

## IN BRIEF

**MiG's Boomerang comes back as Powerslide**

The manoeuvre formerly known as the Boomerang, as performed by the MiG-29 in the daily flying display, has been renamed. Henceforth the eye-catching, physics-defying tumble will be known as the Cossack Powerslide, or 'Kazatsky Zamash' in Russian. The name, a suggestion of Tim Robinson of the Royal Aeronautical Society, was the unanimous winner in a contest to name one of the MiG's manoeuvres. The prize is a trip to Moscow and a ride in the MiG-29. "I am looking forward to experiencing the raw power of the MiG-29," says Robinson. The competition will continue in India later this year.

**Touch sensitive stowage from Textron**

Textron Fastening Systems (Hall 1 C13) has launched an intelligent door handle which responds to touch to open aircraft stowage cabins. The company is demonstrating the Intevia system to the public for the first time at the show. Touching the handle sends a digital command to the door latches, opening them with minimum effort by the passenger. Two-colour LEDs in the touch-pad door handle indicate whether the door is locked or not, and an optical sensor allows interior lights to be dimmed or brightened to match cabin level.

**RUAG handles flight data for Germania**

Interlaken-based RUAG Aerospace (Hall 1, A21) has started statutory flight data evaluation for Germania Airlines' fleet of 19 Fokker 100s. Germania Airlines, headquartered in Berlin, will transmit its flight data via secured web to the avionics centre of RUAG Aerospace's Military Aircraft business unit.



TAM  
President  
Marco  
Bologna.

## AIR TRANSPORT

**No price hikes, demand original A350 customers**

TAM president Marco Bologna and Kingfisher chairman Dr Vijay Mallya, both customers of the original Airbus A350, are happy to see the relaunch of the aircraft with its wider cabin, especially if the price of the XWB model remains the same.

"We don't believe we should pay more," says Marco Antonio Bologna,

president of Brazilian carrier TAM. "The XWB is going to be a better aircraft so we are happy." Once Airbus has finalized the specification of the aircraft, TAM and Airbus will decide on a delivery timetable.

TAM first committed to the A350-900 version of the aircraft at the Paris Air Show last year, increasing an

initial order of eight to 10 in December. This aircraft had a list price of around \$180 million. The A350-900 XWB has a list price of just over \$200 million.

"If they give it to me at the same price then obviously I am happy," says Kingfisher's Dr Mallya, who has ordered 5 A350s.

**Team of seven to clean up the skies****Mike Martin**

The pressing issue of aviation and the environment is to be tackled by seven major players in European aerospace, it was agreed yesterday at Farnborough.

Senior executives signed an agreement – called Clean Sky – which will lead the way to defining elements of what could be a €1.7 billion (\$2.1 billion) programme over seven years.

Clean Sky is aimed at radically improving the impact of air transport on the environment.

The seven signatories are Airbus, Rolls-Royce, Dassault

Aviation, Eurocopter, Thales, Safran and Liebherr Aerospace.

The programme aims to deliver major reduction of emissions, noise and fuel consumption for the next generation of aircraft, associated components and operations.

**Validate**

Its purpose is to demonstrate and validate the technological breakthroughs that are necessary to reach the environmental goals set by the Advisory Council for Aeronautics Research in Europe (ACARE).

Goals set by ACARE –

with a 2020 deadline – include a 50% reduction of CO<sub>2</sub> emissions through a drastic reduction of fuel consumption, an 80% reduction in NO<sub>x</sub> emissions and a 50% cut in external noise. It also aims for a 'green' product life cycle design covering manufacturing, maintenance and disposal.

Funding for the programme will be shared equally by the European Commission and the companies engaged in the programme, both the original signatories and other firms that may join later.

"Today, we want symbolically to show with our part-

ners that we are addressing an issue that is important to the public," said Alain Garcia, Airbus executive vice-president, Engineering. "We are excited to do something that is expected by the public."

"This is a type of management activity that will be similar to the way that we develop a programme, with a clear timescale and responsibilities."

He said that the ultimate product would be demonstrators but it was too early to say whether these would be mathematical simulations, testbeds or flying prototypes.

**Embraer ups E-Jet passenger capacity**

Embraer is to offer high-capacity variants of its E-Jet family in response to interest from both regional and low-cost carriers. The smaller E-Jets will offer two extra seats, with maximum capacity on the E-170 going up to 80 and the E-175 up to 88. The E-190 will be able to offer 114 seats, an increase of six, while the E-195 will go to 122, up by four. No structural changes or new testing will be necessary for certification. Luis Chiessi, vice president market intelligence, says: "For an E-190, for instance, the revenue potential can be increased by up to 14% when compared to the standard all-economy, 32in pitch, 100-seat configuration."

**P&W steps up a gear to force the pace on new twinjets**

It's usually the airframers that dictate the pace of new aircraft launches, but engine-makers are now starting to call the shots. At Farnborough, Pratt & Whitney announced a series of strategic alliances that could force the pace over replacements for the Boeing 737 and Airbus A320 single-aisle jets.

P&W had formed new strategic relationships with MTU Aero Engines, Avio and Volvo Aero for the continued development of key geared turbofan engine technologies, and this could push either Boeing or Airbus – or both – to speed up the process of announcing replacements for their best-selling medium-range twinjets.

Steve Heath, P&W's outgoing president, commercial engines, accompanied by Robert Saia, VP commercial engine programs, told *Flight Daily News* that the geared turbofan engine is only a year away from a ground test and around two years away from a flight demonstration on P&W's flying test-bed Boeing 747.

**Efficiency**

Heath says the geared turbofan will represent a step-change in engine performance for single-aisle aircraft. He explains: "It's all about propulsive efficiency. With our new engine, we'll be able to run the fan and both the LP and HP sections at their optimum

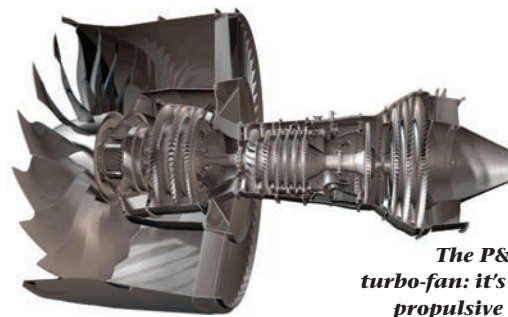
speeds, giving around 12% better fuel economy and a 30dB noise reduction over stage III requirements. We'll also be able to increase the by-pass ratio to between 11 or 12 to one.

"All our market research indicates that customers of the net generation single-aisle aircraft will be equally focused engine performance and cost of operation."

Saia adds: "We'll have all the technology ready by the end of 2008 at the latest and although we can do the flight tests using our own Boeing 747, it would be much better if we could work with Boeing or Airbus right from the start, so that together we can deal with all the aircraft integration issues."

As well as the technical challenges to be overcome, there's also the issue of how the new engine will be brought to market. Steve Heath's preference is for the engine to be produced and marketed by International Aero Engines (IAE) which is owned by P&W (32.5%), Rolls-Royce (32.5%), Japanese Aero Engines (23%) and MTU (12%).

"Ideally," says Heath, "we need the shareholders to agree about the way forward within the next six to nine months. I believe it would be logical for the GTF engine to be in the IAE stable, because their expertise and market knowledge is in single-aisle aircraft. They know the makers and they know the airlines."



The P&W geared turbo-fan: it's all about propulsive efficiency.

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# Lightweight Thales IFE gets Euro debut on Embraer 190



Hannah Martin

The European debut of the Thales Avionics TopSeries i-4500 took place at Farnborough on Tuesday aboard the opening flight of the Embraer 190's demonstration tour of Europe.

The first in-flight entertainment system specifically for regional aircraft, Thales i-4500 is now installed on 27 Air Canada Embraer 175s and 190s. At Farnborough, the system is being demonstrated aboard a 190.

The innovation of this system lies in its reduced size, retaining a 600GB memory capacity without compromising passenger leg-room by including a clumsy seatbox. The installed system weighs only 400lb (180kg), yet includes full audio/video-on-demand capability supporting a range of films and music, and in-seat USB ports for passenger use.

The fledgling system is not without fault. The touchscreen, while clear for its 8.9in (220mm) size, was slow to respond, and the navigation scheme proved initially confusing – not a desirable quality in IFE designed specifically for use on short flights. When viewing films there was some difficulty in returning to view the system controls.

Sound was also variable. The audio player was similar to that of a computer; particularly innovative was the ability to create personal playlists from the music selection provided. Although once again this function would perhaps be more suited to longer flights, it was a successful and thoughtful detail. But sound quality was tinny and the volume control inconsistent.

## A380 passes two new milestones

The Airbus A380 programme marked two milestones this week on the ground and in the air.

On the ground, the static fatigue test passed 15,000 simulated flights. Yesterday the sixth aircraft, MSN 005, made its maiden flight from Toulouse.

The fatigue test milestone is three times the 5,000 flights needed for certification. In total, 47,500 flights will be simulated to test the fatigue strength of the A380 structure.

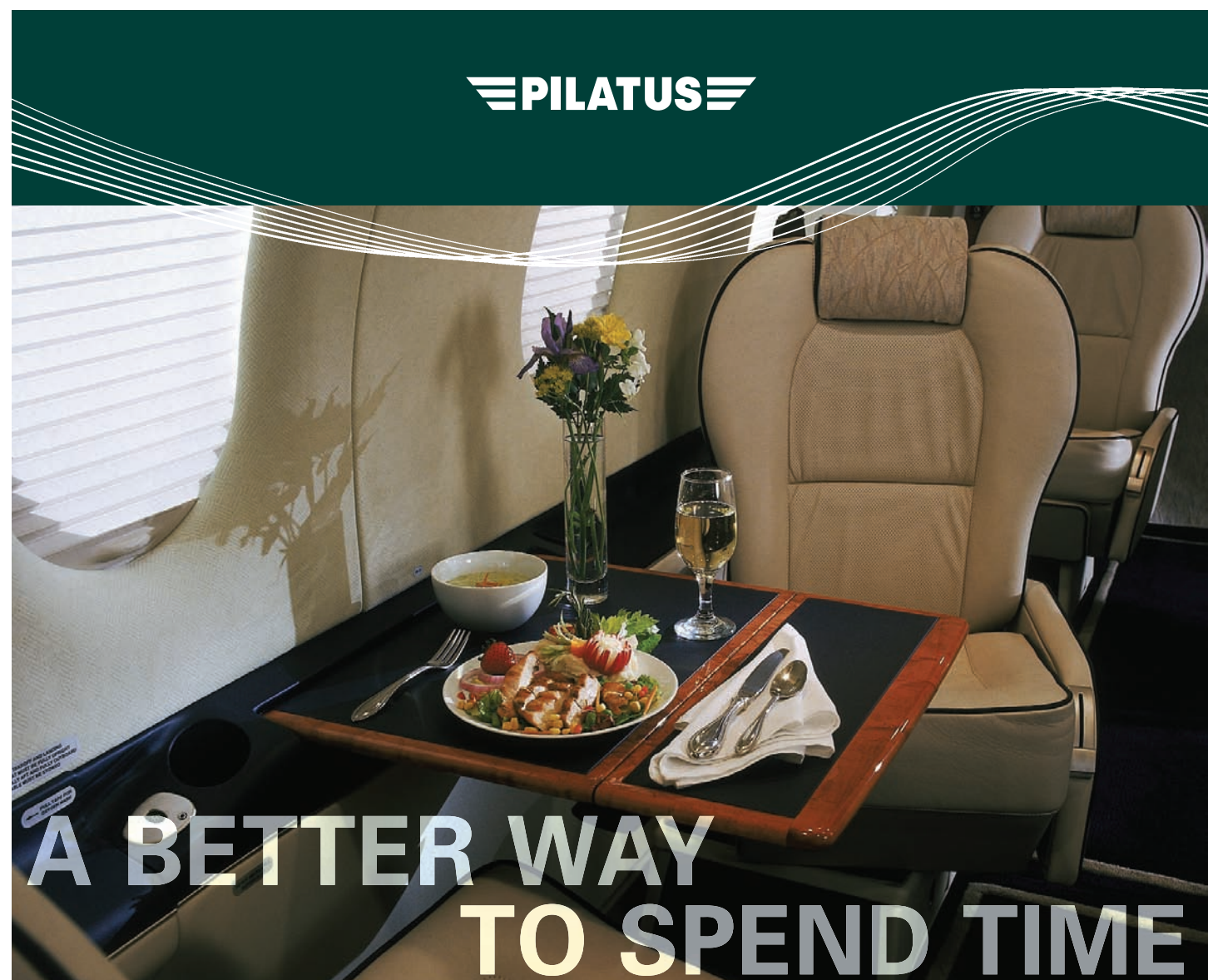
The test, which started in September 2005 in Dresden, Germany, is the most extensive fatigue test ever done on a commercial aircraft. It allows Airbus to demonstrate that the structure of the aircraft is good for many years in service.

## Rockwell Collins supplies IFE to two airlines

Rockwell Collins (Hall 4, F10) yesterday announced a welcome fillip to its in-flight entertainment business with orders from two airlines.

Greek carrier Aegean Airlines and Buraq Air of Libya have ordered the US company's Programmable Audio Video Entertainment System (PAVES) as well as the Airshow 4200

moving-map and passenger information system. Aegean is buying the systems for eight new and three leased Airbus A320s, with options for 12 additional aircraft. Deliveries are due to begin next February. Buraq plans to equip two new Boeing 737NGs aircraft, with options on another four. Deliveries are set to begin next month.



# A BETTER WAY TO SPEND TIME

Are you looking forward to the next time you have to travel by air? For most, it means a lot of time wasted. Wasted waiting at check-in, waiting for passport control, waiting for the boarding call, waiting to clear immigration and customs after landing, and finally waiting to collect your baggage. Needless to say, after standing in lines for half the day, you won't necessarily be arriving in your best shape for that vital meeting.

There is a better way. Imagine air travel that is pure pleasure – flying in privacy and arriving fresh just where you want to be, at a choice of over 1,500 airports in Europe alone. No waiting, just the excitement of cruising the skies at 270 knots.

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