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CONTENTS

- Current Affairs
- Technology
- Business
- Achievements
- Advertisement-Avenues
- Lighter Vein

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Welcome to e-news



Anna University cheers as the country's first university satellite goes into orbit - Details under Technology

READER'S RESPONSE

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

French nano courses for IISc students

The first live cyber-conference between the Indian Institute of Science and the University Joseph Fourier in the French city of Grenoble has resulted in agreement on IISc students being able to take courses in nano sciences from France. Joining researchers from the IISc and Grenoble were teams from INSA Lyon and the Polytechnic University of Tomsk in Russia. The cyberconference was part of a larger cyberuniversity project between IISc and a number of French universities, including the University of Toulouse. It has been developed with support of the Embassy of France. The cyber-conference announces a new collaboration in the field of nanosciences between Grenoble and the IISc. Three scientific presentations in the fields of nanochemistry, nanophysics and nanobiology were beamed live from Grenoble to the IISc campus. The cyber-conference, broadcast via the internet, also made possible the transmission of these conferences on to multiple sites simultaneously.

Source: Times of India

AI to get Boeing 787 Dreamliner in 2010

After a delay of almost two years, India will get delivery of its first Boeing 787 Dreamliner aircraft by June next year, which would enable the national carrier to have more long-haul international flights. The first 787 will be delivered by June 2010. Boeing International's vice-president Mr Dinesh Keskar said here adding that the aircraft called the 'Dreamliner' would join service in the first quarter of 2010, with Japan's all Nippon airways being the launch customer. The first six airplanes are now in different stages of production and flight tests at Boeing's assembly plant at Everett in the US. The 787 Dreamliner has orders for 895 airplanes from 58 airlines, with Air India ordering 27 of them and Jet Airways 10.

Source: Indian Express

'Feathers' can up plane efficiency

Coating the rigid wings of airplanes with artificial bristles that mimic feathers could make them more efficient, experts have suggested. According to a report in New Scientist, an Italian team has demonstrated how feather-like structures help reduce drag on a cylinder and says they could have the same effect on underwater and aerial vehicles. Mr Alessandro Bottaro at the University of Genoa is more interested in how a set of smaller feathers, called coverts, keeps birds flying efficiently. Mr Bottaro's team added synthetic coverts to a computer model of a 20-centimetre-diameter cylinder and put it in a virtual wind tunnel. Their synthetic feathers are modeled as rigid keratin bristles 4 to 6cm long and 0.5mm in diameter, coating the cylinder at a density of three fibres per square centimeter. As the wind

speed increased the bristles started to vibrate in a similar way to real covert feathers, reducing the drag on the cylinder by 15%.

Source: Times of India

Domestic airlines asked to align schedules

The civil aviation ministry has asked domestic air carriers flying to foreign destination not to compete with each other and align schedules of their flights for better returns. Ministry officials asked air carriers to get rid of excess capacity on both foreign and domestic sectors and also reduce transit time to save on operational costs. The suggestion was necessary as domestic airlines such as Air India, Jet Airways and Kingfisher are set to lose over Rs 8,000 crore due to stiff competition and rising jet fuel in 2008-09, a ministry official, who was present in the meeting said. Air India, Jet Airways and Kingfisher have already started rationalising routes and reduced capacity, he said requesting anonymity. The meeting called to discuss ways to enhance operational efficiencies, was attended by executives of domestic airlines, airport operators and aviation regulator.

Source: Economic Times

Missile deal not signed in a jiffy: Antony

Defence Minister Mr A.K. Antony said criminal proceedings would be initiated against the Israel Aerospace Industries (IAI) under the Indian Penal Code if irregularities were found in the missile deal with that country. "If there is credible evidence, the matter will be investigated and the company will be debarred from defence relations with India for five years. Following allegations of kickbacks, the Defence Ministry, the Defence Research and Development Organisation and the Air Force are examining the deal, he said at a Meet-the-Press at the Thrissur Press Club. Mr. Antony reiterated that the deal was transparent. He said: "According to the pre-integrity pact signed with the IAI, the deal could be cancelled at any phase if any malpractice is detected. The deal was initiated after various defence agencies maintained that missiles with India were outdated and recommended medium range surface to air missiles from Israel, which cost less and were technologically superior.

Source: Hindu

India to get Phalcon AWACS next month

India will get its first 'eye in the sky', the Phalcon Airborne Warning And Control Systems (AWACS) aircraft on May 18 which will provide the IAF means to track incoming missiles and look deep into the neighbouring countries without violating any air space. The first Phalcon was inspected by top Indian Defence officials who came here to check the specially modified Russian IL-76 aircraft and set May 18 as the delivery

date. The other two aircraft would be delivered by mid or late 2010, if everything goes on schedule, Defence sources said. The delivery of the aircraft bought at a whopping price of \$1.1 billion is almost a year and a half behind schedule. As per the tripartite deal between India, Russia and Israel, the aircraft should have been delivered by the end of March this year. India and Israel are reported to be in advanced negotiations for the purchase of three more Phalcon AWACS which the IAF proposes to integrate with other air and ground assets. All the six AWACS would be linked with the country's first military satellite proposed to be launched by mid next year.

Source: Indian Express

Domestic airlines suffer setback

It is turning out to be a double whammy for domestic airlines in India with increase in ATF prices coupled with a slide in passenger traffic which may further delay airlines returning to profits. What could impact the load factor further is the recent increase in fuel surcharge by Kingfisher Airlines as well as Jet Airways, airline analysts say. The low-cost airline, SpiceJet is the latest to consider a rise in fares. "The current situation warrants a review of the fare structure. We are evaluating the same," the spokesperson said. But an airline analyst said the airlines should take care to see that they do not price tickets below the cost price which can be disastrous for the whole industry. "It will be tightrope walk and is perhaps their biggest challenge," Ernst & Young partner, aviation sector, Mr Kapil Arora, said. "Typically, any hike in air fares adversely impacts load factors, as the Indian passengers are bargain hunters," he said.

Source: Business Line

IISc to set up neurosciences research centre

The Indian Institute of Science (IISc) will set up the Centre for Neurosciences, an advanced research unit based on Harvard University's model. The centre is likely to start functioning in May. "We've set up the centre with funding from the institute itself. The director and faculty have been appointed. The team will be assembled for a final time and work should begin in May," explained IISc Director Prof P Balaram. "The centre will offer a PhD programme." Along with traditional biologists, the centre will house researchers from other fields such as electrical communication engineering, computer sciences, mathematics and chemistry. "We want to bring people from diverse backgrounds together to work in a large, university-type institute in advanced neuroscience," said neuroscientist Prof Vijayalakshmi Ravindranath, who will head the centre. She's also founder-director of the National Brain Research Centre, New Delhi, which

specializes in cell biology and imaging. She will bring to the IISc centre her experience from the Delhi centre and knowledge from earlier work in Nimhans. Research at the centre will help understand age- and malnutrition-related brain disorders, and disorders related to Alzheimer's, epilepsy and encephalitis.

Source: Times of India

NASA's moon missions face fuzzy future

At a spacecraft factory down the road from Kennedy Space Center in Florida, a small robotic probe is being prepared to fly to the moon. Its mission: map the lunar surface so NASA can find safe landing spots for astronauts. But that may be the least of its worries. A report issued last week by the Congressional Budget Office warns that the new manned space initiative, called Constellation, which is intended to follow the space shuttle and space station programs, is likely to cost about 50 percent more than advertised. The analysis is based on NASA's track record. Of 72 past programs, budget overruns averaged 50 percent, the CBO found, including 14 projects that nearly doubled in cost.

Source: msnbc.com

Saras crash probe to be over by April end

Come April 6, it will be exactly a month since the Saras prototype aircraft of the National Aerospace Laboratories (NAL) crashed near Bidadi here killing three test pilots of the Indian Air Force (IAF). But, NAL officials continue to be tight-lipped about the progress made in the investigation, even as the investigation is now being taken to London to decode data from the black box. Did the aircraft crash in the process of conducting an experiment on fire safety or did the pilots of the ill-fated Saras switch off the engine in a flight test simulation leading to a technical failure? These are the questions NAL will have to ponder over. Director General of Civil Aviation Dr S A Nasim Zaidi, told Deccan Herald from New Delhi that the investigation into the crash is very much on. "A three member team consisting of an official each from the DGCA, NAL and the IAF will leave for London with the Cockpit Voice Recorder (CVR) and Flight Data Recorder (FDR) for decoding in the second week of April. We have decided to take the recorders to the UK as the manufacturer is based there. At the time the aircraft crashed, the temperatures were extremely high resulting in them being badly damaged," he said.

Source: Deccan Herald

India is world No. 4 in supercomputers

India is certainly giving the West a run for its money where supercomputing is concerned. India has been ranked number four in the world, in a global list of countries with the most powerful supercomputers. Only the US, China and Germany are ahead of India in the first, second and third slots. The Top 500 list, prepared by experts in Germany and US, ranks only countries which have the top 500 supercomputers. Within these top 500, India is ranked fourth for the kind of supercomputers we have — with the 13th fastest supercomputer in the world. Ranked among the top five countries with the best supercomputers, India is ahead of even advanced nations such as France, Sweden, Norway, UK. Our supercomputers are better than those in some laboratories in the US, Russia, Spain, Canada and Netherlands.

Source: Times of India

An Indian space shuttle takes shape

An Indian version of the space shuttle will be test-flown from the spaceport at Sriharikota in a year's time. The Reusable Launch Vehicle-Technology Demonstrator (RLV-TD), as it is called, will be a combination rocket-aircraft: the aircraft with a winged body, which is the RLV, will sit vertically on the rocket. The engineering model of the aircraft is ready at the Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram. The first stage of the Satellite Launch Vehicle-3, flown in the early 1980s, will form the booster rocket. Weighing nine tonnes, it is called S-9. After it takes off like a rocket, the booster will release the unmanned aircraft, which will go into space. At the end of the mission, the aircraft will land in the sea. Dr K. Radhakrishnan, Director, VSSC, said in an interview: "The next year we expect the prototype of the RLV-TD to be ready for flight-testing. This will be a milestone for ISRO." The RLV "will open a new dimension in the launch vehicle technology and transportation system of ISRO." According to Dr. Radhakrishnan, ground testing of the booster rocket was done at Sriharikota in December 2008.

Source: Hindu

Nishant flight successful

Defence research in the country touched another milestone on Sunday with successful flight of Unmanned Air Vehicle (UAV) Nishant. The drone, used for investigations, is powered by an indigenous rotary engine. It took off from an abandoned runway of World War II times, 8 km from Kolar. The engine, a Wankel Rotary type, was jointly designed and developed by National Aerospace Laboratories (NAL), a CSIR laboratory, Vehicles Research & Development Establishment (VRDE), Ahmednagar and Aeronautical Development Establishment (ADE), Bangalore. The engine is the first of its kind that was totally designed and developed in the country. The flight took off in

the morning and climbed to an altitude of 1.8 km effortlessly before cruising for 35 minutes. The drone was recovered safely at the intended place at a driedup lake, after a total flight duration of 40 minutes. ADE Director Mr P S Krishnan, VRDE Director Dr C L Dhamejani, NAL Director Dr A R Upadhy and other senior officials witnessed the flight.

Source: Times of India

Risat-2 to be Govt's eye in the sky

A 300-kg radar imaging satellite designated as "Risat-2," developed with inputs from Israel, which could have military applications, is slated for launch on April 20 at Sriharikota. The satellite on which the first studentmade satellite, "Anusat," made by the students of the Chennai-based Madras Institute of Technology, will piggy back, will be flown by the highly-proven Polar Satellite Launch Vehicle (PSLV). Though senior ISRO officials dismissed suggestions that Risat-2 was a spy satellite emphasising that its primary role was disaster management, others in the space agency disagreed saying that it definitely had a military application as well, meaning that it was essentially a spy satellite. The satellite has an Israeli-made Synthetic Aperture Radar can take images during day, night and all weather conditions and also through thick layer of clouds. "It will monitor the borders and help the government in anti-terrorist operations," said an official.

Source: Times of India

India becomes fifth nation to send spy satellite

Giving the much needed fillip to its defence surveillance capabilities, India successfully placed into orbit an Israeli-built all-weather spy satellite but not before some anxious moments prior to the launch caused by a technical glitch which had threatened to stall the mission. The 300 kg RISAT-2, which will also help tackle infiltration and terror activities, was shot into space by ISRO's workhorse PSLV-C12 rocket 19 minutes after it blasted off from the spaceport here, making India the fifth country having such a satellite. But the launch was preceded by 'anxious moments' during the 48-hour countdown for the ISRO team after an umbilical connector from PSLV-C12's top got detached from the launch vehicle and about half-a-dozen others were 'thrown out'. The last minute snag was overcome with the ISRO team managing the crisis making up the six hours of countdown time and setting everything right.

Source: Deccan Herald

Anna Univ cheers as the country's first university satellite goes into orbit

It was a moment for celebration for India's vast

student community, particularly those in Chennai, because it was the country's first university satellite when Anusat entered into its orbit at an altitude of 550 km after riding piggy-back on the 300-kg spy satellite 'Risat-2'. For six years the students and staff of Anna University worked round-the-clock on the 40-kg micro satellite. When 'Anusat' was successfully placed in orbit on Monday morning all the effort put in by the eight teams from Anna University paid off. Dr R Srinivas, an Anna University alumnus and innovations manager at Nokia-Siemens Networks in Bangalore reacted to the successful launch with a sense of pride: "Though I completed my doctorate and passed out of Anna University in 2006 I will never forget the experience of working on Anusat. Now that it is in orbit I feel a great sense of pride and achievement. I celebrated this success with my colleagues at the office canteen. Now I want to rush home and tell my father about it. I want to celebrate this day with my wife and one-year-old son Srihari," he said.

Source: Times of India

Boeing to deliver aircraft worth \$17 bn to India

Aircraft maker Boeing on Friday said the company was not seeing any big impact of the global economic slowdown in the Indian aviation market in the form of cancellation of orders. The US-based aerospace major, which had earlier projected that there would be a requirement of aircraft worth \$105 billion in India in the next 20 years, said the company was planning to deliver 100 planes to India worth \$17 billion over the next five years. "Whatever forecast we had made regarding the demand for aircraft by the airlines in India, still stands good despite the economic slowdown. We want to extend our footprint in India," Mr Dinesh Keskar, President, Boeing India, said during the launch of Boeing's research and technology centre in Bangalore. He said Boeing had not seen any cancellation of its orders for civilian aircraft from Indian airlines. Last year, Jet Airways had deferred the order of two aircraft. Other than the civilian market, Boeing is also actively pursuing some large orders in the defence sector in India, including the supply of 126 medium multi-role combat aircraft by the Ministry of Defence, request for proposal (RFPs) for which have already been issued.

Source: Business Standard

Jet fuel price increase: airlines study impact

Oil companies on Tuesday hiked aviation turbine fuel (ATF/jet fuel) prices by 10% or an average of Rs 2,750 per kilolitre. And airlines, which did not pass on the benefit of 11 successive falls of ATF prices between August and January, will find it difficult to justify fare hikes this time as jet fuel is still at three-and-a-half-year low with prices at June 2005 level. Only the national carrier, Air India-Indian Airlines combine, categorically ruled out any hike in fares due to Tuesday's hike. "Our low fares will continue," said AI spokesperson Mr Jitendra Bhargava as airlines have again been forced to offer special schemes to get people back on board. On the other hand, private airlines like Jet and

Kingfisher said they would review the impact of the latest ATF price hike and then decide. However, even private carriers admit that hiking the already high fares would be difficult as passenger numbers are still not encouraging. Now, ATF per kilolitre will cost Rs 29,926 and Rs 30,785 in Delhi and Mumbai respectively, still a far low from the August highs of Rs 71,028 and Rs 73,674 in these two cities. Riding on spiralling crude, ATF prices witnessed five successive jumps from last March and touched all time highs in August.

Source: Times of India

Israel bags yet another defence deal

The UPA Government's defence contract signing spree ahead of the general elections will bring smile on the face of beleaguered Mr George Fernandes. The Ministry of Defence has revived his plan to build an ordnance factory in his constituency of Nalanda in Bihar. The work on the ordnance factory was halted as the UPA Government had ordered a probe into some of the defence contracts signed by Mr George Fernandes during the NDA rule. The Nalanda plant was being set up with the help of South African arms company Denel which was blacklisted on charges of corruption. But now the government, in the last week of March, signed a \$240-million contract with Israeli Military Industry (IMI) to rebuild the Nalanda complex. Under the deal, IMI will set up five factories to produce Bi-Modular Charge System (BMCS) for 155 mm artillery guns used by the Indian Army.

Source: Indian Express

Air India carries out major check on Airbus 330

Air India has successfully carried out '2C' Check with in-house expertise for the first time on an Airbus 330 aircraft, resulting in substantial savings in foreign exchange. After the check the aircraft was test flown in Mumbai. The airline has two leased Airbus 330 aircraft in its fleet. The '2C' Check, which involves major component removal, inspection and installation; structural inspection; and detailed operational/functional checks of the system, is carried out on every 36 months elapsed time since last completion of such check,

according to a company release. Air India has been carrying out major checks up to 'C'/'D' (heavy maintenance visits) on A319, A320, A321 and A310 aircraft including freighter. This capability has been recently expanded for carrying out 'C' Check on B777 aircraft, and now on A330. The Engineering Department in Air India ensures maximum availability of airworthy aircraft without compromising on safety, at high technical despatch reliability and operating at an optimum cost in a competitive environment. Air India can provide world-class engineering services at competitive rates comparable to the best in the industry, the release adds.

Source: Hindu

India jettisons French jet from race for \$10.4-billion fighter deal

French fighter Rafale has been knocked out of the race for the "mother of all defence deals", the Rs 42,000-crore project to acquire 126 medium multi-role combat aircraft (MMRCA) for IAF, leaving five jets in the fray now. Defence ministry sources on Thursday said Rafale had "fallen short" on "several counts" listed in the GSQRs (General Staff Qualitative Requirements) drawn up by IAF. "It did not pass in the technical evaluation of the bids submitted by the six contenders," said a source. The move is sure to rile France, which like other countries in the contention for what will be the largest global defence contract had mounted a high-voltage campaign for the \$10.4 billion MMRCA contract. "We have no confirmation from the Indian MoD... We are surprised as there was no technical lacuna in our bid," said a French official. India and France are also yet to settle their bitter differences

for the upgrade of the 51 Mirage-2000s in IAF's combat fleet despite being locked in negotiations for over two years. As for MMRCA battle, India will now invite only American F/A-18 'Super Hornet' (Boeing) and F-16 'Falcon' (Lockheed Martin), Russian MiG-35 (United Aircraft Corporation), Swedish Gripen (Saab) and Eurofighter Typhoon (consortium of British, German, Spanish and Italian companies) for field trials likely to begin from July-August.

Source: Times of India

Recession hits aviation industry

The ongoing recession is expected to result in severe losses for airlines in 2009, particularly for the private players, which comprise 75 per cent of the domestic aviation market. In a three-day symposium on "Opportunities and challenges facing aviation industry in Indian subcontinent" organised by the Vaughn college of Aeronautics & Tech, USA, National Aerospace Laboratories and Sreenidhi Institute of Science & Technology, industry experts opined that the airline industry is plagued with several problems including high aviation turbine fuel prices, rising labour costs and shortage of skilled labour, rapid fleet expansion and intense price competition among players. "Most players are going through unacceptable levels of losses. Markets are under extreme price competition. Bulk of the growth has come from low price points, but disappeared when airlines attempted to raise fares to break-even," said Mr Gilbert George, senior general manager, Jet Airways.

Source: ExpressBuzz

Mr Ashok Nayak is new HAL chairman

Mr Ashok Nayak will take charge as new chairman of Hindustan Aeronautics Limited (HAL) from April 1. Mr Nayak, who will be the HAL's 15th chairman, succeeds Mr Ashok K Baweja, who retired on March 31. Prior to this, Mr Nayak was then managing director of HAL's Bangalore Complex. Hailing from Honnavar in Karnataka, a Mechanical Engineer from Bangalore University, joined HAL as a management trainee in 1973. At the Engine Division in Bangalore (1986-1998), he headed production engineering and led the assembly, overhaul and repair of engines like Artouste, Garrett, Dart, Orpheus, Gnome, Adour and the Avon series.

Source: Indian Express

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