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\*Cover: Fabio Cavalli of mondoBIOTECH

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# Memo

At the beginning of September, I had the chance to visit the Asian Aerospace Expo in Hong Kong. While there could have been more business aviation represented in the exhibition halls, it was nice to see the static display filled with business jets. Interest was high from both visitors and the media. The consensus seemed to be that Asia is not totally out of the economic crisis, but that it has not been hit as badly as other parts of the world.

There is strong support for bizav from some countries in the region. Notable among these is China, which has begun an ambitious plan to increase the number of airports that are accessible for bizav. The government strongly believes that business jets mean business and they are behind it 100%. As David Dixon, Bombardier's Regional Vice President and a 30-year veteran of the Asian aerospace industry told me: "Thirty years ago I never thought I would be standing in Beijing, capital of the world's last major communist country, selling business aircraft."

In this issue Sanjay Rampal advises how you can save money on fuel (*Flying Above Stormy Fuel Prices* on page 50) and he takes a look at some of the biofuels that are currently in testing (*Jet Fuel Turns Green Without Envy* on page 53). We also meet Fabio Cavalli, CEO of mondoBIOTECH, to find out how the company's PC-12 is helping them find cures for the world's rarest diseases (page 28). Rod Simpson takes a look at the Bell 429 which has recently been certified (*Bell's New 429* on page 32), while Tim Kern compares Gulfstream's G250 and G200 midsize jets (*New Gulfstream G250: Not Just '50 More'* on page 42).



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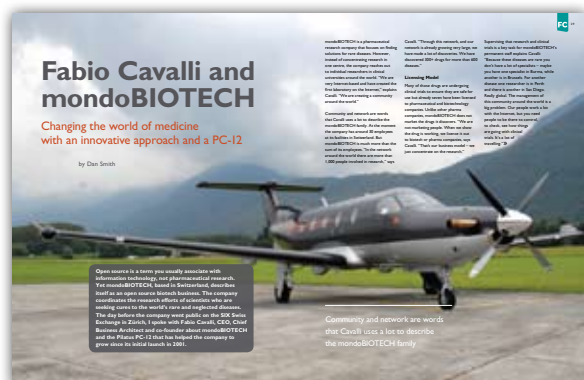
We have also introduced a Comment feature on the website and we invite you to contribute to the discussion. You will find some of the comments we have received in our *Readers Talk Back* section on page 22.

We hope to see many of you at the NBAA convention in Orlando or the Dubai Air Show in November. Until then, keep flying.



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# In Brief

## VLJ Air Taxis - Delivering the Promise?

Speaking at the VLJ Europe 2009 conference, leading British VLJ air taxi operators, London Executive Aviation and Blink, were positive about reaction to their new on-demand air taxi offering. Both companies use Cessna Citation Mustangs and believe their clients are over initial concerns about the small size of the VLJs and are now enthusiastic about their comfort, affordability and convenience.



LEA Mustang

Blink now has seven Mustangs based in London, Geneva and the Channel Islands. Chief Executive Peter Leiman sees users of larger charter jets moving to the smaller Mustang for trips of up to an hour and a half with two or three passengers.

Other operators at the Conference, including German operator JetBird, will soon receive Embraer Phenom 100s, which have the advantage of an aft lavatory. While optimistic, all conference presenters agreed that better customer acceptance of VLJs was necessary and profitability would take time to achieve. Many agreed that their initial plans for annual utilisation of 1,000 hours per aircraft are probably unattainable.

by Rod Simpson

## Jetworld Alliance Launched

A new European alliance of executive jet operators has been launched. Known as Jetworld, the alliance brings together UK-based Ambeo, PrivatAir based in Switzerland and Sky-Taxi based in the Netherlands. The Dutch Minister of Transport, Camiel Eurlings, congratulated the participating partners saying: "This alliance underlines the importance of the business aviation sector in the Netherlands and across Europe."



Schiphol airport

Jetworld was designed to maximise network coverage and aircraft availability. "Our customers will have direct access to a fleet spread across Europe," said Dr Frank Noppel, CEO of Ambeo PLC, which is based at the Marshall Business Aviation Centre in Cambridge.

Sky-Taxi commenced operations in October 2008 and now flies out of Schiphol and Rotterdam airports using Cessna Mustang jets. Ambeo expects to launch its service later this year and will also utilise Mustangs. PrivatAir is headquartered in Switzerland and has offices throughout Europe. The company charters and manages a large fleet of aircraft including the world's only VIP-configured Boeing 767s available for private charter.

## Air Routing Announces Online Flight Support Tools

Air Routing International (ARI) has announced a new suite of online flight support tools for both domestic (US) and international flight operations. ARI believes the tools will ease the complications of international flight. The product suite is supported by ARI's Flight Manager platform.



"Our vision was to provide flight departments an unprecedented and complete suite of user friendly flight support tools into a single source solution", states Roberto Cormack, Air Routing's Chief Technical Officer. "The result is a group of products that combine Air Routing's expert service approach and technology." The suite will include Online Flight Planning, Datalink, Fuel Stop Analyzer™, Online International Trip Quotes™, GPS RAIM Prediction™, and Runway Analysis™. >>

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## Barclays Find Environment Concerns Low

The annual Commercial Business Travel survey by Barclaycard has found that just 15% of executives will travel less this year than in 2008. Of those who will travel less, 57% cited the current economic climate as the main reason. Just one percent of respondents named their company's environmental policy as the reason.

More than a quarter (26%) of all respondents believe the onus is on employers to manage the effects of business travel on the environment, up eight percent from last year. Most (33%) believe government should have overriding responsibility for the environmental impact of business travel, with a fifth (19%) saying it is the individual's responsibility, while 12% believe it is the responsibility of airlines and other travel suppliers.

At present less than a fifth of respondents (18%) have an environmental policy at work that governs business travel. Over a tenth (11%) of those questioned didn't know whether their company did have a policy in place. Even fewer companies monitor their business travel carbon footprint (7%) or offset their carbon emissions (4%).

There is a strong belief that airlines should be taxed to compensate for the effect of carbon emissions on the environment with more than half of respondents (53%) agreeing that a tax should be put in place, of which 62% believe the tax should be passed on to passengers. This falls to a third of respondents (29%) believing that a similar tax should be brought in for train companies, for which, 58% agree the cost should be passed on to passengers. An overwhelming 64% of business travellers do not think air travel should be restricted to help protect the environment.



# In Brief

## Eurocopter Unveils New Design for EC155

Eurocopter has unveiled the new design for its EC155 BI Dauphin helicopter. The design, developed by Andrew Winch Design (AWD), was launched at the 2009 Monaco Yacht show. The aircraft, which is meant to complement AWD's recent Range Rover design, is also designed to be a 'Vertical Takeoff Tender' for large yachts, linking the vessel with the shore.

The interior of the EC155 features teak flooring, wrap-around adjustable leather seats fitted with carbon fibre back shells, fold-down central armrests, 'floating' LCD screens and headphones. "The key idea behind my concept is comfort, endless comfort, be it on land with the Range Rover, at sea with the yacht or in the air with a helicopter," says Andrew Winch.



**Look – No Pilot!**

Hawker Beechcraft Corporation (HBC) and Rockwell Collins have reported the successful flight and landing of a Beechcraft Bonanza fitted with an experimental automatic-landing device.



Originally developed for unmanned air systems (UAS), the device could one day be fitted to general aviation aircraft, enabling them to land if the pilot becomes incapacitated during flight. The tests were part of HBC's ongoing flight control technology programme.

**Helitech Draws Large Attendance**

The 2009 Helitech exhibition, held from 22 to 24 September at Duxford, north of London, drew large attendances with over 1,500 trade visitors registering on the opening day. All of the major helicopter manufacturers were present with more than 40 aircraft on static display and around 200 company stands in the exhibition space.

The emphasis was on public and utility applications. Eurocopter announced an order for a new EC135 for the West Midlands Police Air Support Unit. The company had several police and air ambulance EC135s and MDH Explorers on show.

Notable among the helicopters on the static display was the Polish-built PZL-Świdnik SW-4. This five-seat light helicopter is in the same category as the Eurocopter EC120 and is being built for the Polish Air Force and civil customers. Its presence, alongside the larger W-3A Sokol, was significant as AgustaWestland has recently agreed to purchase a majority stake in PZL-Świdnik. The agreement could see both helicopters being added to the AgustaWestland product range. ■



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# Ask an Expert

## Defining Value in Volatile Markets

***“I am thinking of selling my Gulfstream IV. How can I determine its true resale value?”***

As soon as an aircraft enters service, the asset begins to depreciate. Traditionally a safe guideline for market depreciation has been 3 to 4% per year. However, the current market for used aircraft can hardly be considered traditional. In addition to economic considerations, major maintenance, avionics upgrades, modernisation, engine programmes, total flying time and the number of cycles will all impact the baseline value of your asset. With proper planning and the right intelligence, resale value can be calculated in fairly short order.

A new Gulfstream IV (GIV) cost \$21 M (€14.4 M) in 1990. Standard features include 13 passenger capacity, aft galley, forward and aft lavatories and an SPZ 8000 Flight Control System with dual FMS and Laseref. The standard engine warranty was five years or 2,500 hours, completion warranty one year, non-structural components (including avionics) five years. At some point, after the basic warranties have expired, assuming an annual usage of 500 hours, the aircraft

will incur major capital expenditures for engine inspections (at 4,000 hours or 10 years), airframe check (72 month intervals), gear overhaul (5,000 cycles), avionics upgrades due to regulation and modernisation requirements, and interior refurbishment among other items.

### **Fleet Comparison Vital**

As an aircraft ages you must compare it to the rest of the fleet. How many hours has it flown relative to the fleet, is it enrolled in an engine programme, what is the interior configuration, and have the avionics been updated recently? As of September 2009 the average total time of the GIV fleet was 8,600 hours, 20% were enrolled in an engine programme, 73% were configured with an aft galley, 71% were equipped with Satcom, while 8% had a Head Up Display. Drawing the fleet comparison model gives you a fairly good idea of how your aircraft compares. Excessively high time, a lack of major optional avionics, or an upcoming major maintenance event can all impact baseline value and ultimately resale pricing.

Armed with fleet intelligence you can then compare your aircraft to those currently available on the market. Don't just compare it with other GIVs, but include competing makes and models. If you can purchase a Challenger 604 or Gulfstream IV SP for \$12 M (€8.2 M), why would you pay near that for an older GIV?

The percentage of the fleet that is for sale will also affect value. As a rule of thumb, the baseline value assumes that around 10% of the available fleet is for sale. If it is less than this, the baseline value can be adjusted up – if its higher it needs to be adjusted down. There were 36 GIV aircraft, 16.8% of the fleet, on the market as of 10 September. Therefore the baseline value should be adjusted down around 7% to compensate.

**ASK**

Do you have a question about business aircraft use or operations? Email it to [editor@fly-corporate.com](mailto:editor@fly-corporate.com)

### Long-Term Planning

Any prospective seller should ask themselves why their aircraft would sell before the 36 currently available. Current average time on the market for the GIV is 214 days, although 16 have been available for over a year. Recent major maintenance or refurbishment may give you an edge, but your pricing must be attractive, especially when compared to recent sales of GIV and competing

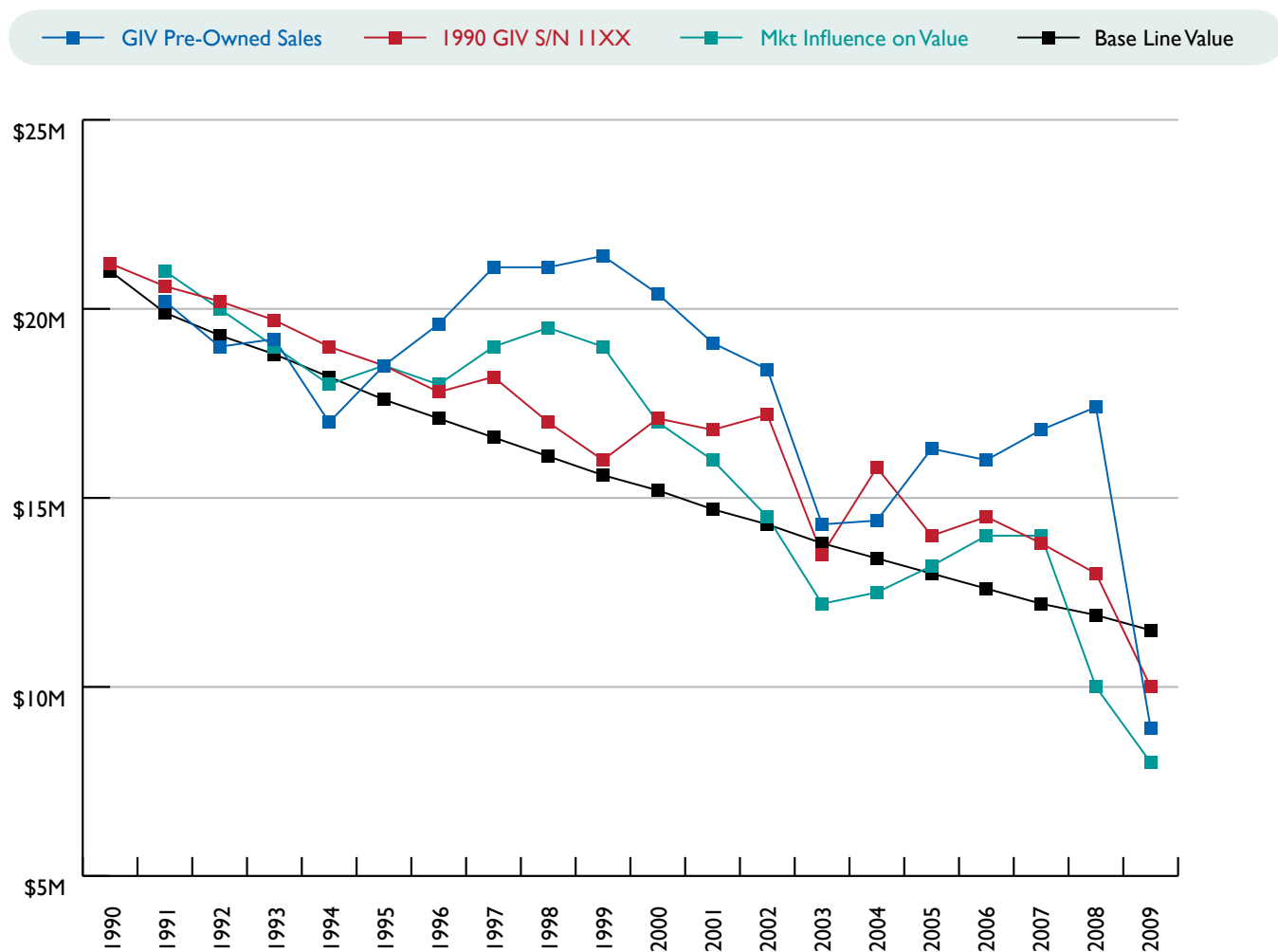
models. In the case of the GIV, asking prices range from \$7.9 to 12.9 M (€5.4 to 8.9 M) but twenty-one are listed without a firm price (Make Offer). There have been two sales in the past six months, both in the \$9 M (€6.2 M) range (+/- 2%).

There are many factors that need to be considered before you price your aircraft. If possible, put a long-term strategic plan in place to track and monitor present value, fleet statistics and market activity

on an on-going basis. Before you make major capital investments in your aircraft, first establish what impact it will have on the value of the asset, not only today but also longer term.

Never place an aircraft on the market at Make Offer and never price it near or above the cost of a new model. Doing either of these two things will cost you more in the long run. ■

### GIV Value Trend



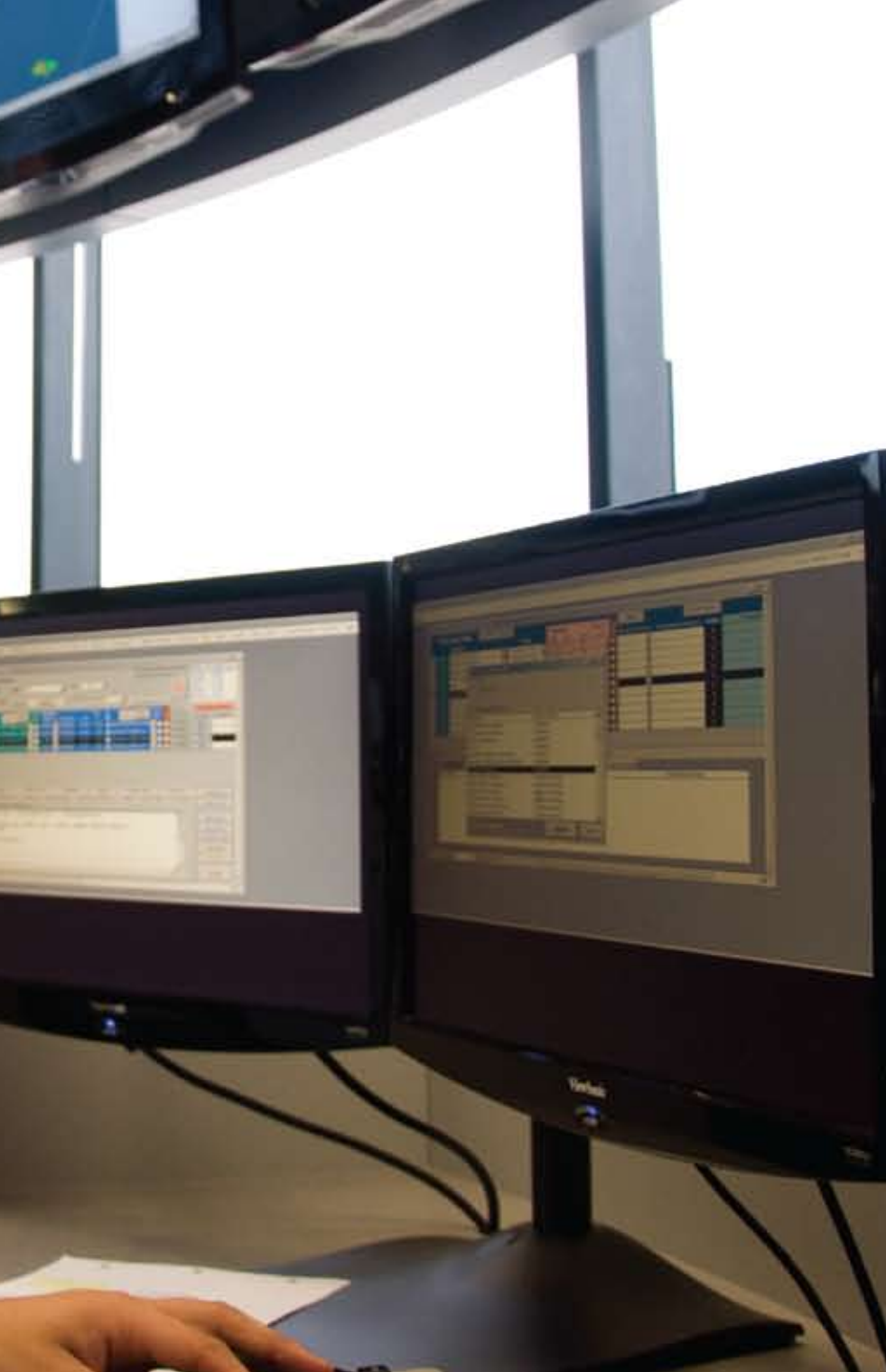
Data courtesy of AircraftPost, Inc



#### Our Expert

Dennis Rousseau is the Founder and President of AircraftPost Inc, a web-based information service that provides real time values for medium- to long-range business jets. [www.aircraftpost.com](http://www.aircraftpost.com)





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# Legacy Thinking

by Andrew Charlton

**You might have thought that air transport was a funky, go forward sort of industry – technologically cutting edge, facing the future, developing products and services that customers actually want – that sort of thing. But no Martian, parachuted to Earth today, would think that the air transport industry is funky (assuming that funky was a measure understood to the average Martian). Indeed, the search would be on for any form of intelligent life.**

## **Disruptive Forces**

A lawyer will tell you that a 'legacy' is a gift under the terms of a will. Never has an expression been taken up with such accuracy as by the wonderfully self-described "legacy carriers". We could only wish that their normal pronouncements were that honest.

The low cost carriers (LCC), by eating away at the legacy carriers' margins, and eventually schedules and networks, are a game-changing disruptive force. By destroying economy-class volume, and thus the frequency and network spread of the legacy carriers, the LCCs have left the legacy boys unable to feed their long-haul flights with business travellers via their hubs.

So bleak is the situation that IATA, which is supposed to represent the legacy carriers, has started to arrange webinars in place of their traditional meetings. When the airline representative body thinks that not even its own members will fly, it might be time to review the safety card.

All very well you say. So, isn't this the chance that business aviation has been waiting for? By casting off the 'plaything of the rich and famous' image it could show its 'real' value – that is, its ability to contribute to the objectives of business. As the more rational observers have noted, business aviation is a productivity-enhancing tool.

### Revolutionary Change?

While the scheduled air transport options are suffering, cutting capacity and routes, there is an opportunity that should be ripe for the picking now. The withdrawal has increased congestion at the airports, adding to the misery and delay already imposed by security.

So, stand by for innovative business models, innovative business products and innovative, business-focused, business-inspired ways to take advantage – right? Who better than business aviation to think like their customers, in funky new business ways....

Stand by if you feel you must, but for everyone's sake, do not hold your breath.

Instead of new business models, all we seem to see, exactly like the legacy carriers, is dinosaur-like grim determination from the business aviation community to do the same thing again and again, in the hope of a different outcome. The most recent example is Jet Republic. Under the guise of revolutionary change, they launched a wildly-overambitious imitation of NetJets, the fractional model which is still struggling to make money 15 years after its launch.

In terms of customer relationships, businesses generally have looked to the Internet to innovate. But try booking a business aviation trip online.

### Transparency and Efficiency

You'll find the online charter marketplace is an oxymoron. The way it is done is the way it's always been done – phone a friend who knows a friend, and keep calling until half a dozen intermediaries have stitched together a flight and a price. Even the new service providers, the ones that boast that they have computers in their offices, work with the brokers, not actual customers.

They are bringing some transparency and efficiency to the industry, but are limiting themselves to creating a wholesale market place. An Expedia or Travelocity copycat is still notable only by its absence. Generally, e-commerce penetration has barely slowed during this Great Recession. It's absolutely standard for relatively simple products like airline tickets. And it has a year-on-year tendency towards ever higher value and more complex transactions. Yet end-user buyers of business jet flights are largely fenced off from the end supplier.

Partly, the time warp is attributable to the complexities of a highly fragmented market and a constantly mobile inventory. But mostly it's redolent of this stubbornly old-fashioned service industry. The service providers – that is, the asset operators themselves – have never had to prioritise sales and marketing over operations. They seem ill-equipped to make the switch. Until they do, a smokescreen of brokers will continue to dominate the customer channel, inflating the real cost of flying private.

Legacy thinking. Oh dear. ■

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## e-commerce penetration has barely slowed during this Great Recession



### Andrew Charlton

Andrew Charlton is the Managing Director of the Europe-based strategic advisory, government and public affairs firm Aviation Advocacy. He advises airlines, airports and industry suppliers on strategic issues concerning air transport and how the industry is to be shaped in the future.

Andrew is well known for his forward-looking and innovative thinking and writing. He writes a monthly subscription-only intelligence report Aviation Industry Reporter – read by an increasing number of influential industry players each month.

Before starting Aviation Advocacy in 2005, Andrew held senior strategic and government affairs roles at SITA and IATA. He was also Chief Legal Officer for Qantas Airways.

# Readers Talk Back

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EMEA & Asia

## EBACE Delegate Tour

*FlyCorporate's slogan is Bringing Together Business Aviation and Business Leaders, and it is exactly what our EBACE delegate tour is about. We bring business leaders from around the world to Geneva and escort them through the show, cutting through the fluff to ensure they meet the leaders of the companies they are interested in. Again this year a number of sales resulted from the tour.*

Thanks for a good day at EBACE 2009! You guys did a good job! I did locate the needed aircraft and we seem to be heading in the right direction.

André Rafnsson, Foubourg Capital Partners

## Survey

FC is simply a great magazine. We have it available in our FBO crew and PAX lounges and it is very popular among all who read it. Many of our FBO visitors have announced their aim to subscribe. Our company also subscribes to Altitudes, AIN and EBAN. All are great, but FC is the only "real" magazine out of those mentioned. FC brings it all together in a very well-balanced way with great graphic layout. Lots of up-to-date information, interviews with many key players in business, latest news and trends are what our FBO visitors appreciate the most about FC.

Jan Jurena, Aviation Service Prague

## Issue 05

I enjoyed reading your article about the PC-12 and it is indeed an impressive plane. But I don't agree with your title claiming that no other turboprop can do what the PC-12 does.

The later models of the Rockwell Commander are on nearly every aspect better performers than the PC-12. They burn less fuel, fly higher, faster, further and although their landing distance is 100 m more than the PC-12 the take off distance is much better than the PC-12, making them an even better short field plane.

You seldom see them in Europe but they are very popular in the US. As all designs from the late Ted Smith, they are very forgiving and easy to fly, with the added security of a second engine. Twin Commander supports them and they run a Grand Renaissance programme.

Koen Velleman

FlyCorporate  
Europe / Middle East

## Newsletters

### Aircraft Maintenance Tips

August 12

One operator in our corner of the world has parked the “Beechjet” in the back of the hangar for 3-4 months now. This could be a very bad idea. Without professional oversight due to maintenance cuts or budget cuts, especially with regard to turbine engine preservation, significant expense and/or serious aircraft de-valuation will result. Engine guaranteed maintenance programs (such as MSP, ESP, JSSI) will generally look at unpreserved engines as “abuse” and the consequences can be very expensive to the operator.

Another more severe example, someone called the other day about advice, regarding the value of a Citation 550. We looked into it, and the aircraft has been sitting outside for close to six months, unpreserved. The engines were about 400 hours from overhaul.

That’s \$500-800K that needs to be spent now instead of a few years down the road. And how does this affect aircraft value?

Outside of the legality of it, airplanes parked for extended periods will develop a lot more problems than airplanes operated during that period. It will help if someone would preserve the aircraft appropriately, or much better yet, put it on a 135 certificate. It’ll fly every once in a while, pay for the maintenance, and the hangar, and it’s a win-win for everyone.

David Harsay

### Who Manages Your Aircraft?

September 9

Congratulations for your excellent knowledge of the market and your rather clever question. Of course we manage our own aircraft and about 250 on behalf of our appreciated clientele.

Juerg Reuthinger, Jet Aviation

### Turboprops - The Executive Solution?

June 15

Anyone who ignores turboprops is cutting off their nose to spite their face. The Avanti and Cheyenne IIIa and IV can beat entry level jets on most counts. I wouldn’t like to use Redhill at the end of a wet week though. You could use some of the other near London ones but there is the lack of IR landing facilities.

Any flight of less than 1-1.5 hours is probably quicker by turboprop than the jet. Unless you’re travelling more than 600 miles on every trip, the turbo-prop will be cheaper.

Dave Hunter



### **Correction**

Our April newsletter “Rewing up For Recovery” contained the following statement about Pratt & Whitney Canada’s PW308A engine: “The programme is on track and the fully-certified PW308A engine can fly at an altitude up to 18,300 m (60,000 ft).” We were advised by Pratt & Whitney Canada that the statement about altitude was incorrect and that the aircraft has only demonstrated the ability to fly “...over 50,000 ft (15,240 m)”. The newsletter was updated immediately. The new version is still available from [fly-corporate.com](http://fly-corporate.com). ■

### EBACE Video

It’s good to see people getting together, doing business, and making things work even with the current economic situation. I think the message for everyone is to show the numbers and show return on investment.

Polish and flash are not as important as solid business principles.

What was presented here is reflective of what is going on in many other industries. Smart business people know that the situation we are in is temporary and is in fact necessary to get back on track. Businesses that restructure and adapt will run much more cost-effectively in the future. The optimism was refreshing and those who seize the opportunities, especially in times like these, will flourish.

A portrait of Ammar Balkar, a middle-aged man with short, light-colored hair, wearing glasses, a dark suit jacket, a white shirt, and a blue patterned tie. He is looking slightly to the left of the camera with a neutral expression. A small, circular gold-colored pin is visible on his lapel. The background is dark and out of focus, showing some architectural elements.

# A Worthy Investment

by Taunya Renson-Martin

**Born in Amman, Jordan, Ammar Balkar has become a well-known personality in international business aviation circles. Not surprising given that he has spent his entire career in aviation and currently holds the roles of President and CEO at the Middle East Business Aviation Association (MEBAA). Balkar is also a board member and co-owner of the Elite Jets Company.**

Balkar's career began with Royal Jordanian Airlines where he gained wide-ranging experience in commercial airlines, corporate jets and helicopters. This included assisting in the formation of three business jet start-up companies in the Middle East, including Royal Jets in Abu Dhabi where he held the post of Vice President for Sales and Marketing. He also contributed to the launch of Royal Wings – a subsidiary of Royal Jordanian Airlines and Commercial Executive Jets of Jordan – and was the Director for Sales and Marketing of Arab Wings, the region's first air taxi company. An Economics and Business Aviation graduate with an M.Sc in Information Management Systems, Balkar also holds a postgraduate diploma in Airline Marketing.

In mid-September Balkar took time out to talk to *FlyCorporate's* Taunya Renson-Martin about the past, present and future of business aviation in the Gulf region.

### **Increase in Operators**

"From 1975 to 1999 the business aviation industry in the Middle East was slow. We had probably one operator covering the entire region. In contrast, between 1999 and today we've seen about 24 new operators, demonstrating the rising demand for business aviation.

"Nonetheless, it is still an immature market and there is room for more operators to come in. Consider, for example, Saudi Arabia, which has almost 50% of the demand for business aviation in the Gulf. There are only one or two operators there due to the fact that Saudi Arabia used to be a closed market. Until recently, the door was not open for the private sector to invest. By comparison, if we look at the United Arab Emirates (UAE), there are at least 12 operators in this relatively small country.

"So Saudi Arabia has 50% of the demand, the UAE has 37% and Egypt comes third, based on data we acquired in early 2008. We also know that until 2007, the charter market was estimated to be around \$500 M (€343 M) and was expected to rise on an annual basis by 15 to 20%. Then the recession set in around September 2008 and things started to change dramatically.

"Since the recession, we've seen a significant downturn in business aircraft traffic. We've experienced a 25 to 30% drop in the charter business. The decline started around September/October 2008 and probably the hardest time for all of us was January/ February 2009. This dip continued through to August. But as expected, we are experiencing a slight increase in demand and we hope that will continue.

"We haven't been hit as hard as the US and Europe, that's for sure. Money didn't really flow out of the system here, there was just a reluctance to fly on private jets or buy a new business jet until businesspeople could see more clearly the outcome of the economic situation. What we are seeing now are more businesspeople interested in buying aircraft because the prices are so dramatically down. So it is the right time to buy!"

### **Still Plenty Room for Growth**

"In 2007 the total number of business jets in the region was in the range of 460 to 470. By 2012, we expect to reach 500 to 520 aircraft. As for handling agents, there were two or three players from 1975 to 1995. Since 1995, we've had at least 25 to 30 new handling agents providing services to business jets across the entire region.

"There is room to expand. I'm sure more Aircraft Operator Certificates (AOCs) will be delivered in Saudi Arabia in the coming five years. More in Qatar

and Kuwait as well. Jordan, for example, has gone from one to four AOCs and Lebanon has gone from zero to five. It's an emerging industry.

"To accommodate this growth, we'd like to see more catering and handling companies setting up. We need more maintenance repair and overhaul (MRO) providers in the region. We need to move away from monopolies and operators need more choices. Again, until 1999, the governments weren't really looking at business aviation because little was happening. But in the last five years we've seen a real shift.

"If you look at the number and variety of aircraft in this region, they need to be supported. There are, for example, very few MRO facilities in the region, which means you have to ferry your aircraft to Europe and this is costly. We believe the aircraft manufacturers should push to set up maintenance facilities here. The Gulf Cooperation Council (GCC) is quite open to investment and the area is tax-free."

### **Making Space for BizAv**

"Our biggest challenge is infrastructure. MEBA started in June 2006 and Dubai welcomed us openly. We'd like to see more accommodating gestures from other governments around the region. We want to see more airport infrastructure and dedicated airports for business jets.

"In Kuwait and Doha, for example, they have just built a dedicated business aviation terminal. Al Bateen in Abu Dhabi (formerly Abu Dhabi's international airport and then a military base) was one of the projects that MEBA worked on to keep it as a dedicated airport for business jets. MEBA helped to convince the government that, rather than shutting the airport down or keeping it military, it was better to turn it into a dedicated business aviation airport. >>

“Al Maktoum International Airport is still progressing in its development despite rumours in the market. His Highness Sheikh Ahmed bin Saeed Al Maktoum, Chairman of Dubai World and Chairman of the Emirates Group, was very clear that construction will continue. The first phase will be completed in June 2010 and the plots of land will be handed over to the operators. As one of those operators, we [Elite Jets] have been asked to confirm our acceptance of the plot of land we bought a year ago. The delivery is on time. And from talking to MEBAA members and other operators in the region, most have booked slots

at Al Maktoum because it's in a perfect location. It's in between Dubai and Abu Dhabi and just outside the city. This doesn't mean that Dubai International will cease operations with business jets, but now there are two choices.

“We'd also like to see direct routes established between Gulf countries so that we can cut down on operational costs. Some of the areas are restricted and we'd like to see them open as long as it doesn't affect national security.

“Our argument is, in this region, 90% of flights on private jets are for business,

not leisure. The people who fly on business jets are the people who are most likely to invest in our countries. The infrastructure should be there. A business jet passenger is not interested in flying into a national airport. They'd like to go to a smaller airport that they can get in and out of in five minutes.”

#### **Clearer Skies Ahead?**

“We've hit the bottom, it won't get any worse. So if we can survive the next few months, then hopefully our members will continue to be successful in promoting the numerous advantages business aviation brings to the region.” ■

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The people who fly on business jets  
are the people who are most likely  
to invest in our countries



#### **About MEBA**

The Middle East Business Aviation Association (MEBA) was launched in 2006 as a non-government, non-profit body focused on the growth of business aviation in the region. Ammar Balkar was appointed its first President and CEO in January 2007.

MEBA serves the needs of companies that operate business and VIP aircraft within the Middle East or supply goods and services to MEBA members. “When I was at Royal Jet, I started thinking about developing an Association. In 2005, together with Founding Chairman Ali al Naqbi, we decided to first conduct a conference to see if there was a demand,” explains Balkar. “We had almost 200 attendees, so we knew there was a demand.”

The Association was launched in 2006, with 16 founding members and today has more than 150. By 2012, MEBA expect its membership to hit 300.

MEBA's mission as an industry forum is to take business aviation further up the economic and political agenda in Middle East and to ensure it has a voice in the decision making process. The Association will be present at the 2009 Dubai Air Show in November and will host the next Middle East Business Aviation (MEBA) Conference in Dubai in December 2010.

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# Fabio Cavalli and mondoBIOTECH

Changing the world of medicine  
with an innovative approach and a PC-12

by Dan Smith

Open source is a term you usually associate with information technology, not pharmaceutical research. Yet mondoBIOTECH, based in Switzerland, describes itself as an open source biotech business. The company coordinates the research efforts of scientists who are seeking cures to the world's rare and neglected diseases. The day before the company went public on the SIX Swiss Exchange in Zürich, I spoke with Fabio Cavalli, CEO, Chief Business Architect and co-founder about mondoBIOTECH and the Pilatus PC-12 that has helped the company to grow since its initial launch in 2001.

mondoBIOTECH is a pharmaceutical research company that focuses on finding solutions for rare diseases. However, instead of concentrating research in one centre, the company reaches out to individual researchers in clinical universities around the world. “We are very Internet-based and have created the first laboratory on the Internet,” explains Cavalli. “We are creating a community around the world.”

Community and network are words that Cavalli uses a lot to describe the mondoBIOTECH family. At the moment the company has around 30 employees at its facilities in Switzerland. But mondoBIOTECH is much more than the sum of its employees. “In the network around the world there are more than 1,000 people involved in research,” says

Cavalli. “Through this network, and our network is already growing very large, we have made a lot of discoveries. We have discovered 300+ drugs for more than 600 diseases.”

### Licensing Model

Many of those drugs are undergoing clinical trials to ensure they are safe for use but already seven have been licensed to pharmaceutical and biotechnology companies. Unlike other pharma companies, mondoBIOTECH does not market the drugs it discovers. “We are not marketing people. When we show the drug is working, we licence it out to biotech or pharma companies,” says Cavalli. “That’s our business model – we just concentrate on the research.”

Supervising that research and clinical trials is a key task for mondoBIOTECH’s permanent staff, explains Cavalli: “Because these diseases are rare you don’t have a lot of specialists – maybe you have one specialist in Burma, while another is in Brussels. For another disease one researcher is in Perth and there is another in San Diego. Really global. The management of this community around the world is a big problem. Our people work a lot with the Internet, but you need people to be there to control, to check, see how things are going with clinical trials. It’s a lot of travelling.” >>

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Community and network are words that Cavalli uses a lot to describe the mondoBIOTECH family



Initially mondoBIOTECH rented private jets to move their people around the world. But in 2007 the company decided to purchase a Pilatus PC-12. “Buying the PC-12 was the only way to solve the problem of growing the business. To work, our business model has to grow, and you can grow if you can travel,” says Cavalli. “I’ll give you two numbers. When we bought this aircraft we had 12 people in our network. Now there are more than 1,000. It’s an incredible business tool.” Cavalli even has the CFO onside: “Ask our Chief Financial Officer. Normally they are not happy to [purchase an aircraft] but he says it is one of the best investments we made in our company!”

### **Intelligent Investment**

The aircraft also helps mondoBIOTECH to save money. “Sometimes we are consulting with experts who are very expensive,” explains Cavalli. “A typical example is when we have to fly to the European Medicines Agency in London. It’s a very expensive day when you factor in the costs of the consultants. Our solution is we fly there in the morning and fly back in the evening. So we pay the consultants for just one day, not two. It has been a very intelligent investment.”

Cavalli is keen to stress that the PC-12 is a working tool for the business: “We don’t want to fly around the world in luxury. For us the plane is like a PC. I never use my PC privately – it is a tool for work. Flying a PC-12 is like having a PC or an Apple - good for work. It’s fantastic because it is not too expensive, it’s very fast, and you can land in places you cannot land with a bigger plane, which is a big advantage for us. It gives us a lot of flexibility as to where we can go.”

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“Each trip with the PC-12 is one chance more to find a solution for another disease”



The reliability of the PC-12 has also been an important point for the mondoBIOTECH team says Cavalli. “If you compare price, efficiency and availability – in two years there has never been a problem, we’ve never had to stop the plane.” That reliability also includes the Captain of the aircraft who also manages the plane on behalf of mondoBIOTECH. “Our Captain takes care of everything. The aircraft has never arrived one minute late, not one minute,” stresses Cavalli.

### The Flying Office

Cavalli himself is an avid aviation fan and often takes the second seat on flights. “Normally I start up-front with the Captain. If it’s a long trip, I go back and work. When we start the descent I come back into the cockpit for the landing.”

And it’s a nice plane to fly? “Aaaaay – fabulous!” exclaims Cavalli. “Sometimes when you have a big meeting you come back into the plane and you can enjoy flying, the sky, the nice view you see, the mountains, the sun. It’s very relaxing.”

Working onboard is not a problem for the mondoBIOTECH team. “During the trips we are constantly working,” explains Cavalli. “We have computers onboard, we can print, everything. It’s a flying office – absolutely. We use 100% of our time to work so you don’t lose time during travel.” The aircraft’s onboard server is synchronised to the main system whenever the aircraft is in the airport. “During the flight we don’t have access to our network. We don’t need that. We are not a broker, so we don’t immediate access to buy or sell shares for example.”

The company is beginning to look for a second aircraft to support its work. “With the growth of the company we have to continue to promote our organisation. We’re thinking of having a larger aircraft to fly to India, to South Africa, to America. We are looking now,” says Cavalli.

One thing is for sure, the new aircraft will have a lot to live up to if it is ever to take the place of the PC-12 in Cavalli’s heart: “There are 7,000 diseases to be cured. The faster we can be now, the more chance we have to cure diseases. Each trip with the PC-12 is one chance more to find a solution for another disease.” ■

## About mondoBIOTECH

mondoBIOTECH describes itself as a community of people dedicated to the search for treatments of rare and neglected diseases and to the support of sufferers from these diseases. That community is made up of biologists, biochemists, physicians, patients and patient-advocacy organisations as well as other persons and organisations who share their experiences, know-how, expertise and skills.

The company specialises in analysing peptides that are naturally occurring in the human body in order to identify promising candidates for the development of medicinal products for use in the treatment of rare and neglected diseases. The candidates in question are then licensed or sold to third parties. More than 300 such candidates have been discovered; while seven have already been licensed to pharmaceutical and biotechnology companies.

Mondobiotec Holding AG went public on the SIX Swiss Exchange in Zürich on 26 August 2009 under the ticker tape symbol RARE. On the first day of trading the value of the company’s stock increased by almost 34.5%.

## How Rare is Rare?

A rare disease, also known as an orphan disease, is any disease that is not common. The US Food and Drug Administration (FDA) classify a rare disease as one that occurs in fewer than 200,000 people in the USA (less than 0.7% of the population). In other parts of the world a disease is considered rare if a physician in a busy general practice would be likely to see less than one case a year on average. Many rare diseases are genetic and can be present throughout the person’s life. Around 30% of children with a rare disease will die before their fifth birthday.

Australia, the European Union, Japan and the United States have enacted legislation that is meant to encourage pharmaceutical companies to develop drugs for diseases that have a small market. Under the laws, companies that develop such a drug may sell it without competition for up to seven years. Depending on the jurisdiction the company may also get clinical trial tax incentives to develop the drug.

# Bell's New Model

# 429

by Rod Simpson





The first customer deliveries of Bell's new **Model 429** helicopter mark a critical milestone for the company in their fightback against Eurocopter's growing domination of the civil helicopter market. Helicopters such as the Jet Ranger and Model 222/422 once ensured that Bell was the market leader, but Eurocopter has invested heavily in industry-leading designs. For many years, Bell's military business and projects, such as the tilt rotor Osprey, have taken priority over their civil programme. The outcome of that decision has been that the venerable Jet Ranger and the Model 430 were dropped and the civil product line was left to depend on the utility **Model 412** and the **Model 407**, which is still, essentially, a Long Ranger.

#### Stretch Version of 427

In 1996, Bell announced the Model 427 (a twin-engine version of the 407) and, later, did detailed studies on their 'new generation' Model 417 Long Ranger replacement. The Model 427 had a brief production life, but it was not certified for single-pilot IFR operations, limiting its appeal to key utility users. The 427 and Model 417 projects were discontinued in 2007. Because Bell had no offering to compete with Eurocopter's class-leading **EC135**, they decided to develop a stretched version of the 427. Named

the Bell 429, the new aircraft first flew on 27 February 2006. Following over 1,800 hours of flight testing using five prototypes, the 429 received its Transport Canada Type Certificate in July 2009. First deliveries started in the same month and the company has more than 300 orders in hand, 60% of which are from outside North America. Bell expects output to reach eight aircraft a month by 2012. This helicopter promises to boost Bell's reputation and provide a significant challenge in this popular market segment. >>



The Model 429 Global Ranger has the flexibility to meet the needs of both the executive market and the key emergency medical service (EMS) and law enforcement communities. Bell has worked with a range of customer advisory committees to ensure that the detailed design has been explored thoroughly, particularly in the main cabin area. The 429's main cabin leads through to double rear-access doors. In its executive configuration the cabin will normally have five, high-quality leather seats in a facing club arrangement with a refreshment console between the rear seat pair. However, an alternative layout, with six standard-finish forward-facing seats, or eight in a high-density configuration, is available for general transport and offshore work. The transport fit incorporates a rear cabin wall, behind which is a large 1.24 m<sup>2</sup> (13.4 ft<sup>2</sup>) baggage area, accessed through the rear doors.

Both sides of the main cabin have large double doors. The forward ones are side-opening and the aft doors sliding – giving a total of 157.5 cm (62 in) of unobstructed side access to provide easy entry for passengers. It also means that EMS operators can load up to two stretchers from either the side or the rear clamshell doors which are ingeniously designed to fold outwards and upwards against the fuselage sides. Bell intends to offer windows in the clamshell doors to meet the requirements of heavy lift operators and the aircraft is certified for operation with these doors removed. In the current

production version, the 429 has a skid undercarriage but a wheeled undercarriage will be offered from aircraft number 26. An emergency flotation kit can be installed to meet JAR-OPS 3 ditching requirements. Other optional equipment includes a 272 kg (600 lb) retractable personnel/cargo hoist, a 1,360 kg (3,000 lb) cargo hook, a high skid undercarriage, heavy-duty heating and air conditioning, and the main rotor blade folds for hangar storage.

### Quiet and Restful

The Model 429, which is powered by a pair of FADEC-controlled 620 shaft horsepower Pratt & Whitney PW207D1 turboshafts, has a four-blade advanced-technology main rotor with swept tips together with improved engine mountings and a modern rotor head to minimise vibration and external and internal noise levels. This results in a passenger cabin that is extremely quiet and restful over long sectors - an important feature as the 429 has a class-leading 390 nautical mile (720 km) range giving more than four hours' flight time.

Unlike the competing EC135 or MD900 which have, respectively, a Fenestron and a NOTAR, the Bell 429 has a tail rotor. To allow rear loading in EMS operation, the tail rotor is fitted with a tail guard and is mounted suitably high on the tail fin to give good

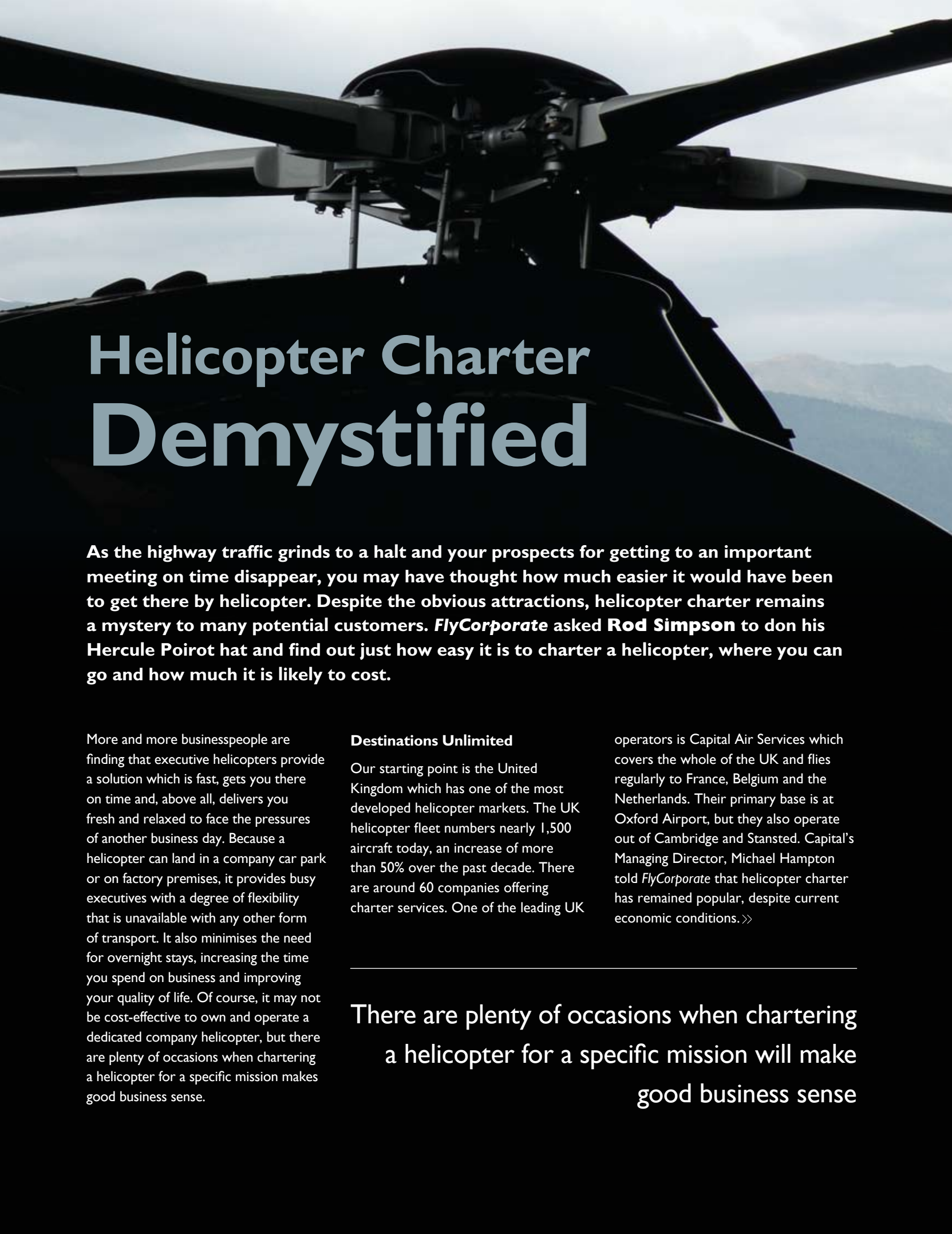
clearance. The tail rotor is an asymmetric four-blade design which is, again, designed for a minimum noise signature.

### Hover and Range Leader

Bell's new helicopter has been certified for single-pilot IFR operations but is offered with dual pilot controls as required. Its systems are designed to minimise pilot workload and there is an Integrated Instrument Display System (IIDS) glass cockpit with the Bell BasisX avionics package, a flight director and a three-axis autopilot with stability augmentation giving effective handling in turbulence.

The important question will be whether the Bell 429 can compete effectively with the Eurocopter EC135. It is a little heavier than the EC135, and has 57 kg (125 lb) less useful load. However, it is faster with a 150 knot cruising speed compared with 138 knots for the Eurocopter, has a better hover ceiling and has longer range. It should not be forgotten that Bell continues to have an excellent reputation with users. Undoubtedly, customers will find that the Bell 429 is comfortable, pilot-friendly and provides excellent utility, so watch out for a battle in the marketplace with Eurocopter at last facing real competition in this key sector. ■





# Helicopter Charter Demystified

**As the highway traffic grinds to a halt and your prospects for getting to an important meeting on time disappear, you may have thought how much easier it would have been to get there by helicopter. Despite the obvious attractions, helicopter charter remains a mystery to many potential customers. *FlyCorporate* asked **Rod Simpson** to don his **Hercule Poirot** hat and find out just how easy it is to charter a helicopter, where you can go and how much it is likely to cost.**

More and more businesspeople are finding that executive helicopters provide a solution which is fast, gets you there on time and, above all, delivers you fresh and relaxed to face the pressures of another business day. Because a helicopter can land in a company car park or on factory premises, it provides busy executives with a degree of flexibility that is unavailable with any other form of transport. It also minimises the need for overnight stays, increasing the time you spend on business and improving your quality of life. Of course, it may not be cost-effective to own and operate a dedicated company helicopter, but there are plenty of occasions when chartering a helicopter for a specific mission makes good business sense.


## **Destinations Unlimited**

Our starting point is the United Kingdom which has one of the most developed helicopter markets. The UK helicopter fleet numbers nearly 1,500 aircraft today, an increase of more than 50% over the past decade. There are around 60 companies offering charter services. One of the leading UK

operators is Capital Air Services which covers the whole of the UK and flies regularly to France, Belgium and the Netherlands. Their primary base is at Oxford Airport, but they also operate out of Cambridge and Stansted. Capital's Managing Director, Michael Hampton told *FlyCorporate* that helicopter charter has remained popular, despite current economic conditions. >>

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**There are plenty of occasions when chartering  
a helicopter for a specific mission will make  
good business sense**



The first question most customers ask is where can you fly from and to? Surprisingly, the answer is pretty much anywhere. With the approval of the landowner, a helicopter can land almost anywhere that meets safety criteria. Capital has a large database showing many hundreds of approved locations. It is certainly possible to fly from your own back garden, providing there is adequate space. Many hotels, restaurants, golf courses and sporting venues have helipads, and helicopters can operate into large airports to drop-off passengers near their departing business or commercial airline flight.

Unlike the United States, large cities in Europe are limited in the availability of city-centre landing sites and rooftop heliports are virtually non-existent. The London Heliport at Battersea is next to the River Thames and a short car journey from the West End. Brussels has a heliport at Halle, operated by Heli Service Belgium, which is just outside the Brussels Ring and, again, a short car journey from the city centre. Perhaps the most convenient European city location is in Paris where the large terminal at Issy-les-Moulineaux is positioned next to the Boulevard Périphérique. The site is the base for a number of charter companies including Aviaxess.

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Safety is paramount and the pilot has the last word on whether you can fly or not

## Fly Immediately

While other French helicopter companies concentrate on utility, fire fighting and emergency medical contracts, Aviaxess specialises in executive and private charters using a fleet that includes the EC135, EC130 and the Twin Squirrel. According to Aviaxess Chief Executive, Frederic Aguetant: "A client landing at Issy can be at a business office in La Défense or at the Champs Élysées within fifteen minutes." As in Britain, helicopters in France can land anywhere outside urban areas with the landowner's permission. Aviaxess offers national coverage and services the busy Mediterranean coast market from its base at Hyères. The company has a close relationship with the highly esteemed Relais & Châteaux hotel chain whose picturesque luxury properties are easily accessible by helicopter.

The next question is how much notice do I have to give to book a helicopter charter? The good news is that, if the aircraft is available, you can be on your way immediately. As with any flying, a helicopter can be frustrated by the weather and most helicopters do not have de-icing protection. Safety is paramount and the pilot has the last word on whether you can fly or not. If you want to travel just one way, that is fine – but you will be charged for repositioning of the helicopter. Some companies, such as Capital, have a two-hour flying time minimum daily charge. If the helicopter is to stay away overnight, the expenses of the crew will also be added to the bill.

You will also want to know how many passengers you can take and what amenities are available. Here we come down to the types of helicopter operated by the charter company. As an example, Capital Air Services has nine helicopters available including three Eurocopter EC135s, two Sikorsky S-76s, two Agusta A109s, a Twin Squirrel and an EC-155. The company will soon have access to a 16-passenger Sikorsky S-92 for higher volume charters.

Your charter company will match the right machine to the mission because each type offers a different mix of seating capacity, cabin size, comfort, speed and operating cost. Capital's helicopters are all twin-engine IFR-equipped aircraft, which means they can legally fly at night and over congested city centre areas. By their nature, helicopters are best suited to trips of up to two hours, so extensive in-flight service is not necessary, but the charter company will be able to stock the helicopter with snacks and drinks. Machines such as the Sikorsky S-76 or EC155 often include a DVD/CD player and FM radio so you can while away the time.

## Sensible Solution

That brings us to the key question – what will my helicopter charter cost? Naturally it will depend on the number of passengers and the type of helicopter you need. Capital charges out a four/ five passenger Twin Squirrel at £1,100 (€1,250) per hour (plus VAT) and the faster and more comfortable EC135 is £1,300 (€1,480) per hour. If you need the ultimate in air-conditioned luxury, Capital's EC155 Dauphin is charged at £2,300 (€2,600) per hour – but it can carry up to eight passengers and, with a cruising speed of over 290 km/hour (180 mph), a trip from London to Paris with five passengers can be achieved in around one hour and 15 minutes.

Our conclusion? Chartering a helicopter may not be an everyday event – but it could be a sensible solution on those occasions when time and business pressures demand the outcome that only a helicopter can provide. ■



# Intercontinental Business Jets

Sweet dream machines with spacious cabins and long, luscious legs

by Amy Laboda

**When your business demands regular face-to-face contact with clients and partners that span continents, there is no question – airline travel, with its awkward schedules, constant delays and long periods of time incommunicado, will rarely suit your needs. But which business jets will go the distance?**

“The business person with a corporate jet has the competitive advantage,” says Robert N. Baugniet, until recently Director of Corporate Communications for Gulfstream, manufacturer of the Gulfstream IV, V, G550 and soon the G650 intercontinental business jets. “These aircraft are mobile offices, equipped with satellite telecommunications, broadband internet and complete presentation systems,” he continues. “You can brief staff, rehearse presentations, and follow up with your team in a private, comfortable and secure environment, all while your competitor, who took the commercial airline, is still waiting for their luggage,” he chuckles.

### Feel the Difference

True intercontinental aircraft need to be able to fly legs of more than 5,000 nm (9,000 km) at speeds of Mach .85 to .9. The best can do so with the efficiency necessary to please the penny pinching CFO and with a level of comfort in the passenger cabin that will make even the most pernickety CEO smile and sigh with relief. Typical accoutrements to look for on true intercontinental aircraft are full galleys, separate eating, working, and yes, even sleeping compartments, and full bathrooms, including refreshing bathing options.

“It is often the sleeping arrangements that limit the number of passengers we’ll take on a long-range trip,” says Baugniet. Check how many passengers the aircraft can sleep in full-length berths or dedicated sleeping chambers, not just how many the aircraft seats in its current cabin configuration. It is also critical that at least some baggage be accessible from the cabin, so that passengers, after a shower, can access fresh clothing, allowing them to look and feel their best upon arrival.

Long-range flights typically require an augmented crew. While it is fine for two pilots to fly eight hours in one stretch,

safety dictates that on longer legs an extra pilot be brought on to allow them a few hours of rest during the trip. A flight attendant for meal preparation and making up berths or sleeping compartments is also typical. With four crew your aircraft must incorporate a dedicated rest area for them containing comfortable seating or a convertible berth and basic lavatory facilities.

The cockpits of these long-range masterpieces harbour the latest high-tech instrumentation and integrated information systems designed to safely carry people and their cargo across vast distances at altitudes high above those where airliners trek. Long-range business jets such as the G550 and G650, Bombardier’s Global Express XRS and Global 5000, and the Dassault Falcon 7X can climb to 15,545 m (51,000 ft), where there is less wind and traffic is rare. The Gulfstream aircraft can do so while still catering to cabin comforts, keeping the cabin altitude as low as 1,500 m (5,000 ft). Cabin air is not recycled in the Gulfstreams, resulting in 100% fresh air every 90 seconds. Passengers might not see the technology keeping them safe and comfortable, but they will feel the difference when they reach their destination.

### Economical Long-range Solutions

Gulfstream, Bombardier and Dassault each produce several aircraft that can, properly configured, carry 10 to 19 passengers transcontinental, for between \$37-60 M (26-42 M) new. However, it is challenging to do an apples-to-apples performance comparison on these half-dozen, mostly custom-outfitted aircraft.

“The Bombardier Global 5000 jet is a true intercontinental aircraft capable of flying non-stop Singapore to Moscow with eight passengers and three crew,” says, David Dixon, Bombardier Business Aircraft’s Regional Vice President, Sales, Asia-Pacific. “It can execute transcontinental missions at Mach .89,”

he explains. “The ultra-long-range Global Express XRS jet has a maximum range of 6,150 nm (11,390 km) and can fly key city pairs such as Shanghai to London non-stop with eight passengers and four crew members. It can depart from ‘hot and high’ airports, as well.”

The Dassault Falcon 7X has the longest range of any Falcon business jet at 5,950 nm (11,019 km). Its 28 cabin windows are noticeably larger than those on its predecessors. Like the Gulfstream 550, the 7X features a low in-flight cabin altitude of 1,830 m at 15,545 m (6,000 ft at 51,000 ft). The hallmark of this distinctive tri-jet, however, is its ultra-quiet passenger cabin, which makes working and sleeping easy. “Collaboration with DesignworksUSA on the interior has successfully integrated functionality, technology and ergonomics into the Falcon 7X cabin,” says John Rosanvallon, President and CEO of Dassault Falcon. That is critical if an airplane is to be capable of carrying executives and VIPs aloft for up to 13 hours.

Gulfstream’s long-range business jets may offer a slight advantage in range and payload over the Bombardier and Dassault series of aircraft. However, the wider cabin on the Bombardier is a decided luxury. The Bombardier XRS will get you there faster, nearly 45 minutes faster on a 5,000 nm (9,260 km) leg. And the Dassault Falcon 7X? Its three engines earn kudos for efficiency and redundancy, something you’ll think about if you regularly fly long over-water legs.

Baugniet is excited about Gulfstream’s newest offering, the G650, which should be able to maintain Mach .9 for 5,000 nm (9,260 km) with NBAA IFR reserves. The company’s flagship G550 has demonstrated its long legs and swift cruise speeds by flying 6,550 nm (12,150 km) from Seoul, Korea, non-stop to Orlando, USA carrying 11 passengers and four crew. >>

### The Ultimate Flying Experience

The Gulfstreams, Bombardiers and Dassault Falcons easily handle smaller airports with runways of only 1,830 m (6,000 ft), lighter loads, higher altitudes and longer distances. But if your mission requires you to transport 20 to 100 passengers on legs from Beijing, China, to London, UK (4,400 nm) or Melbourne, Australia, to Astana, Kazakhstan (6,560 nm), only a wide-body VIP business jet from companies such as Airbus or Boeing will do. These aircraft, new, are priced from \$55 M (€40 M) and range upwards. They are, with a few exceptions, delivered to buyers without an interior, which is custom installed.



The Boeing Company produces a selection of airplanes to accommodate an array of needs and lifestyles – from a smaller 737-sized airplane to a larger 747-8. “Our goal is to help each customer choose the jet that best fits in terms of cabin space and range. All of our jets are intercontinental,” says Vicki L. Ray, spokeswoman for The Boeing Company. “The BBJ 3 is popular in the Middle East, and its routes might include Jeddah to London, or Jeddah to Singapore. These owners often fly their families or government ministers,” explains Ray.

With each new Boeing Business Jet (BBJ) it has introduced, Boeing has increased the cabin size. The BBJ 2 has 25% more interior space and twice the luggage space of the BBJ while the BBJ 3 has 35% more interior space and 89% more luggage space than the BBJ 2. The BBJ programme also includes the 787 VIP and 747-8 VIP which offer ultra-large cabin. These long-range business jets redefine spaciousness and comfort for their private owners, heads of state and charter operators.

These voluptuous flying machines can comfortably carry an entire entourage, and are well suited to the needs of governments, large families and dignitaries who require the ultimate in a flying workspace and living space. Best of all, these aircraft range more than 18,000 km (9,300 + nm) with 75 to 100 passengers on board. Dedicated sleep chambers and full bathing and washroom facilities are no problem when the standard allowance for interior accoutrements is more than 20,000 kg (45,000 lbs) on the Boeing 787 and 45,000 kg (100,000 lbs) on the Boeing 747-8.

### Supreme Flying Business Tools

Is there better than a Boeing out there in an ultra-large business jet? The sales department at Airbus Industries is all smiles when you ask that question. “Frankly, we’ve outsold Boeing,” says David Velupillai, Product Marketing Director, Executive & Private Aviation - CDJ Airbus Central Entity. “We originally forecast the market was 12 aircraft a year and that we’d split that with Boeing, but in reality we’ve averaged selling 10 aircraft a year. That’s 150 or so of these jets.”

Velupillai is convinced the Airbus ACJ cabin design seals the deal. “We often take the aircraft to shows and people come onboard from being on a smaller business jet and they are crouching,” he says. “It takes them a minute to realise that they can stand up to their full height and move around off the centreline of the aircraft without bumping their head against the ceiling.”

The ACJ cabins are on average almost 18 cm (seven in) wider than the BBJs, and do not have an air conditioning duct in the centre of the ceiling, which gives the cabin a more spacious shape.

“A lot of the time the customer is looking to extend the ambiance of their home on the ground into the air. If you travel a lot you may spend quite a lot of your time in the aircraft, so having that comfort onboard can be therapeutic,” explains Velupillai. The wider cabin allows the Airbus aircraft to provide private chambers with comfortable corridors running around them for traffic flow forward and aft, a feature that had been the exclusive domain of the double-decker wide-bodies.

Variety may also help sell the ACJ line. Airbus offers the A318 Elite as a complete aircraft, including the interior, as its entry product, and then progresses through the A319, A320, A330/340 and A380 VIP editions (all delivered without interiors, “green,” to one of several Airbus affiliated finishing outfits).

Velupillai believes the reliability and efficiency of Airbus’ aircraft are part of what makes them the ultimate flying business tools, but the deal closer is in the walk onboard. “I can’t stress enough how different the cabin is compared to the traditional business jets. You can see it in people as they step onboard. Some even say ‘Wow!’ These airplanes are a real step up.”

Many forecasts reveal that the large and long-distance business jet regimes are expected to lead the pack as we emerge from the current global economic slump. Suffice it to say, manufacturers are already in good position to absorb the coming demand for these true global fliers. ■

## Intercontinental Long Legs

From	To	nm	km
Beijing, China	London, United Kingdom	4,400	8,180
Melbourne, Australia	Astana, Kazakhstan	6,560	12,150
Seoul, South Korea	Johannesburg, South Africa	6,560	12,150
Dubai, United Arab Emirates	Shanghai, China	3,470	6,430

## Long-range Aircraft Statistics

The following table indicates the maximum takeoff weight and maximum distance of a number of business aircraft that are typically used for intercontinental flights. The information is a guide only and actual take-off weights and range will depend on a number of factors including number of crew, passenger load, airspeed and the specifications of individual aircraft.

Aircraft	Passengers/ Crew	MTOW		Range	
		kg	pounds (lbs)	nm	km
Airbus 318 Elite	18/4	66,000	145,505	3,980	7,371
Airbus 380 Prestige	118/4	560,000	1,234,589	9,700	18,000
Airbus ACJ (A319)	19/4	76,498	168,650	6,060	11,223
Boeing 747-8VIP	8/4	442,252	975,000	9,555	17,696
Boeing 787-8VIP*	8/4	219,539	484,000	9,960	18,446
Boeing BBJ	8/4	77,565	171,000	6,210	11,501
Boeing BBJ 2	8/4	79,016	174,200	5,660	10,482
Boeing BBJ 3	8/4	85,140	187,700	5,435	10,066
Bombardier Global 5000	8/3	41,957	92,500	5,200	9,630
Bombardier Global Express XRS	8/4	44,452	98,000	6,150	11,390
Dassault Falcon 7X	8/4	31,298	69,000	5,950	11,019
Gulfstream 550	8/4	41,277	91,000	6,750	12,501
Gulfstream 650*	8/4	45,178	99,600	7,000	12,964

\*Projected performance - aircraft not yet certified

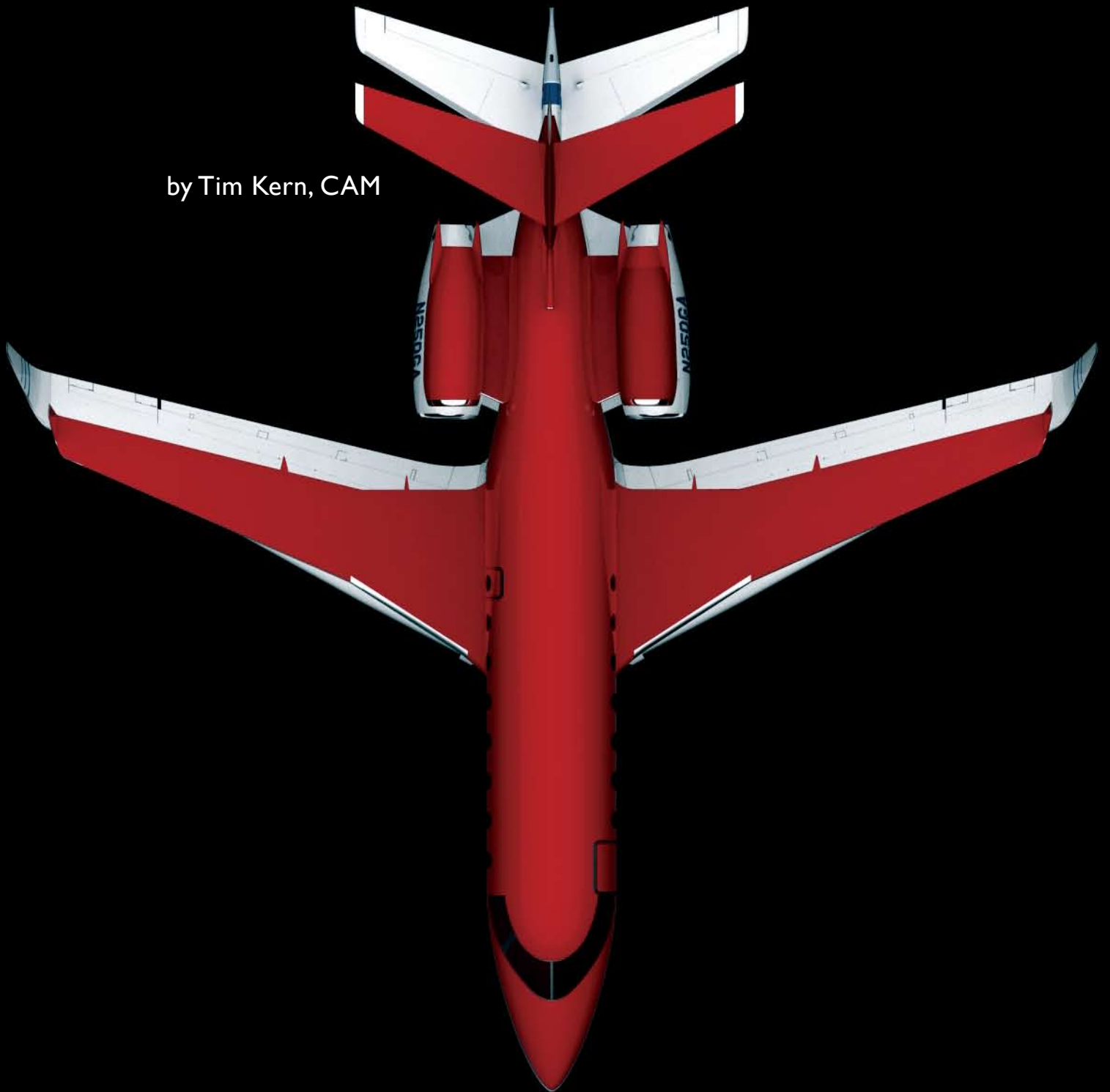


New Gulfstream

# G250

Not Just '50 More'

by Tim Kern, CAM



**When the world learned that Gulfstream was working on a new super-midsize jet in early 2008, the pundits bet on evolutionary changes. When the official announcement was made in late 2008 (at the NBAA convention) and design details became known, it turned the pundits guess into small change. The G250 is closer to being ‘all new’ than evolved.**

The G250 is more a pure-Gulfstream creation than the G200. That aircraft was introduced in 1993 by Galaxy Aerospace, first flew in 1997, and was acquired in 2001 by Gulfstream and rebadged as the G200. While some of the outward differences (such as the T-tail on the new bird) are obvious, examination is rewarding. The wing, for instance, is more similar in planform and airfoil to the G500 than the G200, with more span, more area, more sweep, and less drag; all of which combine to provide more range, more useful speed, and greater efficiency.

### **Customer Advisory Board Input**

Gulfstream’s extensive Customer Advisory Board input was distilled through the G250 Customer Advisory Team and resulted in even lower industry-leading sound levels, the continuation of Gulfstream’s hallmark low-altitude cabin, a pressurised luggage area accessible from the cabin. It also utilises Gulfstream’s and the Cabin Essential™ design philosophy, which extends redundancy from controls and avionics to all of the major cabin systems, so a single-point failure will not result in the loss of cabin functionality.

Luggage volume is increased, partly through taking advantage of the T-tail configuration. In-flight access to the new 3.4 m<sup>3</sup> (120 ft<sup>3</sup>) pressurised rear luggage compartment (a first for a Gulfstream mid-cabin aircraft) is through a door in the now-windowed lavatory.

Flight features include the fly-by-wire spoiler system, auto-throttle, and even auto-braking, unique to this class of jet. Avionics have naturally been upgraded with the PlaneView 250™ cockpit, which is based on Rockwell Collins Pro Line Fusion avionics with three 38.1 cm (15 in) screens, capable of showing multiple formats. (The G200 has five 18.4 cm [7.25 in] screens.)

“The PlaneView G250 flight deck is significant because of its similarity to large-cabin Gulfstream aircraft,” notes Mark Kohler, Gulfstream’s G250 Program Manager. The G250 offers dual Flight Management Systems, dual Gulfstream signature Cursor Control Devices (CCDs), universal worldwide graphical weather, automatic Emergency Descent Mode, Multi-Scan weather radar and a dual auto-throttle system. These combine with optional features, including the Head-Up Display (HUD II), Gulfstream Enhanced Vision (EVS II) and Gulfstream

Synthetic Vision – Primary Flight Display (SV-PFD), to enhance situational awareness and reduce pilot workload.

Dual independent hydraulic control systems are standard. Spoilers and rudder are fly-by-wire, with the spoilers’ mixed to help ailerons and also act as speed brakes. The elevator has some hydraulic boost; the ailerons are straight hydraulic. The mix of inputs will be fine-tuned to provide an “intuitively perfect balance” of force feedback.

### **Power, a Lot More Power**

“One of the features that really stands out is the aircraft’s excellent takeoff performance,” Kohler told us for this article. The all-new wing design, combined with the Honeywell HTF7250G turbofan engines (with 33.1 kN or 7,445 lbs of thrust each), provides takeoff distances of less than 1,520 m (5,000 ft), allowing operations from demanding short runways and high-altitude airports. This, plus a service climb to 12,500 m (41,000 ft), and a ceiling at Flight Level 450. Even with all the extra thrust, the more modern engines and the added efficiency of the airframe (particularly the wing) allow greater range on the same amount of fuel.

The bigger wing now allows all the fuel in the G250 to be held outside the fuselage, in the wing and wing roots, not the case in the G200. Refuelling of the G250 is accomplished through a single point system, and should take no more than twenty minutes. >>

### Why a G250?

The G200 (néé Galaxy) does not seem to have been accepted with all the usual enthusiasm met by Gulfstream's machines, largely due (I am told by used-aircraft sales folks) to its runway requirements. A quick check in early September with Aircraft Post showed there were 29 available G200 aircraft with an average market time of 286 days. Asking prices ranged from just under \$10 M (€6.9 M) to a near-new price of \$19.6 M (€13.5 M).

"The changes are significant, so it is likely that almost everyone will notice something different," said Kohler. "Maintenance departments will appreciate the aircraft's redundancies, which ensure its industry-leading dispatch reliability and availability."

Customers won't notice the Cabin Essential design philosophy, because its very redundancy will make it invisible (and that's the point). However, Kohler bets customers will immediately appreciate the larger washroom.

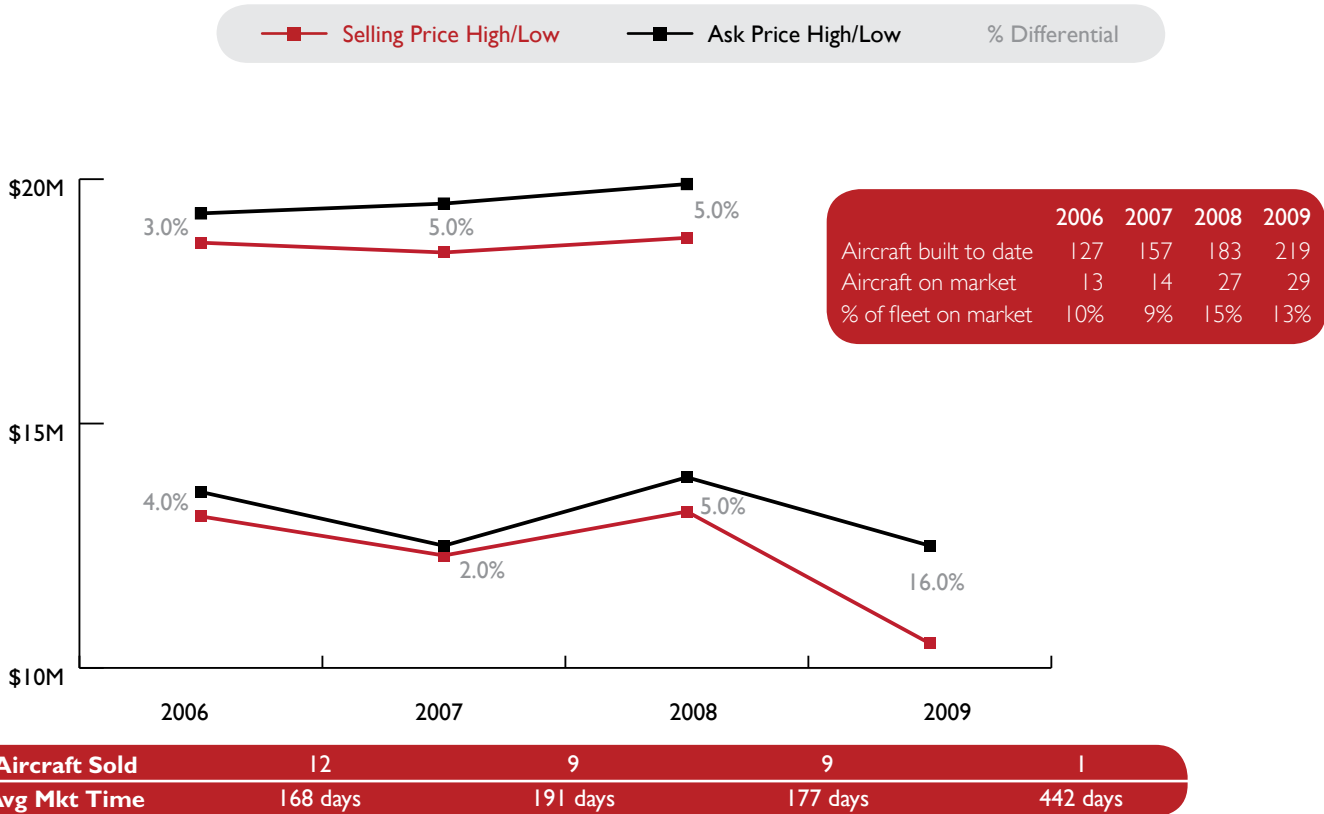
Of course, the existing G200 has a lot of desirable standard features and options, like 100% fresh-air ventilation, satellite communications, a divan/berth, private lavatory, and a galley equipped with a coffee maker and microwave oven, among others. These are all continued in the G250, either as options or standard. The G250's lavatory can be upgraded with a vacuum toilet option. As of late August, Gulfstream reported a "99.84% dispatch reliability rate" for the G200. Even so, once the G250 deliveries are clicking along, we can expect the G200 to be phased out of production.

The G200 is currently priced at \$23.3 M (€16.0 M) indexed to 2009; the standard G250 is pegged to debut at \$24.0 M (€16.5 M) in 2011 conditions. Depending on your predictions regarding major central banks' policies between now and then, you might comfortably consider the price of the new bird to be essentially unchanged from that of the current offering.

With the first flight likely this year and certification on track for 2011, the G250 should be hitting the market's early recovery, as it brings a big improvement to the 'small' end of Gulfstream's line. ■

## The bigger wing now allows all the fuel in the G250 to be held outside the fuselage

### Gulfstream G200



Data courtesy of AircraftPost Inc



	G200		G250	
Passengers	8 - 10		8 - 10	
Tail	Cruciform		T	
Engines	2 x Pratt & Whitney 306A		2 x Honeywell HTF7250G	
Max range cruise speed	Mach .75		Mach .80	
Maximum Mach Operating Speed	Mach .85		Mach .85	
Wingspan	58 ft, 1 in	17.70 m	63 ft	19.2 m
Length OA	62 ft, 3 in	18.97 m	66 ft, 10 in	20.3 m
MTOW	35,450 lbs	16,080 kg	39,600 lbs	17,963 kg
Fuel Cap	15,000 lbs	6,804 kg	14,600 lbs	6,623 kg
Payload w/ max fuel	650 lbs	295 kg	1,000 lbs	454 kg
Cabin Stand-up Height	6 ft, 3 in	191 cm	6 ft, 3 in	191 cm
Cabin cross-section	7 ft, 2 in	218 cm	7 ft, 2 in	218 cm
Total Luggage	150 ft <sup>3</sup>	4.2 m <sup>3</sup>	154 ft <sup>3</sup>	4.36 m <sup>3</sup>
Max thrust (at Stage 4 noise levels)	6,040 lbs	26.87 kN	7,445 lbs	33.12 kN
Max Cruise Range (w/ reserves)	3,400 nm	6,297 km	3,400 nm	6,297 km
Normal Cruise Range (w/ reserves)	3,050 nm	5,649 km	3,280 nm	6,075 km
Takeoff run at MTOW	6,080 ft	1,853 m	4,960 ft	1,512 m
Price (approximate)	\$23.3 M*	€16.0 M	\$24.0 M**	€16.5 M

\* 2009 EIS price

\*\*2011 EIS price

A Challenger 605 aircraft is shown from a low angle, highlighting its tail and engine. The tail is blue with yellow and white accents, featuring the text "CHALLENGER 605" and "CHALLENGER" in white. The aircraft is white with a yellow stripe along the fuselage. The background shows a clear blue sky and a tarmac with some distant structures.

Jordan's

# Arab Wings

Keen on Global Expansion

**Arab Wings** is eyeing up growth opportunities and recently decided Sharjah in the United Arab Emirates (UAE) was the perfect location for its new sister company, **Gulf Wings**. But the company's plans aren't just limited to the UAE. **Phil Nasskau** finds out more.

Think back just a few months to April 2009 and the world was a very different place. Many were surprised when Arab Wings announced its intention to expand through the establishment of GulfWings in Sharjah.

Yet now, as the global economy begins to settle and airlines are seeing some signs that the drastic reduction in passenger numbers is coming to an end, GulfWings seems perfectly poised to take advantage of the turnaround.

### Gulf Wings to Start With 605

Gulf Wings is due to start operations in October, around the same time that it expects to receive its UAE air operator's certificate. Manal Obdei, Head of the Sales & Marketing Department at Arab Wings explained the choice of location: "The reason for choosing Sharjah as a base was that a lot of our clients have their own aircraft and are asking us to manage them on their behalf. Because we have a lot of contacts in the Gulf region we were looking to set something up there. So we decided to establish a company in Sharjah, and will then set something up in Bahrain as well."

A Bombardier Challenger 605, currently jointly managed with Abu Dhabi-based Royal Jet, will be the first to make the switch to Sharjah. "The 605 is ready to make the move. We are just waiting for the General Civil Aviation Authority to ask us to re-register and finalise the paperwork," said Obdei. "We are going to have our 605 there and maybe one of our other aircraft. We have not chosen which one yet, but we think we'll have a Sharjah-based air ambulance there."

The Bahrain expansion plans are more than just a wish. "Back in August, we signed an agreement with a Saudi businessman to help us open an AOC in Bahrain," said Obdei. "We need more time before we can start up in Bahrain. This will follow a year or so after Gulf Wings is flying."

### Europe on the Horizon

But it isn't just the Bahrain and the Middle East that the parent company is targeting for potential expansion. "We are looking to also have something in Europe, perhaps even the UK. We are focusing more on aircraft management and financing. We try to do all the business for our clients, from buying the aircraft, to financing and then managing it," Obdei explained. "But more importantly, when the client isn't flying their aircraft we can charter it out. For us, the expansion is all about offering a complete turnkey solution for our clients," she added.

Gulf Wings will not be in competition with Arab Wings, Obdei stressed. The same team would be in charge: "It's just a different name," she explained. Some companies believe that a recession is the best time to invest, while many others believe it is the best time to cut costs. Arab Wings subscribes to the first theory as Obdei sums up: "If you have the cash, you can do anything."

"We are always looking to grow our business," Obdei continued. "In these times people who have cash are looking what to do with their money because of the economic situation. We need to use this time to grow our business and our fleet. This [economic crisis] may only last for two or three years, but now is the time to grow."

When Gulf Wings opens in October, it will mark Arab Wings' first venture outside its home turf in Jordan. "There will be more steps, in more countries for Arab Wings to grow," Obdei is keen to point out.

Although there is no fixed timeline for any European expansion, Obdei expects more announcements in a year or so. "But maybe this will change. Will something happen in between? We don't know yet," she said. ■



"The 605 is ready to make the move"

# Riding Out the Storm

For most operators these are troubled, perhaps even very troubled, times. But for Arab Wings, this is not case. Phil Nasskau reports.

Arab Wings bills itself as the first private jet operator in the Gulf region. The company started life as a division of Royal Jordanian in 1975 but has been under private ownership since 2005. For Arab Wings, the credit crunch is not proving to be as big a problem as it is for many others. In fact, overall, business is on the up. Manal Obeid, Head of Sales & Marketing Department, explained: "In the earlier part of the year business was down around 40%, but we are now at the same level, maybe even a bit more than we were last year."

"The [economic] situation in Jordan is not like Europe, the Gulf or even Dubai," she explained. "Jordan is far less affected than any of these places. It's not a big issue for us as a country, but it has hit those that work in the Gulf or have projects there."

## Growth Challenge

That's not to say that Arab Wings doesn't face any challenges at present. In fact, the challenge is to embark on a solid plan for growth. With this in mind the company has plans to increase its fleet size by

the end of the year. Since August the company has added two new aircraft to its books. "We are growing our fleet and have more aircraft under management," said Obdei. "We have 11 aircraft on our AOC. By the end of the year this will increase to around 13 in total." In August the company added a Bombardier Challenger 604 to its management and charter portfolio. This aircraft is based in Cairo. In mid-September it added a brand new Cessna Citation Sovereign to the management books.

At the time of writing the company was hoping to finalise an additional aircraft in the form of a Learjet 60 XR. "We are also going to have another Challenger 604, and maybe even add another Learjet 60 too," Obdei advised.

## Diverse Fleet

Arab Wings' diverse fleet is a contributing factor to its present, strong position in the marketplace. In addition to the aircraft already mentioned, the fleet includes: a Hawker Beechcraft 1900 which is on a dry lease contract to a Swiss petroleum

company and operates in Nigeria; a Hawker Beechcraft King Air B200 which is mainly used for medevac flights and is seeing strong demand from Baghdad and the rest of Iraq; two Hawker 800XPs; a Cessna Citation CJ1+; a Challenger 605; a Gulfstream G450; and another Challenger 605 based in Abu Dhabi.

The Abu Dhabi-based Challenger 604 is under joint management with Royal Jet and will move over to Gulf Wings when that company starts operations. Obdei explained that because of Royal Jet's fleet of much larger aircraft, its customers do not really have any use for the Challenger. "This aircraft mainly does owner flights," she said.

It seems the company is buoyed by demand returning to normal. "We're looking for the second half of this year to be better," said Obdei. "Certainly our busy areas seem to be Iraq, the Gulf Cooperation Council\* (GCC) states and, naturally during the summer months, to southern France – particularly around Nice – and also Geneva in Switzerland. Damascus and Beirut are also popular destinations for our customers." ■

\*The Gulf Cooperation Council (GCC) is a trade bloc of six states in the Gulf region. Established in 1981, the GCC today includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.



# Business Aviation

## in the Middle East

**The Middle East has been a very resilient market during the “credit crunch” and continues to lead the way for business aviation. The market there is developing as evidenced by the debut of the Hawker Beechcraft 4000 in the region at the end of August. The aircraft was acquired by Dubai-based Empire Aviation Group (EAG) from the manufacturer on behalf of an owner in the Gulf. The aircraft will be managed by EAG and offered for charter. A further two of the type have already been ordered by EAG for delivery to the Gulf in 2009-2010.**

“EAG is very proud and excited to be the first in the region take a delivery of this aircraft, which is probably ten years ahead of other manufacturers,” EAG’s Executive Director, Steve Hartley told *FlyCorporate*. “The owner – and our charter clients – will benefit from this new technology and the cost/performance that it delivers. In fact, Hawker Beechcraft Corporation is so confident about the new aircraft that it is guaranteeing the aircraft’s maintenance, charging a fixed fee per flying hour to cover all aircraft maintenance and even tyre-wear, for the first five years of operation.”

### **Freeman’s SJ30 on its Way**

Meanwhile, the second SJ30 to be built by Dubai-based Emivest since it took the helm of troubled manufacturer Sino Swearingen, has undertaken its maiden flight. Serial number 010 - N30GZ - flew at the end of August, marking the beginning of the production flight tests for the aircraft.

The aircraft is scheduled to enter Jet Works Air Center’s facility in Denton, Texas in September for completion work before being delivered to Hollywood actor, Morgan Freeman. SN 010 will receive its interior completion, exterior paint, and the installation of an HF radio SELCAL, Garmin 500 with XM weather, XM radio, entertainment package, cockpit speaker mute switch, and dual mode S transponders (with enhanced surveillance) upgrades.

“We are looking forward to delivering the aircraft to Mr Freeman, thus helping him to check his SJ30 purchase off his ‘bucket list,’” said Emivest’s VP of Marketing and Communications, Mark Fairchild.

### **Lineage 1000 Enters Service**

The first Embraer Lineage 1000, which was delivered just before EBACE in May, clocked up more than 180 hours in its first month, including 110 hours carrying the launch customer, Al-Faheem of Abu Dhabi.

The aircraft – based on the Embraer 190 regional jet – is operated by Prestige Jet and has been used for frequent missions between the United Arab Emirates and Europe. Embraer is believed to have 20 orders for the type, with the majority destined for the Middle East.

“The entry into service has proved to be successful,” said Embraer’s International Sales Director, Colin Stevens. “We are seeing direct operating costs at 15% less than the BBJ and 30% less than the ACJ. We are ironing out one or two small problems. All-in-all we think this is going to be a very successful aircraft for the Middle East region.” ■

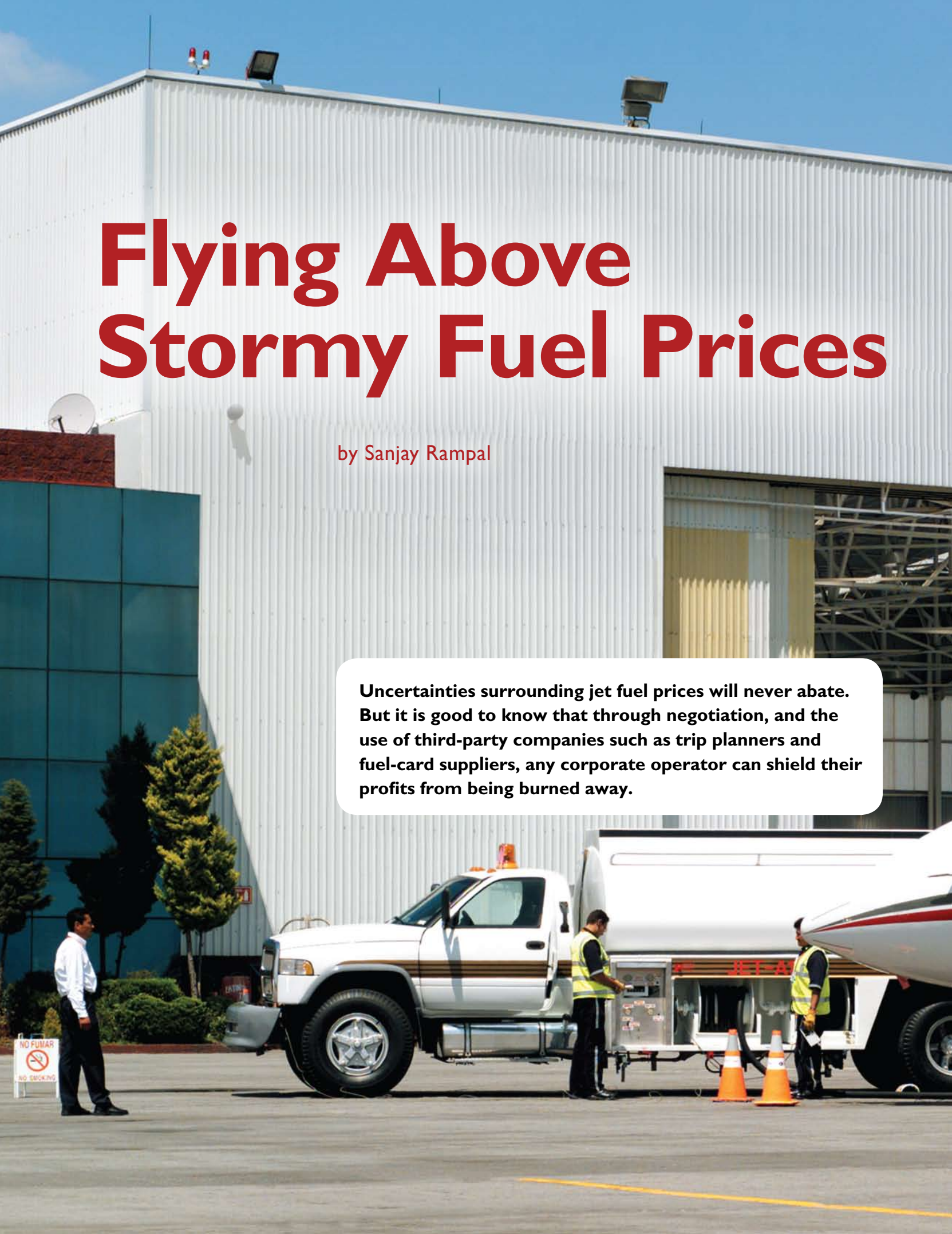
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The Middle East continues to lead the way for business aviation

# Flying Above Stormy Fuel Prices

by Sanjay Rampal

**Uncertainties surrounding jet fuel prices will never abate. But it is good to know that through negotiation, and the use of third-party companies such as trip planners and fuel-card suppliers, any corporate operator can shield their profits from being burned away.**



Problems with traditional Jet-A kerosene, the lifeblood of commercial aviation, boiled over during the summer of 2008 when oil prices peaked at \$147 (€104) a barrel. The onset of the recession in 2009 cooled things down but airlines and private jet operators alike are still feeling the squeeze.

In an attempt to lessen the impact of jet fuel price fluctuations, private jet operators and ground handling companies have implemented a number of strategies to ease the cost burden. A combination of buying power, prudent flight planning and the help of trip planners and technology has helped operators to control their fuel bills.

### The Larger the Better

Large fleet operators with the muscle to leverage discounts are able to negotiate favourable terms with both individual fixed based operators (FBOs) and fuel suppliers when purchasing fuel.

Hong Kong-based **Metrojet**, for example, operates its own modern fuel-efficient fleet in addition to managing the jets of other operators.

Chris Buchholz, CEO of Metrojet said: “The experience of managing our own jets means we’re very cost conscious and we also care about managing the jets of others. We negotiate fuel prices that are best for both our aircraft and our customers. We’re unique as we have our own fleet and so are better at understanding the need to limit fuel price exposure for our customers.” Metrojet, part of the Hong Kong Aviation Group, has a strong thirty-year history in corporate aviation. The company offers a diversified portfolio of services from approved round-the-clock maintenance and repair facilities to fleet management. As the largest tenant at the Hong Kong Business Aviation Centre FBO site, Metrojet has the financial clout to negotiate the best fuel contract deals.

The majority of Metrojet flights are long haul, hence their volume fuel requirement demands prudent flight planning. Planning ahead for each trip enables the company to get the best fuel price from the destination FBO. “We talk to the FBO a week before the flight to get the most competitive price. The pilot knows the agreed price in advance as the ‘walk in fuel price’ would be a lot higher,” says Buchholz.

Buchholz also indicated that the size of their operation gets them closer to the major fuel suppliers. “Building relationships is key in Asia, and we negotiate at a senior level with the headquarters of the fuel providers to get the best direct price. The individual FBOs are aware of this and are therefore eager to bid for our business to offer the lowest fuel price.” Metrojet maintains its competitive edge by ensuring that fuel suppliers are paid without delay, thereby keeping the door open for future discounts. >>



Universal Weather & Aviation ground support in Toluca, Mexico

### Tankering and Easing Back

Tankering is the process of taking on additional fuel at cheaper locations rather than at expensive stopover points in one journey. This requires a flight plan that considers the relative price differentials between the cheapest and most expensive FBOs, the distance travelled, the type of aircraft, payload carried and, crucially, whether fuel is available at some destinations.

Such variables make tankering a complex balancing act. However, if undertaken correctly, operators stand to save between 1-5% of their fuel costs. Metrojet uses both tankering and speed management to attain optimum fuel economies. "The jet may have a top speed of Mach .85, but slowing down to Mach .8 adds perhaps 12 minutes to a journey which translates into thousands of pounds of fuel saved over a year," said Buchholz.

Metrojet flies a modern fleet of jets, Teflon covered, and well maintained, ensuring the highest efficiency in fuel burn. Modern aircraft with full FADEC (Full Authority Digital Engine Controls) on board create greater fuel economies.

### Savvy Planners and Handlers

Support organisations such as flight planners and ground handling facilities allow jet operators to tap into their extensive regional expertise when shopping for the best fuel price. Hong Kong's [ASA Group](#) is a specialist ground handler operating throughout South East Asia. The company often negotiates or buys fuel on behalf of international clients. Joe Wilson, Managing Director said: "We often make route recommendations to our clients, especially for alternate technical stops.

We know which airports are cheaper for fuel. For example, when people go to Thailand we recommend they go to Don Muang rather than Bangkok International Airport (Suvarnabhumi). There are several others around the region that are more economical for operators."

Dedicated trip planners represent another means of managing fuel costs for any prospective flight plan. Traversing continents is a complex business involving stringent overflight regulations, custom clearances, en route weather needs, security and flight-planning logistics. Trip planners offer a complete and comprehensive package, easing the burden on the pilot by working out the best and most cost-effective solution when circumnavigating the globe.

Established companies such as [Air Routing International](#), [Universal Weather and Aviation](#), and [Colt International Services](#) offer solutions with web-based applications that display the most favourable fuel price at any one FBO destination. Colt for instance, with its network of FBOs and e-Trip web software, can leverage the lowest pricing for a variety of services inclusive of fuel.

UAE-based [Hadid International Aviation Services](#) also has a strong fuel department, working around the clock. The company operates an experienced fuel services team. Hadid provides fuelling services and attainable on credit at over 2,200 stations worldwide. It says that due to the "sheer volume" of fuel that it provides its clients, it can pass on the benefits of lower prices to its customers immediately.

Canada's [Skyplan](#) also recently set up shop at Sharjah airport in Dubai to capture the growing business aviation market in the Middle East. The company

is adept at negotiating competitive contract fuel rates on behalf of such operators from world fuel suppliers. "Keeping fuel costs down is a key issue for our customers," said Muhammad Sami, Skyplan's Chief Executive.

### Ace in the Fuel Card Pack

Canny jet owners can also join fuel-card and fuel purchase programmes, which provide their members with the benefit of bulk discounts on fuel purchases. Long-established [AVCARD](#) offers a charge card that works in conjunction with a web interface, enabling customers to check the fuel price at their destination before setting off. Warren E. Boin Jr, Vice President of Marketing and Business Development warns: "It is always worth giving us a call as well. The airport-posted price may be different from our contract price and our in-house team can call the FBO and check the most up-to-date price." AVCARD negotiates discounted fuel prices on behalf of its members from the likes of Shell and other major fuel providers.

Another way to cut costs is to sign up with a fuel partner, such as Universal's UVair Fuel Program. UVair negotiates the best price and arranges fuelling for cardholders at hundreds of locations from Albania to Zambia. Fuel and ground services can be charged to the same card, minimising expense tracking.

### Tightening Future Profits

Jet fuel prices are likely to remain capricious given that alternatives are still decades away. Until then, operators can mitigate their exposure to fuel price fluctuations by seeking the expertise of supporting organisations well versed in the art of getting the best fuel price deals. ■



# Jet Fuel

## Turns Green Without Envy

by Sanjay Rampal

**Although still king, Jet-A kerosene's crown is being challenged by an emerging class of alternative fuels that will certainly find favour with the corporate sector.**

A decade ago it was unthinkable that anything but pure petroleum-based fuels would be used in aviation. But geopolitical tensions and the global thirst for oil have created a taxing backdrop for economies dependant on this increasingly finite resource. These factors have provided the economic impetus for fuel companies to develop sustainable, alternative fuels to reduce

the overall reliance on pricier petroleum derivatives. The aviation sector, buffeted by soaring fuel costs, recessionary pressures, and calls for it to reduce its carbon footprint, has embraced the concept of alternative fuels. Although most testing today is carried out on commercial airliners, there is no doubt that new fuel technologies will also appeal to business aviation users. >>

## Filling up With Unleaded Jet-Algae?

The momentum for biofuel development has led to the current crop of 'drop-in' second-generation fuels which boast a higher energy output than their first-generation cousins. Derived from renewable sources, the chemical make-up of such alternatives closely mirrors the performance characteristics of conventional kerosene jet fuel. Hence the term, 'drop-in', – fuels that can be used immediately without modifications to the engine or its components.

Considerable advances have been made since Virgin Atlantic conducted the world's first biofuel-powered test flight in February 2008. Using a 20% fuel blend composed of coconut and Babassu oils mixed with conventional Jet-A, the first generation mixture was successfully pumped into one General Electric engine powering a Boeing 747.

The Virgin flight brushed aside technical concerns, encouraging further tentative biofuel test flights. In December 2008, Air New Zealand flew a Boeing 747 using a 50% blend of jatropha-oil extract mixed with jet fuel in one of its Rolls Royce engines. The demonstration flight from Auckland Airport represented another milestone as it was the first time a carrier had used a commercially viable and sustainable fuel alternative to pure kerosene.

In January 2009, Continental Airlines proved the viability of a jatropha/algae 50% blend in a CFM engine powering a Boeing 737. Hot on the heels of the Continental flight, environmentally conscious Japan Airlines upped the algae/jatropha component of its biofuel concoction and injected it into a Pratt and Whitney engine installed on a Boeing 747.

The flurry of Synthetic Paraffinic Kerosene (SPK) test flights involving airlines, aero-engine makers and airframe manufacturers represents a serious commitment towards developing fuels from renewable as well as sustainable resources. During the 2009 Paris Airshow, Boeing showcased its active participation in a cross-industry team that has the objective of developing commercially viable biofuels. The other players in the team include: Air New Zealand; CFM; Continental Airlines; General Electric; Honeywell; Japan Airlines; Pratt & Whitney and Rolls Royce.

Boeing reported that the SPK biofuel tests results were encouraging. No detrimental effects were found on engine components, irrespective of the type of engine used. This proves that the blends are 'drop-in' without the need for engine and airframe modifications. Anecdotal evidence suggests that the fuels generate higher energy content by mass when compared to conventional Jet-A fuel, resulting in a reduced fuel burn per mile.

"These are very gratifying results," said Bill Glover, Managing Director of Environmental Strategy for Boeing. "Everyone on the team and across the industry is working hard to make sustainable biofuels a real solution to reduce the carbon footprint of aviation. These results move us closer to that goal."

Despite the fact that current tests are being undertaken on large wide-bodied aircraft and higher thrust engines, developments in alternative fuels will no doubt filter through to the corporate jet sector. Being drop-in fuels, they will work just as well in a Dassault 7X that utilises the same grade of fuel as an Airbus A380. The impending introduction of the European Union's Emissions Trading Scheme (ETS) suggests that the eventual use of alternative fuels by the corporate sector could potentially reduce overall emission-related costs incurred by operators flying into and out of the EU.



## Specifying the SPK Alternative

To be considered sustainable, alternative fuels need to have negligible environmental, economic and social impacts. The raw feedstock for the fuel should not compete with food production nor promote deforestation. Furthermore, lifecycle greenhouse gas emissions should be much lower than for comparable volumes of conventional jet fuel.

To ensure the fuel can be dropped-in to existing engines, the alternative fuel needs to fulfil performance parameters that make it indistinguishable from conventional jet fuel. These include equivalent energy densities, thermal properties and lubricity. A complete synthetic replacement to conventional jet fuel remains elusive with all second-generation fuels being combined with fossil-based kerosene to maintain safety and performance margins.

Finding a fuel that is green and delivers the same performance as Jet-A will represent a feat in cutting-edge chemical engineering. However, aero engine makers General Electric (of which CFM is a part) and Pratt & Whitney believe that commercially viable fuel alternatives are a few short years away from being the norm in aviation, including the corporate jet segment. Both manufacturers are currently developing advanced fuel-efficient and environmentally friendly engines for the next generation of single-aisle aircraft.

Mike Epstein, Leader of Alternative Fuels at General Electric, said: “Our testing to date with GE and CFM engines has shown no meaningful difference between conventional fossil-derived Jet-A and 50-50 blends of biofuel. These fuels are truly drop-in. We do not see a need or requirement to modify our hardware or software to accommodate these fuels.”

His counterpart at Pratt & Whitney, Alan Epstein, Vice President of Technology and Environment, (and no relation to his GE counterpart) concurs: “We use a variety of turbofan engines to test alternative fuel mixtures. We take emission measurements and ensure that the engines operate according to expected performance parameters. Furthermore, we investigate the impact of biofuels on engine life. To date, testing of drop-in second-generation fuels has suggested nothing detrimental [occurs] to core engine-components such as the combustors.”

Both Epsteins agree that final certification of a commercially viable alternative-fuel specification will take place by 2010. CFM has partnered with Airbus and low-cost Mexican carrier InterJet for its 2009 biofuel testing. Pratt & Whitney continues its research efforts by linking up with Jet Blue airlines and, as part of the consortium, InternationalAero Engines, which includes Rolls Royce Aero Engines.

## Green Credentials

Cathay Pacific bucked industry trends by delivering a profit during the third-quarter of 2009. The carrier attributes its turnaround to both prudent cost-cutting measures and fuel-hedging tactics. In July the airline joined the burgeoning ranks of the Sustainable Aviation Fuel Users Group. The user group, established in August 2008, includes airlines such as Air France, Air New Zealand, British Airways, Gulf Air, Japan Airlines, KLM and Virgin Atlantic.

The working group is united by the common belief that the rapid commercialisation of sustainable biofuel alternatives will reduce both emissions and the price volatility of conventional petroleum-based fuels. Reliance on fossil fuels is also lessened through the option of using such alternatives, but with the added beneficial opportunity of trimming fuel overheads.

The group adheres to a strict criterion of sustainability, which ensures that only low emission fuels are developed using renewable feedstock that does not compete with food production or affect biodiversity. Airline participation in the group will go some way to countering the arguments of environmental groups who believe that greater energy requirements are needed to cultivate and convert biomass feedstock into useable fuels.

## Alternative fuels are here to stay

This year’s International Air Transport Association (IATA) annual meeting in Kuala Lumpur reaffirmed the industry’s commitment to achieving carbon neutrality by 2020. Alternative fuels blended at higher ratios with conventional fuel are destined to play a part in achieving this milestone. Biofuels, Fischer-Tropsch fuels, perhaps even hydrogen, all offer a lifeline to both corporate and commercial aviation in the longer run. ■

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**Alternative fuels need to have negligible environmental, economic and social impacts**

A large industrial engine test cell is shown against a bright sky. A jet engine is being lowered by a crane from the top of the structure. The engine is a complex piece of machinery with a large circular intake at the front. The test cell is a tall, white, cylindrical structure with various ladders and platforms. The sun is shining brightly from the upper left, creating a lens flare effect.

# Business Jet Engines' Futurescape

The buzz-words are fast, quiet and efficient. Can one engine be all three?

by Amy Laboda

Face it – as a species, human beings just want to go fast. Nowhere is that more apparent than when we are flying. To those who give the propulsion industry only a cursory glance it would appear that our single-minded endeavour to move ourselves around the planet at light-speed has taken a back seat recently to calls for efficiency, quiet and of course, zero-carbon emissions from our fastest mode of transportation: private air travel. This first decade of the new millennium has even forced the demise of supersonic travel, at least temporarily.

As sad as it was to watch the grand lady Concorde take her last flights, it was a necessary step in the evolution of propulsion technology. You see, without Concorde, there is an even more pressing urge for businesses to develop new aircraft engine technologies, suitable for both new aircraft and for retrofitting existing fleets – engines that meet the more demanding specifications of the 21<sup>st</sup> century.

### Present, Future – Light

Today's business jet owners and operators are keen to reap the benefits of economies of scale. Those benefits include the ability to operate out of much smaller, more restrictive airports, and the ability to operate cutting-edge jet technology inexpensively, comfortably, and blessedly quietly. The new engines being produced by venerable companies such as Rolls-Royce, Snecma, Pratt & Whitney, Williams International and through the partnership between General Electric (GE) and Honda Aircraft Engines, are all that, and more. They are ready to take on the toughest environmental restrictions, with carbon emissions well below the tough, new European limits recently proposed.

Rolls-Royce's BR725 will propel the Gulfstream G650 from 2012, and the company promises the engine produces 75.6 kN (17,000 lb) of take-off thrust, 4.6% more than its BR710 predecessor which powers the long-range G550. But it generates 21% less emissions and no 'visible' smoke. The engine's larger fan and swept titanium blades improve its aerodynamic efficiency. All this is housed in a super-light, all-composite nacelle. The BR725 is also 33% quieter than the BR710, coming in 16 decibels (dB) below Stage 4 noise limits. The BR725-equipped G650 will be able to land at many airports that shun its noisier rivals.

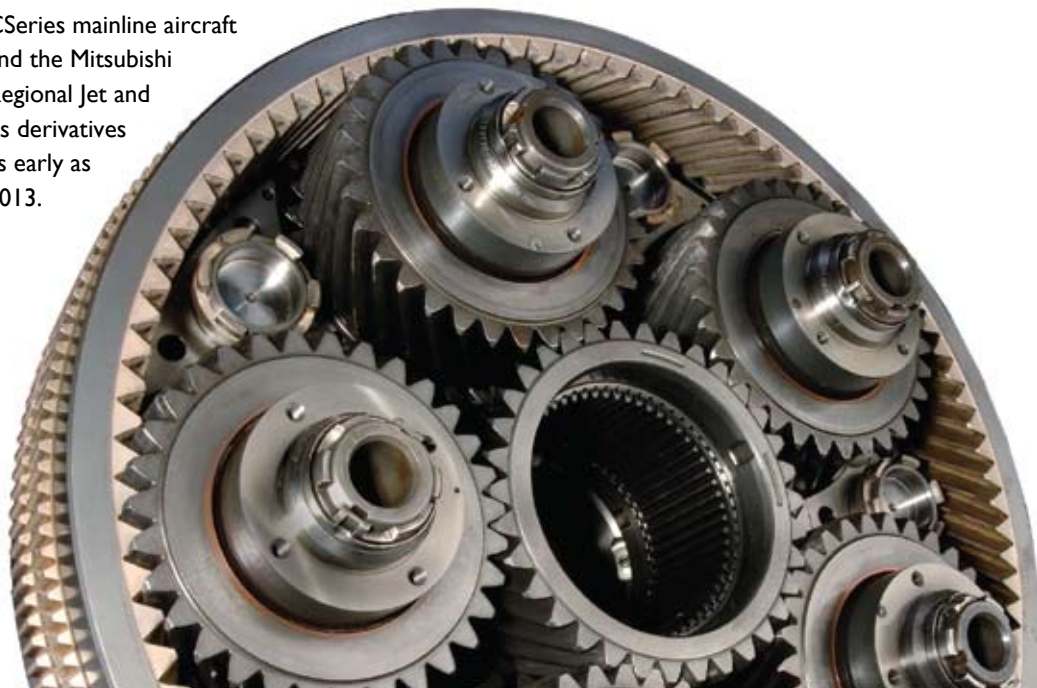
The Snecma Silvercrest engine is destined for business jets with maximum take-off weights between 20,400 and 27,200 kg (45,000 and 60,000 lb). Originally designed as a 37.8 to 46.7 kN (8,500 to 10,500 lb) thrust turbofan, the range has been raised and is currently quoted as 42.3 to 53.4 kN (9,500 to 12,000 lb) of thrust. The company expects this engine to be 15 to 20% quieter than Stage 4 requirements, have 10 to 15% better specific fuel consumption than typical engines in this class, and most importantly, come in 50% under the margin for acceptable emissions. Snecma, part of the SAFRAN Group, is still marketing the engine to airframe manufacturers.

### Slower, Quieter Speed

Pratt & Whitney has invested a tremendous amount of time and money exploring geared turbofan engines and developing its PurePower PW1000G engine family. A unique set of gears allows the engine's fan to operate at a slower, much quieter speed, whilst permitting the low-pressure compressor and turbine, deeper in the engine, to operate at higher speeds, increasing engine efficiency and delivering significantly lower fuel consumption and emissions. The most noticeable attribute of this engine is what you don't hear – it is 50% quieter compared to today's quietest engines, both inside and outside the aircraft cabin. These engines will first be seen on the Bombardier CSeries mainline aircraft and the Mitsubishi Regional Jet and its derivatives as early as 2013.

GE and Honda's joint venture on the HF120 has truly been novel. The engine, designed to power both the HondaJet series and the Embraer Spectrum Freedom jet, has a swept front fan and two-stage booster, with a titanium impeller in the compressor that comes straight from GE's newest GENx technology, designed for much larger aircraft. The unique configuration of the engine, combined with its cutting-edge materials – derived from Honda's Formula 1 racing experience – puts this little 9.1 kN (2,050 lb) thrust engine at the forefront of light-jet engine designs for the coming decade. Cruise-specific fuel consumption is expected to be less than 0.7 lb/(hr lbf) [pounds per hour pound-force] (0.7 kg/(hr kgf) [kilograms per hour kilogram-force]). Time between overhauls is expected to be 5,000 hours (40% longer than current business jet engines). This means significant savings for owners.

At the ultralight end of this scale are Williams International's fanjet derivatives that are currently slated to power the Diamond Aircraft D-jet. This diminutive fanjet sports Williams' low-noise, third-generation wide-sweep fan technology coupled with high-efficiency core components that provide a high overall pressure ratio and exemplary cruise fuel economy. For the owner who wants a sports car-like feel to an aircraft and prefers to fly themselves, the FJ-33-5A powered D-jet is poised to answer. >>



### On the Heavy End

The Boeing 787 Dreamliner VIP aircraft and the complete Airbus A350-900 lineage are all driving the demand for new high-bypass jet engine technology. Both charter and private operators are feeling the heat from European edicts demanding that aircraft emissions be lowered, while noise limitations and curfews constantly plague operators. Efficiency enhancements are a happy by-product of lowering emissions, but one that most owners will gladly accept in light of recent economic events.

At the top of the list of innovators pushing for radical new engine design for heavy business aircraft are Rolls-Royce and General Electric. Each are actively involved in bringing to market engines in the 240 to 330 kN (53,000 to 75,000 lb) range, designated to power some of the ultimate VIP private and business aircraft of our time.

The Rolls-Royce Trent 1000 is one of two engines powering the Boeing 787 Dreamliner, while the Trent XWB engine is slated to power the Airbus A350. The XWB departs from other Trent engines by having a two-stage configuration for the IP turbine, and uses other ground-breaking weight-saving technologies to achieve its performance goals. "The Trent XWB has the lowest carbon emissions of any wide-body engine, and will be the most fuel-efficient engine in the market," says Ian Crawford, Director of Airbus Programmes for Rolls-Royce. It's expected to be flying on the A350 by 2013.

The General Electric GEnx engines are also slated to go on the Boeing 787 Dreamliner, offering Boeing's customers a choice of engines. The GEnx employ distinctive composite fan blades, and like the Trent, has no bleed air system.

Both the Trent 1000 and the GEnx are unique in that they are engineered so that either engine can hang off the same airframe without major modifications. This reduces Boeing's production costs on the aircraft, and that, in turn, reduces customers' cost of entry to the VIP version.

### The Future – and Beyond

Almost all of the engines detailed above (except perhaps the Pratt & Whitney PurePower) are relying on subtle, but effective tweaks of existing high-bypass turbofan technologies and materials for their increased performance and efficiencies.

Even Aerion, developing the first supersonic business jet (SBJ), has teamed with Pratt & Whitney to adapt the latest generation of JT8D engine for its aircraft. The version that will be employed on the SBJ will incorporate some of the recently developed and patented noise suppression technology to achieve Stage 4 noise requirements. The JT8D-219, properly tuned, should allow sustained supersonic cruise at Mach 1.6. Pratt & Whitney is assisting in the engine/airframe integration.

There is, however, another class of aircraft and engines that are just beginning to push the boundaries of what we know we can do with propulsion technologies. It is anyone's guess when we will see the fruits of today's exciting research. However, by simply looking over the waiting list for Virgin Galactic's SpaceShip 2 it is clear to see that the first aircraft developed to mate to these engines will be geared toward moving VIPs, heads of State, and business people around the globe very, very fast.

Hypersonic scram-jet technology promises to push us to our destinations in delectable silence and comfort – soaring high above weather just outside the earth's atmosphere, and at speeds that make the Concorde's blistering Mach 2.0 look passé. Typical scram-jet powered aircraft will operate between Mach 4 and Mach 10, shrinking 13-17 hour legs down to a matter of just an hour or two of travel.

This is not drawing board vapourware. The Korea Aerospace Research Institute (KARI) announced that it has successfully performed the testing of a supersonic air intake and sonic burner, key components of the next generation Supersonic Scramjet engine. The Japanese Aerospace Exploration Agency (JAXA) is working to reduce CO<sub>2</sub> emissions from engines by developing intelligent engine control methods, small but high-performance compressors, fans with better propulsive efficiency, turbine blade cooling structures, and high-temperature super-alloys for higher thermal efficiency.

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Hypersonic scram-jet technology promises to push us to our destinations in delectable silence and comfort

General Electric has designed a variable-cycle engine whose internal valves and moving blades enable it to operate in three modes. On take-off and landing it works much like today's jet engines. During acceleration through Mach 1 it works like a simple but noisy supersonic engine, while for cruising it adopts a posture somewhere between the two.

Rolls-Royce, meanwhile, has proposed a compromise engine design that meets take-off noise requirements without any extra moving parts. The company plans to take its Trent 800 engine, made for the Boeing 777, and remove the fan that produces most of the thrust, replacing it with a smaller, higher-pressure fan.

### **As For the Burn?**

No new engines can ignore the positive revolution that we are on the brink of with biofuel technology in aviation. It has all but decisively been proven that today's aircraft engines can safely run on several different formulations of bio-diesels and bio-kerosene blends. (See Sanjay Rampal's article, "Jet Fuel

Turns Green without Envy" on page 53 of this issue.) One can reasonably expect that all future technologies will be expected to run on both a mixture of petrochemicals and biofuels as well as on pure biofuels, more than likely within the next decade.

All the engine manufacturers we spoke to stated that their engines are up for the challenge of alternative fuels. Most, in fact, welcome the new fuels because they will help to reduce noxious emissions from engines, making them even 'greener' than the manufacturers can presently forecast. Performance figures will have to wait until each engine can be tested with a particular bio-blend or pure biofuel. ■

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All the engine manufacturers we spoke to stated that their engines are up for the challenge

Scram-jet engine



# Pilots Feel the Pinch

by Dan Smith



**The past twelve months have been difficult for everyone in business aviation. As tough economic conditions have bitten, companies have taken action to reduce employment costs and it's the people at the front of the aircraft who are feeling the pinch. While there are signs that the economy, and bizav, might be on the road to recovery, it's still a hard time to be looking for work. So what's happening in the job market now and how can you improve your chances of getting work?**

Typically the employment market runs about three to six months behind the general economy. With exceptions, the banking crisis began to seriously affect stock markets and business confidence around August 2008. At that time the European Union unemployment rate was 7.0%. It has climbed every month since, reaching 8.9% in June this year. However, the most dramatic increase came between December 2008 and

March 2009 when EU unemployment increased from 7.6% to 8.5%. Although still increasing, the rate is levelling off which suggests that the job market, like the economy a few months ago, is improving.

There are signs that things are turning around according to Fiona Betts, Managing Director of Betts Recruitment:

"We are starting to see companies recruit executive-level staff in management, operations and sales." With almost 20 years' experience in recruitment, Betts has seen it all before: "The first thing companies do when the economy starts to recover is get key people in place. It happened after 9/11 and after the Asian financial crisis in the late 90s."

## Cutbacks Up Front

In the August edition of *On the Fly*, FC asked a number of maintenance organisations whether they were still finding it hard to recruit good people, and the universal response was “Yes”. Eric Gillespie, Sales and Marketing Manager of Flying Colours Corp is on the lookout for quality people: “There is still a shortage of quality maintenance engineers. We have not seen this change to date, despite the big downturn in the economy.”

The economic crisis has effectively grounded many hundreds of aircraft as people choose not to fly or to sell their planes. That has put a lot of flight crew out of work. “It’s the guys at the front of the aircraft that are feeling it,” says Betts. “There is a surplus of candidates for pilot jobs, and clients are as fussy as always. A candidate must have the right number of hours, right certification, even the right passport. People are looking for the perfect jigsaw piece.”

## Screening for Safety

With a plethora of candidates to choose from, you think it would be easy to find the right person. Christian Beckert of Aviation Screening cautions employers against accepting candidates without assessing them adequately: “Big companies commonly screen their candidates but small operators usually do not. A pilot is much like a manager and in a small company they can have a lot to do besides flying. Their flying skills are sometimes really poor.” Beckert’s concerns are reflected in a report on Business Jet Safety by the UK Civil Aviation Authority (CAA). Published in March, the CAA report states in part: “...business jets appeared to be involved in a disproportionate number of fatal accidents.” Over one third of those accidents involved ferry or positioning flights.

A surplus of candidates can also pose problems for the applicants themselves. To ensure your CV is picked out of the bunch, Betts recommends you follow exactly the procedures laid out in the job listing: “Provide everything that they ask for. Employers need to have a process to deal with 200 applications for one job. If we are oversubscribed, we shortlist the people who followed the procedure.”

While getting a job is tough, there are ways to increase your chances of being successful (see Putting Your Best Digital Face Forward on page 33) and there are jobs out there. Who knows where your next position will take you? ■

“It’s the guys at the front of the aircraft that are feeling it”



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# Taking the Hard Decision

S-92 simulator

Netjets Europe has a reputation for doing things differently. So it is perhaps no surprise that the company took a unique approach when they realised they needed to cut back around 60,000 duty days, the equivalent of 300 full-time pilot jobs. Rather than axe 300 positions, Netjets formed a working group with its pilots and asked them to come up with some ideas of how they would reduce the workforce.

The working group came back to management with over 20 different ideas. In discussions the list of options was reduced to five. Among the ideas that made the cut were voluntary redundancy, job sharing, part-time working and long- or short-term leave. The options were then presented to the employees who could select which option suited them best.

## Oversubscribed

The result? The programme was oversubscribed by 5,000 duty days. “We had to say no to some people,” a Netjets spokesperson told *FlyCorporate*. Just 87 pilots, or 9% of the total, selected voluntary redundancy.

The most popular has been the job-sharing scheme which allows pilots to work for one year and then take the next year off, even though the pilot is not allowed to work for a direct Netjets competitor during their year off. The scheme runs for four years, so each pilot is guaranteed at least two years work over that time.

Employees have appreciated that Netjets did not take the easy option, and company loyalty has increased as a result.

Many have expressed their satisfaction with the process, stating that it was refreshing to be asked and involved.

“By working very closely with our employees, we have been able to achieve this reduction without having to make any compulsory redundancies,” said Rob Dranitzke, Chief Operating Officer of Netjets Europe. “These measures, combined with other initiatives we are taking to proactively stimulate demand, mean that our business is now effectively positioned to continue to lead the private aviation market. We would like to thank our staff for their understanding and cooperation and look forward to increasing our involvement with them as market conditions improve.” ■

# Putting Your Best Digital Face Forward

A recent job advertisement on [fly-corporate.com](http://fly-corporate.com) attracted a record number of clicks for an ad on our site. Such a positive response can, however, be overwhelming for the person handling the enquiries and applications. So, when competing with such a large number of other candidates, how can you ensure that your application is noticed?

“Think about who is receiving your application,” says Fiona Betts. “If the applications go to the ops manager he will be asking ‘Can this person fly the plane?’. But if they go to the HR Manager, they are more likely to ask ‘Will this person fit in with the team?’.” So forget that standard application letter and tailor it for every job. “People forget that finding a job is a job, nine-to-five, Monday to Friday,” insists Betts. “Spend some of that time improving how you apply.”

## Business Networking

You should also spend some of your time networking. [Facebook](http://Facebook) is probably one of the better-known social networking sites you can use, but the emphasis here is on “social”. Serious networking and job hunting takes place on websites such as [A Small World](http://A Small World), [LinkedIn](http://LinkedIn), [Plaxo](http://Plaxo), [Xing](http://Xing), and many others.

These tools generally enable you to locate people you know, detail your career experience, obtain references and create or join groups of people with common interests. CVs are often passed around and people talk to each other about jobs and candidates. Betts strongly recommends that you don’t underestimate the potential of these sites: “There are people on there who might be your next employer.”

Groups on these sites can be a valuable source of information. Out of work pilots on LinkedIn have formed the Aviation Contract Pilot Pool. The Pool shares intelligence about open positions as well as information on which sites to use for job hunting, training and other useful information. “I think the main advantage of LinkedIn for business aviation pilots is the ability of hiring agents and headhunters to search the site when looking for qualified pilot candidates,” says Dave Wolfram, a pilot, group regular and owner of [Your-Jet Aviation](http://Your-Jet Aviation). Wolfram believes there are better sites for networking and recommends both Pro-Pilot World and the Professional Pilots Rumour Network.

Wolfram is also starting a new service for pilots to help them stay current and marketable at the lowest possible prices. Known as Pilot SIM Brokers, the service has received a number of training slots at a substantial discount off of the regular price. “Pilots who are able to take advantage of this training will be current and in a better position to accept contract flights or full-time positions as they become available,” says Wolfram.

## e-Portfolios Coming

Coming soon is the e-portfolio, essentially a webpage where your basic career and contact details are posted. e-portfolios can also include artefacts (such as digitally scanned images of your degree or other qualifications), examples of work you have done, links to your social networking sites and references from people you have worked with in the past.

Employment agencies are also looking at hosting e-portfolios on their websites. Betts Recruitment has already launched Betts Advantage, a subscription service which provides advice and job links for job seekers. e-portfolios will be added in 2010. ■





# Goodwill Thrives Through Aviation Crisis

by Jeff Apter

***FlyCorporate* readers could be forgiven for forgetting that there was a crisis in aviation when looking at the performance of specialist charter operation Goodwill. The crisis in commercial aviation, which generally should have augured well for charter activity, has had an adverse effect on various charter operators, some of whom have gone bankrupt rather spectacularly. But the situation has boosted growth for Goodwill's operations. The Group reported a record 2008 with income up 35% over the previous year to reach a turnover of €20 M (\$29.2 M). The first half of 2009 already shows a 20% increase over the corresponding period of 2008, with total income this year estimated at €25 to 30 M (\$36.4 to 43.7 M).**

## Sports Travel Leader

Established in November 2000, Goodwill operates in three sectors: business aviation – especially corporate and VIP flights, road shows, plant visits and government flights; commercial aviation – such as conventions, product launches, and seminars; and in its core activity of sports travel, in which it is the European leader. Goodwill has clinched about 30% of the French football (soccer) market. It organises flights for around 30 football, rugby, basketball, handball, tennis, golf and Formula 1 teams, many of them on exclusive contracts, as well as organising group travel for the teams' VIPs, sponsors and supporters.

The Group has offices in Paris, Geneva, Luxembourg and Brussels, and has become one of the leading European charter brokers, organising around 1,000 flights a year. In an exclusive interview with *FlyCorporate*, Goodwill President, CEO and 100% Owner Samuel Bucciaccchio, confirmed that another office would open in Europe: "Probably by the end of this year with another following in 2010." He declined to give details but intimated that the new facilities would be in both the northern and southern parts of the continent. He said plans were well-advanced for offices on the East Coast of the USA and Asia "within the next 12 months."

## Tailored Charter Brokering

Almost five years as sales manager of Air Liberté sub-contractor Air Open Sky taught Bucciaccchio that aircraft ownership is "not necessarily the best solution." He founded Goodwill's business on tailored charter brokering. The Group works 24 hours a day, 365 days a year with over 280 companies – enabling it to provide aircraft ranging from 4/5-passenger very light jets to Boeing 747s, helicopters, ACJs and BBJs at short notice. About 20% of Goodwill's operations concern business aviation, 35% commercial aviation and 45% sports travel. The company organises an average of 15 sport flights a week including on-demand trips for a wide range of activities. Most of the flights originate or land in France, England, Spain and Italy but the United States and Asian destinations are also popular.

"Chartering an aircraft is as easy as reserving a taxi and we can fly to places not served by regular flights easily," explains Bucciaccchio. He cited the example of an international group seeking to visit its European offices in a short time. Eight passengers on board a Piaggio P180 Avanti took off at 07.00 from Lille, France, flying first to Cambridge, England, then Aberdeen in northern Scotland and Rotterdam in the Netherlands before returning to Lille at 18.25 the same day. Instead of taking three days by scheduled flights, three cities were visited in the same day saving around 150 working hours.

Another example was a 07.00 call to take seven experts from Paris to Bordeaux to assess major storm damage. "At 07.30 we gave a cost estimate and at 08.00 confirmed the flight. The group took off at 10.00, returning later the same day."

## Growing Client Base

According to Bucciaccchio, business aviation has become an even more useful economic tool for many companies as they seek to consolidate and expand business opportunities during a crisis. "An increasing number of small- and medium-sized companies have become clients," he says. Bucciaccchio's company has attracted many clients who used to work with other organisations such as Hunt and Palmer, which Bucciaccchio said, has ceased business in France, Italy and Spain. "Airline companies also call Goodwill regularly for some destinations when they want to make maximum use of their own aircraft," he said.

The business is enhanced by the Group's travel agency subsidiary Goodtravel, established in 2004, which offers its clients a full range of made-to-measure services. In addition to private jet activity, Goodtravel provides a round-the-clock service for the organisation of tailor-made trips, hotels and restaurant bookings, yacht hire and villa renting. ■

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“Business aviation has become an even more useful economic tool for many companies”

The Goodwill Team



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# Versus: Netbooks

by Dan Smith

The past year has seen the launch of an astonishing array of “netbook” computers as manufacturers heed calls from frequent travellers for lighter laptops. Netbooks typically have a screen that measures less than 25.4 cm (10 in) and usually weigh less than 1.5 kg. That small size requires concessions in other areas, so pay particular attention to battery life, keyboard size, operating system, memory and the type of pointing device installed (track pads and track balls are the most popular). You will probably need to compromise on at least one of these items.



Asus was first on the market with its range of Eee netbooks which hit the shelves in mid-2008. One of their latest offerings is the Eee PC 1000HE which is available in a Windows XP or Linux version.

Traditionally a maker of motherboards and other computer components, MSI is taking the netbook market by storm. The company has a large number of models available.

Eee PC 1000HE		MSI Wind	
266 mm	Width	260 mm	
191.2 mm	Depth	180 mm	
38 mm	Height	31.5 mm	
1.45 kg	Weight	1.36 kg	
25.7 cm (10.1 in)	Display (diagonal)	25.9 cm (10.2 in)	
Windows XP or Linux	Operating system	Windows XP	
1 GB	Memory	1 GB	
160 GB HDD	Storage	160 GB HDD + 8 GB SDD	
Track pad	Pointing device	Track pad	
Li-ion 6 cells	Battery life	Li-ion 9 cells	
9.0	CNET editor's rating*	8.8	

\*www.cnet.co.uk (17 September 2009)

There is little to set these two apart. But if I had to choose, I would plump for the Eee PC because of its slightly larger keyboard. However, the MSI's better battery life is also extremely attractive. Perhaps the best advice I can give is to take the time to establish exactly what features are important for you. ■

# Landings São Paulo

by the FlyCorporate Editorial Team

More than 11 million people call São Paulo home, making it Brazil's largest city and the seventh largest metropolitan area in the world. With so many people, it's no wonder that the entertainment never stops. During the day São Paulo is one of South America's main centres for business, finance and the arts.



Landings: São Paulo

For more information and other Landings, visit  
[www.fly-corporate.com/content\\_landings.php](http://www.fly-corporate.com/content_landings.php)

## Airports

São Paulo has four airports, three of which are used by business aviation. The fourth, Campo de Marte, is home to one of the largest helicopter fleets in the world.

### Guarulhos International (SBGR)

Guarulhos began operations in 1985 and is now the busiest airport in Brazil. It has a dedicated general aviation area and bizav handling is available. The airport is located 25 km (16 miles) from the centre and handled just over 20 million passengers and 194,000 aircraft movements in 2008.

The airport is open 24 hours a day. Aircraft parking is available on prior request (NOTAM). Guarulhos has two runways: 09R/27L is 3,000 m (9,843 ft) while 09L/27R is 3,700 m (12,140 ft).

### Congonhas International (SBSP)

Congonhas is located 8 km (5 miles) from the centre of São Paulo. Designed with a capacity of 6 million passenger movements a year, the airport handled more than 13.5 million people in 2008. Congonhas has recently undergone major work to improve facilities including the building of a new 3,300 space car park.

The airport is open from 09.00 to 02.00 UTC and has all the infrastructure required to support business aviation. Slots are required. The airport has two runways: 17R/35L is 1,940 m (6,365 ft), while 17L/35R is 1,435 m (4,708 ft).

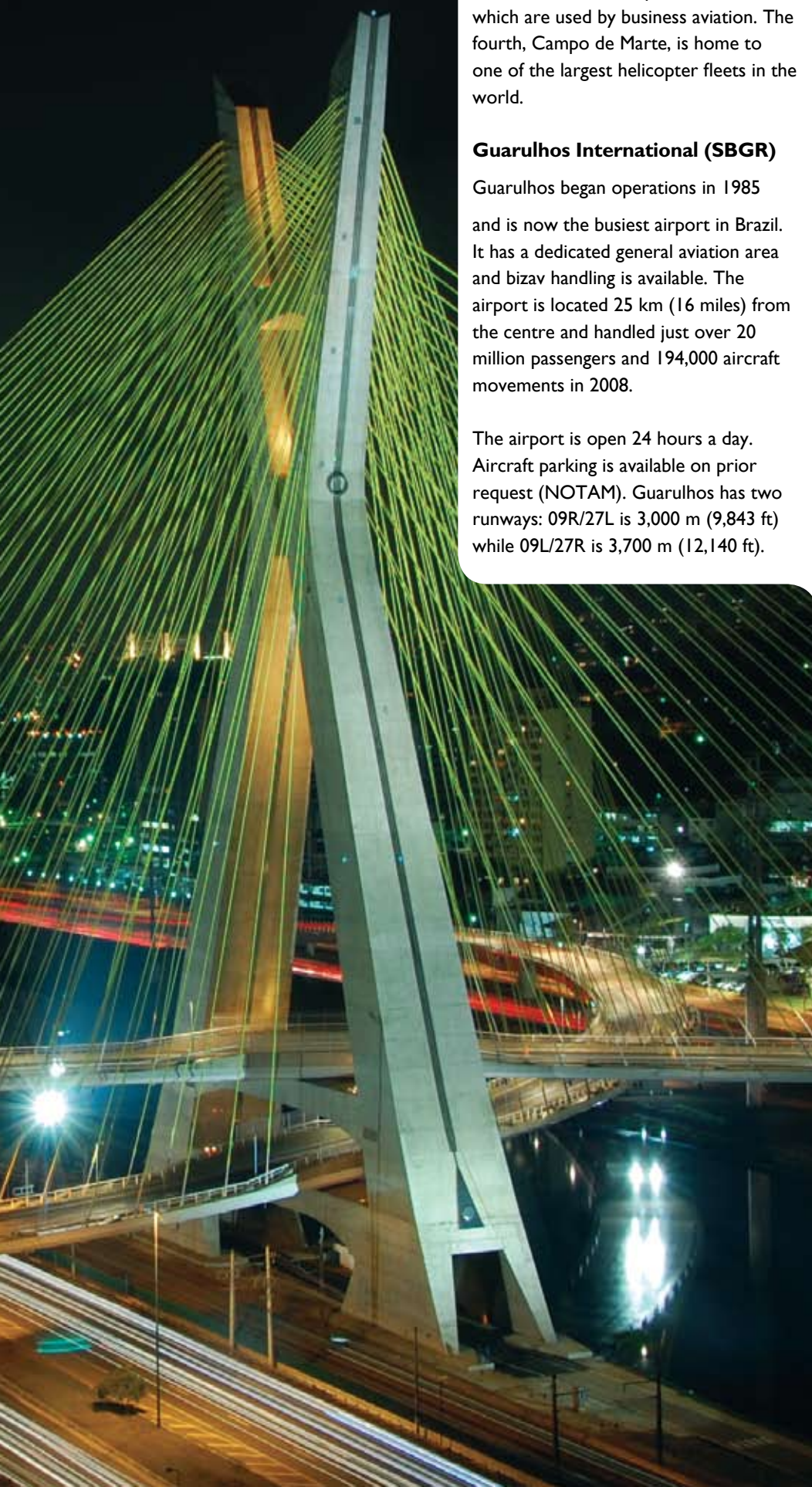
### Viracopos/Campinas International (SBKP)

Although located 99 km (62 miles) from central São Paulo, Viracopos /Campinas is still an important airport for the city. The airport is just 20 km (12 miles) from Campinas, the third largest city in the state of São Paulo. Viracopos is mainly used for domestic services but some international airports operate from here.

The airport is open 24 hours a day and has one runway 15/33 which is 3,240 m (10,630 ft) in length. There are no restrictions on operations at this airport. A general aviation area is provided and handling for bizjets is available.

### Campo de Marte (SBMT) São

Paulo's first airport, Campo de Marte, is situated to the north of the city. Built in 1919, the airport is now the home of the largest fleet of helicopters in Brazil. Along with rotary aircraft, Campo de Marte also handles small aircraft belonging to flying clubs and air taxi firms. Night operations are limited to helicopters. The airport is not a port of entry to Brazil. >>





## FBOs

### **ASAS FBO (Viracopos)**

The staff at the ASAS FBO can provide a wide range of services for executive aviation including handling, maintenance, flight planning and supplies. ASAS can also help with hotel reservations, aircraft charter and car rental.

### **Golden Jet (Guarulhos and Congonhas)**

Golden Jet has FBO facilities at both Guarulhos and Congonhas airports. The company offers a VIP lounge, check-in or collection from commercial flights, customs and immigration facilities, executive transport and security, and aircraft handling.

### **Líder Aviação and Signature Flight Support (Congonhas, Guarulhos and Viracopos)**

Líder Aviação and Signature Flight Support cooperate to provide ground handling and FBO facilities for general aviation throughout Brazil. Operations for airports other than those listed above are coordinated through the Congonhas facility. Bilingual agents, ramp equipment, web access, aircraft cleaning and gourmet catering can be arranged at all of the listed airports. Other services are also available. Hangarage for aircraft up to a G-IV can be arranged at Congonhas.

### **Swissport Executive Aviation (Congonhas, Guarulhos and Viracopos)**

With facilities at all of São Paulo's main airports, Swissport can offer 24 hour access, domestic and international handling, passenger and crew assistance and briefing rooms. Other facilities are available depending on the airport.

### **Universal Aviation (Guarulhos)**

Universal Aviation provides ground handling services for passengers and crew including airside transport between the aircraft and terminal and from the terminal to local hotels. VIP catering, rental cars and limousines can also be arranged. Fuel, on-site aircraft security and flight planning are also available. Universal can also organise assistance at other airports in Brazil.

### Connections

Taxi, limousines and hire cars are available from all airports in São Paulo. Your hotel can also arrange a transfer between the hotel and airport on request. Average travel times from the airports to downtown are 15 minutes from Congonhas Airport, 50 minutes from Guarulhos and 1.5 hours from Viracopos/Campinas. Allow more time at peak hours and during special events.>>

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With so many people, it's no wonder  
that the entertainment never stops

## Top Business Hotels

The business traveller to São Paulo has plenty of choice when it comes to accommodation. Although there are a lot of hotels, the city still fills up for major events such as the Brazilian Grand Prix. You may be required to stay for a minimum number of nights or pay in advance during these periods.

### Fasano

A 1930s-style hotel that combines contemporary design with attention to detail. Philippe Starck has designed the interiors of the 81 rooms and 10 suites. All feature hardwood floors, king-size beds with goose-down pillows and duvet, workstations and a private balcony.

Web [fasano.com.br](http://fasano.com.br)

### Grand Hyatt

Located in the heart of São Paulo's new Marginal Pinheiros business and financial district in the Berrini area. The hotel features 466 luxury rooms and suites, restaurants and a spa complex.

Web [saopaulo.grand.hyatt.com](http://saopaulo.grand.hyatt.com)

### Hilton Morumbi

Large bedrooms with comfortable sitting and working areas overlooking the city or river. The suites have a separate living area, kitchenette, and the marble bathroom is fitted with a hydro spa. An Executive Lounge is also available for those who choose a suite.

Web [hilton.com](http://hilton.com)

### Renaissance

The Renaissance bills itself as "one of the best luxury hotels in São Paulo." You be the judge as you enjoy the hotel's spacious rooms, Club Lounge, business centre and meeting rooms.

Web [marriott.com](http://marriott.com)

### Tivoli São Paulo - Mofarrej

Recently renovated five-star hotel located in the centre of the city. The hotel boasts that it has the largest presidential suite in South America at 750 m<sup>2</sup>. There are 219 other rooms with more modest dimensions. All are equipped with air conditioning, cable TV, safe and Wi-Fi.

Web [tivoli.pt](http://tivoli.pt)

### Unique

As the name implies, the Unique is something different to your ordinary business hotel. Clad in copper, this unusually shaped building was designed by Ruy Ohtake and set in a garden created by renowned landscape designer Gilberto Elikes. The 85 rooms and 10 suites have been individually created by architect João Amentano.

Web [hotelunique.com.br](http://hotelunique.com.br)

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Although there are a lot of hotels,  
the city still fills up for major events  
such as the Brazilian Grand Prix



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## Top Conference Facilities

São Paulo is one of the most popular places to host an event in South America and there is a wide choice of venues. Most of the major hotels also have conference and meeting spaces available.

## Anhembi Parque

The Anhembi Parque is one of the largest event centres in Latin America. With 400,000 m<sup>2</sup> of space, the venue hosts 30% of all the events that take place in Brazil. Venues at the site range from small auditoriums for concerts and presentations, up to the enormous Convention Palace which can be divided into a number of smaller venues.

Web [anhembi.com.br](http://anhembi.com.br)

## Centro de Convenções Frei Caneca

A versatile, contemporary and functional space for events such as trade shows, conferences, conventions, exhibitions, and product launches. The 6,500 m<sup>2</sup> of space can be broken up into modular rooms, each accommodating between 50 and 2,000 seats. The centre partners with Siemens who can provide the latest meeting technology.

Web [convencoesfreicaneca.com.br](http://convencoesfreicaneca.com.br)

## FC Picks for a Post-Meeting Drink

Just outside the SKYE restaurant, on the roof of the Hotel Unique sits [SKYE Bar](#). Sit back and relax with a drink as you overlook the São Paulo skyline and enjoy the regular DJ. For a younger crowd and a more up-tempo atmosphere you can try [Dona Flor](#) which buzzes and shakes until the early hours. [Café Journal](#) offers a more refined atmosphere and some delightful cocktails and snacks. The venue includes a both a wine bar and the La Casa Del Habano cigar bar.

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São Paulo is one of the most popular places to host an event in South America and there is a wide choice of venues



## FC Picks for Lunch or Dinner

Over the years São Paulo been influenced by its major immigrant communities including Italians, Portuguese and people from across Africa. Meat, especially beef, dominates many menus although seafood is also popular.

### SKYE

Situated on the top floor of the Hotel Unique, this modern dining room looks out over the city skyline. The cosmopolitan menu claims Brazilian, French, Italian and Japanese cuisines amongst its influences. SKYE does not accept dinner reservations from guests who are not staying at the Unique. However, you are welcome to turn up and try your luck.

Web [hotelunique.com.br](http://hotelunique.com.br)

### Restaurante Cantaloup

Contemporary restaurant featuring natural lighting and lush landscaping. The design has been recognised with a number of international architectural awards. The owners describe the Cantaloup's kitchen as being "without borders," drawing on a wide range of gastronomic cultures.

Web [cantaloup.com.br](http://cantaloup.com.br)

### Kinu

Modern Japanese restaurant in the Grand Hyatt hotel. Chef Adriano Kanashiro includes different and unusual elements to update traditional Japanese cuisine. A quick menu is available at lunch which is served in a traditional Bento Box. Two tasting menus are available in the evenings along with a full à la carte menu.

Web [kinu.com.br](http://kinu.com.br)

### Rubayat Figueira

Opened in 2001, Rubayat Figueira sits in the shade of a 130-year-old tree. The cuisine is described as one of contrasts, with ovens heated to over 600° F and meat flattened with iron. The restaurant also features an oyster bar and a dessert list featuring 25 delicacies.

Web [rubaiyat.com.br](http://rubaiyat.com.br)

### Restaurante Fasano

Located on the ground floor of the hotel of the same name, Restaurante Fasano serves Italian regional food prepared with fresh local ingredients. The dark wood-panelled dining room comes alive in the evening as the candles are lit and service begins. ■

Web [fasano.com.br](http://fasano.com.br)

## TRIP TIP: SÃO PAULO

Sao Paulo is a global metropolis which offers fantastic restaurants, intense cultural life, boutique hotels, international shopping and a nightlife that never stops. Try the Southern Brazilian way of cooking meat at Fogo de Chão, one of the most renowned barbecue houses in the city.

For the fashion conscious, there is nothing better than taking some time to walk around the Oscar Freire neighbourhood and maybe do some shopping at one of the international chains or local stores such as Rosa Chá for Brazilian beach wear. Nearby is the famous Paulista Avenue, where you can easily spend an afternoon visiting the MASP (Art Museum of São Paulo).

To end the day celebrating the São Paulo way, go to The View Bar & Restaurant, order some caipirinhas (a typical drink made with Brazilian sugar cane liquor) and enjoy the best panoramic view of São Paulo.

After dinner, choose a sophisticated or a modern nightclub and enjoy one of the coolest parties of the world!



[www.signatureflight.com](http://www.signatureflight.com)



[www.lideraviacao.com](http://www.lideraviacao.com)

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**Fraport AG Executive Aviation**  
Germany

**Global Jet Concept**  
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Greece

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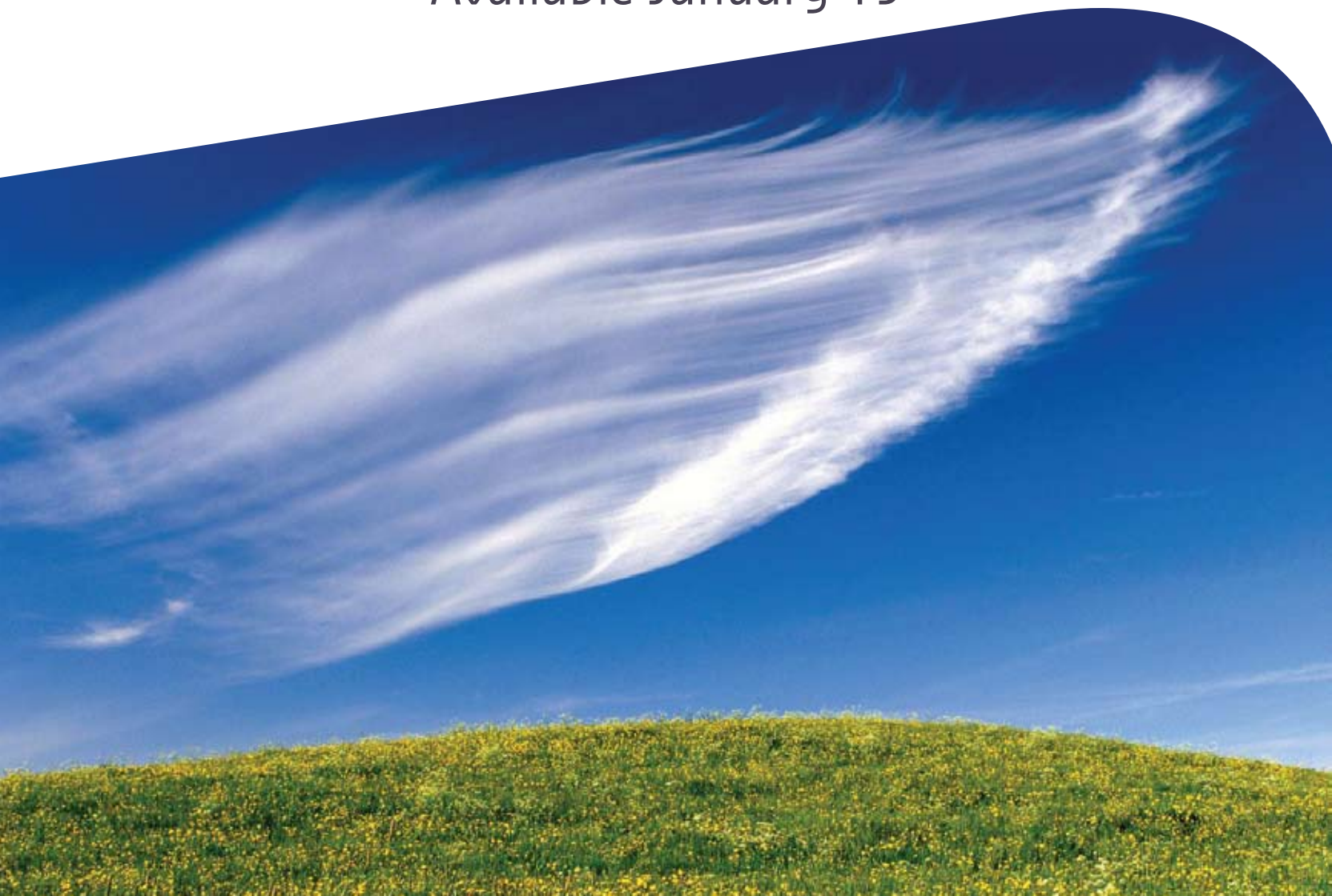
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