from Pranjal Sharma, Executive Editor, Bloomberg UTV. The welcome address was followed by presentations on various aspects of airport infrastructure by eminent personalities from the aviation sector. The list of speakers and their presentations were as follows

- **Amber Dubey**, Director of Aviation, KPMG, touched upon the topic of creating world class airports
- **V.P. Agrawal**, Chairman, AAI, explained the need for creating air connectivity in India
- **Vidya Basarkod**, CEO, Reliance Airport Developers Private Limited, highlighted the challenges in operating Tier 2 and Tier 3 airports
- **M. Kannan,** Jt. Sec. & Eco Advisor, MoCA, shared the views of the aviation ministry
- **Sidharath Kapur**, CFO - Airports, DIAL, spoke on the challenges in a dual airport system
- **T. P. Anantheswaran**, SME – Airports & Logistics Travel & Transportation Center of Competence, IBM, explained the importance of technology in the aviation space
- **N. R. Das**, DG, CISF, emphasized how his organization continuously upgrades itself to combat the security challenges in the aviation sector
- **Yashwant S. Bhave**, Chairman, AERA, on the necessity to balance the interest of users and investors
- **R. G. Panicker**, CEO, CSC India, highlighted the points that enables for efficient cargo operations at Indian Airports
- **D. Sudhakara Reddy**, National President, APAI, spoke on grievances faced by Indian passengers
- **Saroj Datta**, ED, Jet Airways, spoke on the expectations carriers had from airport operators
- **Ansgar Sickert**, MD, Fraport India, exchanged ideas on airline marketing

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While the entire gamut of speakers through their presentations and panel discussion covered every aspect of airport infrastructure, the key take-away points from the forum were

- The growth of Indian aviation lies in the development of regional airports or Low Cost Airports (LCAs), which need to be made viable by chalking plans to make these airports both investor as well as passenger friendly
- Private sector participation is a must as the public sector alone is unable to meet the huge investment required to set up airport infrastructure
- The growth of the airport sector requires equal participation from the public and private sector, and the central and the state governments

- Security best practices by CISF are considered to be one of the best in the world
- Technology is a key element in the success of airports operations

The event concluded with a vote of thanks from Mr. Dubey, where he summarized the key challenges and opportunities that were discussed in the forum.

About Bloomberg UTV Pulse Conferences and Summits

Bloomberg UTV Pulse Conferences and Summit a special team of the Bloomberg UTV which dedicatedly creates live environments that would simulate growth, address needs, and promotes associations.

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COST GUARD SHIP C-153 COMMISSIONED

Vice Admiral Anil Chopra AVSM, Director General, Indian Coast Guard has commissioned the Indian Coast Guard Ship (ICGS) C-153 at an impressive ceremony at Porbandar.

The ICGS C-153 is the 11th and the last in the series of 11 Interceptor Boats (IBs) built by M/s ABG Shipyard, Surat. C-153 is based at Veraval. With the induction of C-153, the security of the coast of Gujarat will be greatly enhanced. This boat is of 30 Mtrs in length and of 90 Ton displacement. C-153, commanded by Comdt LM Gajbhiye, has 11 crew members on board.

This waterjet-propelled vessel has an endurance of 500 NM at 25 knots and is capable of doing high speed up to 45 knots. The vessel is fitted with latest state-of-the-art navigation, communication equipment and armament, thus making it an ideal platform for close coast/shallow water operations.

The Government has sanctioned necessary funds to the Coast Guard for new acquisitions. All pending cases of acquisitions are being cleared by the Central Government on a fast track for protecting the nation from the threat emanating from the seas. Also, with the establishment of all sanctioned stations, ICG will have 42 stations and 15 Air units functioning at various strategic locations along the coastline.

Also, the project of establishment of a Chain of Static Radars along the Indian coastline has been very recently contracted. The aim of setting up of this chain is to create fully integrated infrastructure to achieve real time monitoring and surveillance of coastal area from remote locations. The data would be shared at different levels with all maritime security agencies for quick and effective response to the developing situations at sea.

AW169 Helicopter exhibited in London

AgustaWestland exhibited a full scale mock-up of the all new AW169 twin engine light intermediate helicopter at London in front of the UK Department for Business, Innovation & Skills headquarters in Victoria Street. The 4.5 ton AW169, launched in July 2010 at the Farnborough International Air Show, is scheduled to fly in 2012 with deliveries to customers starting in 2015.

The AW169 is the only new generation helicopter in its weight category in decades and AgustaWestland's Yeovil facility in the UK is extensively involved in the design, development and manufacturing programme, following a £22 million loan announced in July 2011 by the Department of Business, Innovation and Skills. The AW169 programme marks the beginning of a new era for the Yeovil plant with a move into the commercial helicopter business. Commercial helicopter work will become an increasing important part of AgustaWestland's UK business alongside its business with the UK Ministry of Defence and military export customers.

The AW169 has been designed in response to the growing market demand for an aircraft that delivers high performance, meets all the latest safety standards and has multi-role capabilities. The AW169 incorporates several new technology features to provide the highest levels of safety and operational benefits for its customers. New generation technologies are incorporated in the rotor system, engines, avionics, transmission and electric power generation and distribution systems.

Bombardier upbeat on China, Asia-Pacific markets

Bombardier Aerospace has announced that it has strengthened its Business Aircraft sales team in China and Asia-Pacific to increase its focus on the growing activity and volume in the region. The territory is now overseen by a Vice-President and two Regional Vice-Presidents.

"Bombardier is forecasting tremendous growth for China and Asia-Pacific over the next 20 years with industry-wide business jet deliveries forecast at approximately 3,350 units for the region, including 2,360 aircraft for China alone," said Bob Horner, Senior Vice-President, Sales, Bombardier Business Aircraft.

"The vast size and strategic importance of this territory warrants special attention in order to harness the full sales potential of our Learjet, Challenger and Global aircraft. To this end, we have strengthened the sales organisation, dividing the territory into two distinct regions, China and Asia-Pacific/Australia, each represented by a Regional Vice-President and reporting directly to a Vice-President," he added. Christophe Degoumois has been promoted to the position of Vice-President responsible for China, Asia-Pacific, Australia, Eastern Europe, Russia and Commonwealth of Independent States (CIS) countries.

Christophe has been with Bombardier Business Aircraft for over seven years and has had great success as Regional Vice-President Central and Eastern Europe, Russia and CIS countries over the past five years. One of his key strengths is managing and developing successful sales campaigns in emerging markets, a key component of his achievements in Russia and CIS countries.

Michael Han is promoted to the newly created position of Regional Vice-President, China. Michael has an impressive sales track record and brings with him a wealth of knowledge and experience through his 15 years in the aviation industry, most recently as Bombardier Business Aircraft's Sales Director for Greater China.

After 33 years of service, David Dixon will be leaving Bombardier. David has been instrumental in developing our business in the Asia-Pacific region and will be assisting with a smooth transition until the end of 2011.

Civil Aviation Minister Mr. Vayalar Ravi visiting the HAL museum at Bangalore.

Saab, Wipro in cooperation for land-based Active Protection Systems

Wipro Ltd, a leading IT services company globally with a strong presence in market segments of infrastructure engineering and consumer products & lighting has signed a teaming agreement (TA) 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.

The Land Electronic Defence System (LEDS) provides active protection to light and medium combat 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 Mr. Micael Johansson, Senior Vice President and Head of Saab's business area Electronic Defence Systems, and Mr. Pratik Kumar, President, Wipro Infrastructure Engineering.

For the military defence market Wipro and Saab will jointly pursue opportunities for LEDS in India with Indian defence establishments and original equipment manufactures. 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.

"Our current goal with reference to this partnership is to serve the Indian market with state-of-the-art APS solutions. Wipro brings in the unique ability and competency to adapt the product for the Indian market and provide excellent service and product support. This partnership will include sourcing of components from India, transfer of technology to Wipro and the manufacture and integration of APS by Wipro in India, thereby putting the country on the global map as a reliable, cost effective and high quality defence manufacturing hub" says Pratik Kumar.

This partnership is the continuation on earlier signed MoUs in 2008 and 2010 and a Consulting Agreement earlier in 2011 between Saab and Wipro addressing the Indian Survivability technology market and Saab's usage of Wipro competences in the LEDS development.

"India is a very important market for us and an important cornerstone of our overall global strategy. We are very confident about Wipro's technological, innovation and manufacturing capabilities and are excited to partner with them. This collaboration marks our next step towards consolidating our position in the Indian defense market," said Mr Micael Johansson.

LEDS combines active signature management, softkill and hardkill mechanisms to provide full spectrum active protection to land vehicles. The specifications include full hemispherical coverage to detect incoming threats and alert the crew. When installed in full configuration, the System offers main battle tank comparable protection also to light and medium combat vehicles against engagement by weapons like the RPGs, anti-tank missiles, KE ammunition, mortars and artillery shells.

First ever Indo-French Joint Military Training Exercise held

Indo French troops during opening ceremony at Chaubatia, Ranikhet

An Indo-French Joint Military Training Exercise SHAKTI - 2011 was held at Chaubattia recently under the aegis of Garud Division. French Army was represented by four Officers and 50 troops of the 13 Mountain Infantry Battalion while an equal number of officers and troops participated from Second Battalion the Bihar Regiment, under the aegis of 99 Mountain Brigade of the Indian Army.

Exercise Shakti – 11 the first ever Indo-French exercise between the two nations which aimed not only at training troops in Counter Terrorist Operations but also in enhancing defence cooperation and military relations between the two nations. It has provided an ideal platform for the personnel of the two countries to share their experiences on counter terrorist operations; especially in mountainous terrain.

The exercise was conducted in the areas adjoining the salubrious town of Ranikhet which provided an excellent opportunity for the contingents of the two countries to practice and rehearse drills and procedures related to operations in this rugged terrain.

The activities conducted during training includes familiarisation with weapons & equipment being used by both the countries, introduction to the organisation, concept and basic tactics at infantry company and platoon level and modalities of conducting complex operations like Area Domination Patrols, Cordon and Search operations and Search and Destroy Operations in counter insurgency environment. Personnel from the French contingent also got a chance to fire infantry weapons being used by the Indian Army during day as well as night.

The training culminated in a 48 hours Consolidation Exercise in which troops of both nations carried out a daring Search and Destroy Operation in the general area of Pilkholi village on the outskirts of Ranikhet. The troops had reached the area of operations after a grueling march throughout the night of October 20 and thereafter carried out a precise, well coordinated and executed operation to neutralise the terrorists hiding in the dense forests of Pilkholi. The search and destroy mission included clearing and destruction of a terrorist hideout, employment of the Quick Reaction Teams to neutralize escaping terrorists and carrying out a thorough search of the dense forest.

The highlight of the event was an audacious and surgical Raid by heliborne commandoes of both armies on a simulated target. The commandoes of the French Army also employed their Paragliding skills and laid effective stops by employing three paragliding commandoes during the raid. The final phase of the exercise was reviewed by Brigadier General Herve Wattecamps and Colonel Bertrand Lavaux as representatives of France and Major General Rajesh Arya, Vishishtha Seva Medal, General Officer Commanding, 6 Mountain Division and Brigadier A K Yadav, Commander, 99 Mountain Brigade representing India.

The General Officer Commanding during the interaction with the press, said 'During the course of training, besides honing their counter terrorism skills and sharing their experiences on the Counter Insurgency/ Counter Terrorist operations, the troops developed a remarkable mutual understanding and inter-operability that will further strengthen relations between our two great armies.' The General Officer declared the exercise an 'unprecedented success'.

QuEST completed acquisition of INTERFACE

QuEST has completed the acquisition of INTERFACE of Spain, a company with key capabilities in Product Design, Engineering of Processes and Logistic Support. The competencies acquired through this acquisition would include Test / Integration Engineering, Avionic System Engineering, Integrated Logistic Support, Process Engineering or Tech Translations and Technical Publications among others. This milestone further empowers QuEST Global to offer one of the broadest portfolios in end-to-end engineering services, focused on helping clients accelerate growth and mitigate risks and optimize costs.

This acquisition increases the headcount of QuEST Global to 2700 employees worldwide, thereby creating a milestone in QuEST's diversification strategy and bringing them a step closer to achieving thei 2015 goals.

INTERFACE, founded in 2003, is a Madrid based company, possessing key competencies in product & systems engineering, support engineering and process engineering catering to the aeronautical, power generation, oil &gas, naval and industrial markets. With its footprints spread across 9 cities in Spain, including Madrid, Sevilla, Valladolid, Ferrol, Cádiz, Zamudio, Cartagena, Pamplona, and Albacete, INTERFACE has a team of 224 engineerscapable of supporting both military applications and commercial applications. The company's experience serving global majors spans equipment design, system design and technical documentation.

This is an important day for QuEST Global and INTERFACE, and more importantly for the clients we jointly support. Independently, both companies are recognized industry leaders in their respective domains, but offering distinctive capabilities that complement one another. This association will now enhance capabilities of QuEST as a global leader, to better serve our clients - whatever their size, location or sector. " said Mr. Ajith Prabhu, CEO of Quest Golbal Engineering on the occasion.

A400M passes Certification tests

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

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 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.

New Automation module from Component Control

Component Control has released a new automation module developed specifically for aviation service centers that sell Cessna/Citation aircraft parts. The Cessna/Citation Integration module is a fully integrated and automatic solution for receiving and updating Cessna/Citation price lists as well as direct electronic submission of Purchase Orders to Cessna. This module greatly reduces overhead costs associated with traditional paper processes, saves time, and increases productivity through the improved accuracy of electronic communication.

Virgin Atlantic and Lufthansa extends their wings

Virgin Atlantic and Lufthansa Technik AG significantly extend their business relations for C-checks and CF6-80 thrust reverser services for the airline's B747-400 fleet. These contracts are part of current comprehensive negotiations between the two companies to effectively bring together these new agreements within one new general terms agreement (GTA).

The new GTA will consist of the thrust reverser services for both the Trent 500 engines of Virgin's Airbus A340 fleet and also for the CF6-80 engines of the Boeing 747-400 fleet, plus the C-Checks for the thirteen Boeing 747-400s. The C-Checks will be performed at Lufthansa Technik Maintenance International in Frankfurt, whilst the repair and overhaul services for the thrust reversers will be carried out at the airframe related component (ARC®) business unit of Lufthansa Technik in Hamburg.

Additionally, the two companies are negotiating the early extension of the current five year base maintenance contract for the airline's Airbus A340 fleet by a further six years through to 2019.

Dipas celebrated golden jubilee

Defence Institute of Physiology & Allied Sciences (Dipas) celebrated its golden jubilee. Dr. Vijay Kumar Saraswat, Scientific Advisor to Raksha Mantri, Secretary – Dept. of Defence R&D, Ministry of Defence & Director General R&D launched the golden jubilee celebrations.

DIPAS is engaged in R&D work in the area of human physiology especially under extreme conditions of adversities, harsh climate, mental stress etc. DIPAS was established under the aegis of DRDO in 1962 in the wake of Chinese aggression wherein a large number of casualties occurred mainly due to exposure to extreme environment of cold and high altitude.

Dr. Saraswat congratulated the laboratory for its stellar contributions and on reaching the important milestones of 50 years. S,C, Narang, Chairman – Centre for Personnel Talent Management (CEPTAM), Dr. KD Nayak, Chief Controller Research & Development Micro Electronics & Devices & Management Information System and Technologies (MED & MIST), Directors of DRDO Corporate Dtes. and Delhi based labs, retired scientists from DIPAS attended the function.

Need of Certification for Aerospace SMEs and MSMEs

In the global aerospace industry, there are several factors that procurement departments must evaluate when awarding contracts. Cost is the most obvious one and, in the context of the global marketplace, Indian companies can be competitive in this area.

Other considerations may include ability to meet required timeframe, level of manufacturing competence, adaptability to specific customizations in product deliver and willingness to agree to confidentiality and intellectual property agreements, among others.

Last, but by no means least important, is Quality. In fact, this may be the most important factor. This goes beyond competence – it describes an attitude of striving for continual improvement, rather than simply being capable of producing something. It is also tangibly demonstrable via a review of current and historical process and product testing data. Even if all the other factors are satisfactory, but Quality is not there, many major aerospace companies will still consider their risk mitigation needs the highest priority.

So how can companies demonstrate their commitment to Quality and continual improvement? One of the ways is through an industry-recognized certification scheme. In some instances, ISO 9001 or AS9100 may be sufficient, but for special processors there is an additional way to evidence the quality of your operation and differentiate your business from your competitors.

Nadcap is the globally recognized accreditation for special processes and products. A common question is: what is the difference between a Nadcap audit and a quality systems audit, like ISO?

The Nadcap audit has been described as "an inch wide and a mile deep", meaning that the scope of the audit is very specific and the detail the auditor is looking for is considerable. As an example, an audit with a general quality systems focus may include this question regarding calibration:

Does the supplier define the process employed for the calibration of inspection, measuring and test equipment type, unique identification, location, frequency of checks, check method, acceptance criteria and the action to be taken when results are unsatisfactory?

For Nadcap, however, that is too general. In Nadcap audit checklists, the questions are customized to the field being audited, as shown:

Non-Destructive Testing

Are the FPI dryer ovens calibrated every three months at multiple points across the usable range?

Heat Treating: Are furnaces used for heat treating aluminum parts surveyed at the required tolerance and temperature range?

Chemical Processing: Is measuring and test equipment used to control or monitor the control of a process (within parameters) maintained in a calibration system compliant with ISO10012-1? (I.e. temperature gages, conductivity meters, voltmeters, rectifiers)

Consequently, achieving Nadcap accreditation – or any other certification for that matter – is not easy; it requires hard work, dedication and time-commitment. Companies around the world who have succeeded in gaining accreditation are rightly proud of that and it can be a key differentiator between you and your competitors.

Making people aware of your new status can help your company get greater recognition of your expertise and status, which may lead to new business opportunities. In a 2010 survey conducted by the Performance Review Institute, one Indian company explained:

"Sales have increased more than 200%. Earlier we …were known only in India … After Nadcap we have worldwide recognition …our customer base was only 5 earlier and after Nadcap our customer base has increased to 15."

So when you have earned the distinction of being a Nadcap accredited supplier, show that you are proud of this achievement by promoting your accreditation. Some ideas are shown below:

1.Inform your customers

Send a letter or email from your Management to all customers and contacts, informing them of your new status. Include details of the special process accredited, date of accreditation and even a copy of the certificate.

2. Issue a press release

Write a press release and distribute it to industry magazines, local newspapers and trade organizations. To help you in this effort, PRI has developed a press release template for this purpose; it can be found on the PRI website at www.pri-network.org/Nadcap/Promoting-Approval.id.47.html

3.Update your website

As an online reminder of your accreditation, the Nadcap mark of conformity can be strategically placed on your website. As a general rule, the home page and 'About Us' page may be suitable areas to feature this information. Some companies even create a separate page on the website to explain the Nadcap accreditation and its significance. This will ensure that all customers, regardless of their familiarity with the aerospace industry, will understand what this represents.

If your website has a 'News' section, do not forget to update it with the press release you issued. You could also temporarily place 'Now Nadcap Accredited' at various places on your website. Make sure you adhere to the rules regarding the use of the Nadcap mark of conformity – details are on the PRI website (same URL as above).

4. Recognize your staff

Achieving Nadcap accreditation presents an excellent opportunity to acknowledge the hard work of your team. Recognition can be as simple as a 'Thank You' notice pinned up on the staffroom board or a letter of congratulation sent out to any departments involved. In larger companies, notification to individuals who were not involved can help to spread the good news internally as well as externally.

5. Use social media to notify contacts

Social networking sites can be the perfect way to share the fact that you are now Nadcap accredited. Start by adding the mark of conformity to your Twitter, LinkedIn or Facebook profile to indicate your accredited status. As with your website, it is important to display this information on your land page to maximise awareness.

6. Get involved in Nadcap

The triannual Nadcap meetings have become a permanent fixture in the calendars of many Nadcap accredited suppliers. You can find the upcoming schedule and agendas, together with past meeting minutes on the PRI website under 'Nadcap Meetings'. In addition, the Supplier Support Committee gives accredited suppliers an opportunity to help improve the Nadcap process, by ensuring that the program meets the needs of suppliers as well as primes. Contact NadcapSSC@sae.org to find out how to get involved.

7. Contribute to your company newsletter

You can also write an article in your company's newsletter. You may consider including relevant images that complement your article: photos of employees or teams who played a key role in passing the audit, or the Nadcap mark of conformity.

8. Attend local events

By participating in trade shows and conferences, you can communicate the news of your accreditation to a wider audience. You could even volunteer to speak at a conference, to share your Nadcap experience with others.

9. Update your stationery and marketing materials

Ensure that any outgoing materials feature the Nadcap mark of conformity, to maximize customer exposure to news of your accreditation. The Nadcap mark of conformity can feature on brochures, catalogues, newsletters, job advertisements, reports and publications, as well as stationery such as headed paper and business cards.

10. Display your certification

Your certificate comes mounted, framed and ready to display in a prominent position on your premises, where official visitors and customers are likely to see it. The certificate will serve as a testament to the visitor of the high Quality standards held by your firm. Displaying the certificate also celebrates the determination, hard work and dedication of your employees.

DRDO Chief-led delegation of Indian scientists visits Canada

A delegation under the leadership of Dr. Vijay Kumar Saraswat, Scientific Advisor to Raksha Mantri, Secretary, Department of Defence R&D and Director General DRDO visited Canada recently. The purpose of visit was to attend the Indo-Canadian Workshop on 'Frontiers in Science and Engineering 2011' at York University and also to visit and discuss with Canadian agencies and experts from academia, S&T organisations and industries on technologies of common interest to both the countries.

The workshop at York University was attended by delegates from India representing DRDO, ISRO and Universities in India as well as delegates from Universities, S&T institutions, and industries in Canada.

To proceed further the two sides have agreed to outline future course of action within a month and next workshop will be held in India during 2012. It was told by Professor Kozinski, Dean Faculty of Science & Engineering, York University that funds are available from the Canadian Government. Matching funds can be sourced from DRDO and India.

A strong research alignment and interests in the areas of Early Warning and Response Network, Advanced Materials, LIDAR and related instrumentation, Space Technologies and Bioinformatics have emerged. The delegation held discussions with other scientists/engineers and professors during the workshop. It also met with the Defence Research & Development Centre authorities and the Asst Deputy Minister of Canada.

Visits by the team members to S&T organisations for exploring cooperative research include a) Institute for Materials Science, London for Laser processing of materials and surface engineering; b) Concordia University, Montreal for various facilities set up at the University for the e-WAR Project, the modeling and simulation capabilities for the CFD analysis of a mechanical air handling systems; c) Institute of Materials Science, Montreal NRDC facility included Nano-foundry for the fabrication of lab-on-chip cost-effective production; d) Aluminum foam technology by hot rolling; Coating technology based on slurry feeding and curing using a laser beam; e) Institute for microstructural Sciences and CDFC, Ottawa for the microstructural characterization and Nano-foundry. It was decided that discussions for setting up a similar facility at India be taken up.

There was a broad understanding that the two countries are facing similar problems and have identical priorities. It was decided that the matter for collaboration will be taken up at the appropriate level. It is proposed to cover development of futuristic technologies for Defence and Internal Security to prepare both the countries for evolving futuristic threats. A joint mission for futuristic innovation between Canada and India can have a direct impact on the economy and society as a whole in both countries.

Airbus to support Greener Skies Initiative with ATM expertise

Airbus has been selected to provide Air Traffic Management (ATM) and Performance Based Navigation (PBN) expertise for the Federal Aviation Administration's (FAA) Greener Skies Initiative. As part of Boeing's FAA System Engineering 2020 (SE-2020) team, Airbus will identify procedures which fully utilise aircraft precision navigation capabilities to reduce fuel burn, lower emissions and decrease noise.

The Greener Skies initiative seeks to improve ATM efficiency and to minimise the environmental impact on the ground and in the air through the expanded use of PBN including Required Navigation Performance (RNP), area navigation (RNAV), and Optimised Profile Descents (OPD).

The industry consortium includes Adacel, Airbus, Boeing, Cessna and Honeywell, and is tasked with establishing methods for the full implementation of PBN by utilising advanced flight deck and Air Traffic Control (ATC) capabilities while analysing new policies and procedures. Airbus subsidiary Quovadis will provide PBN consultancy and implementation expertise for the initiative. Seattle will be used as a key site to enable these initial advanced operational capabilities to be introduced into the US National Airspace System (NAS).

"Airbus is fully committed to the FAA's success with NextGen to support a cleaner, safer and optimized air transportation system," said Eric Stefanello, CEO of Airbus ProSky. "The Greener Skies programme is a prime example of the FAA's dedication to identifying early economic and environmental benefits by leveraging the investment in advanced flight deck capabilities."

Earlier this year, Airbus launched the Airbus ProSky subsidiary, dedicated to supporting the FAA's Next Generation Air Transportation System (NextGen), Europe's Single European Sky ATM Research (SESAR) and other global ATM modernisation programmes.

Airbus is a leading aircraft manufacturer with the most modern, eco-efficient and comprehensive family of airliners available, ranging in capacity from 100 to more than 500 seats. With over 6,800 aircraft in service worldwide and a backlog of more than 4,200 orders, Airbus is a global company with design and manufacturing facilities around the world. Airbus Americas supports and sells to customers in North and Latin America and conducts engineering work for the global Airbus product line. In 2010 alone, Airbus spent over $10 billion with hundreds of US suppliers, translating into Airbus support of more than 180,000 American jobs.

Successful launch of PSLV-C18 / MEGHA-TROPIQUES Mission

India's Polar Satellite Launch Vehicle (PSLV-C18) successfully launched the Indo-French MEGHA-TROPIQUES Satellite recently. This has been the nineteenth successive successful flight of PSLV.

Three co-passenger Satellites (a) JUGNU from IIT, Kanpur (b) SRMSat from SRM University, Chennai and (c) VesselSat-1 from Luxembourg were also launched by PSLV-C18. The user institutions also have confirmed establishing contact with the satellites.

MEGHA-TROPIQUES Satellite, a joint endeavour of ISRO and the French National Space Agency (CNES), is intended to study the water cycle and energy exchanges in the tropical region covering 20 deg on either side of the Equator.

There are four Science instruments in the MEGHA-TROPIQUES Satellite:

- A Scanning Microwave Imager MADRAS (developed jointly by ISRO and CNES), operating at five frequencies (18, 23, 37, 89 and 157 Giga Hertz) to measure precipitation and cloud properties
- A Scanner ScaRaB (developed by CNES), for measuring Earth Radiation Budget
- A Sounder SAPHIR (developed by CNES) for Atmospheric Profiling of Humidity in the inter-tropical Region
- GPS Radio Occultation Sensor ROSA (procured by ISRO from Italy)

Soon after separation of the MEGHA-TROPIQUES satellite from PSLV, ISRO's Telemetry Tracking and Command Network (ISTRAC), Bangalore took its command and control.

It has been confirmed that the Satellite has been placed very precisely into its intended circular orbit, as given below:

Orbital Parameter at Satellite injection	Point	Target	Achieved
Perigee (km)	865.30 + 20		864.39
Apogee (km)	867.15 + 20		865.16
Orbital Inclination (degree)	20.06 + 0.20		19.99

Cobham to acquire Trivec

Cobham has decided to acquire US-based Trivec-Avant Corporation ('Trivec'), a leading global supplier of sophisticated UHF satellite communication (SATCOM) antenna systems.

Trivec's SATCOM technology, product range and customer base are highly complementary to Cobham's Antenna Systems strategic business unit. The acquisition is in line with Cobham's strategy to build scale in its target markets and deepen its investment in highly differentiated technology.

Cobham will acquire the entire share capital of privately owned Trivec for a cash consideration of US$126 million, payable on completion, on a debt and cash free basis. An additional cash consideration of up to US$18 million is payable between 2013 and 2014, contingent on future performance. Subject to regulatory approvals, the acquisition is expected to complete during the fourth quarter of this year.

International Institute for Aerospace Engineering and Management

A collaborative venture in association with leading Aerospace Organizations in the country such as Hindustan Aeronautics Ltd. (HAL), National Aerospace Laboratories (NAL), Defence Research & Development Organization (DRDO), Indian Space Research Organization (ISRO), Airports Authority of India (AAI), Bangalore International Airport Ltd. (BIAL), Airlines and many aerospace private industries.

Instituted under the initiative of

Society of Indian Aerospace Technologies & Industries

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PG Diploma in Air Traffic Control and Management	1 ½ Year
B.E. in Aerospace Engineering	4 Years (8 Sems)
M.Tech. in Aerospace Engineering (Avionics)	2 Years (4 Sems)
M.Tech in Aerospace Engineering (Aerodynamics / Aerospace Structures / Manufacturing & Management)	2 Years (4 Sems)
MS (Engineering) - Aerospace (Aerospace Structures/Aerodynamics/ Propulsion / Avionics / Manufacturing & Maintenance Management)	Min. 2 Years Max. 4 Years
PhD in Aerospace Engineering	3 to 4 Years

- *The curriculum has been vetted by experts from industry and academia and is research oriented.*
- *The faculty members are from IITs, IISc, experienced / retired scientists from HAL, ISRO, NAL, DRDO, AAI etc. in addition to visiting professor / adjunct faculty from Airport, Airlines, R&D Labs and Industries.*
- *IIAEM also organizes customized short courses for working professionals, faculty and students of Aerospace community.*

Communication Office:

IIAEM, Jain University Global Campus, Jakkasandra Post, Kanakapura Taluk, Bangalore Rural District – 562112, Ph: +91 80 27577231 / 2, Fax: +91 80 27577233

or

Jain University, Aerospace Department, No. 34, Off JC Road, Bangalore – 560027, Ph: +91 080 22484944, Tele+Fax: +91 080 43430146, E: **iiaem@jainuniversity.ac.in**

For further details and application form please visit www.jainuniversity.ac.in/iiaem

Northrop Grumman begins tests on James Webb Space Telescope

The five tennis-court sized sunshield layers that will protect NASA's Webb telescope mirrors and instruments from the heat of the sun have entered an important new test phase. The sunshield is the key design element that allows the Webb telescope to cool to its 40 K. cryogenic operating temperature, necessary to image faint infrared objects in the early universe. The start of 3-D shape testing will tell engineers how the full-size sunshield layers will behave in orbit. Northrop Grumman Corporation is the prime contractor for NASA's Goddard Space Flight Center.

"The month-long testing began in early September at teammate ManTech International Corporation's Nexolve facility in Huntsville, Ala., using flight-like material for the sunshield, and a full-scale test frame and hardware attachments. The test sunshield layer is made of Kapton, a very thin, high-performance plastic with a reflective metallic coating, similar to a mylar balloon.

The Webb Telescope is a joint project of NASA, the European Space Agency and the Canadian Space Agency.

Nordic bought 5 aircraft from China Southern Airlines

Nordic Aviation Capital has purchased five ATR 72-500 (MSN 521, MSN 531, MSN 547, MSN 552, MSN 557) from China Southern Airlines.

Nordic Aviation Capital A/S is a global aircraft leasing company dedicated to the worldwide sale, purchasing and financing of commercial jet and turboprop aircraft. The company, headquartered in Denmark, is the largest turboprop lessor in the world and marked its 20th anniversary in 2010.

The company provides aircraft to well-known carriers such as American Airlines, Lufthansa, US Airways, SAS, Flybe, TACA and other major regional carriers including Widerøe and TRIP Linhas Aéreas.Nordic Aviation Capital's current fleet of over 160 aircraft includes ATR 42, ATR 72, Bombardier Dash 8, Boeing 737, MD 83, CRJ 200, Fokker 50 and Saab 2000 aircraft – with 30 customer companies in 20 countries.

Cobham awarded 5-year, Qantas link contract extension

Cobham has been awarded an AUS $500 million extension of its current B717 Qantas Link contract through 2018 that involves the expansion of operations into Queensland. The extension includes an increase in B717 aircraft operated by Cobham from 11 to 13, and the establishment of a Brisbane operating base in early 2012.

The contract agreement with Qantas was signed on 17 October 2011. Cobham's current QantasLink contract would have expired in 2013.

"This is a significant expansion of Cobham's operations in Australia as the nation's largest contract aviation company and will see Cobham adding 50 more staff. The extended contract strengthens our 20-year relationship with Qantas, enhancing the service we currently supply to QantasLink and for passengers in regional and remote Australia. This is a credit to our very professional and dedicated team and I'm delighted that it provides a further 5 years to our valued relationship with Qantas" said Cobham Aviation Services vice president, Peter Nottage.

Cobham specialises in meeting the insatiable demand for data, connectivity and bandwidth in defence, security and commercial environments. Offering a technically diverse and innovative range of technologies and services, the Group protects lives and livelihoods, responding to customer needs with agility that differentiates it. Employing more than 11,000 people on five continents, the Group has customers and partners in over 100 countries, with annual revenue of some £1.9bn / US$3 billion.

Cobham Aviation Services provides specialist aviation solutions to Defence, Government and major commercial customers under long term performance based contracts. This includes modern battle space air warfare training for the UK armed forces and NATO, operating the largest border protection civil maritime surveillance contract in the world for the Australian Government, supporting a wide range of civil and military platforms with modification and through life support, including the Sentry E3-D fleet and the Future Strategic Tanker Aircraft fleet of A330 aircraft for the UK MOD, providing air traffic control radar display software and aid calibration services to leading UK and European airports and with partner Bristow Helicopters training all helicopter pilots for the UK's Navy, Air Force and Army through entity FB Heliservices.

ITT developed new SLS for P-8A Poseidon aircraft

ITT Corporation recently completed initial qualification testing on a new, environmentally friendly Sonobuoy Launching System (SLS), a high-tech ejection system carried on the U.S. Navy's P-8A Poseidon aircraft. The SLS enables aircraft conducting anti-submarine/ anti-surface warfare or intelligence, surveillance and reconnaissance missions to release more sonobuoys.

The improved design of the SLS eliminates the use of electro-explosive cartridges that had to be discarded and replaced after every single release. Instead, the SLS uses compressed air in the release process, an innovative method designed to reduce wear and tear to the launching system and decrease the amount of maintenance needed, thereby lowering life cycle costs and reducing impact on the environment.

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Pallam Raju assures level playing field in defence procurement

The Minister of State for Defence Dr M M Pallam Raju said at the recent two-day seminar on 'Command, Control, Computers, Communication, Intelligence and Information (C4I2 Summit-2011) that the modern battlefield scenario is becoming more and more complex due to increase in ranges and complexity of military equipment, advances in Information Technology and sophistication of C4I2 structures/Net-Centric warfare.

"Adoption of the latest technology in developing new warfare systems would propel us towards our goal of achieving a technological edge over the adversary in prevailing decisively across the entire spectrum of conflict with reduced force levels and minimal casualties", he said.

In the recently held Combined Commanders Conference, Prime Minster Manmohan Singh has said: "Today terrorist groups are highly networked, nimble footed and more lethal, this calls for appropriate responses. Cyber threats are emerging as a major source of worry. Cyber and information warfare could qualitatively change the concept of a battlefield."

Raju said cyber security and security of defence networks is a big challenge and he is sure Armed forces would take note of these emerging challenges while developing their C4I2 Networks.

"Despite a vast industrial infrastructure, we are still a long way from establishing ourselves as a major defence equipment manufacturing nation with heavy reliance on imports. The Government views import of critical capabilities with concern and is committed to correct this imbalance", he said.

This imbalance can only be corrected by expansion of the indigenous defence industrial base, increasing investment in R&D, identification of core technologies where India is already a lead country, and by promoting Private Public Partnership. The perception that the private and the public sector are 'potential rivals' is misplaced and he believes that there is great scope for developing a synchronised complementarities in strengthening and widening the defence industrial base. He is optimistic that competition will give way to cooperation, enabling both to grow as 'prospective partners' in defence industry.

"We have a procurement procedure that looks at the industry as a capable partner in providing us the means for this transformation. The offset policy in DPP is sure to provide a fair playing ground to both the public and private sectors leading to an enhanced domestic capability. A greater participation by our industry is also expected in the field of information technology with focus on harnessing the technology for our National security", Raju said.

For this, there is an urgent need for the Indian industry to give greater attention to research and development for ensuring that cutting edge technology is available to the Indian Armed Forces. It will be his endeavor to create a level playing field and ensure that greater opportunities are given to Indian entrepreneurs.

"All our future operations are going to be joint operations where desired level of synergy with flow of correlated and intelligent information between the three Services is essential. To translate any joint doctrine into action, interoperability between the Army, Navy and the Air Force is crucial. This interoperability will not be restricted to Service Headquarters alone and would call for integration at all levels there by achieving interoperability at the tactical, operational and strategic levels to ensure the concept of joint warfare. Therefore, while each Service is developing its Network Centricity, much work is underway in formulating policies and standards that will facilitate this integration", the Minister said.

The initiative of hosting an International Seminar on C4I2 is commendable. The participation by the Industry including International partners is encouraging and he considers it as a reflection of our transparent policies on defence matters.

3rd International Seminar on
Aviation Safety

Aeromag Asia along with Society of Indian Aerospace Technologies and Industries (SIATI) is organizing the 3rd International Seminar on Aviation Safety Hazards and New Technologies Previously Bird Strike India Seminar) at New Delhi on 9th & 10th December 2011. Airlines, Airports, Ground handling Agencies, Pilots, Ornithologists, Aviation and Airport security companies, Aircraft and Aero Engine manufacturers, are expected to actively participate in this seminar. It will also be a great opportunity for overseas organisations specialising in Airport Safety, Aviation and Flight Safety, Fire Safety and Bird control to get associated with this seminar .

Seminar for

- Airlines & Airline Personnel
- Airports, Ground handling Agencies
- Engine & Aircraft Manufactures
- Designers, Engine Bird Insulators,Test Engineers
- Aviation and Airport security companies
- Ornithologists, Airport Bird Control Consultants
- Airport Operations & Safety Personnel
- Aircraft and Aero Engine manufacturers
- Airline & Helicopter Pilots
- Civil & Military Aviation Groups
- University Researchers
- Wildlife Agencies,Wild life Control Specialists.

How to register

Please send your details with registration fees :

Name: ----------

Organisation with full address:

Designation: ----------

Tel: ----------

Cell No: ----------

Email: ----------

For more details - contact:

Convenor , Aviation Safety Seminar,
Aeromag Asia , Aeronautical Society of
India Building, Suranjandas Road,
Off Old Madras Road, Bangalore 560075.
Tel : 080 25284145 / 080 65952377
Fax:080 25292440
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info@aeromag.in, www.aeromag.in

M-MRCA commercial bids to be opened on Nov. 4

The Defence Ministry has invited Eurofighter and Dassault Rafale - the two shortlisted vendors in the multi-billion dollar combat aircraft deal - on November 4 to open their commercial bids after which a final decision on giving the contract will be taken.

The two short-listed vendors have received a letter from the Ministry and have been informed that commercial bids for procuring 126 Multi-role Combat Aircraft (M-MRCA) tender will be opened on November 4.

After the bids are opened, the Defence Ministry will be able to determine the lowest bidder in the deal and decide who will ultimately get the contract, described as the "mother of all deals".

As per Indian rules, the lowest bidder in a deal meeting all the specified requirements is considered to be the winner.

The Defence Ministry had earlier this month cleared the way for opening commercial bids of Rafale and Eurofighter Typhoon by approving their offset proposals. Defence Ministry officials said all the spade work for the opening of bids was over and the bids will be opened in the presence of the two vendors.

Eurofighter and Rafale were shortlisted for tender after four companies including American Lockheed Martin and Boeing, Russian MiG-35 and Swedish Saab Gripen were ousted from the race in April.

NIMAS to be set up

The Government has approved setting up of a National Institute of Mountaineering & Allied Sports (NIMAS) at Dirang in Arunachal Pradesh as an autonomous institute under the Ministry of Defence, a Registered Society under Societies Registration Act.

The required land at Dirang for the Institute has been provided by the State Government of Arunachal Pradesh. The expenditure on construction of various buildings at the site of the institute would be Rs. 81 crore. It will directly provide employment to 89 people, mostly in the middle and lower level. Besides, it will generate further indirect employment in the region and will also boost the economy of the common people who would be providing day to day various services required to the Institute.

It would be a training institution for multifarious adventure activities relating to land, air and aqua to attract adventure enthusiasts. The systematical training in the activities will increase the number of visitors from all parts of the country to the remote areas of this border State and their interaction with locals will result in development of the region.

This Institute would be first National Institute of its kind where theoretical and practical training for activities relating to mountaineering, aero adventure and aqua adventure would be conducted. Trainees for the courses at the Institute shall be from all parts of India and abroad. These would include personnel from Defence Forces, Para Military Forces, NCC cadets, civilians and students sponsored by State Governments.

Historic launch by Arianespace

Arianespace has successfully launched the first Soyuz rocket from the Guiana Space Center (CSG) in French Guiana, orbiting the first two satellites in the Galileo constellation. This historic launch signals the advent of the world's broadest range of commercial launch services, and will ensure Europe's independence in satellite positioning and navigation services.

A success story for Europe and Russia

The "Soyuz at CSG" program carries on the partnership between Europe and Russia that started in 1996 with the creation of the Starsem joint venture to operate Soyuz commercial launches from the Baikonur Cosmodrome in Kazakhstan. It gives Europe access to a proven medium launch vehicle, while allowing Russia to increase its annual production of Soyuz launchers.

With Ariane 5, Soyuz and shortly the Vega light launcher, Arianespace is the only launch services company in the world capable of launching all types of payloads to all orbits, including communications, scientific and Earth observation satellites, constellations, cargo missions to the International Space Station and more.

Galileo, a key to European space policy

Galileo effectively started in 2005 and 2007 with Starsem's launch of Soyuz rockets carrying the first two testbed satellites, Giove-1 and Giove-2 (Galileo In-Orbit Validation Element). Since then, the European Commission and the European Space Agency (ESA) have ordered 18 Galileo satellites from the European space industry, to be launched by Arianespace using Ariane 5 and Soyuz rockets.

Galileo gives Europe its own satellite positioning and navigation system, supporting a large number of applications. Once the system is fully operational, it will generate significant economic benefits, and greatly improve the quality of life for European citizens.

Two historic firsts for Arianespace

Commenting on this historic launch, Arianespace Chairman and CEO Jean-Yves Le Gall said: "Congratulations to Europe and Russia, and long live cross-border partnerships! With the launch of the first two Galileo satellites by a Soyuz rocket operating out of CSG, we have a perfect example of a successful partnership. This launch also opens a new chapter in our own history, the story of a Europe that is successful, that confirms its leadership in space, that is open and knows how to team up with different partners."

VS01/Soyuz STB/Galileo IOV-1 mission at a glance

The Soyuz launcher lifted off from the Soyuz Launch Complex (ELS) at the Guiana Space Center (CSG) in French Guiana.

The Galileo IOV-1 satellites were built for ESA by a consortium led by Astrium GmbH of Germany. They were injected into an intermediate circular orbit at an inclination of 54.7 degrees.

The mission, from liftoff to satellite separation, lasted 3 hours, 49 minutes and 27 seconds.

About Soyuz at CSG

The European Space Agency developed the Soyuz at CSG (Guiana Space Center) program to bolster collaboration with Russia on launch vehicles. Program responsibilities are distributed as follows:

-- ESA is the program manager, and provides the Soyuz launch complex (ELS) to Arianespace.

-- Russian space agency Roscosmos is in charge of the Russian segment of the program, and coordinates the work of all Russian companies involved.

-- French space agency CNES is system architect for the Soyuz at CSG program, and the design authority for all facilities at the space center.

-- Arianespace manages the supply of Russian systems and coordinates and supports the work of Russian companies during the development phase. It is in charge of operating Soyuz missions during the operational phase.

Galileo is a European program designed to develop a new global satellite navigation system under civilian control, offering a high-precision, guaranteed positioning service. The design, development and in-orbit validation (IOV) phases of the Galileo program were carried out by ESA, with joint funding by ESA and the European Commission. The Full Operational Capacity (FOC) phase is managed and wholly financed by the European Commission. The Commission and ESA have signed a delegation agreement under the terms of which ESA acts as design and procurement agent on behalf of the Commission.

Northrop Grumman-built unmanned NASA Global Hawks

Environmental scientists will utilise the Northrop Grumman-built unmanned NASA Global Hawks as part of the multi-year Hurricane and Severe Storm Sentinel (HS3), a study of the processes that underlie hurricane formation and intensity change in the Atlantic Ocean.

"The high-altitude and long-duration capabilities of NASA's Global Hawks allow HS3 to sample storms virtually anywhere in the Atlantic and for durations up to three times that of conventional aircraft," said principal investigator Scott Braun of NASA's Goddard Space Flight Center in Greenbelt, Md. "Being able to stay over a storm for 15 or more hours allows us to observe storms in ways that were simply not possible before."

Environmental scientists came together to embark upon a multi-year airborne science investigation of hurricane formation and intensification - or HS3. The scientists prepared for their investigation at NASA Dryden Flight Research Center, Edwards Air Force Base, Calif.

"Global Hawk's ability to fly as high as 65,000 feet for periods of up to 30 hours provides the science community the opportunity to explore remote areas of the Earth's atmosphere," said Scott Winship, advanced concepts vice president, Northrop Grumman Aerospace Systems. "Additionally, Global Hawk's flexible and mature design allows for modifying the aircraft with varying scientific instruments for different types of science missions."

Two flight tests were conducted by one of the NASA Global Hawks.

Data were collected from three scientific instruments aboard the Global Hawk: National Oceanic and Atmospheric Administration's (NOAA) Airborne Vertical Atmospheric Profiling System (dropsonde), the University of Wisconsin's Scanning High-Resolution Interferometer Sounder (S-HIS), and the High Altitude Monolithic Microwave Integrated Circuit Sounding Radiometer (HAMSR.)

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The Offset Policy and the way forward

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Former Chairman HAL

The demand for offset for Commercial Aircraft purchase was spear headed by HAL, Aeronautical Society as well SIATI. The 1st draft paper on National Aeronautical Policy and setting up of an Aerospace commission was prepared, when Dr. A.P.J.Abdul Kalam was the President of the society (of which Dr. Kota Harinarayanan and I were the Members) and was submitted to government, included recommendations to introduce Offset in both Commercial and Military Aircraft purchase. This was presented to Prime Minister and followed up by successive presidents of Aeronautical Society of India.

Due to persistent demand from HAL, showing tender document of other countries in purchase of Aircraft, and many presentations made to Civil Aviation Ministry and later to Cabinet Committee with the help of Ministry of Defence production, HAL was invited to sit-in during the negotiation for purchase of Boeing aircraft by Indian Airlines. Mr. Sachindra, Director, Corporate Planning and Marketing and myself attended the meeting which was much resisted by the then Chairman of Indian Airlines/ Air India, criticizing that the offset is being resorted to get work for HAL. He extorted that PSU's should become efficient and win the tender on competitive basis. We then had to prove that we are competent and without an offset clause we have already won order from Airbus for Passenger door on global competitive bid. We further clarified that offset will not only help HAL but a large number of industries mostly in the Private Sector, and we are seeking this jointly with SIATI and Aeronautical Society Of India, for the growth of Aerospace Industry in the country.

It took a few more years and many presentations to convince the merit of offset. In fact even in the initial part of the Kelkar committee deliberations, a rumor was spread that offset in going to increase the price of the aircraft to be purchased by India and countertrade is preferred.

Mr. Sachindra and I had to prove with facts and calculations that it is countertrade which makes the vendor enhance the price of the aircraft, as the vendor adds his commissions and fees for the agency who will export from India, commodities such as sugar, jute, spices etc on behalf of the aircraft vendor and this also does not result in any net increase in exports as these items are in any case being exported. In the case of offset, the cost of manufacture in India along with cost of quality assurance and logistics management will still enable attractive prices much lower that the vendor procurement prices. Hence the offset can only cost a reduction in the price of the aircraft definitely not an increase.

So much effort had gone, as you can see, and at first it was the Civil Aviation Ministry who introduced offset which was to be monitored by the State Trading Corporation of India. Offset in Defence purchases was introduced only in the Defence Procurement Policy announced in 2005/06. Only then many Private Sector Industries and Industries Associations such as CII, took note of the immense potential of offset policy and started taking some action. You may like to cover this in some detail.

Some critics are of the view that the potential is so large and there is serious doubt about Indian Industry's capacity to meet the offset demand. While this point is valid to some extent, these critics have not indicated any practical solutions. It is easy for anyone to say that such large offset is meaningless and impractical. But we have to find ways and means for gearing up to meet the demand and service to meet the requirement and make the offset policy meaningful. The government has encouraged foreign investments, Joint Ventures, purchase of technologies, concept of offset banking, and so on. These have to be made use of. There are impediments for industries becoming offset partners for the overseas buyers. One major hurdle in the beginning was the need to become a company with more than Rs 1000 crore turnover and get certified by Commerce and Defence Ministry as "Raksha Utpadan Ratna" or something like that. With great effort from SIATI and Defence PSU's this was scrapped. However there is still need for all industries big or small to get a license from the Ministry to be certified as Defence Manufacturing Company capable of participating in the offset. While the overseas vendors are capable of selecting companies based on competitive price, quality delivery etc, why not leave it to them to select quality Offset Partner? Why introduce "License raj" again? This is yet another impediment to be canceled.

Another impediment is the denial of enhancing limit of FDI. While investments in JV's and cost of importing technology are qualified for offset credit, why put a limit especially as we need more JV's and more industry to be able to service the growing offset provisions.

One agreement/view is that increasing FDI limit should be matched with a guarantee for release of the latest and advanced technology (prohibited/ denied). This may not happen. What we need is to expand manufacturing and technology base in Defence and Aerospace Industry, to take up manufacture of components, systems and assemblies equipments for export to meet the growing offset. Technology will naturally flow with time through such projects and people involved. A list of required advanced technologies must be drawn up and value the same and separately negotiate with offset credits. Another impediment is lack of reciprocity on quality certification between DGCA and FAA. While what is certified by FAA or its European/Russian Equivalent are freely imported and used in India and the reverse is not true. There are often restrictions on the basis of quality approvals for export.

There are several more impediments which need to be listed by interactions with small/medium industry, who have taken the brunt of it. CII, SIATI, FICCI, ASSOCHAM and all such organizations must join together to interact with Overseas Aerospace Defence Industry, who have a stake in India and practical solutions should be proposed to speed up the capability building and efficiency of implementing the offset policies.

Recent initiatives by SIATI

SIATI had made suggestions on Defense Offset Policy wide our letter ref. SIATI/offset/2011 dtd.5th April 2011 and SIATI/offset/2011 dtd.4th May 2011. These recommendations were made based on detailed deliberations among the representatives of Indian private sector industries and overseas industries who have an obligation for offset. For the sake of ready reference these recommendations are summarized and placed below:.

1. Industrial License for Defense Production
2. Offset Management
3. Infrastructure for Offset Absorption
4. Foreign Director Investment
5. Any other topics suggested by participants

RECOMMENDATIONS :
INDUSTRIAL LICENSE FOR DEFENCE PRODUCTION

• The requirement for Defense Industrial License has been now removed in DPP 2011. This indeed is a significant improvement and it may be made applicable retrospectively for DPP2006 and 2008 as well.

• Publication of the list of licensed/ or otherwise eligible Indian Industries for offset by MOD may be discontinued and deleted. It may be misleading overseas vendors while selecting partners. Choice of selecting capable partners may please be left to the overseas vendor companies.

• There should also be flexibility to the vendors to add new partners or change non-performing partners with the sole objective of meeting offset commitment effectively.

OFFSET MANAGEMENT

• A corporate regulatory permanent body, having domain specialists is desirable for centralized offset Management across all Defence Purchases and should be fully authorized to take decisions, to help all Indian and overseas industries.

• This corporate Body should be permanent and completely accountable for Offset materialization and should provide Single window clarifications, and assistance for Overseas Vendors and Indian suppliers to get issues resolved.

INFRASTRUCTURE FOR OFFSET ABSORPTION

• There is a significant need for larger number of Indian private industries, and in particular SMEs to be participants in the offset programme. Government may consider suitable incentives for the same.

• Major offset beneficiaries are DPSU's. Hence it may be made mandatory for DPSU's to involve SME's, by out sourcing to them at least 50% in value or more.

• Period of offset performance may please be made negotiable depending on nature of products & services to be bought from Indian companies (need not be co-terminus). Even if the performance period is Co-terminus, a ramp up period is required - initial gradual performance build up, scaling up as one goes along. Penalties for delay to be relaxed (no penalty for first two years).

• Make extensive use of infrastructure of MSMEs. Create mechanism for easier funding to MSMEs for quicker and widespread infrastructure build up required.

• Government to assist in providing support infrastructure in terms of logistics, special process facilities around manufacturing processes, measurement & test labs, access to power /water/road, and for AS 9100 certification.

FOREIGN DIRECT INVESTMENT

• FDI limit for Defence industries may please be enhanced to 49%. FDI to include non cash equity (eg, TOT) and not only cash equity as negotiated and agreed with JV partner

• For export from a JV company , offset credit to go the buyer, which could be a JV partner or another buyer

• For Non-defense, Civil aerospace (including dual use) industries FDI limit may be made 80% and investment should also qualify for offset. For investment in services/training FDI limit should be same and derive same offset credit.

TOPICS SUGGESTED BY PARTICIPANTS

• It is recommended to provide multiplier for export of higher value-added products like assemblies/systems/structures as compared to parts and components.

• Multiplier could be provided for MSMEs to enable inclusive and equitable development of technological base for Aerospace & Defence. Enhance utilization of SMEs who had been the major suppliers/ service providers to Defence and Aerospace in the past before the "offset" policy and contributed significantly to enhancing indigenous development and self reliance in defence and aerospace. Most of these are promoted and managed by engineer (scientist/technologist) entrepreneurs, and have developed a good base in technology by collaborating with DRDO, HAL and other Defence PSUs and Defence & Aerospace organizations. They need to be nurtured.

• Offset banking period should be much longer at least – 7 years. It will be a good incentive to start working with Indian partners early and also to outsource to Indian partners and invest in Indian companies earliest.

• 'Joint R&D' useful to Indian requirement only should qualify for offset credit and not an investment in "closed shell R&D" for vendors' own purpose.

• Investment in Services Company should qualify for offset.

• Offset credit should be for only "Value Add" portion and not for full invoice value as low value added exports can counter the purpose of Offset Policy.

• Regarding offset credit for technology, it is recommended that no offset credit should be given for conventional TOT/ licensed production.

• An expert committee from DRDO and DPSUs may draw up a list of key strategic technologies required for Indian defense industry and offset credit should be given only for the value of such technologies transferred and for which no payment is received by the overseas vendor for TOT/Licensed production etc.

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The major partners in DRDO's nation building endeavors include the three armed forces as the prime users, defence PSUs, private industries, international collaborators and academic/research institutions. The DRDO attracts and encourages young students to take up Defence S&T as career option.

Women contribute very significantly to every aspect of DRDO endeavors and find the work place in DRDO conducive to their professional and intellectual development. Generating technologies for Deterrence and Defence, DRDO has firm determination to make the nation strong and self reliant.

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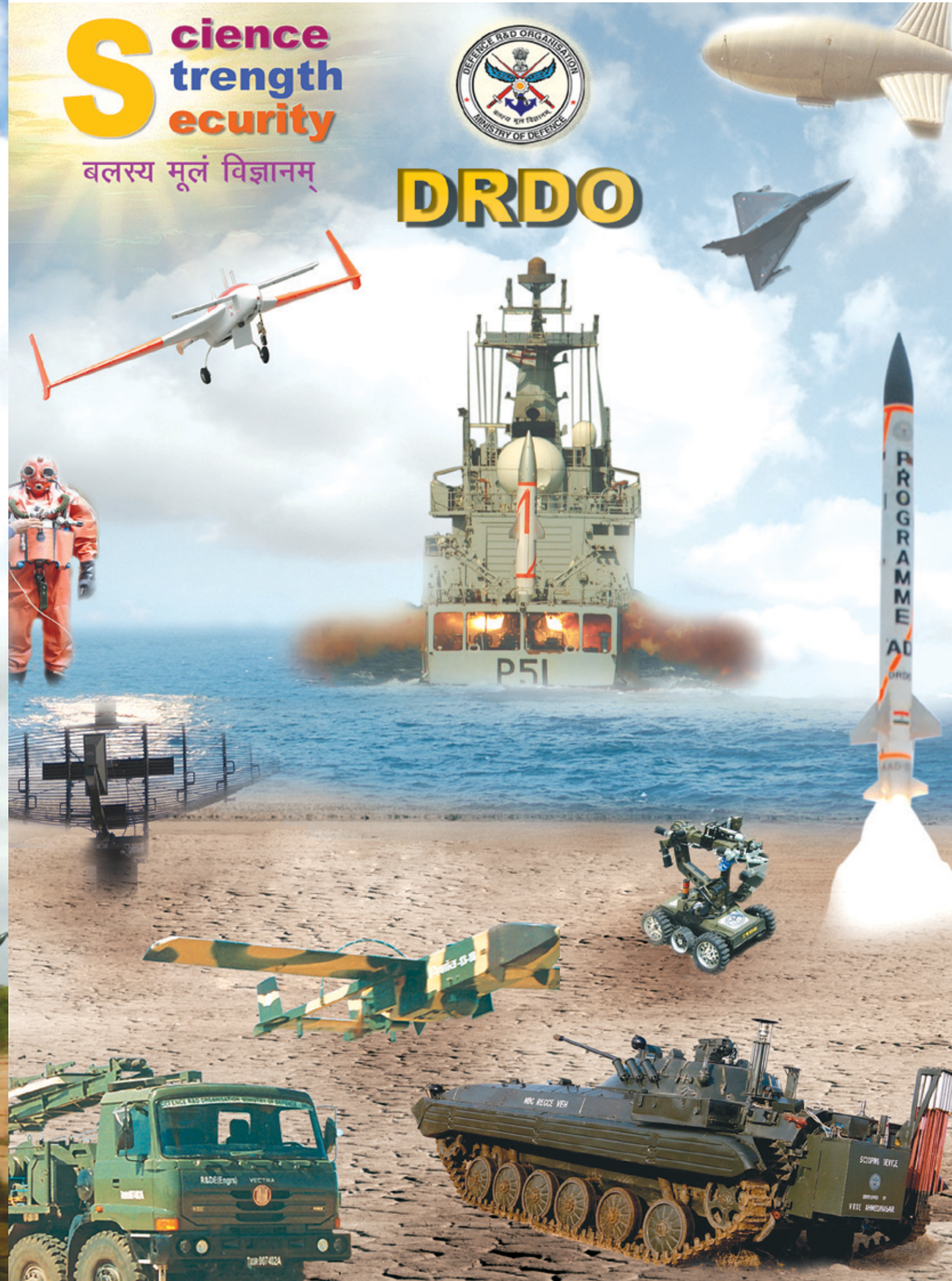

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