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# FLIGHT

## DAILY NEWS

ISSUE 2

Tuesday July 18 2006



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### HAWK ARROWS IN TO SHOW

The first of six Hawk 129 advanced jet trainers for the Royal Bahrain Air Force (RBAF) was formally handed over in a ceremony at the show yesterday.

Flown by BAE Systems test pilot Nat Makepeace and Lt Col Omar Ebrahim Mohamed Al Mahmood, the aircraft arrived at Farnborough with the Hawks of the Red Arrows aerobatic team. The aircraft was then handed over to His Highness Sheikh Salman bin Hamad bin Isa Al Khalifa, Crown Prince of Bahrain.

PICTURE: LIAM RITSON



# LEAHY TAKES ON THE DREAM TEAM

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**Mike Martin**


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The long-expected launch of Airbus's rethought and redesigned answer to the Boeing 787 Dreamliner was unveiled at Farnborough yesterday.

However, new Airbus president and chief executive Christian Streiff says the industrial launch of the \$10 billion programme will have to wait until early October to give him time to "fully understand and improve Airbus's development process".

Almost every aspect of the all-new aircraft comes in ahead of the Boeing product, says Airbus, although it will come in several years behind in terms of entry into service (EIS), scheduled for mid-2012.

"We have leapfrogged our competitor," says John Leahy, Airbus chief operation officer, customers.

"What you get by being a little bit later is that you get to study your competitor and see how, step by step, you can do better."

The A350 XWB will be a three-aircraft medium capacity long-range widebody family. Three passenger versions are on offer – the -800, -900 and -1000 – accommodating 250-375 passengers. The -900R ultra-long range version and -900F freighter complete the family.

#### Longest

Each basic model will have a range of 8,500nm (15,800km), the longest of any aircraft in their size category, says Airbus. It will feature a new high-speed wing offering speeds of Mach .85 and a common engine type across the whole family with a thrust range of 75,000-95,000lb (330-420kN).

To date, only Rolls-Royce has agreed to

supply engines, although Airbus is keen to offer customers a choice and continues to talk with other engine manufacturers including the Engine Alliance which is currently unable to compete on a twin-engine aircraft because of earlier EU antitrust agreements.

It will be made of 62% composites and advanced materials, compared to around 50% for the Boeing 787. The new aircraft will be equipped with the same advanced cockpit as the A380 superjumbo.

In the market, the A350 XWB will not only go head to head with the 787, it will become a competitor to two Boeing 777 models.

The A350-900 will become a competitor not only to the 787-9 but also the 777-200ER, Airbus says. Leahy says the A350-1000 will also be "the successor" to the A340.

## GoAir's \$700m fillip for Airbus

Airbus yesterday landed a \$700 million order for ten A320-family aircraft with ten options and something just as valuable – handsome compliments from the Indian customer GoAir.

GoAir managing director Jeh Wadia was unstinting in his praise for everything from the aircraft itself to the Airbus team he had dealt with.

Against a background of what Airbus has called a "serious crisis" over delays to the A380 and relationships with customers, Wadia's comments must have been music to the ears of the European manufacturer's executives.

"Boeing put up a good fight but the Airbus product is preferred by me and by our customers," says Wadia.

#### Experience

"When we brought in the A320s originally we found the passenger experience was much superior. The Airbus aircraft beat Boeing in terms of both operating costs and price."

Wadia says prior to launching the low-cost airline last year he had interviewed pilots and they had expressed a preference for Airbus aircraft in that it enabled them to progress their careers easily thanks to the commonality of Airbus aircraft types.

"From all aspects, Airbus was better. It is easier to get pilots for Airbus than it is for Boeing aircraft. I would also say that the people we did business with at Airbus are what made the difference," he says.

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## HEADLINES

## Boeing heads exhibitors for Asian Aerospace

Major new exhibitors confirmed for the revamped Asian Aerospace show in Hong Kong next year include Boeing and the aerospace industry associations for Germany and the UK.

Boeing, the German Aerospace Industries Association (BDLI) and the Society of British Aerospace Companies (SBAC) will participate in the event, which relocates from Singapore to Hong Kong from 2007. Show organiser Reed Exhibitions has also confirmed attendances from companies including Aviall, Lufthansa Technik and AMECO Beijing.

Asian Aerospace will be held from 3-6 September 2007 at the new 70,000m<sup>2</sup> (750,000ft<sup>2</sup>) AsiaWorld-Expo complex, adjacent to and integrated with Hong Kong International airport. It will have a business-to-business focus, covering the entire commercial aerospace sector for the Asia-Pacific region.

### Significant

A high-level congress, covering issues such as the growing fleet and maintenance and investment in training and infrastructure and involving major players from the world of aerospace and aviation, will be held as part of the event. Aircraft Interiors Expo Asia 2007 has been scheduled alongside Asian Aerospace.

Mirja Schueller, head of fairs and exhibitions at the BDLI, says: "We represent 154 member companies and the Asia-Pacific region has always been a significant market for our industry. Our association with Asian Aerospace has proved to be a very productive platform for the association and individual member companies to both consolidate business relations and forge new ones in a very important market region."

Clive Richardson, senior vice-president, Reed Exhibitions Aerospace and Defence Group, says: "Hong Kong is not only the perfect gateway to the Chinese market, it is a highly connected aviation hub with direct access to other large emerging markets such as India, Thailand and the Middle East."

## Ambassador 'delighted' with US presence at show

The world's biggest aerospace nation kicked off Farnborough International in style with a special ribbon-cutting ceremony to open the US Pavilion in Halls 2 and 3.

In attendance was US ambassador Robert Tuttle, Governor Jeb Bush of Florida, David Sampson, deputy secretary of commerce, and Tom Kallman of Kallman International. "Farnborough International is very important to the US aerospace sector and the US economy. I'm delighted that more than 180 companies have decided to be part of the pavilion," says Ambassador Tuttle.

Other dignitaries in attendance included numerous US congressmen and governors, as well as former astronaut Buzz Aldrin.



# Sukhoi rebrands RRJ, with competitive price

Colin Baker

Sukhoi officially announced the rebranding of its proposed Russian Regional Jets (RRJ) family as the Superjet 100 on Monday, with Victor Soubbotin, CEO of the manufacturer's civil aircraft division, promising it will be 10-15% cheaper than the competition.

"That's the margin we have to stick to in order to be competitive," Soubbotin said, adding that the manu-

facturer is continuing to negotiate with Sibir despite the fact the Novosibirsk-based carrier ditched plans to order 50 of the 95-seaters after changes were made to the design. This leaves Aeroflot, which has indicated it will order 30 of the type, as the lead customer for the programme. The list price is \$28.5 million.

Soubbotin says success in the Russian market is "critical" to the success of the project. "Otherwise, Russian-produced aircraft will not be

trusted by the international market," he says. SAS has indicated it might be interested in the Superjet100. Sukhoi plans to carry out static testing by the end of the year, with a view to flight tests in 2007.

Sergei Kravchenko, Boeing president for Russia/CIS, said the US manufacturer and project partner "will see" when asked if the level of cooperation would be deepened. "It's a very good demonstration of our five-year co-operation efforts," he

says. Meanwhile, the PowerJet SaM146 engine for the SuperJet100 ran as planned for 2.5 minutes on 9 July at NPO Saturn's test facility in Rybinsk, Russia.

The brand new engine, developing 14,000-17,500lb of thrust, is dedicated to the regional aircraft market. It is being jointly developed by Snecma and NPO Saturn, through the PowerJet joint-venture. Certification of the SaM146 is scheduled for March 2008.

A total of nine SaM146



engines will be used for certification testing, logging more than 4,500 accelerated mission cycles during the process.

From left: Decade of Excellence winner Guy Norris shares celebrations with Flight Daily News editor Alan Peaford and Flightglobal's Justin Wastnage.



## Simply the best show daily – AGAIN!

Flight Daily News was once again voted the world's number one airshow daily in the annual Aerospace Journalist of the Year Awards organised by the World Leadership Forum and the Royal Aeronautical Society.

And Flight International's west coast editor Guy Norris was honoured with the Decade of Excellence award. A third trophy came to the Flight stable with the award for the best air transport submission made to Flightglobal.com editor Justin Wastnage for a feature in Flight International.

"It was a great honour for us to win the best dailies award for the second successive year as market is fiercely contested with a tremendously high standard of publications," says Flight Daily News editor Alan Peaford.

## Medics warn against effects of heatwave

Farnborough's hotting up – and it's only going to get hotter. The temperature is expected to hit 34°C on Wednesday and Farnborough organisers are cautioning visitors to take precautions against both the sun and the heat.

Dr Simon Brown, forward medical incident commander at the show, recommends visitors not underestimate the dangers and has this advice:

- wear sun-block and a hat;
- stand in the shade when possible; avoid long periods in the sun;
- drink plenty of fluids;
- go for comfort over

formality – dispense with business suit jackets if possible.

By mid-afternoon on Monday, there had been 27 referrals to the medical service. The on-site medical team's average response time was around 2min.

There are eight doctors on-site, five ambulances, one medical helicopter and a paramedic on a motor-bike. There is a medical centre at one end of the site and a first-aid post at the other.

- If you require emergency medical assistance, telephone 01252 380999.

## Fire kills hall aircon

The emergency services were called to a fire on site shortly after 11am yesterday as the heat played havoc with facilities.

A fire in a faulty generator outside Halls 2 and 3 was extinguished, but the air conditioning in the halls was affected.

At 2.30pm in temperatures exceeding 35°C, the power in two rows of chalets also failed, leaving exhibitors and guests with no air conditioning.

Additional generators and a replacement have been brought in.

# Rotary majors eye joint venture for HTH

Eurocopter and Sikorsky have held high-level talks about joining forces to build a new heavy transport helicopter (HTH) in what would be an unprecedented collaboration between the two businesses.

The potential co-operation follows Eurocopter's decision to appoint Sikorsky to head up contractor logistics support for the US Army's Light Utility Helicopter (LUH) programme. The Franco-German manufacturer was selected for the \$3 billion contract with its UH-145 variant of the EC145.

The defence ministries of France and Germany have released a joint request for information on the HTH, spurred by Germany's



Vision of the future for Eurocopter and Sikorsky.

approaching need to replace its fleet of Sikorsky CH-53 Super Stallions.

Eurocopter president Fabrice Brégier says a co-development agreement with Sikorsky is just one of several options: "I am strongly in favour of an

international partnership. This type of aircraft is very complex to develop from scratch and if we want to offer a competitive solution, one good way is partnering."

Eurocopter has a number of options, including a partnership with Russian

industry, which has a strong track record in developing large military helicopters, or a collaboration with Boeing.

Far more likely, however, is a more extensive agreement with Sikorsky, which already has a \$3 billion contract to develop the CH-53K shipborne heavy lift helicopter. Brégier says the CH-53K would not be large enough to fulfil the requirements of the European HTH, but adds: "The CH-53K programme is certainly getting closer to the requirement."

Eurocopter believes there is a market for 100 aircraft and has based its initial concepts on a helicopter with a maximum take-off weight of 36t. The manu-

facturer is planning a three-engine design capable of carrying up to 66 combat-equipped troops or a payload of up to 13t.

Brégier says the fly-by-wire technology currently employed on the NH Industries NH90 would be mandatory on the HTH, as would an advanced avionics suite. "We know that by 2020 Germany needs to replace its fleet. In development terms 10-15 years is not a long period of time. We have to start quite soon."

One of the critical parameters is the aircraft's ability to carry a variety of ground vehicles, including the German army's 4,500kg (10,000lb) Wiesel 2 scout car and France's 13,000kg VAB armoured vehicle.

## Ebbs to head new Dubai aviation uni

New aviation powerhouse Dubai Aerospace Enterprise (DAE) has appointed Dr George Ebbs, former president of Embry-Riddle Aviation University (ERAU), as president of the aviation university it is creating.

New DAE president Bob Johnson revealed the appointment as one of the first he will make as he builds the company's leadership team.

Ebbs stepped down as head of Florida-based ERAU last November after seven years in the post during which he expanded an institution that claims to be the world's biggest aviation university.

DAE is co-operating closely with the UK's Cranfield University to create the new school in Dubai, which Johnson says is one of his early priorities. He wants to have students enrolled this year.

## More milestones for Meteor missile

The Meteor beyond visual range (BVR) missile has chalked up a series of new milestones in its development, says the MBDA-led team behind it.

It has completed a series of 'free jet' wind-tunnel tests at the ONERA supersonic wind-tunnel at Modane, France, and the first flight of the Meteor Seeker Data Gathering (SDG) missile.

The first flight of the SDG missile took place on a Gripen aircraft over Linköping, Sweden. The SDG is an inert missile with a flight-standard seeker head, plus additional instrumentation, to record data during trials.

## CAE deals

CAE has signed a number of contracts with a total value of approximately C\$17 million (\$15 million) to offer training services to airlines in Europe and South America. This includes a five-year contract to provide GOL Airlines of Brazil with Boeing 737NG training at CAE's Sao Paulo training centre.

## Lion chooses CFM

Indonesian carrier Lion Air's order for 30 Boeing 737-900ER aircraft (see page 24) will have CFM56-7B-powerplants. The engine order is valued at \$360 million at list price.

## Nordam's forward thinking leads to takeover

Nordam is to acquire the CF6 thrust-reverser repair business of General Electric company Middle River Aircraft Systems (MRAS). The US nacelle repair specialist will also take over manufacture of out-of-production parts for CF6-6, -50 and -80A thrust reversers.

MRAS is original equipment manufacturer (OEM) for CF6-80-series thrust reversers and the deal gives Nordam access to GE's technical data and resources to develop repairs. "This is the first step of many to move us up the value chain," says Nordam chief operating officer John Uzeckaj.

### Division

Privately-held Nordam will relocate the MRAS assets to its Tulsa, Oklahoma-based repair division, and sites in Wales and Singapore, and also take over management of the supply chain for out-of-production parts. "The deal secures our supply chain for parts, which is how we will differentiate ourselves," says Uzeckaj. "The issue in the industry now is the supply chain."

Nordam has a larger share of the CF6 nacelle and reverser repair market than MRAS, but the acquisition will grow its repair business by 10-15%. "This will improve our speed to market, giving us a direct path to the supply chain and more control of the parts," says Meredith Siegfried, vice president global sales and marketing.

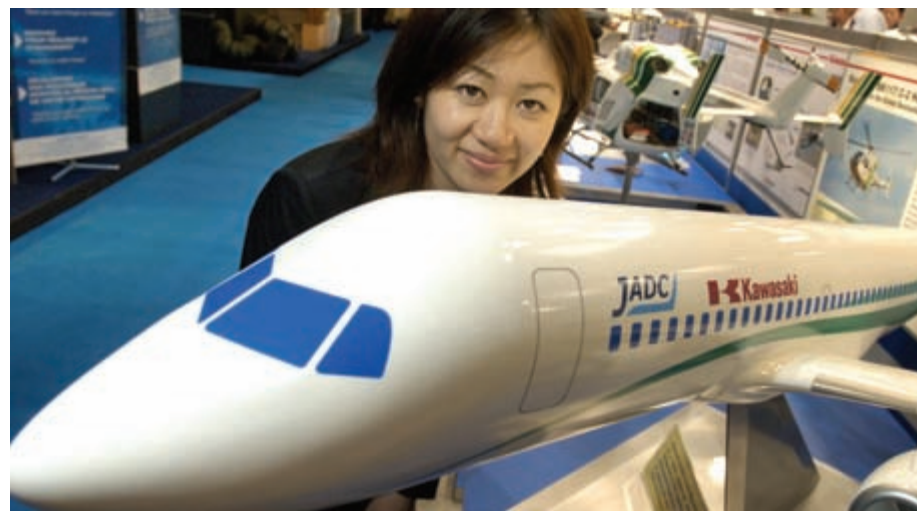
# Kawasaki plans civil version of P-X patrol

Japanese manufacturer Kawasaki Heavy Industries (Hall 2, C17) plans to promote a variant of its under-development P-X patrol aircraft as a new 110-130 seat commercial passenger aircraft.

The P-X itself still has yet to complete its first flight – expected next year – so the proposed commercial spin-off, known as the YPX, is still at the conceptual stage. Kawasaki is currently conducting a feasibility study on the YPX, but has no fixed timescale in mind for making a final decision on the project.

Meanwhile, development of the P-X and its companion C-X cargo aircraft for the Japan Defense Agency continues, with structural tests on both designations currently underway on static test aircraft.

Eighty P-X aircraft have



Yoko Igarashi of Kawasaki Heavy Industries, with a model of the YPX.

been ordered by the Japanese Maritime Self-Defense Force to replace its Lockheed Martin P-3C Orion maritime patrol aircraft and 40 C-X aircraft by the Japanese Air Self-Defense Force to replace its

fleet of Kawasaki C-1s.

Development on the aircraft began in December 2001 and both models are expected to make their first flight in 2007 and delivery to begin in 2011.

An advantage of devel-

oping the two aircraft simultaneously, Kawasaki says, is that they have been designed to have as many common structural parts and pieces of equipment as possible, to reduce costs and increase efficiency.

# Sikorsky unveils Black Hawk variants

**Sikorsky (Hall 4, F13) announced two new Black Hawk variants at Farnborough yesterday – a model designed for the global market, built with international partners, and an armed version, known as the Battlehawk.**

**The International Black Hawk will be sold exclusively outside the US and will provide a cheaper alternative to the new UH-60M model, currently in low rate production for the US military.**

**It will use a combination of components from the UH-60M and the previous UH-60L version, designed with a modular platform that can be configured to individual customer requirements.**

**Sikorsky does not plan to build or assemble the International version itself in the US. Instead it will build the aircraft in collaboration with global partners who are expected to be identified within the next six months.**

**Sikorsky president Jeffrey Pino, who piloted an S-76 helicopter to the show yesterday, says: "We know as we move to the -M version of the Black Hawk, it becomes more expensive and maybe not as reachable for our international customers.**

**"The International Black Hawk will have a 10t capability at a 6t price. It will be positioned below the UH-60M in the market as a very viable option for more financially constrained countries."**

## HEADLINES



## Streiff targets Airbus confidence boost

The priority at crisis-hit Airbus is the restoration of confidence of customers and shareholders, the new president and chief executive Christian Streiff said at Farnborough yesterday.

"To achieve this, I will put a special emphasis on restoring and strengthening the self-confidence of the Airbus teams," he says.

"I want this company to get back to its basics: Airbus' success has been based on the enormous courage it took to introduce the latest technologies, and on a strong customer orientation with a spirit

of always delivering more than expected. I want to keep this Airbus way of working but on top be 100% focused on execution and reliability."

### Haste

Streiff says he wants the company to move fast but without haste. He says his twin priorities are to resolve the production crisis surrounding the A380 and to shepherd the launch of the new A350 XWB.

Streiff is candid in admitting that Airbus was in a crisis. "Yes, Airbus is in the middle of a crisis.

Yes, this is a serious crisis. Yes, the competition is taking advantage of this situation," he says.

"I commit, in front of you, to do everything to turn this crisis into an opportunity. [We must] learn humility, put ourselves into question, change our bad habits and understand the urgent need for improvement."

He says the action plans in place will see Airbus become more competitive, more reliable and quicker. "Airbus must get out of this crisis stronger and better than before."

# Hello to show's good buys

## Fast Action SJ30 sale

Farnborough 2006 is already a success for aircraft distributor Action Aviation. Within an hour of the ribbon being cut, sales director Mike Creed announced his company had sold a \$6.2m Sino Swearingen SJ30 corporate jet to an undisclosed private entrepreneur from Kazakhstan. "We are delighted with this sale so early in the show," he says.

On Sunday the SJ30 completed a record breaking transatlantic flight of 4,400nm with one fuel stop in 11hrs - using only standard fuel tanks. It is the first aircraft in the light business jet class to achieve a transatlantic crossing.

## Brazil scores three times in Kuwait

Embraer has sold two Phenom jets and a Legacy 600 to Kuwaiti VIP charter operator United Aviation. United is a subsidiary of KIPCO, one of the leading operating holding companies in the Middle East and North Africa with more than US\$15bn under management or control.

Its shares are among the most actively traded on the Kuwait Stock Exchange.

The regional launch customer will take delivery of the four seater \$2.85m VLJ 100 and the US\$6.65m nine seater 300 light jet between 2008 and 2010. Embraer will deliver the company's third Legacy in October this year.



The Legacy: Middle East success.

"The Phenom 100 and Phenom 300 represent a natural choice to complement our fleet and are part of our ongoing strategy to expand further within the Middle East", says Abdul Salam Al Bahar, United Aviation's CEO.

Colin Steven, Embraer's vice-president marketing

and sales for EMEA executive jets, says: "This new order for our Phenom family is undeniably a breakthrough in this region, marking a strategic achievement for Embraer."

The sale is another achievement for what is

proving to be a remarkable year for Embraer.

It announced the all-new Phenom jets at NBAA last year and an executive version of its E-190 regional jet, the Lineage 1000 at EBACE two months ago.

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## SALES ROUND-UP

### Italian agency adds second helicopter to fleet

AgustaWestland has sold an AW139 medium-twin helicopter to Italian Civil Protection. The aircraft will act as an airborne command post to support and supplement disaster relief efforts at national, regional and local levels.

The cabin of the AW139 will be equipped with a comprehensive communications suite to allow Italian Civil Protection command staff to coordinate all emergency service activities performed by other government agencies, including rotary, fixed wing aircraft and ground elements. There is already an A109 Power in service with the agency.

### Citic selects extended range Eurocopters

Citic Offshore Helicopter has agreed a deal with Eurocopter for two EC225 twin engine helicopters, with deliveries due at the end of 2007.

Citic, which operates across Asia, will take the first EC225s to be equipped with auxiliary pod tanks extending the range of operations out to more than 250nm (460km) for passenger transport missions while

maintaining a capacity for 19 passengers.

As the first EC225s in offshore configuration to be introduced in China, the aircraft will strengthen a fleet which already includes 10 Eurocopter AS332L1 Super Pumas, five EC155B and B1s and five AS365 Dauphins.

### LoadAir signs for two Boeing freighters

Kuwaiti start-up operator LoadAir Cargo signed an order for two Boeing 747-400 Extended Range Freighters at the show yesterday.

The order is the first part of the company's ambitions to create a major global cargo and aircraft leasing force. "We are trying to build a synergistic aviation group," says Sheikh Khalifa Ali Al-Sabah, chairman of LoadAir.

### Honeywell supply deal agreed

Honeywell has announced a strategic supplier arrangement with US Airways worth \$230 million.

The deal will see Honeywell supply a variety of products and services for the airline's fleet of more than 350 Boeing and Airbus aircraft.

# Finmeccanica: UK to become number one



**Guarguaglini: "We have a special role in the UK."**

Finmeccanica believes the UK will eventually become its single biggest aviation and defence (A&D) market in the near future, with Italy relegated to second place.

This statement was made yesterday by Pier Francesco Guarguaglini, chairman and CEO of Finmeccanica group.

"We have a special role in the UK. In the first half of 2006 we strengthened our position through several programme acquisitions and it is now the second domestic market for Finmeccanica," says Guarguaglini.

## Trends

"The Defence Industrial Strategy (DIS) came at an opportune moment and validates our investments in the UK A&D sector. If trends continue, the UK will become the single

most important market to us." Guarguaglini is also critical at the lack of backing from the firm's national government. "Italian ministers have caused us some problems. If the Italian government invested more, we would be even more successful," he says.

Figures released by Finmeccanica showed that in 2004 the Italian customer base was 81% of its sales with the UK at 6%, however, projections see Italy moving to 38% and the UK increasing to 17% by 2008.

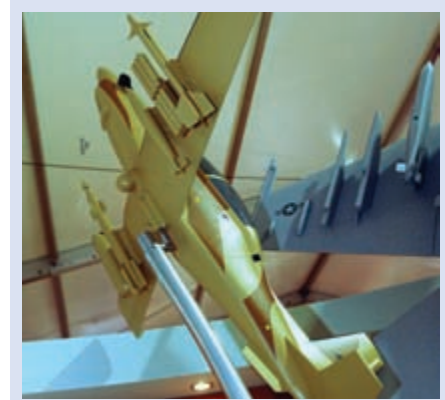
Giorgio Zappa, COO of Finmeccanica, adds that aeronautics will continue to be a major growth area with products such as Eurofighter Typhoon, Future Lynx, C-27J and M 346, all winning orders or gathering interest.

"The €1.4bn contract

with the UK's MoD for the Future Lynx was the first contract under the Strategic Partnership Agreement. We hope to continue with this relationship and use this as a platform to look at new opportunities in the Middle East and Far East."

## Difficulties

Zappa says that outside of continue to grow its three biggest markets – Italy, UK and USA – the company will be looking to increase its interests in China and Japan over the next two years. "China and Japan are two major growth areas over the next couple of years. There are difficulties with China, such as visa and licence issues surrounding helicopters, but I'm sure we will be able to overcome these challenges."



## Light attack variant for Raytheon trainer

Raytheon yesterday unveiled the AT-6 Joint Airborne Weapons System, a light attack variant of its T-6B turboprop trainer.

A model (pictured) on the Raytheon stand gave the first glimpse of the AT-6, which the company says will fulfil roles including close air support, homeland security and general low intensity conflict tasks. It adds sensors, a datalink, cockpit protection and various weapons options to the trainer aircraft. Off-the-shelf equipment could include Flir and a spot laser, while the aircrew will be protected by 30kg (66lb) of the latest-generation Kevlar armour.

Typical weapons will include .5in (12.7mm) machine guns, 2.75in rockets and Mk82 225kg bombs on six potential hardpoint locations. The Hellenic air force already uses some of its fleet of T-6As for weapons training, armed with the machine guns and freefall weapons.

## Lockheed Martin head warns against creeping protectionism

Protectionism may be gaining support in parts of continental Europe and in the United States, said Lockheed Martin president and chief executive Robert Stevens.

"The fundamental question is whether the US and European governments will remain committed to an open business model with transatlantic partnerships or whether they'll revert to narrow nationalist models with protected and subsidised industries," Stevens told a media dinner at Claridges in London.

He singled out the United Kingdom for its "strong commitment" to an open marketplace and said that, as a result, the UK gets good value for money and "access to the best of global technology" – while creating significant industrial benefits at home.

## Support

"But we are concerned that elsewhere within the European Union and in the United States, the impulse toward protectionism may be gathering support," he said.

He added: "Protectionist policies may be well intentioned but they can't succeed long-term – and leading firms on both sides of the Atlantic

understand this very well."

Stevens said the global marketplace offered opportunities not present in any one country's domestic arena. He also called on governments to reform technology transfer regulations in order to fully realise the full value of international partnerships.

"We cannot let rogue regimes or terrorists obtain critical technologies. We know that. But the current system takes excessive toll on allies, resources, patience and goodwill – and actually risks constraining us from working together to develop the best defences against common foes."

He praised the recent agreement between President Bush and Prime Minister Blair on F-35 technology transfer as a positive step and added: "Now, it's time to build on that momentum."

"Lockheed Martin believes it ought to be possible for the United States and allied governments to develop a policy that facilitates technology transfer, while ensuring appropriate safeguards to keep advanced technology from falling into the wrong hands.

"We're confident that the Bush administration and Congress understand this

issue's importance, and that they're beginning to take the necessary steps to achieve those reforms."

Stevens said partnerships were a "strategic imperative" in a world where defence requirements were growing faster than resources.

## Innovation

"The reasons are clear. Partnerships help us sustain innovation. No single company has all the ideas or the answers. No firm has a monopoly on talent," he said.

The second reason was that partnerships bolster trust and goodwill among allies. "Our nations can draw on that reserve of common cause to tackle a host of common challenges – and help ensure that transatlantic unity doesn't fray at the very time we need it most."

He added: "Finally, partnerships are a necessary response to the modern threat environment. Terrorists are networked and working across borders. The civilized world must do the same – not only a responsibility that falls on our governments, but also on the companies that will supply the systems and technologies that enable them to prevail."

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# FLIGHT

## DAILY NEWS

# ATI

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# Honeywell first with SVS in business jet cockpit

Steve Nichols

Gulfstream and Honeywell have ushered in a new era for cockpit avionics with the launch of the first Synthetic Vision System (SVS) for a business jet.

The SVS from Honeywell (Hall 1, A9) will be made available next year on Planeview-equipped Gulfstream G550, G500, G450 and G350 business jet models.

SVS gives the pilot a computer-generated, 3D display of where his aircraft is, where it is heading and what is around him by fusing the outputs from a number of different

sensors with a terrain database. The end result is a display with a realistic depiction of the outside world, which improves the pilot's situational awareness.

The technology means that the aircraft can effectively be flown 'blind' – a holy grail for the industry and a leap ahead of current Enhanced Vision Systems (EVS) that rely on infra-red sensors to 'see' through fog and cloud.

The Gulfstream application, called the Synthetic Vision – Primary Flight Display (SV-PFD), will be available on aircraft equipped with the Honeywell Integrated Primary Flight Display (IPFD) and head-up

display (HUD) technology. The display is generated from Honeywell's enhanced ground proximity warning system (EGPWS) terrain database.

Following certification by the US Federal Aviation Administration in 2007, Gulfstream will also offer SVS as an optional upgrade to existing customers.

Pres Henne, Gulfstream's senior vice-president, programmes, engineering and test, says: "With its real-time, pilot's view of the world beyond the cockpit windshield, SV-PFD increases a pilot's ability to accurately interpret the depth and texture of terrain, obstacles, runways and approaches. It is the next



A bizjet SVS: a new era for cockpit avionics.

logical step in display technology.

"This increased level of awareness means safer operations and is especially beneficial near airports and in mountainous areas."

Ed Wheeler, Honeywell's vice-president, engineering and technology, says that SVS replicates a clear view out of the cockpit window under all weather conditions.

"Seamless integration with the terrain and in-depth human factors of the advanced HUD technology make the Honeywell IPFD the most advanced SVS product available."

## Indian navy's MiGs to arrive from end-2007

As the MiG-29OVT thrust-vectorors its way around the Farnborough sky to spectacular effect, the Russian company has revealed more details of its fighter order for the Indian navy.

It says that "up to 46" MiG-29K and KUB single- and twin-seaters will be produced for New Delhi, with deliveries due to start from the end of 2007. It declines to break down the split between the two versions.

### Significant

Vladimir Vypryazhkin, deputy director-general and general designer for marketing, sales and post-sales service, says that changes to the aircraft are "significant" compared to the MiG-29K produced for the Russian navy in the early 1990s, but minor in terms of airframe design. However, the amount of composite materials in the airframe has jumped from around 20% to 40% compared

India's MiG-29Ks will have a multi-national avionics fit.



to the baseline MiG29K.

Most obvious is the change in the avionics fit, with Sagem providing its Sigma navigational system and Indian companies such as HAL also taking a stake. US and Israeli equipment has also been spec-

ified. The multirole radar will be the Zhuk ME. Vypryazhkin says that MiG has built both single- and twin-seat aircraft to the Indian configuration and that flight tests have been undertaken to ensure the integration of the

foreign equipment but that these examples will not be delivered to India.

The Klimov RD-33MK engines will not have the thrust-vectoring of the OVT "but if India wants it, we're ready to consider it".

## EASA approval for E-195

It was smiles all round at Embraer's chalet yesterday afternoon as the Brazilian manufacturer celebrated the granting of the type certificate for the E-195 twinjet from the European Aviation Safety Agency (EASA).

The first aircraft for UK low-cost carrier Flybe, the model's launch customer, will be delivered in September, said Andrew Strong, chief operating officer of Flybe. It has 14 E-195s on order, plus 12 options. Other customers with firm orders for the E-195 are GECAS, Royal Jordanian and Swiss.

"So far everything Embraer has said it would achieve in terms of deadlines it has achieved," says Strong. The carrier is currently operating a fleet of 40 aircraft – 146-200s and -300s, Dash 8 Q400s and Boeing 737-300s. Within four years it will have a fleet of 59.



From left: Embraer's Mauricio Botelho, EASA's Patrick Goudou and Flybe's Andrew Strong toast the granting of the Embraer 195's type certificate by EASA.



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