SHOW DAILY
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SINGAPORE AIRSHOW
19 - 24 Feb 2008

DAY ONE
TUESDAY, 19th FEBRUARY, 2008

Singapore PM to Unveil Asia's Largest Aerospace Event

With the first ever Air Show undertaken by the Singapore Airshow and Events Pte Ltd set to unveil today, Singapore's Prime Minister, Lee Hsien Loong will be officially inaugurating the show as the Asia's largest-ever aerospace trade event. According to the organisers, following the opening ceremony, Prime Minister Lee will tour the show site with the invited guests, which include heads of state, ministers of transport, ministers of defence, and other senior government representatives

Prime Minister, Lee Hsien Loong

from more than 42 countries.

According to the organisers, this year's event has attracted the largest ever attendance of the high-level government, military and industry delegates of any aviation trade event held in Asia, including 21 airline CEOs and the heads of the two major international industry bodies: the International Air Transport Association (IATA) and the International Civil Aviation Organisation (ICAO).

Jimmy Lau, Managing Director, Singapore Airshow and Events Pte Ltd said," Within two years of announcing this event, the Singapore Airshow has achieved the status of being the region's largest-ever aerospace show. This reflects the tremendous growth of

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Airbus 380 safety oversight

CAAS Signs Enhanced Pact with EASA

With the first ever Singapore Air Show under its new brand name is expected to start with a bang, The Civil Aviation Authority of Singapore (CAAS) and the European Aviation Safety Agency (EASA) signed an agreement on enhanced cooperation on the safety oversight of the Airbus 380 ahead of the show. The agreement was signed by Lim Kim Choon, CAAS' Director-General and Chief Executive Officer and Mr Patrick Goudou, EASA's Executive Director at the the signing, at the Raffles City Convention Centre.

Officials witnessed the signing ceremony from CAAS, Airbus as well as Singapore

Airlines. Under this agreement, CAAS and EASA are expected to exchange information and analyse the airworthiness and flight operations matters pertaining to the Super jumbo A380. Both sides will also col-

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Honeywell gets TSO Approval from FAA

Honeywell recently announced that it has received Technical Standard Order (TSO) approval from the Federal Aviation Administration for its Integrated Primary Flight Display (IPFD).

Honeywell further Informs that their IPFD utilizes a digitized data base of worldwide terrain and obstacles to provide pilots a synthetic '3-dimensional, real-time, out the window' representation of terrain and obstacles on an aircraft's primary displays.

Honeywell's IPFD has accumulated more than 470 hrs of flight simulator testing and 900 hrs of flight test on Honeywell aircraft.

Honeywell's IPFD, which hosts synthetic vision, integrates existing flightdeck information with Head Up Display (HUD) advanced symbology, giving the flight crew a Synthetic Vision display of the outside world. "We believe our IPFD is a game changer in aviation safety that increases situation awareness for the flight crew, no matter what the weather conditions are outside the aircraft," said Bob Smith, Vice President, Advanced Technology. "We are continuing our technology research for expanded functionality, including the incorporation of Enhanced Vision capability that we believe will compliment our IPFD in future versions of our product."

Other new functionality that Honeywell is developing includes 3D airport maps that allow the pilot to clearly see the entire airport surface.

Singapore PM Lee to unveil.....

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Asia's aviation and defence industries and the need to bring manufacturers, suppliers and their customers together."

Lau added that we hope and believe that this Airshow will set a new benchmark for the industry and will truly satisfy the needs of our exhibitors and guests from around the world.

The inaugural event will feature 800 exhibitors and defence companies from 42 countries with a new 40,000 sq.m exhibition hall. The site also includes a 90,000 square metre static display area and more than 100 chalets with roof gardens providing exhibitors with a 360-degree view of the show site and the daily flying displays. More than 30,000 trade visitors are expected to attend the show, with over half from overseas, together with 50,000 aviation enthusiasts on the two public days.

The six-day show is expected to ring in a bonanza for hotels, restaurants and shops as aviation heavyweights pull out all the shops to woo potential clients.

The event is likely to contribute about US$30 million in spin-offs to the Singapore economy, said Jimmy Lau, managing director of Singapore Airshow & Events, which is organising Asia's biggest airshow. Lau said: 'My team felt a sense of achievement as we watch the show grow from a bare site to a huge event.'

The event is the 14th air show held in Singapore and the show organising company is a joint venture between the Civil Aviation Authority of Singapore and the Defence Science and Technology Agency.

Lau feels another 50,000 visitors are expected to wear out the carpet when the airshow is opened to the public for the final two days. Tickets, which have been sold in advance, cost S$20 per ticket.

Die hard aviation fans would see precision flying displays by air forces from Australia and Singapore, and tour the inside of luxurious business jets.

Five conferences that will pull in top flight professionals from the aviation and defence arenas are expected to be among the big draws. Flying machines dazzle The twin-deck Airbus A380, the world's largest airliner by size and capacity, will be the star attraction at the air show's static display area.

Singapore Airshow heavyweights Heavy-hitting companies which have booked company chalets at the show include Northrop Grumman, Lockheed Martin, IAI, Mindef, Goodrich, Defence Science & Technology Agency, Eurocopter, EADS, Airbus, Hawker Pacific, Dassault, Gulf Stream, Embraer, KAI, Bombardier, Thales, Rolls Royce, Bell, GE , BAE etc.

This year also includes a series of conferences including the Singapore Airshow Aviation Leadership Summit; the Global Air Power Conference; the C4I Asia Conference, the International Defence Procurement Conference, and the Global Space Technology Convention.

- Bhavya Desai & Nazir Keshvani

Alenia Aermacchi flies at the Show

Alenia Aermacchi, a Finmeccanica company is the only manufacturer, which offers, complete range of products that covers every phase of the military training. This includes the classic SF-260 screener, the new M-311 turbofan advanced trainer, the MB-339 turbojet used by the Italian Air Force (ITAF) "Frecce Tricolori" display team and the Advanced and Lead-In Fighter Trainer M- 346.

At the Singapore Airshow 2008, Alenia Aermacchi M-346 is performing daily displays. The new generation M-346 advanced trainer makes an uneventful 6,500 nm flight that confirms its reliability and maturity.

Alenia Aermacchi Chief Test Pilot Olinto Cecconello with Test Pilot Quirino Bucci flew the new generation lead-in fighter trainer from Italy.

There are frequent flying demonstrations of M-346 happening today.

The second prototype M-346 flew the 6,500 nm route in four days, making a smooth and uneventful flight that provides further confirmation of the reliability and maturity of the programme. The two Honeywell F124 turbofans provided additional safety during the long stretches over water, deserts, jungles and other potentially difficult terrain.

The aircraft was fitted with two 580 litre under wing tanks and operated with minimal technical support. It is also fitted with the fixed in flight-refuelling probe used in the recent weeks for a series of successful in-flight refuelling tests from an Italian Air Force Tornado attack aircraft.

The flight to Singapore marks the furthest deployment made thus far by M-346, which in August 2007 had flown to Al Ain air base in the United Arab Emirates where it underwent extensive evaluations and assessments. The new advanced trainer had also visited several European countries, including Greece, Poland, France and the UK.

The M-346 trainer is a leading contender for Republic of Singapore Air Force (RSAF) Fighter Wings Course (FWC) competition.

The Route

11 February
Departed Venegono for Iraklion (Crete) and Hurghada (Egypt)
12 February
Hurghada (Egypt) – Riyadh (Saudi Arabia)
– Muscat (Oman)
13 February
Muscat (Oman)
– Ahmadabad (India)
– Calcutta (India)
14 February
Calcutta (India)
– Bangkok (Thailand)
- Singapore

Airbus 380 safety oversight.....

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laborate to address issues arising from the A380 operations. This will enable close monitoring and safety oversight of the A380 fleet in service.

Lim said, "This arrangement is a logical step forward. It is important for the two

organisations, CAAS and EASA, to work closely especially in the initial years of A380 operations to resolve any issues identified expeditiously. Singapore, being the first to put the A380 into commercial service, could share its operational experience with EASA, and at the same time, benefit from the wealth of expertise in EASA on A380 design and maintenance capabilities. CAAS looks forward to further future cooperation with EASA on matters relating to aviation safety."

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ATR
AD

Setting The Offset

India's offset policy, though not quite set, is now moving in the right direction. These were the assurances given by the government to concerned private parties at the Defexpo 2008 in New Delhi, which saw three days of hectic business parleys and industry discussions. The expo culminates today after being thrown open to the public for a while.

Hon. Defence Minister A.K.Antony with the dignitaries at the inauguration of Defexpo2008

POSITIVE SIGNS AT LAST

Lack of clarity on India's offset policy in defence deals has been dogging foreign arms majors. But none other than the Defence Minster AK Antony himself admitted that the policy was still at a nascent stage and evolving.

For many, it was a positive sign at last that the New Delhi was not beating around the bush over offsets. Indications are that a new Defence Procurement Procedure policy will be announced by April this year-and the roadmap for offset regulations will be drawn out.

The 30 percent offset clause was made mandatory for every defence contract or purchase valued at Rs.3 billion or more.

PREPARING A ROADMAP

Antony had last year said that since India was going to procure a lot of defence equipment in the coming years, spending billions of rupees, the PSUs and private firms should capitalise on the opportunity for increasing their share of the pie.

Having said that, however, clear policy guidelines did not get off the ground-especially around Transfer of technology, licensing and credit banking issues.

Sensing the disquiet, the government used the Defexpo platform to request foreign majors to be patient as the policy was in its final stages.

Considering how far India had come since it opened the defence sector to private industry, conclusions pointing to the government "backtracking' should not be drawn.

Government officials said India's Defence Procurement Procedure had evolved on its own and not copies any other model. The DPP was being worked out factoring in the highest degree of public accountability. Transparency, impartiality, a level playing field and healthy competition were the watchwords in the defence industrial policy and procurement process.

NO ROOM FOR MIDDLEMEN

Addressing the media-the Defence Minister also said that there was no room for middlemen in defence deals. And as for developing an indigenous fighter aircraft, Mr. Antony said that despite hiccups, the LAC project would not be abandoned. He, however, acknowledged slip-ups in producing the Kaveri engine for the fighter with the government negotiating with a foreign company for assistance.

"India will ultimately produce the LCA. It will be in the sky in a few years, he said."

THE BIG SHOW

Spread over eight halls and 32,000 sq metres of open and covered space, DEFEXPO-2008 saw the launch of 91 new products ranging from radars, to communications systems, torpedoes, anti-mine vehicles, unmanned aerial vehicles and combat clothing.

16 seminars were also organised to enable exhibitors make technology or product specific presentations to Indian defence establishments, R and D institutions, defence public sector undertakings, ordnance factories and to Indian industry.

US companies more than doubled their presence with a total of 46 American companies, the largest from any country, at the show. They included big guns like Boeing, Raytheon, Lockheed Martin, Northrop Grumman and Sikorsky, besides the US defence department.

With 20 companies participating, Britain also had a major presence at the show. With 43 companies, France was the second largest foreign exhibitor.

-Amitabh Joshi

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LOCKHEED IT'S MATTER OF COMM

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ATR 'turbo-props' Its Way to Record Books

Aldo Mucciardi

With the success of the turboprop aircraft in the commercial aircraft market, ATR has achieved a record order book this year. Aldo Mucciardi, General Secretary, ATR spoke to Bhavya Desai about the company's success this year and the demand forecast for the turboprop aircraft in the market. Excerpts:

What are the reasons that you attribute to the success of turboprop aircraft as well as ATR's achieving a record order book this year?

There are several reasons that have contributed to the success of both. These include:

The revival of the turboprop aircraft has largely been due to the because the huge increase in fuel prices together with a significant evolution of last generation turboprops in terms of passenger's comfort.

On the other hand ATR has continued its efforts to achieve technological evolution in the areas of performance, technology and comfort.

The company has also improved its regional presence by bringing our customers service assistance facilities closer to their operational stations as well as improved GMA (Global Maintenance Agreement).

It is the combination of these factors that have led to the success of both the turboprop aircraft as well as ATR.

With the bulk of the orders coming from the carriers in the APAC region, what is your forecast for the Turboprop aircraft requirement in the region?

Currently, we forecast a worldwide demand of 1,400 turboprop aircraft (from 30 to 90 seats) in the next 10 years. Over the next decade, we expect to book orders for some 60 per cent of this demand, which amounts to around 840 turboprops. The last three years have witnessed an enormous increase in the Asia Pacific region and we have sold approximately 65 per cent aircraft in this region. In the coming years we foresee the same sort of demand and success in the region.

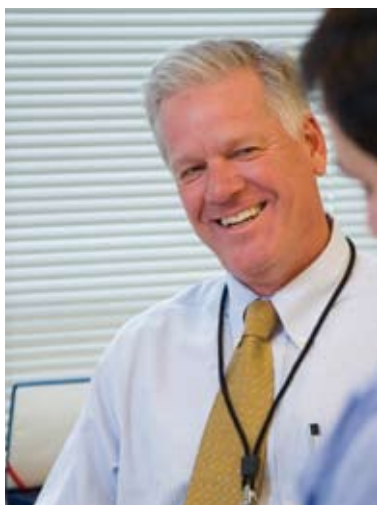
With the company delivering 44 new aircraft in 2007 and getting an order for 113 more, when are these aircraft scheduled to be delivered?

The deliveries related to the 113 aircraft backlog that have been booked, are scheduled to be along the next 2-3 years up to 2012 for some aircraft. But in practical sense we always try to have some aircraft available for new customers, which should have some anticipated first delivery time.

Since the sales of the company seem to be soaring are there any immediate plans to increase production capacity to meet these demands?

Infact we are we are working on this aspect as we plan to deliver more than 60 aircraft this year while work together with our suppliers, for increasing our production capacity to 10 aircraft starting 2010-11.

Boeing Integrated Defence Systems Vying for Numerous Orders



Mark Kronenberg

With a high percentage of defence requirements coming from the APAC region, Boeing IDS is optimistic about its participation in some of the major programs in the region. Mark Kronenberg, Vice President International Business Development, Boeing Integrated Defence Systems spoke to *Trilok Desai* highlighting the company's roadmap for the year.

What are the sort opportunities you see for the IDS division with numerous orders on offer in the region?

The international defense market is a critical component of the IDS growth strategy now and in the future. International defense sales as a share of overall IDS revenues have doubled over the last five years to 13% and are expected to continue to grow in the face of growing demand and flattening US defense expenditure. Asia Pacific is the largest single market for IDS representing more than 50% of the total sales.

The region's importance will continue to grow as existing customers begin to modernize their armed forces and new markets such as India open up for the first time to US defense contractors. Some of the recent successes in the region include the sale of the additional F-15SG fighters to the Royal Singapore Air Force, the contract to develop and deliver an AEW&C system for South Korea, Australia's order for F/A-18F Super Hornets and C-17s.

What the immediate contracts that the company is vying for in the region?

At the moment some of the main opportunities in the region include the sale of 20 F-15Ks to South Korea, India's requirement for a new maritime patrol aircraft which we are competing for with the P-8 Poseidon and an Australian army need for additional CH-47 Chinook helicopters.

As you are aware with the announcement yesterday that Boeing will shortly submit the proposal's for the F/A-18E/F Super Hornet bid for India's MRCA program, a decision on which is expected in 2009. In India we are also pursuing a requirement for the Indian Army's heavylift helicopter requirement with the Chinook. Other regional opportunities include Japan's forthcoming F-X competition for 40-60 new fighters to replace its F-4Js and South Korean requirement for a new attack helicopter.

What do you attribute your success to over the years and also can you throw some light on the partnershisps that you have developed over the years?

We believe that the company has developed an extensive chain of partnership and supplier relationships with aerospace manufacturers both in the defense and commercial sectors around the world. We enjoy longstanding strategic partnerships with Mitsubishi, Kawasaki and Fuji Heavy Industries of Japan and Korea Aerospace Industries, we have also invested in Huneed of Korea and just recently signed a memorandum of understanding to work with India's Hindustan Aeronautics Limited over the next 10 years.

What are the combination of strategies in the commercial and defense division that are adopted by the company to increase the win over the deals/contract?

A critical strength for Boeing is the ability to leverage both its defense as well as the commercial aircraft business to build a local presence in the key markets that the company is competing for work. Deepening relationships with local industry enables Boeing's international partners and suppliers with access to both the US domestic and world markets. A good example of this win-win formula was Boeing's broad and longstanding relationship with Finmeccanica helping to position its C-27J Spartan to win the US Air Force/US Army's Joint Cargo Aircraft competition in 2007.

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HONEYWELL
AD

Global Solution for Global Players

In the past, military sustainment and logistics strategy was centered on stockpiling large quantities of repair parts, equipment and supplies to support their needs. At present Lockheed Martin measures sustainment performance against system requirements with partnering agreements for its customers to help them improve their fleet reliability. With the enhanced capabilities of the company's Global Sustainment organisation, Lockheed Martin Aeronautics is positioned to improve aircraft reliability and availability to its customers like they've never seen before.

Through innovative support packages, anytime and anywhere for thousands of fighters and air mobility transporters around the globe, Lockheed Martin's integrated sustainment solutions provide customers with the most reliable and cost-effective solutions tailored to meet their needs. As the original equipment manufacturer (OEM) of the most advanced aircraft in the world, the company has a huge advantage in this area.

One of the major tools the Lockheed Martin Global Sustainment Team is using to enhance customer's performance is through the use of performance-based logistics (PBL).

The essence of PBL is buying performance outcomes. It is procurement of a capability to support the war fighter -- providing customers a predetermined reliability rate for a set period of time. PBL support strategies integrate responsibility for system support in the Product Support Integrator, who manages all sources of support.

Like traditional support strategies, PBL optimises the best public and private sector competencies based upon a best-value determination. This is determined through an appropriate analysis of the provider's product support capability to meet set performance objectives. The major shift from the traditional approach to product support emphasises how programme manager teams buy support, not who they buy from. Instead of buying set levels or varying quantities of spares, repairs, tools, and data, the focus is on buying a predetermined level of availability to meet the war fighter's objectives.

As a part of a PBL programme, there are incentives to industry to reduce demand for parts through reliability growth and obsolescence management by using, multi-year, fixed-price contracts that specify delivery performance requirements.

One of the most significant aspects of PBL is the concept of a negotiated agreement between the program manager and the support provider that formally documents the performance and support expectations and commensurate resources to achieve the desired PBL outcomes.

Long term partnerships are critical to the success of PBL. Lockheed Martin offers a broad spectrum of PBL solutions tailored to meet operators' needs, including information systems, mission support management enterprise, supply chain management, maintenance and field services, training, technical publications, and engineering support services.

Lockheed Martin support concepts are designed to enhance the readiness of its customer's platforms at reduced life-cycle costs through fully integrated sustainment and logistics services.

As the OEM of new aircraft weapon systems, Lockheed Martin is designing and building aircraft support and sustainability into the weapon system itself. New aircraft such as the 5TH Generation F-22 and F-35 are being designed to provide the predictive maintenance and diagnostics capabilities to allow quicker and more efficient maintenance, upgrades and support of these systems. The retro-fitting process by the company increased sustainability into heritage aircraft like the C-130 Super Hercules, the P-3 Orion and the F-16 Fighting Falcon.

Global Sustainment experts perform work as basic as supplying spare parts or training or as vital as sending a field team to a deployed location to make emergency repairs to a grounded aircraft.

Customers worldwide acknowledge that the support provided by Lockheed Martin is key to the enhancement of their mission readiness. According to Lt. Col. Giuseppe Maggiore, Italian Air Force maintenance squadron commander, Main Operating Base, the OEM support provided by Lockheed Martin for his F-16 fleet is absolutely critical to the sustainment of the fleet.

"Lockheed Martin personnel on site are able to provide both over- the-shoulder technical assistance for routine repairs, and hands on assistance for non-routine repairs," he said. "In addition, Lockheed Martin engineers…provide reach-back capability to its OEM engineering authorities for prompt and complete resolution of very challenging troubleshooting and repairs. Lockheed Martin's ability to support repair and return of line replaceable units in an efficient, cost-effective and rapid manner also reflects the mature, extensive sustainment support capabilities that only an OEM could provide us."

Lockheed Martin has many customers with different levels of need and the company is positioned to tailor solutions based on individual requirements.

Abu Dhabi Intl. Airport Re-Development

Catering for Half a Century of Growth

Abu Dhabi International Airport (ADIA) is the focus of a large-scale development to ensure it can facilitate the major development of the capital Emirate. Huge investments in infrastructure, new industries, tourism, educational facilities, sports, and cultural projects are putting Abu Dhabi on the world map as a leading business, cultural, events, and sports centre.

In response to a strong traffic growth over the last decade, ADIA has increased its capacity to seven million passengers in September 2005, following renovation of Terminal 1 and creation of a second terminal. As the growth is gaining pace even further, a host of new projects are in the pipeline: two new passenger terminals, a second runway, an air traffic control complex, a cargo terminal, and a free trade zone. These will provide infrastructural support for Abu Dhabi's drive to become a major business and tourist hub.

Addressing both short and long term needs, the programme will, by 2011, deliver passenger capacity up to 20 million passengers per annum, nearly triple the current capacity of 7 million. Eventually the programme will allow the Airport to grow beyond 40 million passengers and 2.5 million tonnes of cargo per annum.

An essential element of the programme, which is being led Abu Dhabi Airports Company (ADAC), will cater to the needs of Etihad Airways, whose fast-track expansion has acted as a further stimulant to the Airport's growth since the flag carrier was launched in 2003. Currently operating 29 wide-bodied aircraft, by 2010 Etihad Airways plans to have 50 aircraft flying to nearly 70 destinations from its base at ADIA.

The two additional terminals will come successively on line by 2008 and 2011; Terminal 3 will support Etihad's immediate growth until the Midfield Terminal, the centre piece of the redevelopment programme, comes on stream in 2011. The plan includes also a second runway,

a new traffic control complex, airport support facilities, aircraft maintenance facilities, cargo facilities and a free trade zone.

The new facilities will offer an attractive and welcoming experience for residents, business travelers, and visitors alike. It will be a world-class, architecturally innovative, and operationally efficient home base for Etihad Airways, the national airline of the UAE, as it grows and establishes itself as a premiere airline. The Airport will showcase the UAE's cultural, environmental, and economic achievements.

The master plan is based upon phased implementation of airport facilities. This incremental approach addresses both short and long-term requirements, and supports the growth of the home-base airliner, Etihad.

On the landside, a lot of attention will be given to eliminating congestion and ensuring a pleasant experience for the passenger. World-class technologies and systems will be applied to make sure the Airport provides a superb customer experience. At the same time, due emphasis is given to ensuring that the current great advantages of Abu Dhabi Airport- particularly the quick and efficient passage of passengers through the Airport – are retained and further enhanced.

An essential element of the expansion programme will support both the growth of Etihad network and new foreign airlines, which will trigger both passenger and cargo traffic.

THE MIDFIELD TERMINAL

Abu Dhabi's flagship terminal, the Midfield Terminal Complex "MTC" will provide a gateway to the capital of the UAE and a fitting home for the national airline, Etihad. In addition to serving the ongoing business and commerce travel, the terminal will provide state of the art facilities for those wishing to visit the cultural and tourist destinations currently being planned in Abu Dhabi.

It is the totality of the passenger's experience, from the highway to the aircraft that will set Abu Dhabi International airport apart. Operating from this new terminal complex, Etihad Airways will establish ADIA as the destination of choice in the Gulf region for transfer and destination passengers alike.

FREE ZONE

ADAC is moving ahead with plans to create a free trade zone in the vicinity of Abu Dhabi Airport. The Free Zone is an important part of the development and expansion of the airport. It will ensure that Abu Dhabi International Airport will become a thriving cargo and business hub as well as ensuring ADAC's goal of increasing non-aeronautical revenues.

Occupying a built area of over four million square meters, the free zone will offer investors an impressive package of world-class facilities and services. Clusters of amenities will be brought under one roof and all the required facilities will be conveniently integrated to ensure that investors receive the best service.

SAFETY FIRST

Abu Dhabi International Airport has always met international standards of safety and security. A recent audit by the International Civil Aviation Organisation (ICAO) has concluded that the Airport possessed world-class capabilities that ensure safety of airport users and airport operations.

GROWING RECOGNITION

The due emphasis on security and safety does in no way hamper efforts to provide passengers with the best travel experience. A host of initiatives have been introduced to ensure that users of the existing facilities get the best possible treatment.

The list of improvements introduced in the past year included an indoor taxi queue system, free internet and TV zones, dedicated smoking areas, new directory signs, and dedicated pre-check-in security points for premium passengers.

These efforts have already begun to pay dividend, as manifested in strong growth in traffic and mounting recognition as an airport of choice. In 2006, the Airport clinched two prestigious awards by the Airports Council International (ACI). The awards, based on annual feedback of international passengers, confirmed ADIA as the best Airport in Africa and the Middle East in terms of service quality, courtesy, and customer service. In 2007, ADIA was voted by Skytrax as provider of the best baggage delivery system in the world. In the same year, the airport won "The Best Station" Award by Sri Lanka Airlines, and the Air Cargo Excellence Award, by Air Cargo World Magazine. This year, ADIA's superiority in providing unmatched baggage handling service was reconfirmed with another award from the independent research organisation, Skytrax.

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ENGINE ALLIANCE CARBON TAX AD

Pg No. 11
ENGINE ALLIANCE CARBON TAX AD

CAAS Awards Contract for Upgrading of Changi Airport Terminal 1

The Civil Aviation Authority of Singapore (CAAS) has awarded the tender for the project to upgrade Singapore Changi Airport's Terminal 1 to Takenaka Corporation.

The upgrading works will commence in May 2008 and are scheduled to be completed in 2011. The works, at an estimated project cost of about S$500 million, will rejuvenate the 27-year old terminal and enhance the passenger experience at Changi Airport.

Director-General and Chief Executive Officer, CAAS, Mr Lim Kim Choon, said,

"With the recently renovated Terminal 2 and newly opened Terminal 3, Terminal 1's face lift will ensure that all passengers at Changi Airport can enjoy the an exciting, vibrant and enjoyable Changi Experience."

The concept for Terminal 1's face lift is "Tropical City". Works will refurbish the terminal's interior design and finishes, as well as improve passenger flow at key areas. Areas to be upgraded include the exterior façade, Departure Kerbside, Departure Checkin Hall, Departure Transit Mall and Arrival Hall.

In line with the theme, the architectural and interior design will create a warm and familiar feeling for travellers. Landscaping will be integrated with the interior design to maintain the original warmth and welcoming ambience of the terminal.

On top of enhancing the aesthetics of the terminal, the processing capacity of key areas, such as the Departure Check-in Hall, will be improved. Older sections of the finger piers will be expanded and seating in the gate holdrooms enhanced.

As part of Terminal 1's upgrading works, services and facilities offered will be improved. The building will also be expanded to allow for the provision of new passenger facilities while expanding the retail and F&B offering. Changi Airport started operations with Terminal 1 in 1981.

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EADS DEFENCE
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Pratt &Whitney's Next-Generation Engine Initiated

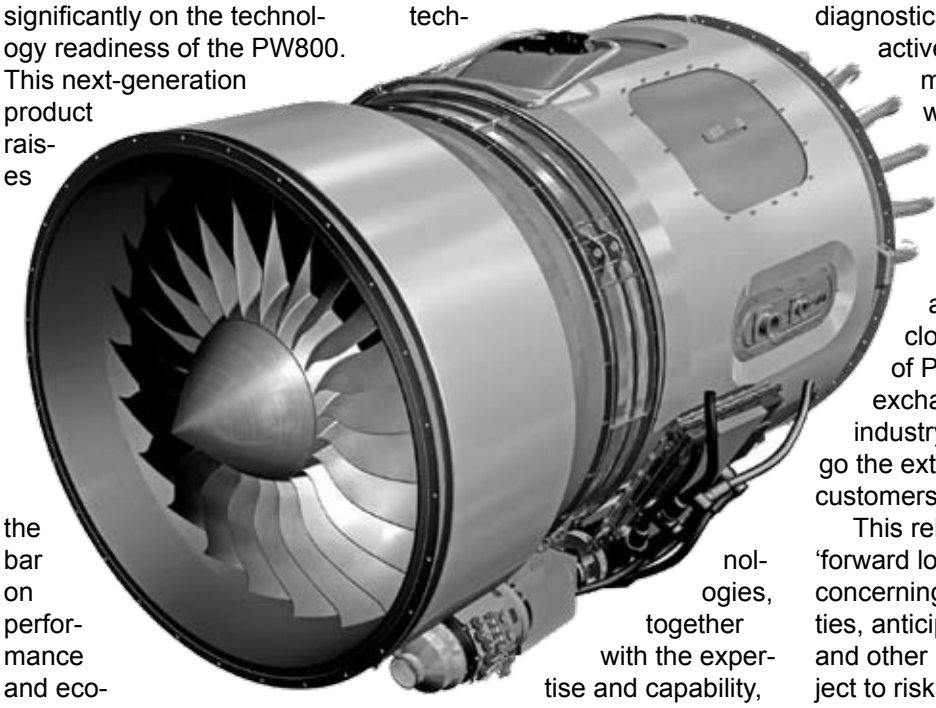
Pratt & Whitney Canada has launched its next-generation 10,000-pound-thrust-class engine family, designated the PW800. Cessna Aircraft Company has selected the first engine, the PW810, to power its new Citation Columbus business aircraft.

Says Alain M. Bellemare, President, P&WC and Executive Vice President, Pratt & Whitney Group Strategy & Development, 'We are very pleased that Cessna has selected P&WC for its large-cabin jet, and we are equally eager to be growing our product offering with this all-new, greener engine family for customers in the large, long-range business aircraft segment.'

"We are committed to the business aviation market and are investing to maintain our leadership. This win, which represents a multibillion opportunity for us in potential orders over the life of the program, opens doors to both the large-cabin, long-range corporate and the regional jet markets,' he informs.

According to Cessna Chairman, President and CEO Jack J. Pelton, 'Based on a very rigorous and competitive selection process involving a number of engine suppliers, we are convinced that Pratt & Whitney Canada offers the best solution for our large-cabin Citation business jet. We now look forward to launching into this exciting new market together.'

The PW800 engine family is the most recent evolution in P&WC's growth strategy to continue expanding its portfolio with best-in-class, dependable products. Over the last few years, P&WC has focused significantly on the technology readiness of the PW800. This next-generation product raises the bar on performance and economics by taking advantage of the latest materials, aerodynamic and design technologies developed by the company. It incorporates advanced fan, compressor, turbine and low-emissions TALON™ combustion systems for exceptional fuel consumption, future thrust-growth capability and improved environmental friendliness.



In addition, the PW810 will surpass International Civil Aviation Organization (ICAO) emissions standards by up to 50 per cent for nitrous oxide and 35 per cent for carbon monoxide emissions, and will also achieve low unburned hydrocarbons and smoke emissions. It is also designed for low noise, well below Stage IV standards.

'We have the best proven technologies, together with the expertise and capability, to successfully launch this programme now,' says Bellemare. 'The timing is perfect, as we have just completed development on several of our most recent engine programmes.'

P&WC brings to this programme its extensive experience in developing new products. In the last 12 years, the company has successfully certified and brought to market over 60 new engines.

P&WC's customer support encompasses over 30 company-owned and designated service facilities, a Customer First Centre for expert and rapid assistance and an expanded parts distribution network to deliver an enhanced level of unmatched frontline support. The PW800 engine is also equipped with state-of-the-art diagnostics capability for proactive maintenance that maximizes time on wing and fast return to service of aircraft. With field support representatives on all continents, mobile repair teams available around the clock, the largest pool of P&WC rental and exchange engines in the industry, P&WC's goal is to go the extra mile to keep its customers flying.

This release includes 'forward looking statements' concerning business opportunities, anticipated future revenue and other matters that are subject to risks and uncertainties. Important factors that could cause actual results to differ materially from those anticipated or implied in forward looking statements include changes in the health of the global economy and in the strength of end market demand in the commercial aerospace industry; fluctuation in commodity prices, interest rates and foreign exchange rates; challenges in the design, development, production and support of advanced technologies and new products and services; and delays and disruption in delivery of materials and services from suppliers.

A 380 to Display the Entire Range

Airbus' participation at the Singapore Airshow will feature an A380 development aircraft, which will take part in the daily flying schedule and will also be on view at the static display area throughout the week

Visitors to the show will be able to find out more about the entire Airbus product line at the indoor stand of its parent company EADS, located in the main hall (H23) of the new Changi Exhibition Centre. The exhibit will feature scale models of the A380, new widebody A350 and the popular single aisle A320. Airbus executives will be present at the EADS chalet (row CD12 to CD18).

Airbus is a leading aircraft manufacturer with the most modern and comprehensive family of airliners on the market, ranging in capacity from 100 to more than 500 seats. Airbus has delivered more than 5,000 aircraft to some 285 customers and operators worldwide, and boasts a healthy backlog of around 3,400 aircraft for delivery over the coming years.

Airbus is a global company with design and manufacturing facilities in France, Germany, the UK and Spain as well as subsidiaries in the U.S., China, Japan and in the Middle East. Headquartered in Toulouse, France, Airbus is an EADS company. Airbus is an EADS company.

Knights, Camera, Action!

Keep your eyes and camera lenses glued to the RSAF's aerobatics team at the Singapore Airshow

The famed Republic of Singapore Air Force (RSAF) aerial display team, the Black Knights, is all set to dazzle spectators with heart-stopping aerobatics during the Singapore Airshow.

Last seen in 2000, the new six-aircraft team is the first RSAF team to use F-16C Fighting Falcons to perform precision aerobatics.

Leading the team is Lieutenant-Colonel Leng Wai Mun, also known as Black Knight 1. At the press preview, Lt-Col Leng said that 16 dazzling aerial manoeuvres will ensure that spectators' eyes are glued to the warplanes. The 19-minute routine will be set to rousing pop music.

"We want people to have a field day watching the artistry in the air," said the RSAF veteran who has flown F-5 Tigers and F-16s in his 23 years with the air force. While the team is not a full-time, professional one, the Black Knights have nonetheless pulled out all the stops to stage a memorable display. Team members trawled through displays put up by the 11 earlier Black Knights teams (the first was formed in 1973) for ideas on formation aerobatics.

They also visited Britain's Red Arrows aerial display team and the United States Air Force's Thunderbirds last year to pick up ideas.

No less important is the support from 25 hand-picked Black Knights ground crew who ensure the planes are in tip-top condition and gleaming by hand-polishing each jet.

The result is a routine that allows pilots to show off the F-16C's agility and the skill of the pilots as they criss-cross the skies trailing white smoke.

The jets will fly as close as 3m from one another, perform their aerial ballet between 150m and 3,000m above ground, and hit speeds of up to 600 knots (1,111 kmh).

Lt-Col Philip Chionh, 39, Black Knight 5, said: "You can't afford to look away at any time. Take your cue from the commentator.

"The four-ship routine shows off manoeuvrability but the solos bring on the excitement because we're fast, we come in towards each other. That's always a crowd-pleaser - when two aircraft almost seem to collide.'

The Black Knights are due to perform once a day at the Singapore Airshow 2008, from Feb 19 to 24 at Changi North.

The Men In The Machines

BLACK KNIGHT 1
Lieutenant-Colonel Leng Wai Mun, 42
Clocked 2,800 flying hours. Spent 23 years in the air force. Married with two sons. Enjoys outdoor activities with his family.

BLACK KNIGHT 2
Captain Augustine Wan, 31
Amassed 1,100 flying hours after 10 years with the air force. Married with two sons, enjoys spending time with his family, cycling and hiking.

BLACK KNIGHT 3
Captain Lester John Fair, 29
Youngest in the team. Has 1,400 flying hours in his 10-year RSAF career . Enjoys outdoor activities such as soccer. Described as Black Knights' 'most eligible fighter pilot'.

BLACK KNIGHT 4
Major Tay Kok Ann, 35
Chalked up 2,000 flying hours. Joined RSAF 15 years ago. Was a Black Knights member in 2000. Married with a son. Enjoys family time and playing golf.

BLACK KNIGHT 5
Lieutenant-Colonel Philip Chionh, 39
Logged 2,100 flying hours in his 21-year RSAF career. Performed as a Black Knights member in 2000. Married with two sons. Enjoys family time, water sports and golf.

BLACK KNIGHT 6
Major Jeffrey Nah, 31
Been with the RSAF for 12 years. Has 1,900 flying hours. Married with a daughter. Enjoys family time and outdoor activities like cycling.

Changi's T3 Vs Bangkok's Suvarnabhumi

Bangkok is losing more ground in the battle to become South-east Asia's aviation hub to rival Singapore, and may miss out on the benefits arising from surging air traffic growth.

Aviation experts say that the city's Suvarnabhumi Airport may suffer after Singapore officially opened the US$1.22 billion (S$1.75 billion) Terminal 3 (T3) in January which raised Changi Airport's handling capacity to 70 million passengers a year.

The 155 billion baht (S$7.5 billion) Suvarnabhumi is still plagued by operating troubles and construction flaws stemming from its premature opening in September 2006.

And the trouble is only set to get worse. Crowding problems will likely reach a critical point this year when the airport hits its designed capacity of 45 million passengers a year.

Furthermore, the plan to expand Suvarnabhumi remains unclear. The government has been unable to spell out a clear policy on whether the old Don Muang Airport should also handle international traffic to relieve congestion at Suvarnabhumi.

'If an airport doesn't have the capacity to accommodate growth, airlines and passengers will end up going to an airport that has this capacity. Singapore is ready to handle the additional passengers,' the International Air Transport Association (Iata) said.

T3's opening will enhance Changi's position as the region's air hub, enabling it to meet the 5.9 per cent annual growth rate anticipated in the Asia-Pacific region between 2007 and 2011.

That translates into 300 million additional passengers in Asia over the next five years, noted Mr Albert Tjoeng, Iata's Asia-Pacific spokesman.

Airports in Asia need to continue planning and investing in additional capacity to keep pace with expected traffic growth and ensure that the capacity is efficiently utilised, said the Geneva-based organisation.

However, Mrs Kulya Pakakrong, a senior executive vice-president at Airports of Thailand Plc (AoT), downplayed the impact of Changi's expansion on Suvarnabhumi.

'Airlines and passengers going to Singapore represent different market groups, mostly involving corporate travellers, while those coming to Thai airports are largely tourists,' she said.

'It is those passengers who cause airlines to fly to Bangkok,' she added, noting that the state-controlled airport monopoly kept a careful eye on what its regional competitors were up to.

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Pg No. 17
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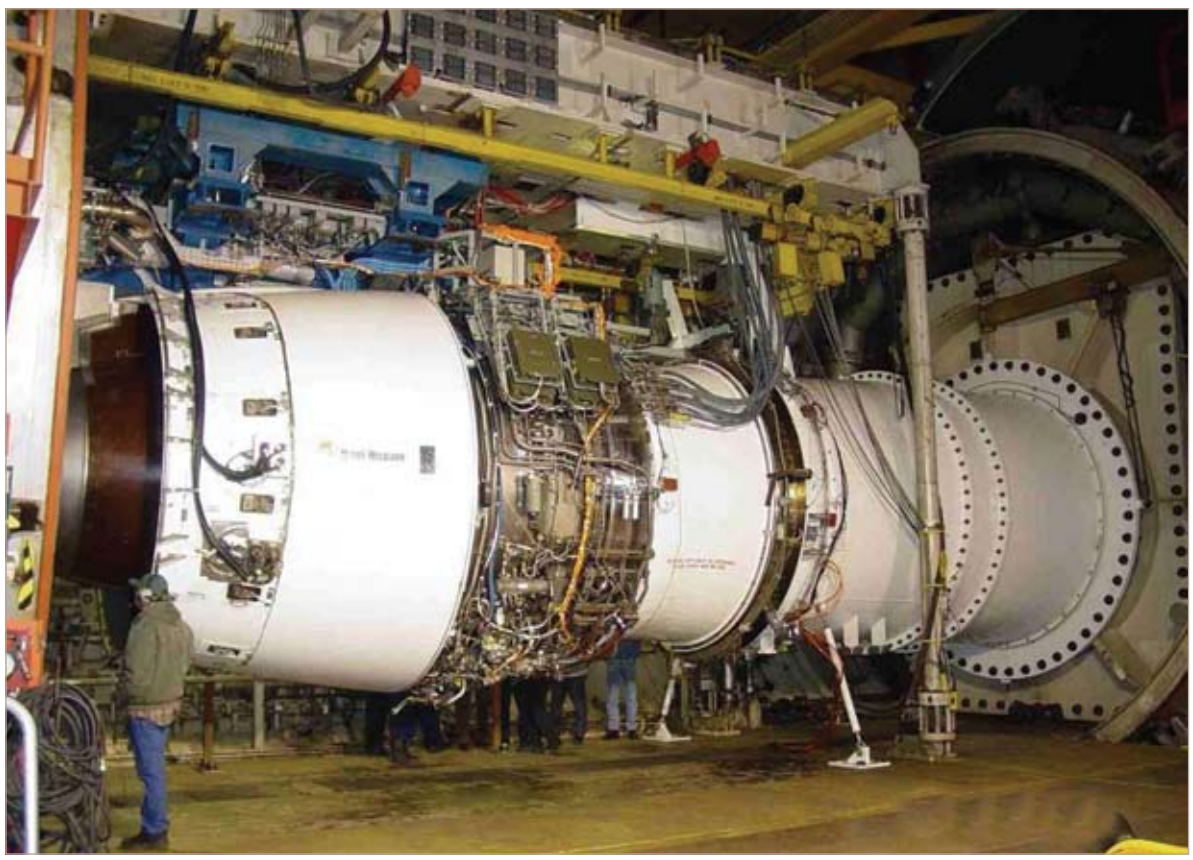
A380 Powered by Rolls-Royce Trent 900

Trent 900, the engine of choice for the A380, also marks another stage in the successful relationship between Singapore Airlines and Rolls-Royce.



When Singapore Airlines' first Airbus A380 flight took off for Sydney, its passengers felt reassured that the Rolls-Royce Trent 900 engine that powers this magnificient aircraft has been tested to the equivalent of 14 years in operation.

This makes it the most tested engine Rolls-Royce has ever produced. The amount of testing that had gone into developing this engine helped to make it the engine of choice for the A380. Singapore Airlines has a total of 10 aircraft on order with Trent power.

Ten other airlines have also made an engine selection for the A380. Of these, seven have joined Singapore Airlines as Trent 900 customers giving it a 61 per cent market share.

The Trent 900 is also the largest engine that the company has ever built, yet it is one of the most environmentally efficient and quiet. Each power plant measures nearly three metres in diameter. Despite its vast size, the engine's low noise emissions have led some to christen the Trent-powered A380 as 'the Whispering Giant'. It comfortably meets the stringent noise limits for airports such as London's Heathrow, one of the early destinations for Singapore Airlines.

At take-off, each of the four Trent 900s powering the A380 delivers thrust equivalent to the power of more than 3,500 family cars! Or the same as around 70 Formula One racing cars.

The first flight will mark another stage in the successful relationship between Singapore Airlines and Rolls-Royce, which began in 1995 when the airline selected the Trent 800 for its fleet of Boeing 777s. Since then, Singapore Airlines has also selected Rolls-Royce power for its Airbus A340-500s, A330s and A350 XWBs.

Rolls-Royce is a major player in Singapore's aerospace industry, accounting for over 10 per cent of the country's aerospace output. Through the company's joint ventures with Singapore Airlines Engineering Company - under Singapore Aero Engine Services Limited and International Engine Component Overhaul - Rolls-Royce currently employs nearly 1,000 people in the country, nearly 5 per cent of the total industry workforce.

"It's an effective partnership," says Rolls-Royce regional director Jonathan Asherson. "We are one of many major companies to benefit from what Singapore offers. In return, we feel that we have been able to contribute to the phenomenal growth of this country, and will continue to do so in the future." The company continues to place emphasis on technology partnerships and collaborative research and development, while benefiting from investments made in new products and markets.

An Advanced Technology Centre has been created here, following an agreement with A*Star and its research institutes. It's work covers a broad portfolio of technologies, but work already under way includes high-performance computing for aerodynamic design, materials science and modelling for fuel cells.

Beyond Singapore, 600 airlines and 4,000 utility operators rely on Rolls-Royce power, and the company is number one in modern large turbofans. Trent series engines have a market-leading 40 per cent share of new generation wide-body airlines, and have been selected to provide launch power for both the Boeing 787 Dreamliner and the Airbus A350 XWB. It is a position which reflects well on the decision taken in the 1980s to have an engine available for as many new aircraft types as possible. The result has seen the company's share of the civil engine market triple during those two decades.

Malaysia Aims to be Regional Aircraft Maintenance Hub

Malaysia plans to become a regional hub for aircraft maintenance and repairs amid strong growth in air travel worldwide, deputy prime minister Najib Razak told the state news agency Bernama.

Mr Najib said the country was currently ranked fifth in Asia and tenth in the world in terms of aircraft maintenance, repair and overhaul.

'Our hub will be unique because it'll be able to handle civilian and military planes as well as helicopters,' he was quoted as saying.

Companies involved in maintenance activities include national carrier Malaysia Airlines, Eurocopter - which maintains helicopters - and Airod which has been working on foreign military planes, he said. "Suitables areas for maintenance, repair and overhaul activities have been identified," Mr Najib said.

The deputy premier said that rising demand for air travel, fleet expansion by airlines and the introduction of new and bigger aircraft support the development of a robust maintenance industry.

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EADS CASA
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IATA Signs Partnership Agreement with Solar Impulse

Delegates at the Singapore Airshow Aviation Leadership Summit listened attentively as the charismatic scientist adventurer Bertrand Piccard – who shot to fame with his non-stop trip around the world in a hot-air balloon – gave detailed plans for a revolutionary, exciting initiative that would certainly change the future of air-travel.

Piccard is preparing to fly around the world in a solar plane with no fuel and zero emissions. The plane, called Solar Impulse, gathers its energy from The Sun and stores it in batteries. This allows the pilot to fly out of daylight hours.

Piccard however assured delegates from the aviation industry that his plan to fly solo around the world in Solar Impulse was not an attempt to convert the commercial aviation industry to solar power. The adventurer said his main goal is to illustrate what new technology could achieve.

Piccard's plans received a ringing endorsement from the International Air Transport Association (IATA), which had undertaken to become an Institutional Partner of Solar Impulse.

The agreement, signed by Piccard, in his capacity as president of Solar Impulse and Giovanni Bisignani, director general and CEO of IATA, established a framework for cooperation between the two organisations. IATA will provide assistance to ensure the smooth passage of the solar plane around the world.

The partnership is in line with IATA's announcement in June 2007 for a vision of zero carbon emissions for the aviation industry in 50 years.

"Solar Impulse and IATA share a vision. We are natural partners. We are both looking towards a zero carbon emission future for air travel. Solar power is one of the building blocks that will make this happen. The Solar Impulse initiative is proof that with vision anything is possible – even carbon free flight," said Bisignani.

"Our future freedom relies on us converting to renewable energy sources as soon as possible. In this sense, the vision set by IATA to eliminate all polluting emissions within the next 50 years is admirable," explained Piccard.

Solar Impulse is building the first prototype airplane that aims to demonstrate the feasibility of flying day and night, only propelled by solar energy. The first test flights will take place in early 2009. In 2011, Bertrand Piccard and André Borschberg, CEO, will fly around the world with five stopovers. IATA will help make this dream a reality by providing support including assistance in obtaining air traffic control clearance.

"In one year's time, Solar Impulse will fly without any polluting emissions, but will carry only one person. To achieve IATA's vision there are a little more than 40 years left to find a way to increase the payload to a few hundred passengers," said Piccard.

Bisignani added, "Achieving zero carbon passenger flights will not happen overnight. And no single initiative can provide all the answers. But the airline industry was born by realising a dream that people could fly. We can already see the potential building blocks for a carbon-free future: along with solar power, other exciting initiatives include progress in fuel cell technology, and fuel made from biomass. By working together with a common vision, an even greener industry is absolutely achievable."

Embraer Legacy Preview

Leading Brazilian aircraft manufacturer, Embraer, flew a group of aviation to Hong Kong to preview its premium executive jet which had a Hong Kong stopover enroute to the Singapore Air Show.

Embraer's Legacy jet is a super midsize twin-engine business jet, designed to meet the demands of businesses and governments. The aircraft offers sophisticated and personalised options for the interior, high performance, comfort and low maintenance costs. The Legacy now has a new interior with more headroom and improvements to the overall cabin experience.

Based on the successful ERJ 135/140/145 family of regional jets, the Legacy delivers the largest cabin in its class and is capable of flying non-stop from Singapore to Tokyo.

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RAYTHEON AESA

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Qantas Picks KL as Aircraft Repair Site

Australia's national airline, Qantas, has chosen Kuala Lumpur for its first aircraft repair base in Asia, providing a boost to efforts to turn Malaysia into an Asian-Pacific hub for aircraft maintenance, repair and overhaul (MRO).

Qantas and MAS Aerospace Engineering, a Malaysia Airlines subsidiary, have signed a memorandum of understanding for a joint venture company to provide airframe maintenance services.

The new facility will be able to take on overflow engineering work from other repair centres in the region such as Singapore, China and the Philippines.

The recent growth in Asian budget airlines is expected to create even more business for maintenance and engineering facilities.

The new company, which is due to start operations this year, will place Qantas in a commanding position to take advantage of the rapidly-growing Asian-Pacific MRO market, which is expected to be worth US$16 billion (S$23 billion) by 2016.

Qantas has already gained a foothold in the region with its investment in Singapore-based Jetstar Asia and Pacific Airlines in Vietnam.

Qantas chief executive Geoff Dixon predicted the joint venture would create a world-class and cost-effective facility to build on the A$300 million (S$380 million) the airline had already invested in Australian engineering operations.

'The venture also reflects the Qantas Group's objectives of growing our aviation-related businesses into growth markets in the Asia-Pacific,' he added.

Mr Dixon said the airline had for many years contracted overflow engineering work to

a variety of Asian countries.

'The operation in Malaysia will provide the opportunity to consolidate some of this work while providing further growth for the Qantas Group.'

While no figure has been placed on the cost of the stake, he made it clear that Qantas would have a significant input in the management, engineering and quality system of the new company.

MAS Aerospace is already well-established in Kualu Lumpur, where its 1,000-strong engineering force maintains Boeing 747s, 777s and 737s, as well as the Airbus 330s and 320s.

Echoing his Qantas counterpart, Datuk Idris Jala said MAS Engineering was well-positioned to build a world-class MRO joint venture with Qantas. 'Our priority will be to develop Kuala Lumpur as a hub for the Asian-Pacific region for MRO services,' he added.

97 New Airports for China by 2020 to Meet Rising Demand

China has plans to build 97 new airports by 2020, a move that will cater to soaring air travel demand and alleviate the strain on existing aviation infrastructure.

The 450 billion yuan (S$89 billion) undertaking over the next 12 years will bring the total number of civilian airports in China to 244, up from 147 in 2006, according to China's General Administration of Civil Aviation.

The new airports will be built in five main regions of the country - north, east, south-central, south-western and north-western.

When the expansion is complete, it would mean that 82 per cent of China's population - expected to hit 1.45 billion people by 2020 - would be living within 100km - or a 90-minute drive - of an airport.

Currently, about 60 per cent of the country's 1.3 billion people live within this range.

China's blistering pace of economic growth over the past decade is seeing a surge in demand for air travel, as more and more well-off Chinese criss-cross the country for business as well as for pleasure.

And as previously undeveloped provinces and regions open up more to investment and tourism, the country's domestic air travel market has grown by double digits annually.

The General Administration predicts passenger traffic will increase by 11.4 per cent a year between now and 2020. Freight traffic will rise by 14 per cent annually.

Last year, for example, air traffic volume rose 16 per cent over the previous year to 185 million passengers, according to official figures.

Domestic airlines are busy expanding their fleets to meet rising air traffic demand.

The increasing demand for air travel has resulted in immense pressure on several key airports in China. The Beijing Capital airport and Shanghai's two airports, Pudong and Hongqiao, are bursting at their seams.

The new airport additions will ease some of that pressure. By 2020, the number of airports serving more than 30 million passengers a year will rise from the present three to 13, said the General Administration.

The construction of airport facilities, however, will go to waste if the country does not solve certain pressing problems that have been plaguing its aviation industry.

A shortage of pilots and limited airspace for civilian flights (China's military controls 70 per cent to 80 per cent of the country's airspace), for example, threaten to slow things down. The gap between the demand and supply of pilots is likely to be 2,000 by 2010, according to state media.

But building more airports will also mean more opportunities for foreign investors hoping for a bite of China's aviation infrastructure sector.

The country opened up this lucrative market to foreign investors in the early 2000s and overseas airport operators have dived in to buy stakes in several domestic airports.

For instance, last year, Singapore's Changi Airports International, an international airport investor, operator and joint venture partner, paid 1.08 billion yuan for a 29-per cent stake in Nanjing Lukou International Airport in east China's Jiangsu province.

The venture was described as the first private-equity investment deal in a Chinese airport by a foreign airport.

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AUVSI's Unmanned Systems Asia-Pacific 2008

Currently, military services operate nearly 4,000 unmanned aircraft, most of which have been deployed to Iraq or Afghanistan. The US Army alone is flying 1,200 drones in surveillance combat missions.

Delegates to The Association for Unmanned Vehicle Systems International (AUVSI) were told this at the Unmanned Systems Asia-Pacific 2008 congress on the sidelines of the Singapore Airshow 2008.

Unmanned air vehicles are valuable tools for commanders, but their utility is limited because systems are not interoperable, said Dr. Zairil Zaludin of Universiti Putra Malaysia.

Dr Zairil gave the example of the Medium Range UAV with over 6 hours loitering capability. The vehicle is capable of carrying more than 20kg of payload. The program began from the initial design phase in 2002, followed by fabrication, avionics installation, ground testing and finally flight testing.

After various testing in the lab and on the field, the UAV was prepared for endorsement from two major governing bodies in the country, the Malaysian Department of Civil Aviation (DCA) and the Malaysian Communication and Multimedia Corporation (MCMC). In 2006, the official certifications from both institutions were granted.

A lone UAV flying over an area of interest can stream live video to an operator on the ground who is equipped with a so-called "remote operations video enhanced receiver" (Rover), a line-of-sight wireless system about the size of a laptop computer. The technology is useful but still does not solve the problem of how to make the data more widely available, Dr Zairil said.

Meanwhile, Dr. Tamara Gottesman of Elbit Systems Ltd., Israel in his presentation outlined the methodology and activities of Elbit Systems to obtain Civil Aviation Authority of Israel (CAAI) Special Permits for Unmanned Aircraft System Type (SP-UAS-T) for tactical medium and small Unmanned Aircraft System (UAS) (such as Hermes 450, Skylark I and Skylark II), in parallel with meeting the civil and military certification requirements of various customers.

Dr Gottesman explained that the certification methodology of UAS is presently in a transition stage. The fast development of UAS raises a requirement to operate them in non-segregated airspace, while the regulatory framework is not yet mature and internationally harmonized standards, regulations and procedures are still in development.

Roy Peshin, Simlat, also of Israel went on to automatic computerized evaluation of skills and performance, in the world of UAS operation, has numerous potential applications such as the perfection of training systems and online assistance to operational activities.

However, in spite of the obvious need, Peshin explained that there had not been much progress in this field due to technological and conceptual difficulties.

"The main challenges have been the development of smart algorithms that actually measure operational success and failure, and the calibration and validation of these algorithms with real data," he said.

About AUVSI

The Association for Unmanned Vehicle Systems International (AUVSI) is the world's largest non-profit organization devoted exclusively to advancing the unmanned systems community. AUVSI, with members from government organizations, industry and academia, is committed to fostering, developing, and promoting unmanned systems and related technologies. AUVSI's Unmanned Systems Asia-Pacific 2008 brought together military leaders, government officials and industry players for an in-depth conference which explored new directions in unmanned systems technology.

Virgin's A-380s to Offer Showers and Gambling

Billionaire entrepreneur Richard Branson is determined to go one better than Singapore Airlines (SIA). His company, Virgin Atlantic Airways, plans to fit its A-380 superjumbos with private rooms, showers and roulette tables.

Virgin already provides customers flying 'upper class' with beauty treatments and an in-flight bar. The London-based carrier wants to take perks a step further when the superjumbos join the fleet in five years' time.

'It's surprising how little people have done,' the Virgin Group chairman said. 'We will have bars, showers and, in countries where we're allowed to, roulette and blackjack. We'll certainly have double beds, private rooms, masseuses and manicurists.'

Virgin has six double-decker, 525-seat A-380s on order. SIA, which owns 49 per cent of Virgin, received the first A-380 in October 2007. Its main innovation was to offer cubicles and beds wide enough for two in a new 'super first class.' Emirates and Qantas Airways will get the plane next year and have not announced services beyond those normally available.

Virgin has said it will deploy the superjumbos on routes from London to Los Angeles, Tokyo, Johannesburg, Sydney and New York's John F. Kennedy airport.

Sir Richard, along with Emirates, is also pushing Airbus to develop a longer version of the A-380 able to carry about 800 passengers in a three-class configuration.

Airbus chief operating officer John Leahy said the company could begin work on a larger A-380 once the standard plane reaches full production in 2010. Designated the A380-900, it would enter service around 2015, he said.

China's First Homegrown Regional Jet Unveiled

China has unveiled its first homegrown regional jet, whose commercial viability would impact bigger plans to build the country's own large passenger plane by 2020.

A 90-seater version of the Chinese-made ARJ21- 700 aircraft - short for Advanced Regional Jet for the 21st Century - rolled off the production line in Shanghai at a flashy ceremony with thumping music and a laser show.

'The ARJ21 makes us part of the global aviation industry,' said Mr Lin Zuoming, general manager of the jet's manufacturer, China Aviation Industry Corp I (AVIC 1.)

Indeed, many analysts are saying that marketing the jet globally could prove tougher than building it.

On paper, the ARJ21 is a cheaper alternative to similar planes made by Canada's Bombardier or Brazil's Embraer.

The ARJ21 costs between US$27 million (S$39 million) and US$29 million, compared with about US$30 million for a similar aircraft by its foreign rivals, state media reports said.

However, analysts said a lower price tag alone would not be enough to entice buyers, who would need to be convinced that the Chinese manufacturer can deliver solid after-sales and maintenance services.

The extent of AVIC 1's success in marketing the ARJ21 in the years ahead could cast a long shadow on China's ambition to build its large passenger plane to rival those of Boeing and Airbus.

AVIC 1 made plain that it would focus on the domestic market for now, particularly in western China, where high temperatures and complex aviation routes reportedly make similar foreign-made planes 'unsuitable'.

Mr Zhou Jisheng, the deputy chief designer of the ARJ21, said: "The planes that China buys from overseas are basically unsuitable for the special needs of western aviation routes, resulting in planes having to dramatically reduce their load and affecting economic efficiency."

Whether the ARJ21 would handle these conditions better would be known in March, when the jet makes its maiden test flight.

The jet is expected to be delivered to its first customer in September 2009, before entering full production later that same year.Thus far, the jet has clinched more than 170 orders, mostly from domestic airlines.

Northrop Grumman Showcases Key Capabilities at Singapore Air Show

Northrop Grumman will display a wide range of its key capabilities and programmes at the Singapore Air Show, including unmanned aerial vehicles, airborne early warning and control systems, fire control radars and infrared countermeasures.

"We are strongly committed to our Asian customer base, and Singapore is an important market in which we have considerable capabilities to offer," said John Brooks, president Northrop Grumman International Inc. and vice-president business development for Northrop Grumman's Integrated Systems sector.

"Our capabilities across the company are well matched to meeting the region's growing defence and aerospace requirements."

Among the exhibits featured in the Northrop Grumman pavilion will be an E-2 Hawkeye airborne warning and battle management system crew workstation and flyable cockpit simulator aimed at demonstrating maritime reconnaissance. Also highlighted will be Northrop Grumman's 737 airborne early war and control, multi-role electronically scanned array (MESA) radar capabilities.

Presentations and models of the AN/APG-68(V)9 mechanically scanned fire control radar, and the AN/APG-81 active electronically scanned array (AESA) radar will also be present. Northrop Grumman will also be revealing the newest addition to its collection of AESA fire control radars.

Other programmes available for viewing will be the directional infrared countermeasures (DIRCM); AN/APR-39B(V)2 suite of integrated sensors and countermeasures (SISCM); the joint threat emitter (JTE); the LITENING advanced airborne targeting and navigation pod; the Longbow Apache helicopter and Hellfire missile system; and the Viper Strike precision strike munition.

The MQ-8B Fire Scout vertical take-off and landing unmanned aerial vehicle (VTUAV) and RQ-4 Global Hawk high altitude, long endurance unmanned system will also be featured.

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Singapore Airshow Unveils Conference Line-Up

The Singapore Airshow will play host to a series of conferences one day prior to the airshow's kick-off on the 19 February. Jimmy Lau, managing director of Singapore Airshow & Events Pte Ltd, said the conference programme was the result of close collaboration with various government agencies.

"We are very excited and pleased about the conferences we have lined-up, as well as the thought leaders spearheading each one," said Lau. "There is no doubt these conferences will provide the ideal platform for the various communities to come together to meet about pressing issues pertaining to their industries."

"Aside from the high-level nature of the conferences, the airshow will most certainly provide trade visitors with an unmatched access to the world's civil and defence aviation communities," he added.

Jimmy Lau

The premier line-up of industry conferences include:

SINGAPORE AIRSHOW AVIATION LEADERSHIP SUMMIT

In collaboration with the International Air Transport Association (IATA), Civil Aviation Authority of Singapore (CAAS) and Ministry of Transport (MOT), the highlight of the conference series will be the Singapore Airshow Aviation Leadership Summit. Top representatives from the government and civil sectors will meet senior officials of various transport ministries behind closed doors to engage in a dialogue session on major development challenges confronting the aviation industry. Issues that will be addressed during this exclusive summit will include opportunities in the Asian aviation industry, managing safety and security challenges, as well as the 'hot' topic of the environment.

GLOBAL AIR POWER CONFERENCE

The Airshow will play host to global air chiefs and defence industry leaders who will come together to discuss the future of airpower, as well as the challenges which the future presents to airport development, at the Global Air Power Conference (GAPC). Supported by the Republic of Singapore Airforce (RSAF) and S. Rajaratnam School of International Studies (RSIS), the Global Air Power Conference will also be the fourth conference in the Asia-Pacific Security Conference (APSEC) series.

INTERNATIONAL DEFENCE PROCUREMENT CONFERENCE

For the very first time at an international airshow, a defence procurement conference will be held to engage the defence procurement community. The International Defence Procurement Conference (IDPC) will address challenges and trends in the global defence procurement arena. Participants can expect to hear six different viewpoints of defence procurement agencies and defence companies, as well as engage in discussions on the latest developments with other stakeholders in the defence procurement community.

C4I Asia Conference

Addressing challenges and issues faced by the leading Armed Forces around the world, the C4I Asia Conference will focus on command and control in network centric warfare, it's ongoing evolution in managing battlespace uncertainty, as well as the critical role of battlespace digitization in affecting force transformation. Focussing on practitioners and technologies involved in the field of C4I, this conference will be the foremost event for top military leaders and technologists to share ideas and innovation on network centricity.

GLOBAL SPACE AND TECHNOLOGY CONVENTION

The airshow will also be hosting the Global Space and Technology Convention (GSTC), the world's premier space convention showcasing the latest technology in space engineering and design. Jointly-organized with the Singapore Space & Technology Association (SSTA), the event, which will take place during the Airshow, will serve as a leading platform for networking within the space community, and will help facilitate international co-operation amongst the industry.

Intl. Defence Procurement Conference

Globalisation of information, standards, products, business processes, capital, labour, raw materials has gathered pace over the last ten years and has had generally beneficial results, Mr. Denis Ranque, chairman and CEO of Thales, France, informed delegates of the International Defence Procurement Conference (IDPC), the first ever defence procurement conference held concurrently with Singapore Airshow 2008.

"While globalisation of security risks and threats is one side of the coin, fundamental shifts in world economic activity were inevitable," Ranque said. "Nonetheless, global security remained a key challenge of the 21st century."

"Governments cannot address these challenges on their own. Industry is able to respond multinationally but is constrained by lack of consensus and cooperation between customer states and international organizations," he added.

"The key need is to prepare comprehensive crisis management capabilities, recognising that we cannot predict how threats will materialise. Governments must be more flexible, more network-centric. We must invest in security-related technology and ensure that breakthroughs can be efficiently and safely harnessed worldwide. Technology will not determine our future security but we must master its potential benefits and stay at the leading edge of scientific advancement."

Ranque explained that Thales had identified global security as the main focus of its future growth. "Through a multi-domestic approach and emphasis on dual-technology, we are investing in security related R&T and global standardisation efforts. We wish to strengthen our long term partnership in these activities with key governments, including Singapore" he said.

The session was rounded off with a panel discussion chaired by Mr. Tony Edwards, Visiting Professor with the Defence College of Science and Technology (Cranfield University), UK. The panel consisted of Mr Soh Kong Pheng, chief executive of the Defence Science & Technology Agency, Singapore; Mr. Lee Chung-won, director general of defense industry promotion, Defense Acquisition Program Administration, South Korea; Mr. Wee Siew Kim, president, defence business and deputy CEO (Aerospace & Marine) of Singapore Technologies Engineering, Singapore.

The panel concluded that there were many critical issues in defence procurement which necessitate even more complex analysis and resolution. Chief among these concerns was the integrity of the defence procurement which represented the link between Foreign, Defence, Industrial and Technology Policies and the Armed Forces.

Leaders in procurement had to make tough decisions which trade-off between capability in depth and breadth, interoperability and technology with cost effectiveness, where the cost inevitably escalates faster than any consumer index.

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Aerospec Supplies Pte Ltd	B32	
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AgustaWestland	J39	
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Air Ambulance Technology	B65	
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Alcoa Fastening Systems	V35	
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Altrus Pte Ltd	D65	
Ameco Beijing	D78	
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AmEuro Metals BV	C23	
Amphenol Aerospace Operations	Q81	
APC Technology	F65	
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ARGE OFFSET	B65	
Argosy International Inc.	S35	
ASIAN DEFENCE JOURNAL	Q99	
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Aston Aviation Supplies Pte Ltd	R87	
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Australian Aerospace Limited	F65	
Australian Industry & Defence Network - Vic Inc	F65	
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Aviall Services, Inc.	N39	
Aviation & Electronics Support	C107	
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Aviation Engineers Pty Ltd	F65	
Aviation International News	CD77	
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Avibank Mfg., Inc. & Avibank Services, LLC	R107	
Avio Diepen	C23	
Avio/JSD Corporation	D94	
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AVOX SYSTEMS INC - ZODIAC	F36	
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Daedalus Aviation Group	C23	
DASS Aero Engine Services	D75	
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ECM Expo & Conference Management GmbH	NA	
Economic Development Board	NA	
EDAG Australia Pty Ltd	F65	
EDC of Florida's Space Coast	P87	
EDN Aviation	P87	
EDO Corporation	T71	
Elbit Systems Group	N65	
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Fokker Services	C23	
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FTE CENZIN Co. Ltd Foreign Trade Enterprise	D93	
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Hamilton Sundstrand	L39	
Handtmann A-Punkt Automation GmbH	R100	
Harris Corporation	S01	
HAULOTTE GROUP	D87	
Hawker Pacific	CD31	
Henkel Singapore Pte Ltd	D107	
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Horizon International Flight Academy	C09	
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MPC Products Corporation	T65	
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NCS Communications Engineering Pte Ltd	503	
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PAS Technologies Inc.	R72	
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Piaggio Aero Industries S.p.A.	C09	
Pilatus Australia Pty Ltd	V61	
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PPG Aerospace E71,	E71	
Pratt & Whitney	L39	
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Universal Singapore Airport Services Pte Ltd	S97	
Uniworld Marketing	NA	
Ventura Media Pty Ltd	B07	
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