



e-news

CONTENTS

- **Current Affairs**
- **Technology**
- **Business**
- **Advertisement-Avenues**

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Welcome to e-news



F-18 comes in.first, test trails begin- Details under Current affairs

READER'S RESPONSE

The editorial team invites your views, suggestions, to the News about Members Column and contributions to the e-news.

Boeing rolls out new aircraft

American aviation giant Boeing today rolled out its first 'P-8A Poseidon', claiming it to be the world's most advanced multi-mission maritime patrol and reconnaissance aircraft, with the Company saying that India would be its first buyer country. India has ordered eight P-8Is, a derivative of the American version, the first of which Boeing will deliver within 48 months of the contract being signed. The rest seven aircraft would be delivered by 2015, filling a wide gap in India's maritime reconnaissance capability, hit by crashes of its Russian built aircraft. The Indian RFP (request for proposal) which is awaiting a formal nod from the Cabinet Committee on Security calls for delivery of eight aircraft over a four-year period. Though the Indian version is a variant of the just rolled out P-8A Poseidon, Boeing officials said the mission system of the Indian aircraft have been made to address the unique requirements tailored by the Indian Navy.

Source: Deccan Herald

F-18 comes in. First, test trials begin

Boeing's F-18 has come in ahead of Lockheed Martin's F-16 for the IAF's test trials in the city. The F-18's flights began at HAL Airport, with both Indian and American pilots trying their hand. IAF is conducting trials for 126 fighter aircraft it plans to buy next year. The F-18 has come with flight test engineers to coordinate with their Indian counterparts. Pilots from the Aircraft Systems Testing Establishment have been trained to conduct flights. The tests involve sorties for a particular duration and are undertaken twice — in the morning and at noon. It will look at the behaviour of the aircraft in normal weather conditions of Bangalore, thrust, engine power and flexibility of manoeuvres. The F-18 is the Super Hornet version, favourite of the US Navy. F/A-18E is a one-seater, while F/A-18F is a two-seater. They are designed for both air-to-air (combat) and air-to-ground (attack) missions.

Source: Times of India

Flight testing of Tejas

Taking into account certain changes in the objectives proposed by Indian Air Force, the second quarterly review held in March 2007 by the Empowered Committee chaired by Chief of Air Staff (CAS) have recommended the date for Final Operational Clearance for Light Combat Aircraft (LCA) Tejas as December 2012. To complete the project in time, a high level review is being conducted by the CAS once in every quarter and by the Deputy Chief of Air Staff once in every month. Defence Minister AK Anthony informed the Parliament.

Source: Indian Aviation News

MMRCA trials to begin in Bangalore

India's quest to buy 126 Medium Multi-role Combat Aircraft (MMRCA) will shift gear when the flight trials of the six global contenders will begin in Bangalore this week with US major Boeing's F/A-18 fighter being the first contender. "F/A-18 will be the first contender to arrive in India for the trails that will begin in Bangalore this week," top IAF officers said. The Lockheed Martin F-16s, Dassault's Rafale, SAAB Gripen, Eurofighter Typhoon and Russian MiG-35, the other five competitors for the US\$ 10-billion deal, will follow F/A-18, not necessarily in that order, for the first phase of the flight trials in India, they said. After Bangalore, all contending aircraft will move to Leh for high altitude trials and to Jaisalmer for summer trials. "We are optimistic that the trails on Indian soil and conditions of all the six aircraft competing for the deal will be completed before April end next year," the officers added. The IAF would field a team of two test pilots each, who would carry out the flight trials in the three locations that the Air Force has chosen, they said.

Source: Indian Aviation News

IAF awaits response to RFP for attack helicopters

Indian Air Force has issued a fresh request for proposal (RFP) this year for supply of attack helicopters, Defence Minister Mr A K Antony informed the Parliament. The RFP has been issued even as the country awaits operational clearance of a HAL-designed and developed technology demonstrator of an attack helicopter. The design and development programme of the Light Combat Helicopter (LCH) was approved in October 2006. The RFP for attack helicopters from foreign vendors has a chequered history with proposals from three suppliers being rejected earlier, as they failed to conform to specifications laid out in an RFP issued on 23 May 2008. When a technical evaluation of the proposals revealed lack of compliance, the RFP was withdrawn on 9 March 2009 and a fresh RFP issued on 25 May 2009.

Source: Indian Aviation News

New Director Corp Planning & Marketing at HAL

Mr P Soundara Rajan has been appointed as Director, Corporate Planning and Marketing at Hindustan Aeronautics Ltd (HAL). As Director, Mr Soundara Rajan will spearhead a gamut of activities in the planning, marketing, customer services, quality, projects, management services and information technology areas. Prior to the latest appointment, Mr Soundara Rajan was General Manager (Projects) at the Corporate Headquarters, driving the business

development activities. Mr Soundara Rajan has undertaken several path breaking initiatives at HAL such as aligning the quality systems to international AS 9100 and NADCAP standards, implementation of ERP systems, indigenization of key systems and establishing long term business agreements with supply chain. During his tenure, he established the major overhaul line for Mirage 2000 and its systems, a first of its kind outside France at that time.

Source: Indian Aviation News

ISRO, Nasa search for water ice

India's Rs 386-crore moon mission, Chandrayaan-1 crossed an important milestone when it teamed up with NASA's Lunar Reconnaissance Orbiter (LRO) in search of water ice. Chandrayaan project director Mylaswamy Annadurai told TOI hours before the momentous turning point both the spacecraft would move simultaneously picking up data. "It will be a brief flight leading to an exchange of information. There will be a combined analysis of the data." He said both the spacecraft would fly at a velocity of 1.6 km per second and survey an area on the moon's north pole which is 18 km across. The historic combined flight is being tracked by ISRO's deep space network at Bialalu, 40 km from Bangalore and NASA's deep space network and Applied Physics Laboratory in Maryland, US.

Source: Times of India

IISc Continues to lead in Science and Technology research

INDIAN Institute of Science (IISc) continues to top the list of elite engineering and technological institute in the country, leaving the IITs a distant second. IISc faculty and students have published 75 percent more research papers than the second ranked IIT Kharagpur. A combined study by Dr Gangan Prathap of the National Institute of Science Communication and Information Resources and Mr BM Guptha of the National Institute of Science and Technology, has found that between 1999 and 2008, IISc produced nearly 13,000 research papers. IIT Kharagpur has produced 7,300 papers, followed closely by IIT Bombay (7,228), IIT Delhi (6,520), IIT Kanpur (6,234), IIT Madras (5,715), and IIT Roorkee (3,471). The National Institutes of Engineering (NITs) are sadly, nowhere in the picture as far as research is concerned.

Source: Indian Express

No data yet from student satellite

Even after nearly 100 days into the path-breaking space mission, ground receivers at the Anna

University in Chennai have not been able to acquire data from the main payload of India's first student satellite, Anusat. The tiny 40-kg satellite designed and developed by Anna University students, piggy-backed on the Risat-2 spy satellite and was flown on the Polar Satellite Launch Vehicle. After liftoff from Sriharikota on April 20, Anusat is operating at an altitude of 550 km. Speaking to TOI, Anusat project director P V Ramakrishna said the primary payload of Anusat was what was known as "store and forward". Its main role was to educate students on the challenges in designing a satellite payload. "It's this payload which has still to be validated," he said. Anusat completed 100 days of operation on July 28 and each day it executes 12 orbits. In Chennai, the Anusat ground receiver is located at the MIT campus at Chrompet which is a part of Anna University.

Source: Times of India

Young 'wing walker' aims for record

An eight-year old British boy sought to fly into the record books today "wing walking" at 160KM per Hour strapped to the top of a biplane, supporters said. Tiger Brewer, aiming to be the world's youngest wing walker, stood on top of his grandfather's plane as it climbed to an altitude of 1,000 feet during the stunt at an airfield near Cirencester in southwest England. "It felt amazing, like I was on top of the world." he said afterwards. "It was cold and windy but it can't be beat. You don't have a parachute, just a pair of goggles." A team of witness will now send their testimony to Guinness World Records who they hope will officially declare a new world record.

Source: Hindu Business Line

HAL components for Russia's Sukhoi

The Hindustan Aeronautics Ltd (HAL) will supply components to Russia for its Sukhoi range of combat jets for export to third countries, even as India's premier aviation giant prepares to roll out the first fully indigenous Su-30MKI multi-role fighter next year. India and Russia are expected to sign an inter-governmental agreement on supply on components by the end of this year, a top HAL executive has said. "We are already supplying navigation and communication equipment for installation on the Su-30MK series of fighters exported by Russia to other countries," GM of HAL'S Nasik based Aircraft Manufacturing Division, Mr V Balalaishnan told FTI on sidelines of the International Aerospace Show-MAKS-2009.

Source: Bangalore Mirror

ISRO completes design of Chandrayaan-2

India has completed the design of Chandrayaan-2, its next mission to the moon, in collaboration with Russia, that would have a lander and rover which can collect samples of the lunar soil and analyse them and send back the data. "Right now, the design has been completed. We had a joint review with the Russian scientists here," the Chairman of Indian Space Research Organisation, Mr G. Madhavan Nair, told PTI. According to the Bangalore- headquartered space agency, the Chandrayaan-2 mission would have an orbital flight vehicle constituting an Orbital Craft and a Lunar Craft that would carry a soft landing system up to Lunar Transfer Trajectory. The target location for the lander-rover would be identified using data from instruments of Chandrayaan-1, the first unmanned mission to the Moon launched on October, 22 last year. While ISRO will be developing the orbiter, it will be Russia's job to make the lander and rover. Additional scientific payloads would be acquired from the international scientific community.

Source: Hindu Business Line

Focus on renewable energy: Kalam

With the Central government fixing a target of 20,000 mw solar energy generation by 2020, the nation faces the task of generating 2,000 mw every year from now on, the former President, Dr A.P.J. Abdul Kalam, said here. But, solar energy alone could not meet the total requirement. The country had a 7,000-km-long coastline that could be tapped for wind energy. Other energy sources also should be tapped to supplement solar energy, Mr. Kalam said after inaugurating a solar thermal power research and development centre of the K.G. Group. He also met children who had undergone free surgery under a Government scheme to correct congenital defects in the heart. Science and technology should be used as a vehicle for the economic uplift of a country. At the same time challenges such as climate change, diseases,

economic slowdown and terrorism needed to be tackled.

Source: Hindu

A planet that orbits backwards

Astronomers have discovered the first planet that orbits in the opposite direction to the spin of its star. A team of scientists says the planet appears to have been the victim of a game of planetary billiards, flung into its unusual orbit by a close encounter with a "big brother" planet. The planet, named WASP-17, and orbiting a star 1000 light years away, was found by the UK's WASP project in collaboration with Geneva Observatory. Since planets form out of the same swirling gas cloud that creates a star, they are expected to orbit in the same direction that the star spins. Students David Anderson, of Keele University, and Amaury Triaud, of Geneva Observatory, were surprised to find that WASP-17 is orbiting the wrong way, making it the first planet known to have a "retrograde" orbit.

Source: Times of India

Low cost AEW&CS from DRDO

THE Centre for Airborne Systems (CABS) at Defence Research and Development Organisation (DRDO) has revealed that it has developed a low-cost, indigenous radar system, which will match and even surpass the Israeli Phalcon Airborne Warning and Control System (AWACS). "DRDO is equipped to develop an indigenous radar system at substantially low-cost by using technologies developed for indigenous AEW&CS," said a CABS official. An indigenous airborne early warning and control system (AEW&CS), to be based on Embraer-145 platforms, is being readied for delivery by 2011. The system will be developed at a cost of Rs 1,800 crore. This CABS- developed indigenous system alone is capable of creating business opportunities worth Rs 500-600 crore for SMEs in the country. CABS officials said its various work centres at DRDO are already tapping around 50-60 SMEs and PSUs to develop the indigenous system.

Source: Indian Aviation News

50-year-old warhorse can still give jitters enemy

It's an old warhorse, 50 years old to be exact. But after a life-extending refit, India's lone aircraft carrier the INS Viraat is back to show that it still has enough steam to give jitters to the enemy. The INS Viraat, meaning giant in Sanskrit and which has a crew of 1,500 personnel, has been docked at the Cochin Shipyard Ltd for the past year for repair and maintenance. The refit will increase the aircraft carrier's sea life with the Indian Navy till 2015. "The

refit of the aircraft carrier has been completed. Currently it is floating (in the docks)," said a senior official at the shipyard. "By the beginning of next month, it is expected to go to its parent base in Mumbai in the Western Naval Command", and it will be received with a great bang. A golden jubilee celebration for completing 50 years of service.

Source: Deccan Herald

'Nanotechnology is the ultimate frontier for mankind'

It is said that a nano-sized structure has to be magnified 10 million times before we can see it with the naked eye. Nanotechnology is the study of the control of matter on an atomic and molecular scale. It deals with structures of the size 100 nanometers or smaller, and involves developing materials or devices within that size. Dr Pulickel M Ajayan, professor in engineering at the mechanical engineering and materials science department of Rice University, Houston, is one of the pioneers in the field of carbon nanotubes. Considered to be the strongest and stiffest material discovered yet in terms of tensile strength, carbon nanotubes are important in nanotechnical engineering as well as in the production of everyday items like clothes and sportsgear to combat jackets. Recipient of numerous awards, Ajayan and his team created the darkest material known to man in 2008 — a carpet of carbon nanotubes that reflects only 0.045 per cent of the light. A native of Kodungalloor in Kerala, Ajayan has given more than 230 invited talks, including several keynote and plenary lectures, in more than 20 countries. He was in Kochi recently to attend an international conference on nanotechnology.

Source: Deccan Herald

Coming soon: Wind turbines for the home

Professor John Gregg at the University of Oxford is an international expert in the fields of spin electronics, spintronics and magnetic instrumentation. But he has designed and built something for homeowners facing high energy costs: a new-generation wind turbine. He is testing the turbine, which features a standard induction motor as a generator, in his mother's garden in Ireland. It all started thanks to rising energy prices. "About five years ago, the prices got so bad that we agreed we needed a wind turbine to heat the water for the shower," says Gregg. He was "knocked sideways" to find he would have to pay \$38,000 giving an unrealistic 50-year payback time. One problem, of course, is the wind. Velocities drop dramatically as you come down in height, and planning laws though thanks to Irish MP Dick Roche, Ireland has good

exemptions for domestic wind turbines make it difficult to erect tall wind turbines in gardens.

Source: Hindu Business Line

ISRO Counters Google Earth

India has come up with an alternative to Google Earth with its own satellite mapping temporal-www.bhuvan.nrsc.gov.in - which is more precise and has the benefit of better updates. The portal which would use images taken by ISRO's series of remote sensing satellites (IRS), including Cartosat-1 and Cartosat-2, would serve the user with images having resolution up to 10 m. The portal, Bhuvan (meaning 'the earth' in Sanskrit) will provide multi-layered images and the images would be updated every year unlike Google Earth which is updated only in four years. Union Minister of State for Science and Technology and Earth Sciences Prithviraj Chavan launched the beta version of the geoportal here on Wednesday at the one-day workshop of the Astronautical Society of India. While Google Earth shares only single layer information, its Indian counterpart would share multi-layer information using the images exclusively from indigenous satellites. The images would be visible to the user both in two and three dimensions using the navigation tools provided.

Source: The New Indian Express

India, Russia set for Final Testing

Indian and Russian scientists are close to final development and testing of the air launched version of the BrahMos supersonic cruise missile. A top Russian defence official said a new take-off engine for launching of the missile high in air and at extreme high altitudes had been developed. Alexander Leonov, Director of the Russian Machine Building Research and Production Center, said: "we are ready for test launches." Leonov was quoted as saying by a news agency that the initial test firing of the missile would be undertaken from the Sukhoi-30 MKI, but did not specify the exact dates. After testing, the IAF would be the launch customers for the air launched BrahMos cruise missile, which will make the Indian Air Force, the only force in Asia, to have such a capability.

Source: Indian Express

ISRO to put Algerian satellites in orbit by 2010

With the US clearing the decks for the Indian Space Research Organisation (ISRO) to launch Algerian Satellites with American components, the space agency is planning to put the satellites in orbit by the end of 2009 or 2010. The clearance given to launch the Algerian satellites ALSAT-2A and ALSAT-2B which have US components on board an Indian Space launch vehicle comes after the signing of the Technical Sage Guards

Agreement(TSA) between the US and India during US Secretary of State Hillary Clinton's recent visit to the country. "Now that the clearance has been given, we plan to launch the Algerian satellites from the Satish Dhawan Space Centre by the end of the year or early next year if the weather permits," said ISRO spokesperson S Satish.

Source: *The New Indian Express*

VROOM...JET SET FOR RACE

The F-16s from Lockheed Martin will be the IN version, said to be the latest in the F-16 stables. Lockheed is flying in a specialized pilot and flight engineer for demos. "A cockpit simulator is being brought for familiarization with electronics and overall atmosphere of the F-16 cockpit," Lockheed representatives told TOI. The latest version of the F-16 incorporates advanced avionics, stealth and other critical systems of our F-22 and F-35 jets, the only two fifth generation fighters currently flying. Lockheed believes F-16 is the fastest path for the IAF to the fifth-generation fighter. India and Russia

are currently engaged in joint design of a fifth-generation fighter but its production is at least a decade away.

Source: *Times of India*

IIT Kanpur develops nanostat

Taking a big leap in its technological quest, IIT Kanpur has developed a Nano satellite which is expected to provide real-time data on drought, flood, vegetation and forestation. The satellite, designed and developed by a group of students of the institute, will be handed over to ISRO, which is expected to launch it by the end of the year. "This satellite will have specific function of sending imagery on ground conditions. We will set up a tracking station in our institute where we will get the real-time data on drought, flood, vegetation and forestation," IIT-K Director Prof G Dhande said. The satellite, costing Rs 2.5 crore, has been developed by a team of students led by Agrawal, an M Phil student. The Nano satellite, which will be named 'Jugnu', has a mass of less than 10 kg. It will piggyback on larger launches, avoiding the need for a dedicated launch.

Source: *Deccan Herald*

AI may Cancel Six Boeing 777 aircraft Orders

FACED with slump in the aviation sector and mounting government pressure to restructure, cash-strapped national carrier Air India is mulling canceling delivery of six Boeing 777 long-haul aircraft. Air India chairman and managing director Arvind Jadhav and Boeing India president Dinesh Keskar held a meeting in Mumbai on Friday at the Air India office to discuss the matter. "Air India is in dialogue with Boeing for cancellation of Six B-777 aircraft deliveries in 2010-11 and 2011-12 in view of the current global aviation scenario," an Air India spokesperson said. The national carrier, which is facing a severe cash crunch, had ordered 111 aircraft, including 68 from Boeing, at a total cost of over Rs 50,000 crore to augment its fleet. The fleet renewal plan, including scheduled deliveries of airplanes, is currently being reviewed by the carrier. As of now, it has 46 aircraft on lease including 17 on sale-and-lease back arrangement.

Source: *Economic Times*

Biggest Indo-US defence deal rolls

The last hurdle for the execution of the biggest-ever defence deal with US — the \$2.1 billion contract for eight Boeing P-8I Longrange Maritime Reconnaissance (LRMR) aircraft — has now been cleared. The US and Indian governments have finalised the Technical Assistance Agreement (TAA) for the P-8I contract after exchange of a few drafts

and the formal approval by the Cabinet Committee on Security (CCS). This, in effect, means the direct commercial sales contract inked with Boeing seven months ago "has now become effective", with US assuring India of providing the requisite support and maintenance for the P-8Is. TOI was the first to report that the UPA government had quietly signed the commercial contract for eight P-8I aircraft on January 1. Since then, the two nations have also finalised the text of the contentious end-use monitoring agreement to "smoothen" India's acquisitions of weapon systems from Washington.

Source: *Times of India*

Nod likely for jet fuel import

IN A move that could provide some respite to ailing airline companies, the government is looking at allowing airline companies to import jet fuel on their own. Freeing up imports of jet fuel would allow airlines to avoid high sales tax levied by state governments varying from 12% to 34%. The fuel could be imported under the government's Open General Licence policy and is the most liberalised form of import licence which does not place any export obligation on the importer. The airline industry suffered an estimated loss of Rs 10,000 crore in 2008-09 on account of high fuel price, excess capacity and weak demand and has sought government's support to tide over the tough times. The Finance Ministry is examining the proposal in this regard, a government official told ET. At present, Aviation Turbine Fuel (ATF) can only be imported by the Indian Oil Corporation, which is the designated

agency, as it is a canalised item, although there is no import of jet fuel at the moment.

Source: *Economic Times*

Etihad to fly to Hyderabad in November

ETIHAD Airways is to boost its Indian flying programme with the addition of Hyderabad to its expanding global network. The Abu Dhabi-based airline will become the first airline to operate flights between its home base and the state capital of Andhra Pradesh, when it launches its non-stop, four times a week service from November 2009. The service will become daily from the start of 2010. The addition of Hyderabad brings the number of Indian destinations served by Etihad to seven and follows successful bi-lateral talks between the Governments of the UAE and India, aimed at further liberalising flying links between the two countries. James Hogan, Etihad Airways' Chief Executive, said, "Etihad has made no secret of the fact that it wants to build up its Indian services and looks forward to expand its flying programme to the country with the launch of this exciting new service.

Source: *Indian Aviation News*

DHL introduces the first AOG service in India

DHL the global market leader in the international express and logistics industry announced their AOG (Aircraft on Ground) services to major air carriers in India's aviation industry. The fast growing aircraft maintenance, repair and overhaul (MRO) sector has witnessed significant losses per month each time an aircraft is grounded due to technical snags. DHL looks to mitigate this condition by providing an end to end logistics solution that will help the aviation sector in faster MRO processes. As per a Ministry of Aviation report in 2007, Indian airlines alone, posted an expenditure of Rs. 68.40 crore and loss of revenue of Rs. 45.96 crore due to aircraft on ground. A grounded aircraft eats up profits and generates no revenue. Airline companies cannot afford to have a single aircraft from their fleet grounded at any point of time.

Source: *Indian Aviation News*

Army gets go-ahead for Israeli missile systems

Army's long-pending case for new air defence weapons to protect its tanks and troops as well as "vital areas and installations" from aerial threats has finally got a boost with the defence ministry giving the green signal for the various projects. With the indigenous Akash and Trishul air defence projects not meeting "user requirements", the Army is now on course to procuring three regiments of quick-reaction surface to-air missile (QR-SAM) systems from Israel for around Rs 4,000 crore. The Defence Acquisitions Council, chaired by defence minister Mr A K Antony, discussed the entire matter on Monday. Though there was no official word, sources said the Israeli SpyDer QR-SAM systems had been selected for the project.

Source: *Times of India*

MAYTAS to construct airport at Gulbarga

Minister for Tourism Mr Janardhan Reddy said that the Cabinet has given permission to MAYTAS Company for the construction of airports at Gulbarga and Shimoga in its previous meeting a few days back and the construction would commence soon after the bypolls to five Assembly segments. Speaking to reporters near Nagavi village of Chittapur taluk on Sunday, Reddy said that the Cabinet had discussed the pros and cons of entrusting the airport works to MAYTAS. "The government has put a condition to MAYTAS that it should complete the work as per the previous agreement on time," he added. "I have toured all the five Assembly segments which are going to the bypolls and the public are completely in favour of the BJP," he said.

Source: *Indian Express*

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