



# ARABIAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN THE MIDDLE EAST AND NORTH AFRICA

[www.arabianaerospace.aero](http://www.arabianaerospace.aero)



# BAHRAIN BECKONS

FOCUS ON BAHRAIN'S AEROSPACE AS THE COUNTRY HOSTS ITS FIRST INTERNATIONAL AIR SHOW

**AIR TRANSPORT**

The Boeing Dream awakens  
**PAGE 20**



**TRAINING**

The battle to train tomorrow's finest  
**PAGE 87**



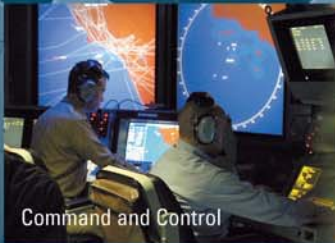
**INTERIORS**

Gearing up for AIME show  
**PAGE 105**





# how



## GLOBAL PARTNERS BUILDING GLOBAL SECURITY.

In a world that continues to change dramatically, governments increasingly seek to accomplish their most vital goals by working with advanced technology companies from around the globe. Building and sustaining partnerships that achieve their objectives is a question of how. And it is the how that makes all the difference.

[lockheedmartin.com/how](http://lockheedmartin.com/how)

**LOCKHEED MARTIN**  
*We never forget who we're working for*



Published by



TIMES Aerospace Limited  
Thamesgate Business Centre  
Thamesgate House  
37 Victoria Avenue, Southend on Sea  
Essex SS2 6DF UK  
Tel: +44 (0) 1702 32 2000  
Fax: +44 (0) 1702 32 2001  
Website:  
www.arabianaerospace.aero

**Directors:**

Mark Brown & Kevin Sammon

**Publisher:**

Mark Brown  
mark.brown@arabianaerospace.aero

**Display Advertising:**

Nick Hutchins  
nick.hutchins@arabianaerospace.aero

**Production Coordinator:**

Claire Hutchings  
claire.hutchings@arabianaerospace.aero

**Circulation Dept:**

rosie.lawford@arabianaerospace.aero

**EDITORIAL**

**Editor:** Alan Peaford

alan.peaford@arabianaerospace.aero

**Defence:** Jon Lake

**Air Transport:** Alan Dron

**Business Aviation:** Liz Moscrop

**Helicopters:** Paul Derby

**General Aviation:** Liz Moscrop

**Space:** Steve Nichols

**Aircraft Interiors:** Marcelle Nethersole

**Technology:** Brendan Gallagher

**MRO & Propulsion:** Martin Johnson

**Business:** Ian Sheppard

**Picture Editor:** Ian Billinghurst

**Designer:** Chris Murray

**Production Editor:** Rick Haden

**Sub-Editors:** Steve Knight, Mark Bursa

**Contributors:** Ralph Ahearn, Mohammed Ali Alia, Kelly Clark, Ian Goold, Jamie Hunter, Mike Martin, Terry Spruce, Geoff Thomas.

**Editorial head office:**

Aerocomm Ltd  
The Gatehouse, 104 Lodge Lane  
Grays, Essex, RM16 2UL UK.  
Tel: +44 (0)1375 427014  
Fax + 44 (0)1375 404478

**Disclaimer**

The views expressed in ARABIAN AEROSPACE magazine are not necessarily shared by, nor should they be taken as the views of TIMES Aerospace Limited (the publishers) or Aerocomm Ltd. Any views expressed are those of the individual contributors.  
No responsibility or liability is accepted by the editor or the publishers for any loss occasioned to any person, legal or physical, acting or refraining from action as a result of any statement, fact, figure, expression of opinion or belief contained in Arabian Aerospace.  
The publication of advertisements does not in any way imply endorsement by the editor or the publishers of the products or services referred to therein.  
The entire contents of this publication are protected by copyright, full details of which are available on request. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission from TIMES Aerospace Limited.  
Printed in the UAE by Emirates Printing Press.



## Don't miss our regular Arabian Aerospace podcasts as well...

The Dubai Airshow was a massive success.

Despite all of the well-documented issues around the economy of Dubai, there was no question that the world wanted to be in the city for the show and there was plenty happening – even if the mega orders of previous years were not.

For Arabian Aerospace it was a good moment for us too.

Visitors to the show could not fail to see our presence – and those who weren't there were able to keep up with the breaking news on our online coverage and then listen to the best of the interviews through our new podcast *Arabian Aerospace* radio.

The radio programme goes live every Sunday and brings you a concise summary of the week's news as well as a chance to hear directly from the

newsmakers in interviews with our top journalistic team.

Please do listen – and let me know what you think.

We will, of course, be reporting from the major events in the next few months including the Bahrain Airshow, the Marrakesh show and the three big conference events in Dubai – AIME (Aircraft Interiors Middle East), MRO Middle East and ADTS – the Aviation and Defence Training Show.

This issue of the magazine gives a brief snapshot of what is likely to be on the agenda at those events and looks behind the scenes of the issues affecting our industry in this part of the world.

Alan Peaford  
Editor-in-chief

### COVER: PATROLLING THE SKIES OF BAHRAIN. PICTURE BY STEFAN DE GRAEF

### Advertisers

Abu Dhabi Airports Company	6	Contractair	25	OnAir	104
ADTS 2010 (F&E Aerospace)	101	Dassault Falcon	27	Palm Aviation	8
Advanced Arabian Simulation Company (AASC)	96	DHL – UAE	85	Registry of Aruba, The	55
AIME 2010 (F&E Aerospace)	108	Elite Jets	50	Sabre Airline Solutions	31
Alsalam Aircraft Company	47	EgyptAir MRO	14 & 118	Saudi Aviation Flight Academy	93
ARINC	15	Farnborough Int'l Airshow 2010	125	SIA Engineering Company	73
Aviation Outlook MENA 2010	23	Fokker Aircraft Services	113	Signature Flight Support	19
BAE Systems	12	Gates & Partners	115	TAG Aeronautics	4,5
Bahrain Airport Services	69	Gulf Air	66	UKTI Defence & Security Organisation	36
Bell Helicopter	45	Gulf Aviation Academy	65		
Blenheim Capital	0BC	Hawker Beechcraft	43		
Bombardier Aerospace	53	Horizon Int'l Flight Academy L.L.C.	86		
CAE	103	JorAMCo	121		
Civil Aviation Affairs	60	Lockheed Martin	IFC		
Cessna Aircraft Company	IBC	Marlborough	11 & 126		
		MENA Aerospace	77		
		Middle East Aerospace Consortium	127		
		MSI	119		

ARABIAN AEROSPACE magazine is a proud 'Industry Partner' of:



ARABIAN AEROSPACE magazine is officially supported by:







CHALLENGER 605  
CHALLENGER  
605

HS-

**TAG**  
AERONAUTICS

FIND OUT MORE ABOUT TAG AERONAUTICS. PLEASE CALL (514) 855-7771.  
[WWW.TAG-AERO.COM](http://WWW.TAG-AERO.COM)





REFLECTING ON SUCCESS

WHEN THE FIRST CHALLENGER\* AIRCRAFT TOOK TO THE SKY SOME THIRTY YEARS AGO, IT BEGAN A LEGACY OF EXCELLENCE THAT CONTINUES TO THIS DAY. AS A LAUNCH CUSTOMER IN 1977, TAG AERONAUTICS LOOKED TO THE FUTURE, AND SAW WHAT WOULD BECOME ONE OF AVIATION'S MOST RENOWNED FAMILIES OF AIRCRAFT.

TODAY, WE CELEBRATE THE CHALLENGER FAMILY OF AIRCRAFT AND ITS INDUSTRY-LEADING SUCCESSORS, THE CHALLENGER 605 AND THE CHALLENGER 300 AIRCRAFT. AND TAG AERONAUTICS, AS THE EXCLUSIVE REPRESENTATIVE AND DISTRIBUTOR OF CHALLENGER AIRCRAFT, IS PROUD TO BE A PART OF THIS HERITAGE OF EXCELLENCE.

**BOMBARDIER**

FIND OUT MORE ABOUT BOMBARDIER AEROSPACE. PLEASE CALL (514) 855-7698.  
[WWW.BUSINESSAIRCRAFT.BOMBARDIER.COM](http://WWW.BUSINESSAIRCRAFT.BOMBARDIER.COM)

\*Registered trademark(s) or trademark(s) of Bombardier Inc. or its subsidiaries. © 2007 Bombardier Inc. All rights reserved.

# Regional. Diverse. And always growing.



## ADAC. We're so much more than an airport company.

As operator of Abu Dhabi International, Al Ain International and Al Bateen Executive Airports, as well as Sir Bani Yas Island and Delma Island Airports, we connect to over 75 destinations in 46 countries. And we're currently working on one of the world's most ambitious airport development projects at Abu Dhabi International Airport. We've even won awards for our service efficiency and quick turnarounds. But now we've grown far beyond the role of a simple airport operator. From the unique retail offerings of Shop-Dine-Unwind – including the world's first stand-alone Jimmy Choo store at an airport – to our meet & greet, in-flight catering, luxury lounges, off-airport check-in facilities and VIP airport services. From our state-of-the-art business park at Skycity with world-class logistics and cargo services to one of the world's largest purpose-built aerospace facilities – the Al Ain Aviation and Aerospace Development – we're here to help your business grow.

To find out more, visit [www.adac.ae](http://www.adac.ae)





## 10 **business brief**

### SHOW NEWS

- 16 Dubai review**  
Headline news from the 11th Dubai Airshow held at Airport Expo in November

### AIR TRANSPORT

- 20 The Dream awakens**  
Ian Goold looks at the first flight of the B787 Dreamliner and considers the impact it will have on fleets in the MENA region.
- 22 Libyan flies a Green trail**  
ATR makes successful inroads into North Africa with its environmentally friendly ATR 42 and 72.
- 24 Airline killer**  
Alan Dron finds out how political decisions are affecting the future of Syrian Arab Airlines through 'unfair' US sanctions.
- 26 Size matters**  
Alan Peaford looks at how Embraer is rising to the right sizing challenge.
- 28 Silky route to growth**  
Ralph Ahearn flies to Almaty to check out how Air Astana plans to compete.
- 30 C-ing the future**  
Bombardier's new C-Series is getting closer to the Middle East.
- 32 Upmarket Tourism key for Oman**  
Oman Air's new strategy towards upmarket tourism.
- 33 Route Development**  
Marcelle Nethersole meets five of the region's best kept secret destinations..

### DEFENCE

- 37 Tail wind behind Typhoon**  
Eurofighter predicts more sales for its fighter in the Middle East. Jon Lake talks to the manufacturer to find out the fact behind the predictions.
- 38 Band of Brothers**  
Stefan de Graef and Edwin Borremans go to Jordan to watch the multinational F-16 large force deployment exercise and see how the training benefits local forces.
- 42 Saab success**  
The UAE defence force has selected its airborne early warning system. Jon Lake explains why this is an interim solution.
- 44 Little bird swoops**  
Boeing launches its AH-6i Little Bird helicopter at the Dubai Airshow.
- 46 Poseidon Adventure**  
Saudi Arabia could be in the market for the submarine-buster, the Boeing P-8 Poseidon. We look at what the Kingdom could get for its money.





# LEADERSHIP



As leaders in global handling and flight support, no-one has more experience and agents in every place than we do. We offer every aspect of service, from credit handling, refuelling and permits to itinerary planning and weather reports. All of which makes flying in and out of some of the world's most remote airports hassle-free.

Palm Aviation: real leadership in Global Flight Support.



## ■ BUSINESS AVIATION

- 48 Widening the Net**  
Fractional ownership finished? Not according to Graeme Deary who returns to the region to run Netjets Middle East.
- 51 Supermarket sweep**  
Liz Moscrop looks at the super-players that are emerging in the world of executive charters throughout the region.
- 54 Business charter data**  
Avinode data is used around the world to gauge charter demand. We look at the statistics for the Middle East.

## ■ SPACE

- 56 Space Spotlight**  
Abu Dhabi hosts the Global Space Technology Forum. Steve Nichols was there to see how the space race is affecting the Middle East players.

## ■ MAINTENANCE

- 116 Alsalem adding value in Saudi**  
Jon Lake meets the head of Alsalem and finds out why everyone is talking about the Saudi company's successful partnerships.
- 120 MRO Matters**  
Joramco wins double contract in Jordan while Etihad steps up the competition in Abu Dhabi. Fukeirah joins in the game while India poses MRO alternative to the region.

## ■ TECHNOLOGY

- 122 Splashing out on Lido**  
Lufthansa Systems Lido finds another willing customer in the Gulf to use the flight management system that saves cost and the earth.
- 123 Sabre survey**  
Software solutions firm finds out what Middle eastern airlines need to do to survive and grow.

## ■ EVENTS

- 124 What's on where**  
Forthcoming key events across the region.

## ■ PEOPLE

- 126 Moving places and faces**  
Air traffic management systems in the MENA region may need a new approach.
- 128 Plane Art**  
Chuck Grieve meets up with the artist David Bent and finds out how his time in the Gulf has inspired his creations.
- 160 All in a day**  
Ahmed Nemat from Bahrain's Civil Aviation Affairs talks about the challenges of his job.

# TRAINING SPECIAL

87-102



- 87: ADTS, the new show for regional training market**
- 88: Basic trainers: Props v jets**
- 91: Advanced trainers: Gulf has the pick**
- 94: Crews Control: How Etihad stays on top**
- 97: New Aircraft means new training cost**
- 99: Cairo hosts simulating discussion**
- 100: Training schools set to flourish**



# PREVIEW

AIRCRAFT INTERIORS MIDDLE EAST

105-114



- 105: Cabin creativity – what's new at the back**
- 107: Business jets offer new horizons**
- 109: Seat covers are big business for one Dubai manufacturer**
- 111: Flying by Numbers – connectivity under the spotlight**

## New airline – watch this Space...

Jordan is to get a new start-up airline focusing on routes between Amman and tourist locations in Turkey, Egypt, Bulgaria and Russia.

The airline is called Space Airlines and will begin operations from Queen Alia International Airport (QAIA) early this year with the first leased aircraft – a Boeing 737-400 – having already arrived at QAIA.

Space Airlines has signed a tenancy agreement with Airport International Group (AIG) at QAIA giving it a maintenance zone on the northern apron and an office in terminal one.

Curtis Grad, AIG's chief executive said: "We look forward to building a long-term and prosperous relationship with Space Airlines."

Space Airlines Captain Basil Obeidat, chief executive said: "Space Airlines is proud to be signing an agreement with AIG, resulting in the launch of our new services from QAIA, an airport that is witnessing significant growth and tangible increase in traffic."

## A technical Legacy

Operators of the 20 Legacy 600s in the Middle East had the chance to get to grips with technical issues and flight operations programmes in the second Embraer Legacy Operators meeting held in Dubai in December.

Embraer announced a partnership with CEVA Logistics during the Dubai Airshow, offering its executive jet operators a new distribution centre at Jebel Ali to improve the supply of spare parts to its expanding customer base in the region.



## Rolls lands Saudi Typhoon contracts

**Rolls-Royce has concluded contracts with BAE Systems to support the EJ200 engines powering the Typhoon fleet of the Royal Saudi Air Force.**

The two three-year contracts form part of the Salam Support Solution that has been agreed between the governments of Saudi Arabia and the United Kingdom.

Under the terms of the contracts Rolls-Royce, and its subsidiary Rolls-Royce Saudi Arabia Limited, will lead support for the engine fleet on behalf of the Eurojet consortium.

A key element of the contracts is that initial in-country support activity on the EJ200 engines will be conducted in Saudi Arabia. This will involve completing some repairs onsite and preparing engines and modules for transport back to Europe for deeper maintenance requirements if needed.

Martin Fausset, managing director of Rolls-Royce Defence Aerospace, said: "We are delighted at this opportunity to cement our relationship with BAE Systems in support of the Typhoon aircraft for the Royal Saudi Air Force. Working closely with the prime contractor, we have designed this solution using the experience gained supporting the UK's EJ200 fleet and look forward to delivering high levels of service performance to the Royal Saudi Air Force."

Al Smith, Rolls-Royce senior vice president for the Middle East and a director of Rolls-Royce Saudi Arabia Limited, said: "This is a milestone contract for Rolls-Royce and its European partners in the long history of our partnership with Saudi Arabia. The support will involve a mixture of Saudi nationals and is the first step of the plans for the EJ200 engine in Saudi Arabia."

## Falcon swoops for a copter 'first'

Falcon Aviation Services (FAS) is to become the worldwide launch customer for the Sikorsky S-76D helicopter.

The Abu Dhabi company has contracted to purchase two of the new Sikorsky helicopters, with options to purchase two more.

FAS is based at Al Bateen executive airport on Abu Dhabi island and provides a wide array of helicopter and jet services, ranging from aerial tours to offshore oil and gas transport and corporate jet charter.

The S-76D helicopters are scheduled for delivery to FAS starting in 2011. The aircraft will be configured for VIP corporate, helitaxi, and offshore oil and gas support missions.

The S-76D helicopter's features include all-composite, flaw-tolerant main rotor blades; an advanced Thales avionics system and autopilot; and an optional Rotor Ice Protection System (RIPS) for all-weather capability.

## Superstar opts for Dubai jet

Hollywood actor Morgan Freeman flew in to Dubai at Christmas to accept formal delivery of his Emivest Aerospace SJ30 private jet.

The superstar collected the aircraft from its completion centre in Texas and flew to the Emirates with the test pilot to put the aircraft through its paces.

On arrival he said, "Emivest came out on top as the only company that fitted all my criteria. I was more than happy to buy from a company based in the UAE as I have travelled around the Emirates on a number of occasions and see this as a strong business hub despite the current economic problems across the world."



## Lockheed Martin close to Egypt deal

Lockheed Martin is close to signing a contract with Egypt to buy a seventh batch of F-16s, although the company confirms that several Middle Eastern forces have expressed interest in fifth-generation capabilities.

The US Congress has already approved the sale of up to 24 F-16s as part of a programme called Peace Vector VII. However, sources say that Egypt's current demands are for 20 F-16s rather than the full 24.

The Egyptian deal was confirmed by Rick Groesch, Lockheed's regional vice president for Middle East business development.

He said F-16 orders are normally followed by deliveries starting 36 months later but the final negotiations with Egypt include discussions for accelerating the delivery schedule.

Signing the deal with Egypt was critical to avoid a costly gap on Lockheed's production line.

Lockheed also remains in talks with Iraq and Qatar in the region for new F-16 sales.

Other countries, such as Oman and the UAE, have discussed follow-on F-16 buys with Lockheed, Groesch said.

Middle East militaries are keen to move beyond fourth-generation fighters such as the F-16 and, at the recent Air Chiefs conference in Dubai, a top UAE military officer said he hoped his country would have a fifth-



## Shining start for Crystal Cargo freighter

Ethiad Crystal Cargo's new A330-200 freighter made its maiden flight over Toulouse in France in November, where the aircraft manufacturer Airbus is based.

The flight marked the start of a 200 hour flight-test and certification campaign and paves the way for delivery to Ethiad Crystal Cargo, the launch operator, later this year.

The new aircraft will enhance Crystal Cargo's capacity with its extensive range and a higher maximum payload. Ethiad ordered the A330-200F at the 2007 Paris Air Show in Le Bourget.

Des Vertannes, Ethiad Airways executive vice president cargo, said: "The maiden test flight is always a special occasion for the launch operator and we are very proud to see the aircraft take to the skies."

"The A330-200F can carry up to 69 metric tonnes of cargo and can fly up to 6,000 kilometres non-stop."

"This ensures we can continue to offer our customers the very highest levels of service and commitment."

generation fighter within a couple years.

The US government has not previously identified any country in the Middle East besides Israel as a sales target for the Lockheed F-35 Joint Strike Fighter, although briefings dating back to 2002 listed the region in long-term sales projections.

Groesch confirmed that interest in the Middle East for the F-35 is real. "All the customers I talk to in the Gulf want to fly the F-35," he said.

## Ethiad takes delivery of latest A330-300

Ethiad Airways has taken delivery of its first Airbus A330-300, configured with the airline's new first, business and economy cabin product.

The aircraft is the first of five new A330-300s the Abu Dhabi-based airline will take delivery of during the next two years and will be deployed between Abu Dhabi and London Heathrow.

It carries 12 passengers in first class, 40 passengers in business class and 151 passengers in economy class.

## Russians host first heli conference

Rotocraft manufacturer and dealer Russian Helicopters held its first regional conference seeking to increase deliveries to the Middle East and ensuring reliable helicopter operations in the region.

"The conference was entitled 'New approaches to after-sales service and maintenance of Mi Helicopters' which basically says it all," said Andrei Shubitov, CEO.

"We have entered into a joint venture with Airfreight Aviation, International Rotocraft Services.

The new company will service Russian-made rotocraft at its base in Sharjah and at MRO centres all over the region.

"This new joint venture will help the interaction of design engineers and dealers with operators, offer material and technical support to local operators," said Shubitov.

Around 600 Russian-made helicopters currently operate in the Middle East and North Africa.

## Al Jaber finance first

Al Jaber Aviation - part of the Abu Dhabi based Al Jaber Group - made aviation finance history in December as it successfully closed a finance deal under a framework of Export Credit Agency (ECA) backed financing for the first of its Airbus corporate jets.

The financing is the first ever European ECA-supported deal to a corporate entity for private jets.

The transaction was financed by HSBC with the backing of ECA from Germany, France and the United Kingdom.

## Fast track check-in

First Class Aviation Executive Search

Marlborough are experts at identifying aviation talent and are trusted advisers to air transport companies worldwide; both large and small.


When faced with a sudden departure, you can rely on Marlborough to swiftly plug the talent gap without delay.

Don't just take our word for it, see what our clients have to say on our [new website](http://www.marlborough.aero)

[www.marlborough.aero/testimonials](http://www.marlborough.aero/testimonials)



**BECAUSE THE CHALLENGES YOUR AIR FORCE  
FACES ARE UNIQUE, SO IS OUR THINKING.**



Whether it's state of the art combat aircraft, the latest in autonomous systems or the world's leading jet trainers, we have through life solutions for every requirement. It's innovations like these that provide effective air power and deliver a real advantage to all of our customers.

**BAE SYSTEMS**

**REAL CAPABILITY. REAL ADVANTAGE.**



## It's a cool deal in Bahrain

Bahrain Airport's extension will be featuring a new technology that cools down aircraft in the height of the hot and humid Gulf summers.

Svenska Rotor Maskiner has won a breakthrough order for core components to Cavotec MSL's PCAir, a completely new pre-conditioned air system for cooling aircraft.

The unit provides significant environmental advantages compared with conventional cooling systems and uses technology to expand dry, compressed air in order to cool parked aircraft instead of APUs. The time needed to cool an aircraft can be cut in half.

## NewJV for Russian Helicopters

Rotocraft manufacturer and dealer Russian Helicopters held its first regional conference seeking to increase deliveries to the Middle East and ensuring reliable helicopter operations in the region.

"The conference was entitled 'New approaches to after-sales service and maintenance of Mi Helicopters' which basically says it all," said Andrei Shibitov, CEO. "We have entered into a joint venture with Airfreight Aviation, International Rotocraft Services.

The new company will service Russian-made rotocraft at its base in Sharjah and at MRO centres all over the region.

"This new joint venture will help the interaction of design engineers and dealers with operators, offer material and technical support to local operators," said Shibitov.

Around 600 Russian-made helicopters currently



## Sikorsky makes history in Saudi Arabia

Saudi Arabia's Ministry of Interior (MOI) has taken delivery of the first two of nine aircraft for its light helicopters fleet.

The helicopters are the S-434TM from Sikorsky; the first for this aircraft.

"With these deliveries, the S-434 helicopter turns a page in its early history," said David Horton, general manager of Sikorsky Global Helicopters, Light Helicopter Division. "We are proud to begin this relationship with the MOI and look forward to the further growth of this product line."

The S-434 helicopters were manufactured at the company's Light Helicopter Division in Horseheads, New York.

In addition to the S-434s, Sikorsky Global Helicopters is providing a complete logistical support package, including spare parts, special tools, and training for pilots and mechanics. In-country support personnel will include a technical representative and instructor pilot.

The S-434 single turbine is a new version of the S-333TM helicopter and incorporates many of the latest design and performance technologies developed with respect to light helicopters. Its predecessor operates throughout the world in many demanding missions, including law enforcement patrol, commercial and military flight training, power line/pipeline patrol, personal use, and light utility operations.

Inherited advantages of the S-333 helicopter design ensure that benefits such as excellent visibility, superior flight handling characteristics, and exceptional safety and crashworthiness features are retained on the S-434.

operate in the Middle East and North Africa. Of these, a significant part are operated by member states of the global anti-terrorism coalition and state authorities of Iraq, Afghanistan, and Pakistan.

"We will deliver at least 50 Mi-17 helicopters to the region in 2009 and 2010 and we estimate around 120 more deliveries of Russian-made Rotocraft by 2015," said Shibitov.

"The region is very important to us. We want to stress we carry out our work in strict accordance

with the schedule, which will allow us to deliver helicopters on time to operators."

International RotorCraft Services is also planning to open a service centre in Afghanistan soon.

## Dubai gets a new Charter

London-based business aviation charter business The Charter Company has opened its first international office in the Dubai Airport Free Zone (DAFZA).

The company said its new office will serve established clients in the Middle East as well as being an ideal location to expand the business into emerging markets, such as India.

Neil Turnbull, who will be based in Dubai, will take up the role as president of Middle East sales and heads an experienced team of European and Arabian charter brokers.

Managing director Julian Burrell said: "With around 30 per cent of our private charter business already

coming from the Middle East region it made sense to choose the UAE when it came to expanding the business. I feel confident our high-calibre team will continue to deliver the superb level of service our Middle East clients currently enjoy from the London office."

## Bombardier's regional response

Bombardier has expanded its mobile response team to cover Middle Eastern business jet operators. The Canadian company's mobile service is now available to respond to aircraft-on-ground situations throughout the region.

Bombardier launched its service earlier this year but initially the technical expert team was unable to respond to Middle East calls.

The service will also now cover the Learjet 60. Initially only Global and Challenger models were covered. Bombardier said coverage will be further expanded next year to include other Learjet models.

## DAE signs avionics deal

Dubai Aerospace Enterprise (DAE) has selected Rockwell Collins communication, navigation and surveillance systems to be offered as baseline equipment for line fit on 70 of the company's new Airbus A320 aircraft. Delivery of the aircraft is scheduled from 2011 through 2015.

The Rockwell Collins avionics will be offered as "baseline" when DAE leases an aircraft to an end-user airline. Specific aircraft avionics configurations will vary depending on client preference.

## Phenom 300 moves a step closer

Executive charter operators in the Middle East are a step closer to taking delivery of the new Embraer Phenom 300 light jet following official certification of the aircraft in Brazil in December.

It received the type and production certificates from Brazil's National Civil Aviation Authority, followed by FAA type certificate.

"When we launched the Phenom 300 programme, we wanted to bring an unparalleled product into the light jet category," said Luís Carlos Affonso, Embraer executive vice president, executive jets. "Besides delivering a product with unique and innovative features for this class, we are very happy to announce that the Phenom 300 has not only met all original specification targets but has also surpassed many performance goals."

## Piaggio job for Synopsis

Air Synopsis – the Dubai-based business aviation development & consultancy business – has been appointed the official sales representative for the Piaggio P180 Avanti II turboprop in all of the GCC countries, as well as Jordan and Lebanon.

Piaggio is jointly owned by Abu Dhabi's Mubadala, Ferrari and India's Tata group.



Nasser Al Reyami receives the award (from left to right) UK TV personalities Tamara Beckwith, Bobby Davro, WTTA CEO Jean-Claude Baumgarte, and Miss World.

Abu Dhabi was the star of the show at the World Travel Awards which, according to the Wall Street Journal, is hailed as the industry equivalent of the Hollywood Oscars.

Abu Dhabi's flagship carrier Etihad led the way by being named the 'World's Leading Airline'.

For the third time in as many years, Royal Jet - the Abu Dhabi headquartered international luxury executive flight services company - won the coveted World Travel Award for the World's Leading Private Jet Charter and the Abu Dhabi Tourism Authority (ADTA) won the 'World's Leading Tourist Board' accolade.

"Three years ago Etihad set itself one clear goal – to be the best airline in the world. We regard this award a great honour and a testament to the commitment of our staff," said chief executive James Hogan.

At the start of 2009 Hogan had pledged the airline would have a fleet of 50 aircraft by the end of the year and it has actually managed 52. New routes were also a target and the airline has seen 55 added, including Cape Town, Chicago, Melbourne and Hyderabad.

## Abu Dhabi shines at the World Travel Awards

Significantly the Abu Dhabi Tourism Authority (ADTA) won the 'World's Leading Tourist Board' accolade.

His Excellency Mubarak Al Muhairi, director general of ADTA, expressed his delight: "This award is most valued by the authority as it comes from peers within the industry we serve, manage and promote. It is also very timely as this year marks the fifth anniversary of the Abu Dhabi Tourism Authority.

"ADTA expects tourism numbers to be the same as last year at 1.5 million hotel guests. Next year it is aiming for 10 per cent growth in hotel guests, with 15 per cent slated both for 2011 and 2012.

Sheikh Khalifa, president of the UAE, has announced the emirates will set up a national council for tourism and antiquities. The move is to help people understand the geography and history of the UAE and stop the perception that Dubai is a country.

Each emirate previously advertised itself as a separate destination and acted independently through tourism departments such as the Dubai Department of Tourism and Commerce Marketing and the Abu Dhabi Tourism Authority.

With separate entities hawking individual sites, it is felt many tourists do not understand the relationship between the emirates and how easy it would be to travel around the UAE as a whole.

"I haven't come across any other country where there is no national tourism strategy," said Ian Michael, specialist in tourism marketing research at Zayed University in Dubai.

"I think that is missing over here. A tourist coming to Dubai doesn't know anything beyond Dubai.

"It amazes me that there is nothing which can tell a person that you can do two weeks or maybe even a month of holidaying in this country and it's not only Dubai."

The name of the new organisation and a launch date is yet to be announced. The individual Emirati boards will continue to exist and work alongside the national board once it opens.



**EGYPTAIR MAINTENANCE & ENGINEERING** Company is considered a great maintenance hub as it conducts all types and levels of maintenance for aircraft, engines and components including checks, replacements, repair, modification, as well as offering technical studies. The range of activities available to customers is very comprehensive and ranges from line maintenance to any hanger letter checks and overhaul. Noteworthy, the number of our customers exceeded 70 customers. The company is approved by many authorities including EASA.145.0290 and ISO 9001:2000 for different activities of the company. Meanwhile, we are in process to obtain the FAA approval.

[www.egyptair-me.com](http://www.egyptair-me.com)





# ARINC

Security is not just something we do at  
**ARINC** – it's part  
of who we are

For years, we've helped develop and implement solutions for commercial, government, and defense industries to help strengthen security around the globe.

Whether it's sending and receiving information securely, providing mobile wireless networks, supporting systems that guard nuclear power plants, or developing the latest biometric tools, ARINC delivers.

As a capabilities-driven company with communications, engineering, and integration as our core competencies – you can trust us to handle your greatest security challenges.

Our people. Our products. Our solutions.

***DEDICATION BEYOND EXPECTATION***

[arinc.com](http://arinc.com)



# Dubai extravaganza the springboard to recovery

**D**ubai Airshow closed its doors to another successful aerospace extravaganza, setting a new record in visitor numbers and confirming that the Middle East region is the springboard for a rebounding aerospace industry.

The show ran over five days, from 15 to 19 November, and attracted 52,978 industry professionals from 138 countries, an 18 per cent rise in attendee numbers compared to the previous airshow in 2007, while welcoming new visitors from seven additional countries.

The increase in visitors was reflected in the show's biggest-ever exhibitor numbers - 890 companies from 47 countries, with 150 first-time participants - plus an additional 7,000sqm in floor space to accommodate the anticipated surge in exhibitors, as the eyes of the aerospace industry turned to the Middle East region for signs of an upturn.

And they were not disappointed: The Dubai

Airshow closed with a declared onsite order-book in excess of US\$14 billion, including sales of civil and military aircraft, helicopters, engines, plus agreements for heavy maintenance, cabin refurbishment and crew management processes.

While the UAE accounted for the largest country share, it represented less than a third of the overall tally at just over 17,000.

A notable increase in visitors from North African states was reflected in the onsite orders placed.

Airbus closed lucrative deals with Ethiopian and Senegal Airlines, along with Nepal and Yemenia.

The aircraft maker's COO - Customers, John Leahy commented: "We had a good airshow, better than many expected, but our industry is not out of the woods yet.

"There will be a difficult winter ahead of us, but with the deals we made in Dubai and the interest

in our products that we saw here, Spring may not be that far away."

Ministers of Defence, presidents and CEOs of airlines, plus chairmen of civil aviation authorities attended as part of the 511 civil and military delegations at the show.

Alison Weller, aerospace director of organiser F&E said: "Exhibitors favour the Dubai show because it's strictly a trade-only exhibition - visitors are there to see the latest products and services and negotiate deals. Without doubt, this has been a platform for doing business, giving exhibitors a better and more profitable return on investment."

A significant number of companies have already signed up to the next Dubai Airshow at Airport Expo, Dubai, from 30 October to 3 November 2011, taking advantage of the price freeze on exhibitor space which continues until the end of 2010.

## 'Orphan' worries limit local military orders

With Dubai's debt crisis looming, the Dubai Airshow was as notable for those local military orders that had been expected - but which failed to materialise - as it was for the contracts that were actually inked.

Though contracts were signed by the UAE Air Force and Air Defence for the supply of 25 Pilatus PC-21 basic trainers, and for a pair of Saab 340 Erieye AEW aircraft, other expected orders were not placed, amid speculation that Abu Dhabi was not willing to sign contracts for further equipment that it would be largely paying for at Dubai's flagship aerospace show.

But fiscal constraints alone did not account for the failure of the UAE Air Force to sign a contract for the Aermacchi M-346 Master (whose selection was announced this February) and the non-appearance of the long-expected order for Dassault Rafale fighters.

There were reports at the show that its experience with the UAE-unique Block 60 F-16E/F Desert Falcon had left the Air Force unwilling to be the launch customer for a new aircraft, or to operate another unique aircraft variant.

Under present plans, the Italian air force plans to order just 15 M-346s, and only six of these have actually been ordered - and these as recently as November 10. The UAE had always indicated that it did not want to be the launch customer for a jet trainer and it seems that a six-aircraft order from the home nation air force did not adequately address UAE concerns that its planned aircraft might be an 'orphan'.

Intriguingly, as the show drew to a close (and after most of the journalists had left), a press conference was called. When the handful of remaining journalists



arrived the front row, usually reserved for the successful contractors, was reportedly packed with executives from Alenia Aermacchi, and it was widely assumed that an M-346 contract signature was imminent.

The conference was then cancelled at the last moment.

There are similar concerns about Rafale, which would need a new, more powerful engine (not funded or even required by the domestic customer) to meet UAE requirements, as well as an AESA radar and the Meteor missile (both items on the Rafale's roadmap, but neither likely to be in service before the middle of the decade). Until these features are on French Rafales, the UAE would be looking at acquiring what has been described as an 'orphan version'.

Further doubt was cast on Rafale's chances in the

UAE after remarks by Brig Gen Ibrahim Naser Alalawi, deputy commander of the UAE Air Force and Air Defence, who suggested that the UAE wished to obtain a fifth-generation fighter in the very near term, implying a potential new sales opportunity for the Lockheed Martin F-35 Joint Strike Fighter.

There are also reportedly concerns about 'interoperability' with US and US-supplied systems, including the UAE's own F-16 Block 60 aircraft.

Finally, the UAE requires a buy-back or onward sale of its existing Mirage 2000 fighters, according to Riad Kahwaji, the chief executive of the Institute for Near East & Gulf Military Analysis (INEGMA): "The French government needs to find a solution for the Mirage 2000 in order for the UAE to be able to purchase the Rafale," he said.



## Rivals put in a surprise appearance

It was an appearance that thrilled the crowds and the show organisers, but with the UAE air force having already received its Lockheed Martin F-16E/F Block 60 fighters and widely reported to also be close to approving an order for Dassault's Rafale, the presence of two sector rivals at the show came as a surprise

The surprise entrants to the daily flying display were the Eurofighter Typhoon – represented by an aircraft from the UK Royal Air Force – and the US Air Force's Lockheed F-22 Raptor.

The latter was the source of great contractual controversy earlier this year, until President Barack Obama carried out his pledge to terminate production of the fifth-generation type after 2012.

The reason for their attendance was nothing to do with potential orders.

While the show was on, the UAE hosted a major multinational exercise involving fighter assets from four nations.

In addition to the RAF and the USAF, the UAE air force was also exercising with military aircraft from France and Pakistan, with the manoeuvres being conducted from Al Dhafra, near Abu Dhabi.



The Raptor revealed!  
Inset: first showing for Typhoon



## Safran wins mixed doubles

French aerospace group Safran signed two partnership deals with the UAE's Baynuna Group.

The Snechat Engine Technologies joint venture between engine manufacturer Snecma and Baynuna Aviation will provide manufacturing capabilities, and long-term support services, for Snecma and the UAE air force. In particular, it will support the UAE's M53-P2 engines used on the service's Dassault Mirage 2000 fighters.

Sagembat Defense, a joint venture between Sagem and Baynuna Aviation, will help develop capabilities in the UAE for new military technologies, including smart weapons.



## < Palm approval

Palm Aviation – the flight services company – had a special visit from HH Sheikh Mohammed bin Rashid al Maktoum the ruler of Dubai and the deputy president and prime minister of the UAE as he toured the halls after formally opening the show.

Mohammad Saideh, executive vice president and chief marketing officer was on the booth as His Highness passed by. "I called out to him that we were a 100 percent Dubai Company, and he stopped to come over. I think he was pleased that a UAE company – and a Dubai one at that – is doing so well in the international markets.

## Tiger prowls > the Gulf

European manufacturer Eurocopter believes the Tiger helicopter has good prospects in the Gulf – despite the fact that Saudi Arabia cancelled an order for 12 in 2006 – and brought the aircraft to the Dubai Airshow for its belated debut in the region.

Test pilot Fabrice Bonne stunned the crowds with the Tiger's signature pitch-up and roll-off manoeuvres, which Eurocopter claims are unique to the Tiger design.

Eurocopter has amassed 206 combined orders for the Tiger from Australia, France, Germany and Spain.



## Mubadala aiming for tiers of joy

One of the most prominent booths at the Dubai Airshow was Mubadala, the Abu Dhabi-based investment company that is growing its aerospace portfolio.

The company made headlines at the show when Homaïd Al Shemmari, Mubadala's associate director business development, revealed: "Our ambition is to build an aircraft in Abu Dhabi by 2018."

Al Shemmari said the company plans to build its own business jet within nine years.

"What we do will be in partnership with someone and Piaggio is our current platform," he said.

Mubadala has, in the past two years, made a number of key aerospace investments. Other than Piaggio, it has a majority stake in Swiss maintenance, repair and overhaul specialist SR Technics, and wholly owns local MRO house Abu Dhabi Aircraft Technologies, and Al Ain-based Horizon Flight Academy.

During the Dubai show it also began construction of an aerostructures business in Al Ain called Strata which, from 2011, will manufacture components for Italy's Alenia Aeronautica as well as – in a deal announced with Airbus at the show – aileron composite panels and aileron shipsets for the A330/A340.

Al Shemmari said Strata's aim is to become a first tier supplier, with engineering, design and research and development capability within three years. "We are targeting new technologies. It's not like the Chinese or Indian model. We want to create a world-class education system around aerospace and aviation, diversify our economy, create sustainable businesses and provide career opportunities for UAE nationals," he explained.

"Everything is a pull into Abu Dhabi. Our investments are not just capital plays, although they all make financial sense. But everything has to be tied into diversifying our economy."



Saad Wallan (right) with Cessna's Trevor Esling.



## < Wallan enjoys a silver lining with Citation

Cessna handed over the keys of the first Middle Eastern Citation X fitted with elliptical winglets to Wallan Aviation at the Dubai Airshow.

Saad Wallan, chairman of Wallan Aviation, said the aircraft, with its range-extending blended winglets, allows for non-stop travel between Riyadh and London at its signature high-speed cruise at Mach 0.92.

The newly-introduced winglets add a 15kt (28km/h) boost in cruise speed and 545kg (1,200lb) more payload at hot and high airports, as well as a 280km (150nm) increase in range.

Along with a reduced time to climb, Cessna said the winglets also reduce fuel consumption by four to five per cent for long-range missions.

In June the US Federal Aviation Administration certificated the retrofit of the winglet for the Citation X, which includes the replacement of the existing anti-collision and position light system with LED versions.

Wallan Aviation was an order holder for the super-midsize Columbus business jet that was cancelled by Cessna in July but Wallan said even in the downturn that sidelined the new aircraft, his company has found a silver lining that has made the substitution of the Citation X ideal. Previous operators of large-cabin BBJ and Gulfstream aircraft have opted for a smaller aircraft like the Citation X for their travel needs," Wallan explained.

He believed the dust had now settled following the sharp downturn in business jet travel, adding that the Dubai Airshow represented a barometer for the industry.

"We have a lot of faith in this show to show us the direction," he said.

## Capital selection

DAE Capital used the Dubai show to announce it has selected the IAE V2500 SelectOne engine to power the 20 new Airbus A320s it has on order.

The value of the engines is \$340 million at list price and deliveries are scheduled to begin in 2011. The aircraft are part of the 70 that the leasing arm of Dubai Aerospace Enterprise (DAE) placed in July 2008.

"In the current economic environment, our customers demand the lowest cost of ownership. The V2500 offers significant advantages for operators, ensuring its position as one of the most popular engines in service today and making it an important addition to our fleet," said Bob Genise, chief executive of DAE Capital.

## Sharklets add bite to A320 fleet

Airbus used the Dubai Airshow to unveil the latest development for its A320 fleet – a winglet-equipped version of the single-aisle aircraft, which will enter service in late 2012, delivering fuel burn improvements of up to three-and-a-half per cent.

The winglet has been named "a sharklet" by the European manufacturer.

Airbus chief operating officer customers John Leahy (below) said the airframer had decided to adopt its own sharklet design after a series of winglet flight-test evaluations in recent years. "The sharklet can give you another 150nm [278km] range or 500kg [1,100lb] more payload," he told a show press conference.

Offered as a forward-fit option, sharklets are expected to result in reduced fuel burn over longer sectors, corresponding to an annual CO<sub>2</sub> reduction of around 700 tonnes per aircraft.

The A320 will be the first model fitted with sharklets, which will be delivered around the end of 2012, to be followed by the other A320 Family models from 2013. Air New Zealand is the launch customer for the sharklets, which are specified for its future A320 fleet.

Leahy said a retrofit for in-service aircraft is being examined in conjunction with Aviation Partners (API). "Sharklets are not just part of Airbus's response to addressing environmental issues and rising fuel costs, but they also enhance aircraft overall performance," he said.





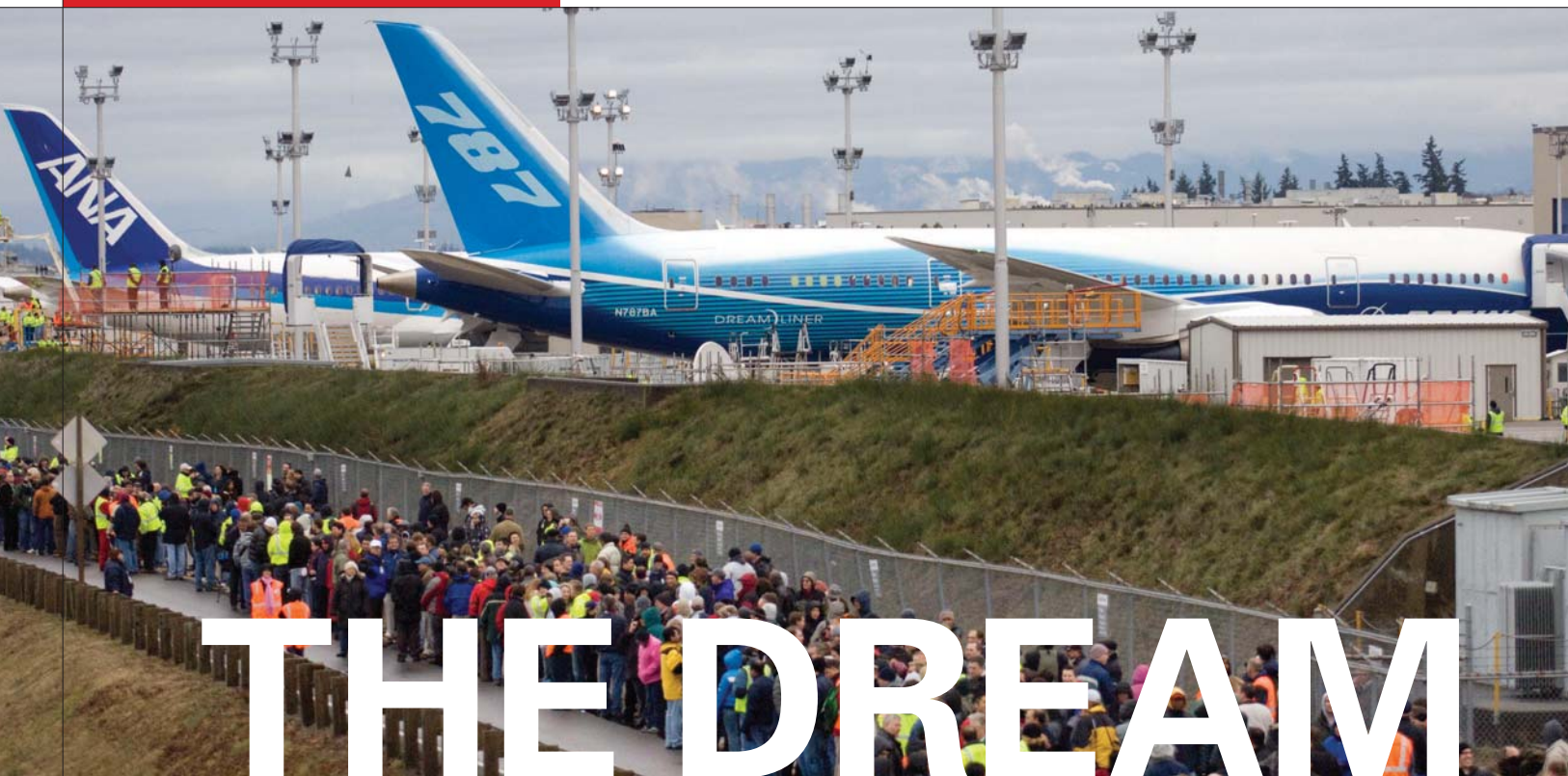
# There's No SUCH THING As Routine FLIGHT SUPPORT

Lower your airstairs at any of our 102 worldwide locations and you'll immediately notice our warm, personal greeting. It's the first item in our Signature Service Promise. Followed up with safe, ramp-ready handling, inviting facilities, personal attention to passengers and crew and available quick turn service. Add to that our always fair, competitive pricing, and you'll want to make Signature a permanent part of your flight plan.

Find specific information about individual locations at [SignatureFlight.com](http://SignatureFlight.com).



*Signature*  
FLIGHT SUPPORT  
BBA Aviation



# THE DREAM

*US manufacturer Boeing has started 2010 as planned, with the first flight of its new 787 jetliner finally achieved after a series of problems that delayed the project for 28 months. The aircraft, designed to replace the 767 and produced by international partners who share programme costs and risks, offers “no-bleed” engines, “more-electric” systems, new cabin concepts, and – not least – a composites structure.*

**Ian Goold** summarises developments as flight-testing gets under way.

**A**fter an accumulated delay of almost two-and-a-half years, the new Rolls-Royce Trent 1000-engined Boeing 787 flew for the first time on December 15 at the beginning of a certification programme the company hopes will culminate in delivery to launch operator All Nippon Airways before the end of this year.

As often happens, not everything went according to plan: the flight was curtailed by poor weather that obscured the 787’s visibility to ‘chase’ aircraft. (More dramatically, on other first flights, the 747 had suffered a small structural failure, the 767 had been unable to retract its landing-gear and the 757 had flown for several minutes on one engine after the other failed to relight immediately following a deliberate shutdown.)

Boeing aims to provide a better flying “experience” and greater efficiency to operators with the 787 which, it claims, will burn 20 per cent less fuel than current machines of similar size and offer up to 45 per cent greater cargo revenue capacity. Travellers will enjoy an enhanced cabin environment that includes cleaner air, larger windows, increased stowage volume, better lighting, and other perquisites.

The 787’s first flight was welcome news for airline and lease customers in the Middle East that have placed orders for the machine. As at December 1, Boeing figures showed seven companies in the region were planning to acquire some 135 examples, among a total of 55 customers that had ordered 840 787s overall.

Waiting longest for the first flight has been UAE-based lessor LCAL, which ordered five Rolls-Royce Trent 1000-powered 787s almost

five years ago in May 2005. No other Middle East customer has specified R-R engines.

Another lease company, Kuwait’s ALAFCO, followed with an order for six GEnx-engined 787s in September 2006, six more six months later, and a further ten in July 2007.

Other 2007 customers were Royal Jordanian (two separate pairs of 787s), Qatar Airways (30), and lessor Dubai Aerospace Enterprise (15). Abu Dhabi carrier Etihad Airways ordered 35 aircraft in 2008, while Gulf Air in Bahrain ordered 16 (plus eight more in 2009). All aircraft are 787-800s (marketed as 787-8s) except those for Etihad, which are -900s (787-9s). Qatar Airways has been very vocal in expressing its disappointment at the delays and in seeking assurances about the delivery schedule for its aircraft.

#### **Twin-aisle jetliners**

The 787s ordered by Middle East carriers will contribute to a 20-year, \$200 billion market for some 850 twin-aisle passenger and freight jetliners foreseen in the region by Boeing. The manufacturer predicts a 2028 Middle East twin-aisle fleet of some 900 machines, with about 310 current aircraft having been retired in the ensuing period.

The new 787 capacity will be needed to support local airlines’ expansion on major network services. Boeing says that Middle East originating traffic (revenue passenger-miles/kilometres) flying within the region and to Asia/Pacific and North America markets will grow at more than six per cent per year during 2009-28, slightly ahead of five-and-a-half per cent annual growth predicted on routes to Europe.





The much-heralded new twin-aisle twinjet had been slated to fly in late August 2007 (“or within a month”) and enter service just eight months later, but dramatically and expensively it ran into problems that resulted in six delays. The maiden flight followed tests of a successful repair to delaminations found in the carbon fibre wing-root structure during static load testing.

Initial delays had been triggered when out-sourced major sub-assemblies arrived from offshore 787 partners incompletely plumbed and wired, or with parts or paperwork missing, as Boeing sought to maintain momentum with the fast-paced schedule. The manufacturer had needed to parachute more than 100 engineers into its partner companies in an effort to expedite the first sub-assemblies for 787 No 1. Later delays included problems with fasteners, such that the aircraft was woefully incomplete when formally rolled out in July 2007.

Given that current jetliners are likely to be operated for 50 or 60 years, with longer periods between new designs entering service, opportunities for engineers to develop clean sheet (or, rather, computer screen) designs are few and far between, meaning there is little opportunity to accrue experience. Engineers might get just one such chance in a long career.

Forensic consideration of the many causal factors contributing to the accident suggests many circumstances taken together might all have played a part. Taking a broad view, the company’s loss of market leadership to European nose-to-nose competitor Airbus must be one consideration, especially after Boeing concluded

the very-large aircraft market was “not big enough for the two of them”.

This may have been compounded by a loss of confidence in Boeing Commercial Airplanes when company head office was moved to Chicago. On the one hand, Seattle workers no longer were cosily next door to headquarters while, on the other, there was no longer a temptation for employees in other divisions based elsewhere to feel they were somehow poor relations to the commercial-aircraft business.

#### **Pre-flight debacle**

Other considerations in analysing the pre-flight debacle include:

- the urgency of the 787 programme (to fly the aircraft and to achieve certification in eight months);
- use of a much-larger proportion (50 per cent by weight) of composites material;
- contracting of so much work to partners;
- partners having to fit equipment and systems into “their” sub-assemblies;
- much greater reliance on computers for solutions; and
- a requirement to support Boeing’s drive for shareholder value.

A combination of some or all of these circumstances may have played a part.

Before an estimated 12,000-strong crowd of employees and guests, the first of six 787s in the flight-test programme lifted off from Paine Field in Everett (Washington state) in the hands of 787 chief

pilot Captain Mike Carriker. It flew for just over three hours before landing at Boeing Field, Seattle, a planned longer flight having been curtailed by deteriorating weather that hampered observation of the aircraft from accompanying observation aircraft.

Carriker was accompanied by Captain Randall Neville, who helped to test some of the airplane’s systems and structures, while on-board test equipment recorded and transmitted real-time data. “We figured out more things about this aircraft after 10 minutes of flying than we had in the previous 100 days of ground testing,” said Carriker after the first flight.

“There was a lot of climbing, turning, descending to avoid weather,” said Neville. Even though Boeing has now provided more time in the 787 flight-test and delivery programme than originally scheduled, Neville said the company now would stay with the aggressive seven-to-eight-month certification programme. “We’re not changing the plan,” he said.

The event marked the beginning of a 6,000hr flight and ground-test schedule that should culminate in formal Federal Aviation Administration airworthiness-approval being granted in time for at least one aircraft to be delivered to launch customer All Nippon Airways by the end of the year. Two of the flight-test 787s will be powered by General Electric GENx engines.

The 787 was launched (as the 7E7) seven years ago in 2003 as a family of jetliners aimed at replacing the established Model 767, while also providing additional range. Three or four variants are offered in the 200-300 seat class to fly on routes of 3,500-8,500 nautical miles (6,500-16,000km).

# Libyan flies a green trail across Africa

**Alan Peaford** *meets the European manufacturer that is changing the game for regional airlines across North Africa and the Middle East.*

**T**he gleaming new turboprop on the Dubai Airshow static park from Libyan Airlines heralded not just a resurgence in the fortunes and opportunities for the North African carrier but was also a clear indicator of a growing demand for the economically viable and environmentally sound airframe that bears Libyan flag carrier's corporate logo.

The aircraft was the ATR-42-500, the first of two of the regional turboprops ordered by Libya and also the first ATR aircraft to be operated in the country.

According to John Moore, ATR's head of international sales, the Dubai show couldn't have come at a better time for the Franco-Italian joint venture.

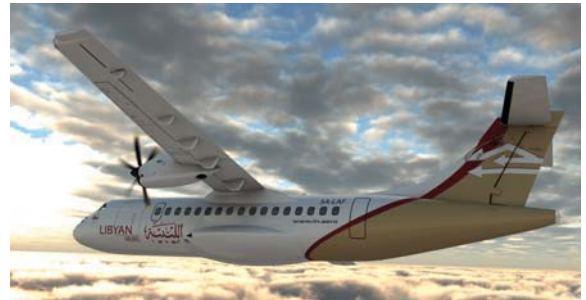
"We have found the Dubai Airshow to work really well for us with visitors coming not just from the Middle East but from Africa and the Indian subcontinent as well. There is a growing interest in the ATR aircraft for obvious reasons and we are pleased to be able to show them an aircraft that delivers on promises," Moore said.

The 'obvious reasons' that Moore is so proud of are the performance figures that he says outstrips the regional jet competitors.

"There are two big factors that we are really scoring on – the first is economic performance and the second is comfort," Moore said. "The dramatic increase in fuel charges that we saw over the past few years makes the argument for a turboprop quite compelling. To operate a 50 or 70-seat regional jet below three to four hundred nautical miles (6-900km) route doesn't make economic sense. Fuel costs are double what they are with an ATR, there is no speed advantage on this length of mission and so it doesn't add up. Of course, if you are using half of the fuel you are creating half of the amount of emissions too."

Moore shrugs off the old criticism that the turboprops are noisy.

"We have put a lot of time and investment into development and enhancing the



comfort for the customer," he said. "The noise levels, the vibration, the whole cabin feel with its mood lighting is so much better. Once people actually experience the cabin they overcome the resistance.

"What we did with the 500 is develop measures like stiffening the frame and reinforcing the fuselage. We put in passive noise suppression rather than active and the new six-bladed prop reduced external noise and vibration. The result is that we have noise at around 78 decibels compared to 85 before. This matches the Q400 from Bombardier and compares favourably with the jets. This reduction is a huge improvement. For the interiors we have added LED lighting and our own in-flight entertainment (IFE) system that is unique for this class of airplane. The whole feel is like a much larger aircraft. It looks and feels like a jet and costs the airline significantly less."

Nearly 1,000 ATR aircraft have been sold – around two-thirds of which have been ordered or delivered in the past five years. "A lot of people said the turboprop was dead but the figures show that the compelling arguments in favour of the aircraft are winning," Moore said.

Certainly ATR is gaining ground across North Africa with Royal Air Morocco likely to be the first to receive the latest ATR model – the dash 600 – when it is certificated in 2011.

The Moroccan flag carrier was among the batch of launch customers to sign up for the new type with its purchase of four ATR 72-600s and two ATR 42-600s aircraft, plus options for two additional ATR 72-60.

The aircraft will be operated by Regional Air Maroc Express, the new regional subsidiary of the national airline. It is using leased ATR 72-200s to meet demands until the new aircraft are delivered.

With five 6"x8" LCD units the flight deck will be impressive and with automatic dependent surveillance broadcast (ADS-B) and RNP (required navigation performance) capability the ATR-600 will be able to plan shorter direct routes resulting in reduced fuel consumption and emissions of CO2 and NOx. "We anticipate 15-20kg of fuel savings for each RNP approach, as well as improved minima compared to existing approaches and improved access to more airports."

The ATR capabilities in dusty desert conditions, or with hot and high requirements, were the drivers behind the Libyan Airlines decision to invest in the European turboprop.

Captain Mohamed Ibsem, Libyan's chief executive said: "We decided on the ATR aircraft because of the flexibility to operate in challenging conditions and tough environments, like the ones that can be found at some destinations in the Libyan desert. We will be able to improve the quality of our regular air connectivity to several local communities, thus contributing to strengthen both human and business links in our country."

**John Moore: "There are two big factors that we are really scoring on – the first is economic performance and the second is comfort."**



Free tickets  
available for  
airlines

Visit event website for details  
[www.terrappinn.com/2010/aome](http://www.terrappinn.com/2010/aome)

#### Hear from:



**Curtis Grad**  
CEO  
Airport International Group



**Sherif Attia**  
Chairman  
Air Cairo



**Adel Ali**  
CEO  
Air Arabia



**Stefan Pichler**  
CEO  
Jazeera Airways



**Pieter Elbers**  
Head of Network Planning  
KLM



**Nawal K. Taneja**  
Professor & Chairman,  
Department of Aviation  
Ohio State University

# Aviation Outlook MENA

12 - 15 April 2010, Grand Hyatt Cairo, Egypt

Taking off



**Opportunity and strategy for airlines, airports and investors**

**Over 300 attendees, including all of the region's network carriers and LCCs**

#### New for this year

Aviation Outlook MENA will this year also include Low Cost Airlines World MENA, which means that with one investment you get double the value.

#### Your itinerary

12 April 2010	13 April 2010	14 April 2010	15 April 2010
<p>Conference day</p>	<p>Conference day one</p>	<p>Conference day two</p>	<p>Airport revenue workshop</p>

**Limited offer** Save up to \$950, just quote ME301002A when you register

[www.terrappinn.com/2010/aome](http://www.terrappinn.com/2010/aome)

Sponsors:



**BOMBARDIER**



Event partner:



Main media partner:



Media partners:



Presented by:



# Why US sanctions

*Most airline chief executives today think they have a hard enough job worrying about falling yields and rising fuel prices. The CEO of Syrian Arab Airlines is fighting to forestall nothing less than the total collapse of her airline due to political decisions made more than 9000km from her Damascus office. Alan Dron reports*

**T**hese are, according to Ghaida Abdullatif, “dark days” for Syrian Arab Airlines. Half her short-haul fleet is grounded because she cannot source the spare parts she needs to keep them in the air. Her only two long-range aircraft have not flown for months. Attempts to buy new aircraft are blocked. All due to US sanctions on the Syrian Government.

Last July there appeared to be light at the end of the tunnel. President Obama’s Middle East special envoy, George Mitchell, met President Bashar Al-Assad in Damascus with an offer to ease the sanctions.

This move would particularly affect “requests to export...components related to the safety of civil aviation,” said a State Department spokesman at the time.

However, it appears to have been a false dawn, said Abdullatif. “The situation has not changed. We have six Airbus A320s but three of them are grounded.”

Syrian Arab refuses to compromise on safety. When an aircraft requires a maintenance check that cannot be performed under the sanctions, the airline feels it has no option but to withdraw it from service. Its rigorous approach was demonstrated recently by the airline passing the

International Air Transport Association (IATA) Operational Safety Audit certification for the second time.

This growing shortage of aircraft has had serious effects on the airline’s route network.

“We have already cut back,” said Abdullatif. “We have suspended many destinations. We still fly to the UK, France, Germany, Italy and the Gulf area, but frequency has decreased.” Abdullatif has been able to lease one A320 to help fill the gaps in her schedules, but more aircraft are required.

#### Lease Russian airliners

To try to solve this problem in the short term, she is in discussions to lease Russian airliners that are not subject to the US embargo.

“We are in the process of leasing two Tupolev Tu-204s for a year, and later we can purchase them,” she said.

This would not be the first time Syrian Arab has acquired Russian aircraft. During the 1970s, political ties between Moscow and Damascus saw the airline operating a mix of Tupolev Tu-134 and 154s, Antonov An-26s, Ilyushin Il-76s and Yakovlev Yak-40s.

Today, only a single Tu-134B-3 and two Yak-

40s remain on strength, normally operating domestic sectors only.

Syrian Arab is one of the few remaining operators of the Boeing 747SP, the ‘hot rod’ version of Boeing’s behemoth that was designed to fly fast and high on long, thin routes. Never a cheap aircraft to operate even in its 1970s heyday, it is now “very expensive”, said Abdullatif. Like the Airbuses, both of Syrian Arab’s 747SPs have been removed from service awaiting overhaul. Early in 2009 the US granted a licence to allow repair of the 747SPs and the airline is in negotiation with Boeing to handle the work.

The airline is also reportedly looking at ATR 42s for its short-haul work. Despite reports appearing in the Damascus newspapers, the Franco-Italian manufacturer is saying nothing.

In the longer term, new aircraft are the answer to the carrier’s problems and it has a Memorandum of Understanding (MoU) with Airbus for 14 aircraft – a combination of more A320s and the new A350XWB – but progress depends on the lifting of the sanctions. A similar MoU with Boeing for a mix of 737s and 777s remains in abeyance for the same reason. “My hope for 2010 is to have export licences to purchase Boeings and Airbuses,” said Abdullatif, one of the world’s few female airline CEOs.





# may kill off an airline

Her dismay at her airline's situation and her sense of injustice at being caught up in a situation not of her making, comes across strongly during conversation. "We are a commercial organisation. We carry passengers of all nations, not only Syrian people. Sanctions on Syrian Air are not fair; we have a clean record. We have never done anything, but we are suffering."

On top of her unique problems, she also has the difficulty faced by many other full-service airlines in the region of low-cost carriers starting to make incursions into her home market. Several now operate into Damascus, Aleppo and Latakia.

The airline's future will depend on the actions of the US government in coming months. Abdullatif is on record as saying the airline may have to cease operations completely if the situation does not improve.

"I hope that these dark days for Syrian Arab Airlines will be finished soon," she said. She must be hoping that the darkest time comes just before the dawn.

## Obama holds the key to survival

The heart of Syrian Arab's problem is the poor state of relations between Syria and the United States. The US has for many years accused the Syrian government of involvement in international terrorism and procuring weapons of mass destruction, and in 2004 President George W Bush introduced economic sanctions against Damascus.

Those sanctions included a block on all US exports to Syria apart from humanitarian items. Not only did new aircraft and spare parts fall under this ban, but also US goods that might be used in other nations' products that could, in turn, be exported to Syria.

Any aircraft containing more than 10 per cent of US components is affected, which affects the other main commercial aircraft supplier, Airbus, most of whose aircraft have US-supplied engines and other components.

In theory, these sanctions have never covered aircraft components necessary for safety. In practice, say Syrian Government officials, many requests from US companies to supply such items were refused by the Bush administration.

At the time of President Obama's offer to ease sanctions last July a senior administration official who spoke on the condition of anonymity to the New York Times added: "We are going to look at these waivers, especially on airplane spare parts, and our predisposition is going to be, view them favourably, as opposed to the prior administration's policy."

That promise has not yet been fulfilled.

Worldwide Crew Leasing and  
Aviation Consultancy Specialising  
in the MENA Regions

# Contractair

Contractair is a world leader in the provision of contract and permanent flight deck and cabin crew, training solutions, flight operations support and aircraft ferry and positioning services.

We are familiar with all types of operators, including: commercial passenger and cargo, corporate management, charter and VIP private owners.

Our flight crews are qualified, experienced and current on the aircraft you operate.

We are able to provide personnel to commence duty at short notice at any location in the world.

Contractair will be exhibiting at  
Low Cost Airlines World MENA  
12<sup>th</sup>-14<sup>th</sup> April, Cairo, Egypt



إسأل مجرب ولا تسأل خبير

"Ask the experienced rather than the learned"

Visit: [www.contractair.net](http://www.contractair.net)

Call: +44 1256 368590



# Size matters

## Embraer's Brazilian blend leads the charge for right-sized fleet sales

REPORT ALAN PEAFORD

**A**fter years of Middle Eastern air transport being dominated by wide-bodied aircraft, the idea of right-sizing – putting the right aircraft on the right routes – has led to a sudden growth in demand for regional aircraft. Lining up at the front of the queue of sales people in the region has been Embraer.

The Brazilian manufacturer clearly aims to capitalise on its early successes in penetrating the Middle Eastern market with its E-Jet family of airliners, and expects to double its fleet in the region over the next five years.

Already in action with Royal Jordanian, the manufacturer was able to announce a breakthrough contract with Oman Air – the first time that Embraer has sold the aircraft in the Gulf area.

The sale of five Embraer 175 aircraft – four of which will be operated by the airline and one by the Royal Omani Police – may be modest in terms of aircraft deals but the acceptance of the type by one of the Gulf carriers has sent a clear signal. Already the other airlines are taking notice.

The order for the Omani aircraft is worth \$177.5m at list price and first delivery is scheduled for the first quarter of 2011. Deliveries are expected to continue until 2013.

The Oman deal has sped up plans by the Brazilian manufacturer to select a location for a Middle East spares warehouse, aimed at enabling the manufacturer to better support its growing band of airline customers in the region. An announcement is expected during the first half of this year.

There are already four airline-controlled Embraer spares centres in the Middle East; in Cairo (EgyptAir), Amman (Royal Jordanian), and Riyadh and Jeddah (Saudi Arabian Airlines and NAS), which are supplied via Embraer's European warehouse in Paris, France.

Setting up the Middle East facility is “something that we

want to do quickly, but it's a very complex analysis that we have to do”, said Jose Luis Molina, Embraer airline market vice-president for Europe, Africa and the Middle East.

“Initially, we have the intention to establish a partnership with a local company,” he added. “Oman is an option, as are Dubai, Abu Dhabi and Bahrain.”

Embraer's five Middle Eastern airline customers have ordered around 55 E-Jet family aircraft to date and the manufacturer is in talks with several more prospective buyers in the region. One key target is Gulf Air, which has announced its restructuring plans to include the purchase of regional jets.

Molina is optimistic about the opportunities. “We believe that in four to five years we can double the fleet in the region,” he said.

The E-Jet business case is compelling. Presenting to a small group of journalists in Amman, Embraer senior manager marketing Byron Bohlman outlined how EgyptAir provided a “perfect example” of the E-Jets philosophy.

Before the carrier's Express subsidiary introduced its fleet of E-170s in 2007, the Egyptian flag carrier had offered four daily flights between Sharm el Sheikh and Cairo, using a mix of Airbus A320-family aircraft, A330 wide-bodies and Boeing 737s. The route is now served 11 times daily, with nine of the flights employing the E-170.

“EgyptAir has preserved its overall capacity but has a much more market friendly schedule,” explained Bohlman.

Royal Jordanian also opted for the Brazilian jets to operate alongside its A320 fleet and now operates five E-195s and a pair of E-175s on 47 city pairs. According to Royal Jordanian chief executive Hussein Dabbas, two more E-Jets could be joining the fleet soon.

“We haven't decided yet, but two additional E-175s are on our radar screen for entry into our fleet during the next couple of years,” Dabbas said, describing the type as “economical to operate, and attractive to customers”.

### Customer acceptance

Dabbas said that although the jets were not as economically attractive as the turboprop alternatives, they had a much better customer acceptance. “We introduced Bombardier Dash 8 Q400 70-seat turboprops in 2006, but customers didn't feel comfortable flying on them,” said Dabbas. “There is nothing wrong with them – I think it's basically just a lack of understanding and knowledge.”

At the Amman presentation, Dabbas said the airline also considered Bombardier's CRJ regional jets, but had rejected them because they were unable to use the airbridges at Royal Jordanian's home base of Queen Alia International airport in Amman.

“We use them on our domestic flights to Aqaba and on short haul around the Levant. We need to treat the passengers the same as if they were on an Airbus A320 in terms of comfort and access. The E-175 works well for us in that respect.”

NAS of Saudi Arabia operates its six-strong E-190/195 fleet on 25 routes and has four more aircraft on order, while Saudi Arabian Airlines operates its E-170s on 62 routes.

The new Oman Air E-Jets will also have domestic routes in their sights first. Peter Hill, Oman Air's CEO, said: “The 175 is a good fit between our ATRs and 737s.

“The aircraft will also supplement our off-peak routes to Dubai and with our plans to extend local services. We will be able to fly more frequently, more effectively and more profitably.”





# EFFICIENTISSIMO! THE NEW FALCON 2000LX

*Translation: Not just the most efficient in its large-cabin class. More efficient than "the most advanced" in the next smaller class. And less fuel means fewer emissions. Even with a 4000nm range – and the unique agility to hop from city to city, then leap over an ocean without stopping to refuel.*

*The newly certificated Falcon 2000LX proves again that we share a common sense of efficiency with companies who need to stay close to their customers, get the most out of their best people, see and seize opportunities in person – and keep on working en-route. Visit us at [falconjet.com/2000LX](http://falconjet.com/2000LX).*

*The Common Sense of Efficiency.™*

Dubai +9714.29.94.900

**DASSAULT**  
**FALCON**

ENGINEERED WITH PASSION

*Ralph Ahearn takes a flight across the Gulf and looks at an airline with an altogether different business plan that seems to be working.*

**Y**ou would think that an airline with its hub located on the ancient Silk Road would naturally follow a network model linking East and West, rather like the Gulf carriers to the south. The reality of Air Astana – national carrier of Kazakhstan – could not be further from that model.

Where the Gulf airlines such as Emirates, Qatar Airways and Etihad, have adopted a “build it and they will come” approach, throwing capacity at world-spanning networks, Air Astana’s model is as intricate as the patterns found in one of the region’s famed silk carpets.

Since its formation in May, 2002, the airline has been painstakingly developing routes across central Asia, linking cities like Novosibirsk and Tashkent with its main hub at Almaty and secondary hubs in the Kazakhstan capital Astana and in Atyrau. Beyond the central Asian region, it has carefully chosen destinations in the Middle East, Europe and the Far East, including Dubai, London, Amsterdam, Beijing and – most recently – Kuala Lumpur.

It’s a “softly softly” approach to route development and growth, incremental and understated but in a quite different way as fascinating as anything the Gulf has to offer.

Despite often huge challenges – from the global financial crisis and exchange rate issues to a highly demanding operational environment – Air Astana has made a profit every year since launch and the end of 2009 was set to see its best ever year, with profits expected to double.

“Revenues will be 15 per cent lower but all the indications are that 2009 will be our best ever year,” said Air Astana president Peter Foster, who was speaking towards the end of last year. “We are heading for a spectacularly successful year, by far our best ever.”

The airline was able to achieve this largely because the world economic crisis hit Kazakhstan a year earlier than other countries.

“We responded very early, in September 2007,” said Foster. “We put in place a significant range of cost-cutting measures in early 2008 based on a 12-point plan. So, when global traffic collapsed in October 2008 we had everything in position, having already cut costs.”

However, Foster is not sanguine about the immediate future.

“We have had a brilliant 2009, but now we have



# SILKY ROUTE

## WHY THE SOFTLY SOFTLY APPROACH IS PAYING

squeezed every cent on cost and clearly we cannot sustain that into 2010. We are not optimistic that revenue is showing any signs of a dramatic recovery.

“It would be nice to say that, having got over the recession we can take full advantage of the restructuring we went through, but unfortunately we cannot do that. At this point, we see no reason to anticipate a significant passenger or freight upturn in the early part of 2010.”

The economy is not the only critical issue facing the Air Astana management team. Last year the airline was the only Kazakhstan carrier to escape a blanket ban by the European Union on the country’s carriers operating into EU members’ airspace and there are fears that it could still be caught up in a wider ban.

“This is almost existential,” said Foster. “The EU action was based on International Civil Aviation Organization (ICAO) data. That demands a response from the Kazakhstan

Aviation Committee (CAC) within a given timeframe or the consequences could be far more serious. We are spending a huge amount of time, money and management effort helping the committee to improve its procedures in order to address the ICAO findings.

“It is logical that as a major international player we provide as much support to the CAC as possible. Failure to comply could result in a blanket ban by ICAO (on Kazakhstan airlines), which we could be caught up in. But things are moving.”

Air Astana is a joint venture between the Kazakhstan sovereign wealth fund Samruk-Kazyna, which owns 51 per cent, and BAE Systems with the rest. It was established following the collapse of Kazakhstan Airlines.

From the outset, Air Astana followed a very clear strategy, acquiring a fleet of young, Western aircraft, choosing its routes very carefully and operating to Western standards – it is the only





**The distinctive uniform and tail design will be seen in the Middle East and beyond as Kazakhstan's airline grows.**

particularly the population issue, according to Canliel.

For instance, the airline operates only aircraft configured in business and economy classes. "When you talk about a population of 16 million, the number of passengers does not justify a three-cabin configuration," said Canliel.

It was also the population issue that led to the strategy of "extending" the borders of Kazakhstan into neighbouring CIS states and even China, according to Peter Foster.

"We took a surrogate market strategy," he said. "We hope that we can demonstrate with our operation that this was a valid position. We have embraced all the countries and borders nearest to us. By looking at our market in that way, we jump from a population of 16 million to 60 million people who live in that zone. This was the strategy pursued by Cathay Pacific and Singapore Airlines."

That embraces southern Russia (Novosibirsk), Uzbekistan (Bishkek), China (Urumchi) and Azerbaijan (Baku). The feeder routes plug passengers into the Almaty or Astana hubs for onward long-distance jounries. More are in the pipeline.

Ibrahim Canliel said: "In our model we are definitely looking at direct point-to-point traffic. If there is no point-to-point traffic and the feeder model is not effective, we would not operate a route. We have no ambitions to carry passengers from Australia to London.

"We are looking to become the leading carrier in central Asia, not another one in the East-West market where there are already too many players."

He added: "A passenger from Novosibirsk can save six or seven hours by flying to Astana rather than Moscow for their onward flight. From Biskek, we have a wide mix of people going on to Korea, Istanbul or Delhi."

How are the CIS neighbours taking the strategy?

"In Russia we are still a small player but as we grow, in time they may oppose us. But in Kirgizstan people really welcome us because there is very little other service. Our vision for Central Asia means that we are in a unique position as a company to operate an airline to European standards. If I look at our neighbours, there are not many people who can say the same.

# TO GROWTH

## OFF FOR KAZAKHSTAN'S NATIONAL AIRLINE

airline in Kazakhstan with European Aviation Safety Agency (EASA) Part 145 aircraft maintenance certification and one of only six Commonwealth of Independent States (CIS) airlines admitted to the register of the International Air Transport Association (IATA) Operational Safety Audit (IOSA) without restrictions.

At present, the fleet totals 21 aircraft: four Boeing 757s, two Boeing 767s, seven Airbus A320s, two A321s and one A319, and five Fokker 50s.

Air Astana had gone down the leasing route until, in 2008, it announced an order for six A320s, due for delivery in 2012-2013. It also plans to lease two Embraer 190LR regional jets, thus adding a new type to its fleet.

While many airlines seek to rationalise the number of aircraft they have in their fleets, Air Astana sees fleet diversity as a key to developing routes.

Ibrahim Canliel, vice president, marketing and sales, said: "The Embraers are coming in in 2011 and it is a new type for us. They are complementing rather than replacing the Fokker 50s. It will enable us to right size some of the routes, filling a gap in terms of seats between the Fokker and the A320. The ability to fine tune our capacity is very important as we develop our routes."

To understand Air Astana's strategy, you need to look at both the geography and recent history of Kazakhstan, as well as the country's economy. It's a huge country – the ninth largest in the world – but has a population of only 16 million.

The country has been independent since 1991 when the Soviet Union was dissolved. Of the CIS that emerged, Kazakhstan's economy has performed the best as the country begins to leverage its fabulous horde of oil, gas and mineral wealth.

All have a bearing on Air Astana's strategy,

*The arrival of the first fuselage section of Bombardier's*

*C-Series regional aircraft marks a landmark in the \$3.5 billion programme.*

*Gary Scott, president*

*Commercial*

*Aircraft, talked to Mike Martin about progress and prospects in the Middle East.*

## An A in history boosts the C-Series team

**B**ombardier Commercial Aircraft is getting closer to the Middle East market as progress on the C-Series family of regional aircraft gathers pace towards a planned first flight in 2012 and entry into service (EIS) the following year.

The Canadian firm has just beefed up its Dubai-based spares depot by stocking commercial aircraft items there for the first time, and is now planning a regional support office (RSO), which covers sales, marketing and support for the region.

"We are still operating from our home base for this region, though our teams spend a lot of time here," said Gary Scott. "We are moving more towards a model where we will establish local operations and put sales, marketing and support people into the region."

The existence of the spares depot in Dubai does not automatically qualify the Gulf state as the preferred candidate for the RSO, he added. "Obviously, it's a big hub in the region but there are other good locations. We are not working to a tight timeframe but it will be in the not-too-distant future."

If Bombardier's 20-year forecast for aircraft demand in the Middle East, India and Africa region is close to the mark, then the RSO will make even more sense. The forecast for the C-Series size of aircraft (100-150 seat) shows that the current regional fleet of 400 will grow to 950 by 2028.

"Although we don't have orders here yet for the C-Series, it is an important region for us," said Scott. "It's a good market for all our products and we have about 160 aircraft here, flying or on order. "We have the Q400 and the older Q300, as well as the regional jets such as the CRJ 700, 900 and 1000."

Scott will be looking to the region for sales for the C-Series and Qatar Airways chief executive Akbar Al Baker has said publicly that his airline is "very interested" in the aircraft.

The all-new aircraft and engine currently features two family members; the CS100 (100-125 seats) and the CS300 (120-145 seats). Powered by two Pratt & Whitney PurePower PW1000G Geared Turbofans capable to



**Gary Scott: "It is an important region for us."**

23,000lb of thrust, the C-Series has a range of 2,950nm (5,457km). It's packed with the latest technology, including fourth generation aerodynamics, increased use of composites and advanced aluminium alloy in structures; and the very latest in system technologies, such as fly-by-wire and electric brakes.

It's got a virtuous carbon footprint, too. The aircraft will emit 20 per cent less CO<sub>2</sub> and 50 per cent less NO<sub>x</sub>, as well as flying four times quieter than comparable aircraft.

At the bottom line it will offer dramatic energy savings, says Bombardier – a 20 per cent fuel burn advantage, as well as 15 per cent improved cash operating costs versus current in-production aircraft of similar size.

But, how does he now see the timing of the launch, coming as it did on the eve of the economic crisis?

"In terms of the economic crisis, we could not have picked a worse time to launch the programme but we feel it was the best time from the long-term perspective to serve this market," he said.

"The reality is that the 100-150 seat market is mostly served by out-of-production aircraft, or larger Boeing or Airbus aircraft that are not right-sized for this market. There has not been a family of aircraft targeted specifically at this market for 40 years. So we knew that these out-of-production aircraft were running out of runway and that the airlines were looking for an optimal solution."

Some observers questioned the wisdom of Bombardier entering a market at the lower end of the "big two's" product range, but Scott counters that neither Boeing nor Airbus offer products "focused or optimised" in the 100-150 seat segment. "Basically, they have downsized versions of their aircraft to operate in this market, rather than building aircraft that are dedicated to it."

He added that Boeing and Airbus are now talking about Boeing 737 and Airbus A320 family replacements in the timeframe 2020 and beyond. "We are delighted that they are apparently waiting until then."

Even when new single-aisle families emerge, Scott does not believe they will be tailored to the 100-150 seat segment. "All the indications are that, from their history and from their own words, they will make the next generation of aircraft bigger still."

And what about the problems of introducing a new technology aircraft, as Boeing found with the 787?

"We have a much more reasonable schedule than they put forward," he said. "Boeing tried to launch this all-new technology aircraft in four years. Our schedule is 63 months. We have a lot of confidence in our ability to manage the supply chain and work closely with it. There are a lot of lessons learned from the 787 programme. We share a lot of common suppliers and we are benefiting from those lessons learned."





promise delivered



Introducing *Sabre AirCentre*, the industry's leading operations solution that helps deliver your promise.

Every ticket you sell is a contract. And managing the pieces that go into meeting those commitments is no easy task.

That's why you need *Sabre® AirCentre™ Enterprise Operations*, so you can deliver your promise across your entire airline – flight, crew, airport and maintenance – all at the lowest operating cost for your airline. Plus, its flexible technology platform adapts to your ever-changing business needs. That's our promise to you!

See the many ways *Sabre AirCentre* delivers. Visit [sabreaircentre.com](http://sabreaircentre.com) today.

**Sabre** / Airline  
Solutions /

*In a world where many airlines are holding on by their fingertips as the recession covers their accounts in red ink, it seems positively odd to come across a happy CEO. But for Peter Hill and Oman Air, the future is looking decidedly rosy. Marcelle Nethersole and Alan Dron report.*

## Oman Air plays a key role in upmarket tourism strategy



**Peter Hill: Five destinations opened up in just five weeks.**

**N**ew wide-bodied flagships for the fleet, a supportive government backer and an expanding route network. A lot of airline chief executives would give their right arm to be sitting in Peter Hill's chair.

When Oman's government decided to leave Gulf Air in 2007, it effectively elevated Oman Air from being a second-tier carrier and decided to harness it to assist in the development of the nation's economy – notably by expanding tourism.

"They basically bought out all the private investors," said Hill. "They wanted to expand the airline's horizons and take over from where Gulf Air had left off. The decision was taken in mid-2007 to go for wide-bodied aircraft and to expand the 737 fleet."

The wide-bodies came from Airbus in the shape of A330s (two -200s and two -300s so far, with another -300 and two -200s to arrive), while there are now 15 Boeing 737s on charge (two -700s and 13 -800s). There are also two ATR42-500 turboprops: one is operated for an oilfield support organisation while the other tackles domestic schedules and sometimes operates into Abu Dhabi or Dubai on off-peak flights.

The ATRs' roles will be taken on by new Embraer 175s, five of which were ordered at last November's Dubai airshow for delivery from mid-2011.

Four will be operated in 72-seat configuration and used on domestic and regional flights where a 150-seat 737 would be too large. The fifth 175 will go to the Royal Oman Police. "They operate their own fleet for their own personnel around Oman," explained Hill. "It's a big country."

The only cloud on the horizon is the late delivery of the airline's planned six Boeing 787s. Originally intended to arrive from the first half of 2012, "our best guess now is they won't arrive before mid-2014".

The last A330s are due to arrive by early 2011. "That gives me a big gap between mid-2011 and mid-2014 unless Boeing can improve on that," said Hill.

How Oman Air gets through that period depends greatly

on whether the market starts to emerge from the economic doldrums. "If it does – and we believe it should – there could be a case for some interim lift between 2011 and 2014." The most likely candidates would be another couple of A330s, he said.

Although the decision to sign up for 787s was taken before Hill arrived, he says the airline looked on the Boeing aircraft as a more economical aircraft that "could do more with less" compared to the A330.

Despite its late arrival: "The argument still holds good. If we get the aircraft in 2014 at the prices we paid in 2007 it will be a good deal – provided it performs."

For Oman Air generally, 'performing' does not mean following in the footsteps of major players like Emirates and Qatar Airways: "We've got enough business here, we believe, in coming years that we don't need to be another hub," explained Hill. Tourism in Oman has developed slowly over the past 30 years but this has been a deliberate ploy by Oman's government, which did not want to be overwhelmed by large numbers of visitors.

Instead, it went for the upmarket end of the holiday industry. Now there are plans to accelerate the development of tourism, but still in that mid-to-upmarket bracket, said Hill. Muscat will become a destination airport rather than just a transit point for people flying between Europe and the Far East.

Oman Airways has a vital role to play in this national strategy. Although very hot in summer, for seven months of the year pleasant temperatures coupled with unspoilt coastline and mountain ranges make Oman a potential winner in the tourism stakes. On top of its physical attractions, life there has a different quality compared to many other Gulf destinations. "I first visited Muscat in 1974 and today it still has the same characteristics as back then," said Hill.

The main target market will be Europe, with new services to Frankfurt, Munich and Paris having opened in quick succession last autumn. "We have also started up the Maldives and Colombo in Sri Lanka. That was five destinations we opened up in just five weeks."

Future destinations will include Kuala Lumpur and Katmandhu. The airline is also looking at several East African cities, including Dar-es-Salaam and Addis Ababa.

Hill sees little in the way of threats to Oman Air's immediate future. His prognosis is for the Oman Air Group – which includes several service companies – to break even within four years and be profitable in five.

"There's no threat, just a question of how quickly we expand," he said. "We see only good things coming out of this."





*Middle East tourist boards and operators were out in force at the London World Travel Market in November. The Middle East is fast becoming a tourist destination and it's not all about the glitz and glamour of Dubai. Some countries may be something of a surprise but, as tourist boards explain, the Middle East is a beautiful part of the world steeped in history and culture and although many people think parts are turbulent, it is generally very safe.*

**Marcelle Nethersole** focuses on five Middle Eastern countries to find out why they are being put on the tourist map.

# FIVE STAR DESTINATIONS

## PLACES TO GO THAT OFFER SOMETHING DIFFERENT

### 1 Iran

#### *The whole world in one place*

Iran is not a country people would normally think of as a holiday destination but peel away the misconceptions and you find a beautiful country spilling over with history.

"We have the whole world in one place," said Cyrus Etemadi, managing director of Cyrus Sahra Tour and Travel Agency. "It is a beautiful country with deserts, mountains, rivers and lakes. It is a cultural country with many ancient cities, the most famous being Persopolis from the Achaemenid Empire more than 2500 years ago. Rediscovered in the 1930s, it draws a huge amount of visitors who can walk among ruins such as monumental staircases and huge gateways."

Iran also boasts ski resorts. "Many visitors come from Germany, Austria and Switzerland to visit our slopes and take the challenge of climbing Mount Damavand and skiing all the way down from 5000 metres," said Etemadi.

Capital city Tehran bustles with life. "It is a big cosmopolitan city with over 12 million people but it's beautiful and a great place to visit," said Etemadi. "We have great restaurants boasting local food and international cuisine.

"The north of Tehran is a great family summer resort with beautiful rivers. It is also good for trekking.

So how safe is Iran and how organised is it for tourists?

Etemadi said: "We have hotels but we don't have many. We used to have Hyatt, Sheraton and Hilton but most need renovation. However we have good three or four star hotels and we're working on building five star ones. Around 45 years ago we had around 700,000 tourists a year. We are looking to get back on track."

Tehran has two international airports, the old Mehrabad International Airport (THR) and new Imam Khomeini International Airport (IKA). Most international flights fly into IKA including BA, Lufthansa, KLM and Turkish Airlines.

Iran Air is the country's national carrier but it has had its problems. "Iran is trying to make improvements with its aircraft and trying to get new ones.

"Iranian Airlines was once one of the best airlines in the world and was the first airline to fly from Tehran to New York non-stop. When China opened its doors to tourists it was Iranian Airlines that flew from Tehran to Peking.

"Tourists had to fly to Tehran and take Iranian Airlines to Peking. We have domestic flights but we do have a shortage of aircraft due to US sanctions. We are hoping this will improve shortly as our tourism steadily increases," said Etemadi.



Cyrus Etemadi: "The whole world in one place."

## 2 Yemen

### *From the Stone Age to a modern outlook*

Yemen, the land of milk and honey, sits on the southern part of the Arabian Peninsula. Dating back to the Stone Age, it has remained largely isolated and has suffered conflict. But today it has its doors open to tourists and has launched a domestic low-budget airline.

"I have never seen a place like this," admitted Christopher Imbsen, programme director of Dunira Strategy. "The capital city San'a still has 11th century mud brick buildings with alabaster windows. It looks like a ginger bread city. It is unique in the world; and unique is a word you can apply to Yemen."

Yemen is the only country on the Arabian Peninsula to experience regular rainfall, offering lush green landscapes as well as mountain air breezes, coral reefs, exotic Red Sea islands and thousands of kilometres of empty white sandy beaches.

San'a was founded by Shem, the son of Noah, and sits on the rooftop of Arabia at 3000 meters. You walk through the streets of San'a and the men still carry curved daggers (jambia).

"The city is surrounded by mountains where you can see precarious looking villages perched on the edge. Kids can't play football in the garden as they would fall down 100 metres," explained Imbsen.

Yemen's history is extensive. Dating back 3000 years it has seen many invasion attempts, including the Roman Empire back in 24 BC. It has also experienced civil wars and today still has its turbulent regions, which should be noted to the traveller.

"Yemen is safe if you behave responsibly and follow the advice of your tour operator," said Imbsen. "There is an insurgency in the north and also a little trouble in the middle of the country around Marib, where the Queen of Sheba lived. But Yemen has many fascinating ancient cities that are safe, such as Shibam, known for its modern-looking brick skyscrapers sprouting out of a desert but which were built in the 16th century and are still standing today."

San'a is already a business centre and Yemen's tourism is steadily on the increase.

Imbsen said: "We had around 400,000 Middle Eastern visitors in 2008. And there were 9,000 visitors from the UK. Our largest European markets are Germany, Italy and France. San'a has five star hotels and there are plans for more but many people like staying at the boutique hotels, which fit in with the Yemini look."

Yemen has six airports including Aden and San'a International. Yemen's national carrier, Yemenia Airways, flies to dozens of destinations across the Middle East and Europe, including London, Paris and Rome. But new to the industry is Yemen's low-budget domestic airline, Felix Airways.

"Felix started last year and it provides an extensive network of domestic services on the Middle East's youngest aircraft fleet," said Imbsen. "It flies to many Middle Eastern and North African destinations and has just launched services to Sharjah and Djibouti."



Abdulwahab Sadaka, (left) tourism counsellor to Yemen and Christopher Imbsen, programme director of advisors Dunira Strategy.

## 3 Syria



Eng. Wael Zuabi: "If you want to increase tourism you need to increase flights."

### *A first for knowledge...*

The Silk Road of Syria has deserts, valleys, citadels, castles and bazaars, and a country proud to boast being the first inventors of quite a few things.

"We had the first alphabet in the world," said Bassam Barsik, director general of development & tourism marketing. "Syria is home to the first musical tune in the world, the first dictionary, and Damascus was the first capital for the state of Islam. These are just little interesting facts but it shows how old we and how advanced we were back then."

Syria's ancient cities of Damascus, Aleppo and Bosra are all on Unesco's World Heritage list, as is the beautiful ruined city of Palmyra.

"Anyone interested in history must come to Syria. More than 33 civilisations have passed over the area. There are more than 10,000 archaeological sites all officially registered, we really are an open air museum," said Barsik. "We have a huge diversity with nature and ecology too. In one hour you can go from the coast to the mountains. Another hour on is the desert, where we have the Bedouin life."

"We also have a deep religious background from stories of the Prophet Mohammed to Christianity. Ma'alula, a Syrian village that springs from the rocks, witnessed the birth of Christianity. The language of this village is Aramaic, the language of Jesus."

Damascus is the oldest inhabited capital in the world. You can walk the around the beautiful Old City, which is filled with bustling bazaars and souks and the winding alleys, mosques and fountain courtyards, cafés and street vendors."

Eng. Wael Zuabi of the Ministers' Office added: "We are marketing Syria as a tourist destination and work closely with the airlines. If you want to increase tourism you need to increase flights, so we need to work together."

We have four international airports with Arab airlines such as Emirates, Saudi Airline and Royal Jordanian increasing their flights to Syria's main international airport just outside Damascus. Some make four or five flights every day."

Syria's flagship carrier is Syrian Arab Airlines, which has a small fleet including Airbuses.

"Last year we had 5.5 million tourists with 60 per cent being from the Arab countries. That's a big market but we also have many European carriers fly to Syria such as BMI, Alitalia and Lufthansa," said Barsik.



## 4 Lebanon

### *Ski slopes, beaches, and vineyards*

Beirut was once referred to as the Paris of the Middle East but that was before Lebanon suffered turbulent times. This is now behind them and, as the director general of tourism explained, Lebanon is back on track to being a chic and sophisticated tourist hotspot while still keeping its traditional roots.

"Lebanon is a diverse country," said Nada Sardouk, director general for the Ministry of Tourism. "We have a culture dating back 7,000 years. There are historical cities and sites, deep forests and snow-capped mountains. We have ski resorts but, if you're a beach fan, we also have the Mediterranean coast. There is also a burgeoning ecotourism offering."

If that wasn't enough, Lebanon is known for its delicious cuisine; arguably the richest in the region. It also has another secret ingredient – flourishing vineyards producing delicious wine.

"We are a safe country. Previous conflicts were actually localised and were never aimed at tourists. We are a small, harmonious and friendly country. We have tight security and safety. It is as safe as anywhere else and our criminal statistics are very low," said Sardouk.

Lebanon's tourist numbers reached 1.6 million in the summer and with its new winter sports destinations it is expected to see a further two million by the end of the year.

Sardouk said: "We have new hotels, resorts and mixed-use developments starting to appear all over Lebanon and key organisations within the tourism

industry are joining forces and are working closely to sustain our country's position as a Middle East business hub and top tourist spot.

"Rafic Hariri International Airport is Lebanon's only airport and can host around six million visitors. We had 1.6 million visitors in the summer – 50 per cent from the Middle East and the others European," said Sardouk.

Lebanon is also seeing a different sort of 'tourist' visit. "We have fantastic medical services. Many people from other Arab countries come to Lebanon for operations."

Beirut is an exciting, fun and chic capital. Its streets still bear a striking resemblance to those in St Tropez, with palm trees, lines of cafes and bars. Look a little closer and you will see the dark side too, with bullet holes peppering older buildings. There are plenty of hotels, including charming family establishments and boutique hotels like in France.

Beirut boasts great culture and a fabulous party life. There are lots of bars, including sky bars on the roofs, which boast the best views over Beirut.

It also offers cabaret theatre, shows, dancing, music and even gambling at its Casino Du Liban, as well as hoards of restaurants.

"We are also very a liberal country. We have 19 different religions and we all live well together. We have women with veils walking next to women in tiny shorts. Lebanon is also a gateway. By land, you can reach Damascus, Syria, by taxi in just two hours. Many travellers make this journey," said Sarouk.



Nada Sardouk: "We are a safe country."

## 5 Palestine

### *Sights to take your breath away*

Palestine, a country that doesn't need much introduction, has every right to boast its tourist potential.

"Palestine hasn't had any incidences of trouble, especially in the West Bank, against travellers for a number of years," said Joseph Sahouri, international relations coordinator of the Ministry of Tourism.

"Although many tourist sites and facilities are being developed and rehabilitated, we are continuing to work within the international community to offer additional sites, which are currently off limits because of Israel's military occupation."

Such sites include the Dead Sea Scrolls in Qumran, the old City of Jerusalem, Herodium Castle near Bethlehem, and the Old City of Hebron, among others. But there is still a lot to see that will take your breath away.

Sahouri explained: "Despite these restrictions, some of the best sites in the world are accessible. These include the Church of the Nativity in Bethlehem, Jacob's Well in Nablus, the Mount of Temptation in Jericho and Belameh Water Tunnel in Jenin. We are trying to diversify. We have wonderful religious history but we are also adding our cultural aspects and expanding to other regions such as Jericho, Ramallah and Hebron as they have their own special attractions. Palestine has archaeological, religious and ecological aspects, as well as wonderful people, and wait until you try our gastronomy."

Palestine's main airport was in Gaza, which has since been destroyed and is occupied by the Israeli military. So how exactly do you get in?

"It's a lot easier and safer than you think," said



Joseph Sahouri and Khoulood Daibes-Abu Dayyeh, minister of tourism and antiquities.

Sahouri. "We work well with the Israeli tourism authority. Why shouldn't we? We are all good people looking to improve the tourism in our countries and this connects us.

"The way to get to Palestine is via Tel Aviv or Amman, then you simply take a car for two hours to get to cities such as Jerusalem, Bethlehem or Ramallah. There is no need for a special visa from either country – its just normal border control like any other country, the normal check points; you just need an access visa.

"There is no problem with having an Israeli stamp in your passport then going in to Palestine. It may only be a problem in the case with regional countries such as Lebanon – in which case, simply ask for your passport

not to be stamped or get a second passport.

"We have no control of airspace so there is still a problem but we are trying to negotiate. We're supposed to reclaim back Jerusalem airport on the eastern side. And one day we hope Gaza International Airport will be open again," said Sahouri.

In 2008 Palestine received 1.4 million visitors, both business and tourists. "That was a milestone for us. It was almost the same as the year 2000, which means we're getting back on track," said Sahouri. "The markets are mainly from western and southern Europe, the Americas and the Far East and we're expanding in the Eastern European countries. It was surprising that the Russians were the main tourists to Palestine."



# A TRUSTED PARTNER IN DEFENCE AND SECURITY



## DO YOU NEED AN EDGE IN THE MODERN BATTLESPACE?

Unmanned Aerial Vehicles boost operational capability in the key areas of surveillance and reconnaissance, cost effectively.

## CAN YOU BELIEVE WHAT OTHERS CLAIM IN THIS SECTOR?

The UK Armed Forces have current operational experience and implement effective operational doctrine to support and back up the claims of UK Industry.

## ARE YOU LOOKING FOR INTELLIGENCE AND INNOVATION WITH A TRUSTED PARTNER?

A relationship with the UK Government offers a harmonised approach as the UK can be trusted to do the right thing. We are energetic and flexible; we look to the future and plan to innovate.

A LIMITED NUMBER OF ONE-TO-ONE CONSULTATIONS WITH MEMBERS OF OUR TEAM ARE AVAILABLE.  
BOOK AN APPOINTMENT VIA OUR WEBSITE: [www.dso.uktradeinvest.gov.uk/bahrain](http://www.dso.uktradeinvest.gov.uk/bahrain)

**VISIT CHALET A32**  
**[WWW.DSO.UKTRADEINVEST.GOV.UK/BAHRAIN](http://WWW.DSO.UKTRADEINVEST.GOV.UK/BAHRAIN)**



*At Dubai, Eurofighter GmbH CEO Enzo Casolini predicted a global market for 800 advanced fighters in the next 20 years and was optimistic that his company would win a significant proportion of the orders. Peter Anstiss, business development director at BAE Systems, spoke to Jon Lake about selling Typhoon into the region.*



## Tail wind behind Typhoon sales

**T**yphoon has already broken into the Middle East market. Saudi Arabia has ordered 72 aircraft and there is every chance of a follow-on order, and Oman is known to have been in discussions about acquiring 12-24 Typhoons.

There are market opportunities elsewhere, too, initially in Kuwait, Qatar, and the UAE.

Eurofighter GmbH CEO Enzo Casolini was bullish: "For Eurofighter we target 300 global export contracts. In the Middle East I'm targeting, to be pessimistic, 50 aircraft, or to be optimistic 100," he said.

Peter Anstiss, business development director at BAE Systems, said his company's analysis suggested that 900 aircraft in the high-end combat aircraft class would be purchased around the world in the next 15 years, at a total price of about £90bn.

He pointed out that this total excluded nations where it was unlikely that authorisation to sell would be received and others that had already made commitments elsewhere. Within that, Anstiss said that Eurofighter's determination was: "to achieve a significant market share with what is a now proven product", predicting, "I'd like to think conservatively, that in excess of 200 Typhoon aircraft can be sold."

Not content to rest on the existing sales in Austria and the Kingdom of Saudi Arabia, he emphasized that his goal was to make sure that "we maximize the penetration of that market".

Anstiss said selling fighter aircraft into the Middle East market offers challenges and exciting opportunities. "This part of the world doesn't have the same sort of formally structured procurement processes that we see elsewhere. The competitions for combat aircraft in this region are not as clearly defined, as far in advance as they are in some other markets.

"In many ways that's a strength as it means

that if opportunities arise, we're not bound by the same ten-year cycle of decision making that some countries demand, and if we, as industry, are sufficiently fleet of foot, we can respond to those customers' need as they arise.

"The important thing for us is to work closely with our current and potential customers, understand their requirements and make sure that we put forward attractive proposals that are compliant with the cost and inward investment and operational requirements."

Anstiss sees the four-nation Eurofighter consortium as a real advantage when it comes to selling Typhoon, allowing the programme to draw on the substantial human, technical and technological resources of what he calls "four leading players in Europe – companies of great standing in the sector – EADS in Spain and Germany, Alenia and Finmeccanica in Italy, and BAE Systems in the UK".

He is also quick to point out that a combat aircraft programme can be a catalyst for political and military relationships and that the Typhoon programme, in particular, is one that has already demonstrated its capacity for allowing governments with common defence interests to get together, strengthening the ties between customer air forces, while enhancing co-operation and encouraging shared doctrine and training. He pointed to the strong relationship between the UK Government and the Government of the Kingdom of Saudi Arabia and the close links between the Royal Saudi Air Force and the Royal Air Force as examples of the process in action.

Anstiss believes that, in what he refers to as "the worst case of a regional conflict", operating Typhoon enables interoperable air forces, with common, interoperable equipment to work together more effectively in a coalition. "This is already a very important strength for the four nations that underpin the Eurofighter Typhoon

programme but it also offers real opportunities and advantages to export customers."

Though he admits that the Eurofighter partner companies are governed by stringent regulations and are compliant with all of the national and international regulations that apply to exporting military hardware, he claims that "one of the things that we do more readily from Europe, and we have a proven track record here, is to form international joint ventures to share technology".

And this is not, he insists, always a one-way street. "There are plenty of examples of where we've entered into collaborative programmes on defence activities and the flow of information and technology has been in two directions, not just a transfer from (say) the UK to an industrial partner overseas."

Anstiss insists that the Eurofighter partners "take this very seriously".

From his BAE Systems background, Anstiss is keen to highlight the strong long-term relationships forged with Hindustan Aeronautics Ltd, that will culminate in the full local licence production of a modern training aircraft. "That's a good example that we can replicate with Eurofighter Typhoon," he said.

"We are committed to forming joint ventures with companies; we look at shared technology, we look at positioning our company (and I can only speak for BAE Systems here) as a tried and trusted partner in the region."



# BAND OF BROTHERS





*What happens when top-class pilots and air crew from various nations meet up? Stefan DeGraef and Edwin Borremans joined the multinational F-16 large force deployment exercise in Jordan to find out*

**S**trengthening multi-lateral military relations by allowing international aircrew to work and train together in realistic operational conditions and, at the same time, offering an opportunity to freely exchange ideas and experiences, is one of the most successful concepts in creating strong coalitions between countries and air forces.

The input of several informal air competitions in the tactical flying programme, which allows the participating pilots and ground crew to compete against each other as ‘equals’ will transform them into ‘winged brothers’, boosting mutual respect and long lasting friendship.

The positive impact of such an exercise and informal competition on the Kingdom of Jordan’s coalition partners was brilliantly perceived and put into action by HRH Prince Feisal Bin Al Hussein.

This desire to improve multi-lateral relationships was quickly joined by the Colorado National Guard in the United States. In April

2004 the kingdom of Jordan and the US Colorado National Guard signed a bi-lateral State Partnership Programme to exchange military, civil and cultural ideas.

Initially created to improve military relationships, as part of the US Department of Defense global security policy, the program rapidly also shifted to civil, economic and even cultural issues.

**Arushed start for ‘Deuce’ and ‘Smack’**

Muwaffaq Salti Air Base (MSAB) Azraq, Wednesday October 19, 2009: two young F-16 Fighting Falcon pilots of No 349 squadron of the Belgian Air Component and four Belgian ground crew rush to their two F-16AMs lined-up some ten meters in front of them.

Only seconds after hearing the ‘go’ whistle, “Deuce” and “Smack” have boarded their aircraft and lit their powerful P&W F100-engines.

At the same time the mechanics perform the vital external checks to secure a safe and

procedurally correct start-up and arming of the on-board aircraft systems.

This highly professional ground-ballet, witnessed by some 100 international spectators, ends when the second of the two jets moves forward to abruptly stop a few seconds later. “Deuce” and “Smack” have just terminated the first part of the ‘Air-Air Scramble’ competition event in the 2009 Falcon Air Meet, organised at the Royal Jordanian Air Force (RJAF) prime F-16 fighter base, located in the desert some 100 kilometres east of Amman.

The stopwatch of the all-seeing referee – a pilot of USAF’s Colorado Air National Guard – will later reveal whether they outclassed their American and Jordanian opponents.

Minutes later both Belgian aircraft would take-off from MSAB to intercept a RJAF CASA 295 bi-engined transport aircraft. Each formation needed to score – as soon as possible after brakes release on the runway – a Fox II short-range heat-

Continued on Page 40

## CONTINUED FROM PAGE 39

seeking (but simulated) missile kill on the unfortunate CN295. Competition-points would be deducted if the AIM-9 Sidewinder missile was fired outside pre-determined distances to the target.

**How it all began**

The first Falcon Air Meet was organised in 2006 at MSAB attended by the RJAF, 522FS/27FW Cannon AFB/NM, and the Turkish Air Force (161 Filo / Bandirma), under supervision of 120FS/140FW Colorado ANG (COANG).

In 2007, the Belgian Air Component participated for the first time by sending F-16AM/BM Fighting Falcons of No.1 squadron (Florennes) to MSAB.

From 2009 on the operational emphasis of the Falcon Air Meet shifted from a multinational flying and ground-handling competition into an overall large force employment (LFE) air exercise, using the vast airspace over eastern Jordan and the available multinational air-assets.

Unfortunately, the Turkish Air Force had to decline its traditional participation in FAM 2009 but three F-16AM Fighting Falcons of No 349/Belgian Air Component and six F-16CJ Block 52 Vipers of 157FS/169FW South Carolina ANG joined RJAF's MSAB-based No1 squadron, equipped with MidLifeUpdated F-16AMs.

Several of these Royal Jordanian Air Force F-16s were purchased second-hand from the Belgian Air Component in 2008 but were degraded from MLU M3 to M2-status before delivery.

**Much more than a simple competition**

Having arrived a few days before the official kick-off, both visiting foreign squadron contingents flew a familiarisation sortie over the exercise 'playground' of east-Jordan, ranging from the Syrian border in the

north over the world famous Wadi-Rum area to the Saudi-border in the deep south of the kingdom.

The availability of a McConnell (Kansas)-based USAF KC-135R Stratotanker of the 22 ARW at MSAB enabled the Jordanian F-16 pilots to train and regain their air-air refuelling skills and qualification, while showing their guests some critical exercise areas (including Prince Hassan Air Base to be used for technical emergency diversions). Immediately after the official opening of the Meet, attended by a large number of regional and international air force commanders, attachés and observers (including Royal Air Force of Oman, RAAF and RAF's ADWC at RAF Waddington), the FM2009-competition launched with a timed formation arrival event over the on-base viewing area.

Two days later, after the completion of the air-air scramble and intercept competition, the first large force employment (LFE) was flown by a sizable multinational F-16 force. Similar to other large-scale exercises, the complexity of the flying programme and scenarios was gradually increased as things progressed. To optimize the training value for the various participants, mission command during the different LFEs was rotated between the various squadrons, offering a broad spectrum of ideas and experiences to exchange.

**A realistic test of skill and knowledge**

FAM 2009 offered the RJAF pilots of No.1 squadron their first opportunity to fully operate their M2/M3-updated F-16 Fighting Falcons in realistic tactical scenarios. Alongside the intense flying programme, the FAM competition also tested the skills of maintenance and armament personnel by giving scores for individual sortie success. The various nations had to compete in a missile loading competition, during which ground crew needed to install an inert AIM-9 Sidewinder and AIM 120 AMRAAM on two of the aircraft (wingtip) hard points. Once more ground crew of the COANG supervised the competition and deducted vital points for incorrect hardware manipulations or safety hazards. By far the most spectacular FM event was the live air-ground bombing competition, in

which all participating F-16s dropped two live Mk.82 Snakeye general-purpose bombs on training targets, close to the airbase.

This event was integrated in a large-scale time-sensitive insertion and extraction exercise of Jordanian Special Forces, making a C-130H Hercules-borne assault landing. All pilots needed to drop their bombs within 30 seconds of the preceding aircraft. Each flight lead – the first pilot in the formation of four aircraft – needed to be over the target exactly two minutes after the last aircraft of the previous formation. To keep all pilots and ground crew competitive until the end, no individual or intermediate scores were given out before the official closing ceremony on November 3. USANG became the overall-winner.

**Jordan is the host with the most**

FAM 2009 saw for the first time the integration of full-scale large force employment missions into its flying programme and scenarios. Operating for two weeks over the vast and almost unlimited airspace of eastern Jordan, all participants were able to test and train their skills during exercise set-ups, often impossible to organise in their homeland (especially Belgium) due to airspace congestion and unavailability.

Ideally located within this enormous airspace 'bubble', MSAB offers plenty of usable parking infrastructure and an almost unlimited willingness of its air force personnel to solve practical problems.

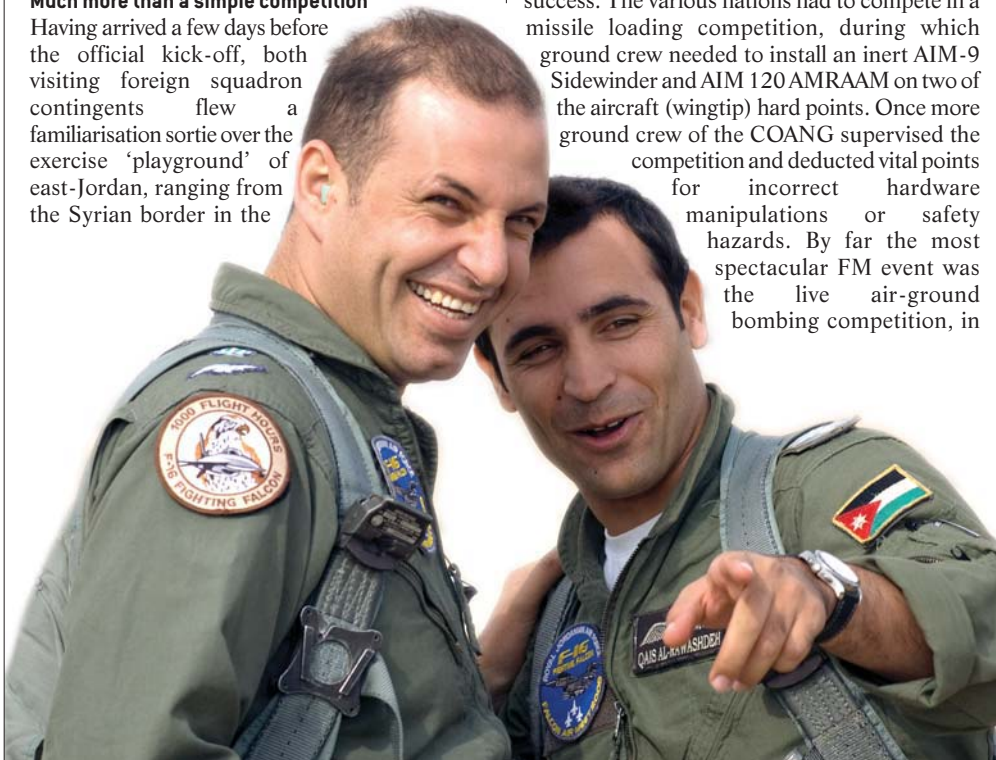
The availability of modern MidLifeUpdated F-16 Fighting Falcons, being a quantum-leap over their old pre-update Block 15s and/or Mirage F-1C/E fighters, will rapidly and successfully bring the RJAF pilots into the digital age of aerial warfare. Their eagerness to demonstrate their capabilities and their vast experience in operating with great tactical efficiency over desert terrain will make them ideal brothers in arms and/or sparring-partners for all parties involved in future FAMs.

**More air forces could turn the air blue**

To continuously improve the high standard of flying operations during the Falcon Air Meet, various air forces – operating state-of-the-art fighter aircraft – will be invited to participate in the LFE missions, with the option to skip the competition events.

The integration of additional 'blue air' participants, 'red air' opponents and ground-based air-defence systems will make this exercise an ideal training-venue.

The use of Air Combat Manoeuvring Instrumentation (ACMI) hardware for debriefing purposes will enhance the capabilities to analyse the various missions in all its aspects. Supervised by the Colorado Air National Guard, the annual Falcon Air Meet may well become a cheaper and realistic alternative for Southeast European and Middle/Near East Air Forces, lacking the logistical support and financial assets, to participate in large-scale exercises in North America (RedFlag - Nellis AFB/USA or Maple Flag/Canada).











In something of a surprise move, the UAE Air Force and Air Defence has announced a \$220 million (€148.3 m, 814.4 AED, 1.5 billion SEK) contract for a pair of AEW-configured Saab 340 aircraft as an interim solution to its long-standing operational requirement for an airborne early warning capability.

No Saab 340 Erieye was present at the Dubai Airshow, while the static park did feature a US Navy E-2C Hawkeye parked alongside the first RAAF Boeing 737 Wedgetail aircraft, which had interrupted its ferry flight to Australia.

Major General Faris Al Mazrouei, the chief of the UAE Armed Forces' logistics staff, made it clear that the purchase of the two ex-Swedish Air Force Saab S100 Argus aircraft represented an interim measure, and that the UAE wasn't yet ready to make a decision on the long-term airborne early warning solution. The new aircraft are to be used to train the UAE military in airborne early warning and command and control capabilities.

The contract covers the supply of two Saab 340 AEW aircraft, fully outfitted with the advanced Erieye radar system, as well as associated ground equipment, initial spares, and logistics and support services.

The two aircraft will be modified with some new and some replaced equipment, with the explicit aim of shortening delivery times as much as possible, according to Sten Söderström, Saab's VP of sales and marketing. The first machine is to be delivered during the third quarter of 2010 and the second around the first quarter of 2011.

Al Mazrouei said: "The UAE Air Force and Air Defence is currently evaluating several options to purchase permanent solution command and early warning aircraft to meet operational requirements."

He confirmed that the Saab 2000-based Erieye was still under active consideration, together with the Boeing 737 AEW&C (which he described as having "suffered technical difficulties") and the Northrop Grumman E-2D Hawkeye which, he

## Saab wins UAE interim AEW order

pointed out, was not yet in service with the US Navy. This helped to explain the UAE's decision not to commit to a definitive 'permanent solution' programme.

Though acquired by the UAE as an interim solution, the Saab 340 Erieye combination is an extremely effective airspace and air battle management platform, proven by the Swedish Air Force, which has a formidable reputation for being at the leading edge of network centric and net enabled air power operations.

Saab's Erieye surveillance system is also in service (or entering service) on Saab 340 aircraft platforms with the Royal Thai Air Force and on the R-99A derivative of the Embraer ERJ145 regional jet with Brazil, Greece, and Mexico, as well as on the Saab 2000 with Pakistan.

### Innovative large aperture

The Erieye radar system was developed by Ericsson Microwave Systems (now Saab Microwave Systems) and is an active, pulse-Doppler radar with an innovative large aperture, dual-sided fixed-phased array antenna mounted in a dorsal fore-and-aft 'plank' fairing. This incorporates some 192 transmit/receive modules that are used to produce a pencil beam, which can be steered as required within the 150 degree operating sector on each side of the aircraft (scanning on one side of the aircraft at a time). The Erieye radar can detect airborne targets in the 30 degree sectors directly ahead of the aircraft and behind it, but may have little tracking capability in these sectors.

The antenna provides coverage out to a range of 450km and has a detection range of 350km,

even in a dense electronic warfare environment or against low flying targets in heavy radar clutter.

The Erieye Ground Interface Segment (EGIS) provides a two-way exchange of data between the airborne AEW & C platform and a ground-based air defence network via an associated datalink sub-system, or on-board operators can control friendly fighters directly. But Erieye is not just for air defence – the detailed situational picture that it provides can also be used to support border control or even rescue operations.

The UAE's acquisition of the Erieye gives the nations of the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE) an additional AEW component (augmenting the Royal Saudi Air Force's E-3 Sentries), and marks a renewed effort to produce an increasingly effective and integrated command-and-control infrastructure, with airborne platforms and long range ground-based radars.

Saab CEO Åke Svensson was clearly delighted by the announcement. "We've been conducting discussions concerning an airborne surveillance system for the UAE for several years. This contract award is proof of our expertise and international competitiveness in the field of network-based solutions." The company seems optimistic that Erieye could be selected to meet the full requirement, as well.

Timescales for a permanent solution remain unclear and the situation has been further muddled by speculation that the UAE is now also looking at a procurement of a Global Express-based ground surveillance aircraft, like the UK's ASTOR-equipped Sentinel R.Mk 1, following a presentation by Brig Gen Ibrahim Naser Alalawi.



# FIRST IN ITS CLASS. FIRST IN THE WORLD.

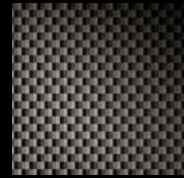
INTRODUCING THE HAWKER 4000. THE WORLD'S MOST ADVANCED BUSINESS JET.

©2010 HAWKER BEECHCRAFT CORPORATION. ALL RIGHTS RESERVED. HAWKER AND BEECHCRAFT ARE TRADEMARKS OF HAWKER BEECHCRAFT CORPORATION. QUOTES FROM ROBB REPORT, JUNE 2008.



## COMPOSITE CONSTRUCTION

Pound for pound, stronger than aluminum. The Hawker 4000 is the *only* super-midsize jet with a fuselage formed of lightweight, high-tech composite.



## INTERCONTINENTAL RANGE

A truly global reach. "With a range of 3280 nautical miles, it flies effortlessly between continents and hops over oceans without ever stopping for fuel."



## BESPOKE CABIN INTERIORS

Unlike its competitors, Hawker's furniture and cabinetry are created in-house by master craftsmen, using select woods and leathers to client specification.



## REVOLUTIONARY COMPOSITE CONSTRUCTION. LIGHTER. FASTER. STRONGER.

In the award-winning Hawker 4000, an industry-first composite fuselage delivers a superior combination of exceptional speed, intercontinental range and incredible cabin volume never before seen in a super-midsize business jet. And unlike its competitors, Hawker artisans bring peerless craftsmanship to a luxurious cabin that accommodates up to eight passengers in stand-up, stretch-out comfort. No other aircraft marries state-of-the-art technology and state-of-the-art luxury like the Hawker 4000. The Hawker 4000 is simply the most advanced business jet in the world. Learn more, dial **+44 (0)1244 523 803** or visit [HawkerBeechcraft.com/900XP](http://HawkerBeechcraft.com/900XP)

VISIT OUR STATIC DISPLAY. MEET THE WORLD'S MOST POPULAR AND MOST ADVANCED BUSINESS AIRCRAFT SOLUTIONS FROM HAWKER BEECHCRAFT.

**Hawker**  
WE MAKE BUSINESS AVIATION MAKE SENSE

# Boeing targets AH-6i at Middle East market

**B**oeing chose to launch its new AH-6i at Dubai, predicting a market for some 300 of these helicopters, many of them in the Middle East.

Fred Jernigan, Boeing's AH-6 international capture team leader told Arabian Aerospace that the AH-6i was the next generation "Little Bird".

He said: "The US special ops guys picked this aircraft – this is combat proven. We looked at the international market and assessed what was needed. This gives AH-64 Apache capabilities, but is down the scales of affordability from the Apache (which is a high end, heavy attack helicopter) smaller in size and lower cost. But not everybody needs an Apache. We have removed obsolescence and improved performance, yet we have not started anew from the ground up – thereby avoiding the cost of an all-new development programme."

Launched with internal company funding, design of the AH-6i began in February 2009 and the prototype made its maiden flight on September 16. The AH-6i was thus designed



The Little Bird has a special desert look for Middle East markets.

and built in just seven months and it uses COTS avionics, apart from the mission computer and weapons controller, thereby avoiding the 'drag' of external development programmes. It also borrows heavily from the US Army version. As a result Jernigan said: "We can deliver operationally useable aircraft in 21 months, period, no caveats."

The aircraft can hover out of ground effect at 6,000ft even on a 35° C (95° F) day, and despite its compact dimensions is fitted with a 3,000-lb capacity hook, used for underslung loads of up to 2,000-lb.

The new variant uses the same C30R engine and transmission as the US Special Forces A/MH-6M Mission Enhanced Little Bird, and has the same 4,700-lb maximum take-off weight, giving plenty of excess power and payload even with full internal fuel and four Hellfire missiles.

Like the US Army version, the AH-6i can be fitted with a weapons plank for mounting weapons, or a utility plank allowing external

carriage of passengers or snipers. It is being offered with a wide range of offensive weapons, including laser-guided Hellfire ASMs, and the laser-guided DAGR rocket, which gives similar accuracy and effect, albeit at shorter range, as well as 0.50-in or 7.62-mm machine guns.

Despite the obvious similarities, Boeing avoids comparing the AH-6i with the US Army A/MH-6M, as Jernigan explained: "Boeing would not say so. The US Government does not like such comparisons to existing Special Forces equipment."

Al Winn, Boeing's Apache programs vice president did admit that the A/MH-6M was the 'base aircraft' and pointed out that this allowed Boeing to take advantage of the same airworthiness release and weapons installation and clearances, but stressed that it had "different equipment and a different sensor". He also revealed that the AH-6i had a new main rotor blade with a tapered tip and a new tail rotor, giving enhanced performance and reduced control loads.

The aircraft has an all-glass cockpit with a single analogue back-up flight instrument. It uses Block III Apache software and, as a result, the display symbology would be immediately familiar to any AH-64 Apache pilot.

The MX-15Di sensor turret accounts for about ten per cent of the aircraft cost and is a five-axis stabilized sensor ball with electro-optical infrared (EO and IR) sensors and a laser designator and spot tracker. It reportedly started life as a movie camera mount – and is stable enough to achieve very high-resolution imagery.

A tactical common data link (TCDL) is fitted to allow the streaming of video or data from the aircraft to a suitably equipped ground station.

## The Little Bird that flew back home

The AH-6i marks something of a surprise return by Boeing to a design it sold off in 1998, following its merger with McDonnell Douglas.

Boeing sold the civilian line of MD500/520/530 helicopters to MD Helicopter Holdings Inc. (RDM Holdings). It briefly continued to work on military H-6s or Little Birds after the sale, retaining the development contract for the US Army's A/MH-6M Mission Enhanced Little Bird upgrade until it received its airworthiness release from the US Army, after which the 'fielding support' of the programme was handed over to MD Helicopters.

The Mission Enhanced Little Bird forms the backbone of the US Army's 160th Special Operations Aviation Regiment and has played a vital role in all recent US military operations, as well as a supporting part in the Hollywood motion picture *Blackhawk Down*.

Boeing bought back the rights to design, build and sell military versions of the H-6 design in 2005, primarily in order to be able to offer a derivative of the Little Bird to meet the US Army's armed reconnaissance helicopter (ARH) requirement. In the event, the ARH competition was won by Bell's ARH-70, a derivative of the commercial Bell 407.

But Boeing also saw other applications for the Little Bird.

The company had already begun work on an

unmanned Little Bird demonstrator under an internally-funded development programme that began in 2004. This was intended as a proof-of-concept for a UAV kit that could be put on any helicopter, allowing it to be converted from manned to unmanned configuration and back – making it what Boeing called an optionally manned aerial vehicle.

Boeing used the software-enabled control (SEC) technology that it had previously developed for unmanned air vehicles under a 1999 US Defense Advanced Research Projects Agency (DARPA) and US Air Force Research Laboratory (AFRL) project.

The demonstrator, based on the US Army's A/MH-6M Mission Enhanced Little Bird, made its first 'unmanned' flight (with a safety pilot sitting in) on September 8 2004, and a first fully unmanned flight followed on June 30 2006.

But Boeing also saw a manned role and real export potential in the latest Little Bird, estimating an export market for 300 during the next ten years.

The company, therefore, designed the export version launching the new type as a privately-funded programme in October 2008, producing the AH-6i prototype by converting one of a pair of A/MH-6X UMELB (Unmanned Mission Enhanced Little Bird) demonstrators that it had built in 2006.



**Bell Helicopter** FLY SMART. FLY BELL.  
A Textron Company

**Bell** 4 SERIES



**COMPLETE A LIFESAVING MISSION IN LESS TIME THAN MOST PEOPLE WAIT AT THE DOCTOR'S OFFICE.**

The Bell 429. Offering lifesaving speed and unmatched reliability, it lets you approach the critical hour with a whole new confidence. Add to that the largest cabin in its class, and you've got the ultimate ER in the air. Welcome to the evolution of the 4 Series. **Welcome to the leading edge of vertical lift.™**







## Is Saudi Arabia next for the Poseidon adventure?

**B**oeing has orders for the P-8 Poseidon already ‘in the bag’ from the US Navy and India, and Australia is participating in the development programme but has not yet committed to purchase the aircraft.

The company is now turning its attentions to further potential customers – most of them currently operating the P-3 Orion. But the most likely next customer, according to programme insiders, is the Kingdom of Saudi Arabia.

The Boeing P-8 is the US Navy’s newest maritime patrol and anti-submarine warfare aircraft and 117 are expected to be ordered to replace the US Navy’s Lockheed P-3 Orions, with at least eight more going to the Indian Navy.

The P-8 is a military derivative version of the next-generation 737-800, with a strengthened fuselage, a wing based on that of the 737-900, and raked wingtips like those on the Model 767-400ER, instead of the blended winglets available on 737NG variants. Boeing is using the P-8A programme to establish best practices for the use of commercial airplane platforms, production processes, and capabilities on its military products.

The aircraft carries six additional fuselage fuel tanks, manufactured by Marshall Aerospace, three in the forward cargo compartment and three in the rear, for extended range. It has an open architecture mission system based on that developed by Boeing for the UK’s Nimrod MRA Mk 4 programme, and thus now extensively ‘derisked’ on that aircraft.

### Primary sensors

The primary sensors are a new AN/APY-10 radar developed for the P-8A, advanced ESM, and acoustics. The aircraft can then engage targets using SLAM-ER missiles or Lockheed Mk 54 Longshot torpedoes, optimized for dropping from medium level, and developed under the High Altitude ASW Weapons Concept (HAAWC) programme. As a result, Boeing claims that the P-8A is “the world’s most advanced long-range maritime patrol and reconnaissance aircraft”.

As such, the type has already attracted interest from a number of the world’s leading naval air arms, including Saudi Arabia’s, where any P-8 acquisition would form part

of a planned major naval modernisation programme, made possible by the recent spike in oil prices, and necessitated by continuing regional tension, not least over Iran’s nuclear aspirations.

Saudi Arabia’s defence spending totalled \$36bn by the end of last year, and the proposed naval modernisation may eventually be worth as more than \$20bn.

Saudi Arabia has asked the US Defense Security Cooperation Agency to assist in formulating and structuring the modernization programme, which will include the procurement of new ships (smaller combat ships from Lockheed Martin or General Dynamics) and a range of maritime aviation assets.

### Maritime patrol aircraft

It is believed that Saudi Arabia has a requirement for six P-8 Poseidon maritime patrol aircraft, worth a reported US \$1.5 billion, and that these aircraft would be augmented by purchases of Sikorsky SH-60R Seahawk multi-mission helicopters and Northrop Grumman Fire Scout unmanned helicopters.

Saudi interest in the P-8 was revealed when Boeing advertised for a “VP for business development in Riyadh”, including the type in the list of systems that the company would be marketing to the kingdom!

Saudi Arabia is merely at the leading edge of a major defence modernization effort in the Gulf region and Boeing has hinted that it could see other states in the area acquiring P-8As, though none operate equivalent types at the moment.

The first three ‘flight test’ P-8s are now flying in support of the company’s development programme and Boeing has completed static and fatigue test examples. Three further production representative test aircraft are taking shape on the dedicated new ITAR-compliant production line at Renton, where wings, empennages and engines are mated to fuselage sections shipped in from Spirit Aerosystems in Wichita, Kansas.

The baseline ‘Increment 1’ P-8 is expected to enter service in 2013, with Increment 2 aircraft (incorporating ‘Spiral 1’ capability enhancements) following in 2015, and the planned full standard Increment 3 aircraft, with ‘Spiral 2’ in 2018.



# ALSALAM AIRCRAFT COMPANY

A CENTER FOR TECHNICAL EXPERTISE  
& SERVICES IN THE MIDDLE EAST



- Manufacturing of parts for military and commercial aircraft
- VIP interior design & modifications
- VIP aircraft management, maintenance, modifications & refurbishment
- Military aircraft depot level maintenance, modifications & upgrades
- Military technical support services
- Commercial aircraft heavy maintenance, modifications & upgrades
- Technical training programs

GET  
MORE

P.O. Box 8012, Riyadh 11482, King Khalid International  
Airport Industrial Park, Kingdom of Saudi Arabia

Tel: 966 1 220 3966

Fax: 966 1 220 3973

Email: [businessdev@alsalam.aero](mailto:businessdev@alsalam.aero)



شركة السلام للطائرات  
ALSALAM AIRCRAFT CO.

*For several years the fractional ownership concept has limped along in a region where most people choose not to share ownership of an aircraft. NetJets has brought back its former whiz kid to give the model some oomph.*

**Liz Moscrop reports.**

# DEARY SET TO WIDEN THE NET

**G**raeme Deary, NetJets Middle East's (NJME) executive director for business development, was in bullish form at the Dubai Airshow.

His company – owned by Saudi Arabia's National Air Services (NAS) and licensed to NetJets – had just taken delivery of the first Dassault Falcon 2000LX to be operated commercially in the Gulf. It was also celebrating a decade of operations in the region and was about to take on the Middle East's first Gulfstream G550 to be offered for charter.

Deary explained: "The business aviation market over here has not been affected to the same extent as in Europe and the States. Although we have seen a cut back in flying in the Middle East, it is a stable market. While some have retrenched, it is also a great opportunity to develop further and obtain new customers with new longer contracts."

It is precisely this attitude that encouraged his former employer to bring him in to revitalise the flagging fractional model in the region. Deary is a passionate believer in the concept and was drafted in to boost NJME's flagging marketing and sales division. He was part of the dream team that set up NetJets Europe in 1996 but he left to set up a competing firm, which went into administration a year ago.

The NetJets concept is simple. Owners buy or lease a fractional interest in an executive aircraft based on the number of hours they are likely to fly in a year. NetJets then provides them with an aircraft to suit their flight profile, looking at comfort, range and frequency of flights and undertakes all the operational needs of the jet.

Although buyers purchase a fractional share in a specific aircraft, they are able to change between aircraft types depending on their needs. Costs are

guaranteed for five years. However, until this year the model had not earned widespread popularity in the Middle East.

That has all changed now. According to Deary, NJME has seen a "significant boost" in sales since it altered its sales programmes slightly to adapt to local preferences. The company now offers the traditional NetJets fractional ownership JetCard in 25-hour increments, as well as the ability to lease fractional shares for one to five years.

He said: "We have had a phenomenal response to the leasing programme. You'd think that the cheaper one-year programmes would have been more popular, but people are signing up for the five-year leases."

#### Unique demands

He attributes this to the fact that now is a good time to buy for those who can afford it with prices of new aircraft down by as much as to 30 per cent. He said: "You have to ask: 'What are the unique demands of this market? What is different from the European or American programmes today?' Cairo is buoyant. Africa has lots of projects and other regions of the world are investing. Prices are so depressed that people are taking advantage of great deals."

He says that NJME is helping to stimulate the market by offering only new aircraft. The company constantly recycles its jets and flies a new fleet that is two or three years old. He said: "Lease rates are also currently very attractive, which are reflecting the rest of the market."

Although NJME is offering shorter leasing periods, Deary says that thanks to the bargain rates most new buyers are opting for the longer five-year terms. He says the entry-level 25-hour block charter card on a 750 is far less popular than leasing, which now accounts for the lion's share of the company's business.

The new Falcon will be offered under a shared ownership scheme and NJME is also relaunching a card program for its Hawker Beechcraft aircraft. NAS already has Gulfstream G450s and Hawker 750s in its fleet and Deary sees the arrival of the new long-range Falcon 2000LX as a major step forward for the company. With a range of up to 4,000 nautical miles, the 2000LX can fly non-stop from Dubai to Paris and London.

"The Falcon 2000LX is the optimum aircraft to fly this route with a spacious cabin and good performance enabling it to get into some of the smaller airports in Europe. This, coupled with its large baggage compartment, allows our guests to travel with all their home comforts," said Deary. The aircraft is also known to have demonstrably strong high cycle use and hot and high capabilities.

Should that particular aircraft not be available, NJME has access to a worldwide fleet of Falcons and says there will always be an aircraft on hand when a customer requires. Deary said: "It is difficult for other charter operators to offer guaranteed availability."

The company also offers management and charter services and will take delivery of the region's first Gulfstream G550 to be available on a Part 135 certificate for charter in the first quarter of 2010. This is the result of a deal with Aviation Link Saudi Arabia, which signed an exclusive contract in November 2009 for NJME to manage its G550.

Abdulaziz Al-Rowaished, Aviation Link's chief executive, said: "Following considerable research and undertaking extensive market studies we chose the best aircraft in its category and naturally associated with NetJets Middle East as the best service provider in the region for its operation."

Deary anticipates that the company will have "five to ten" aircraft on its books in two years time





**“It is a great opportunity to develop further and obtain new customers with new longer contracts.”**

**Graeme Deary**

and that 75 per cent of its revenues will come from the new leasing model. He said: “Although the UAE was badly hit, other regions are buoyant.”

His confidence is partly based on the fact that NetJets’ clients tend to stay. He said: “Less than a handful of customers have left our programme because of the economy. We have a loyal customer base.”

Additionally, NJME has the finances to back its goals. In June 2009 NAS obtained a \$60.5m seven-year loan from Arab Banking Corporation, supported by a guarantee from the Export-Import Bank of the United States. The loan was intended to pay for six Hawker 750s, while providing relaxed payment terms for fractional scheme participants.

#### **Looking for funding**

At the time NAS said it would also be looking for funding for three more Gulfstream G-450s, one of which will be delivered in 2010. These would augment an already strong stable. NJME’s current regional fleet consists of 20 aircraft, 17 under fractional ownership, which are a mix of Hawker 750s/800XPs, Falcon 2000s/2000EXs and Gulfstream GIV-SPs/G450s. There are also three business jets under management, which are chartered to both NJME and outside customers.

The company also offers on-demand charter. Although Deary anticipates that the new aircraft on his books will cater for the lift required, he says that NJME will outsource to carefully selected local providers should the need arise.

He added: “In five years time hopefully we will see a steep curve out of this recession. I passionately believe that we have a tremendous product that will have a phenomenal appeal in the Middle East.”



24hr Sales: +971 4 6026060  
charters@elitejets.aero  
www.elitejets.aero



Photo courtesy of Dassault

## Leaders by Definition

- Exclusive Aircraft Fleet
- Excellent Charter Solutions
- Exemplary Services

It's simply about availing yourself of the full range of business tools to do your job, maximize efficiency, increase productivity and save time - *a necessity really!*

Our fleet includes:  
Gulfstream G450, Falcon 900B, Falcon 900DX, Hawker 850XP

Members of: MEBA, NBAA & IS-BAO certified







# SUPER MARKET

*The recent downturn has seen off several of the weaker aviation companies in the Middle East while the serious contenders are muscling into new related territories to become 'superplayers'.*

**Liz Moscrop** reports

If there was such a thing as a 'superplayer' Royal Jet would certainly be one. That's the view of the company's commercial vice president John Morgan.

The award-winning Abu Dhabi-based luxury charter operator is constantly expanding and last year opened a Dubai charter brokerage business to give it global reach.

The service offers aircraft availability when Royal Jet's own jets are either in use or of an unsuitable size. Royal Jet says it aims to double its fleet by 2013, has recently moved into Saudi Arabia, operates a Fixed Base of Operation (FBO) at Abu Dhabi and is also active in the medevac field.

Like several of the region's rapidly evolving VIP aviation businesses, Royal Jet has imported new talent, often casualties of the downturn elsewhere. Morgan, himself, was part of the team that created now defunct British all-business class airline EOS. The company has also recently hired Richard Roth, a former consultant for the low-cost carrier sector, to help drive down costs while keeping the company operating at the level of service its

customers expect. Morgan said: "We are all part of a bigger experienced team. We work closely as a unit to get the best out of the business and develop a strategic direction."

Morgan has introduced the concept of a personal chef on board, while Roth looks to sourcing and wastage to make sure supplies are being used effectively. The company is also refurbishing its fleet to make sure the brand is realised throughout the interiors.

Royal Jet is one of several operators shaping the new VIP aviation landscape in the region. Another company that could lay claim to the 'superplayer' title is Jordanian luxury charter business Arab Wings, which recently announced that it had obtained a UAE air operators certificate (AOC). This it used to open a new charter company – Gulf Wings – in Sharjah in December. Gulf Wings has a Challenger 605 under management, with four more aircraft set to join its fleet at the time of writing. All together the fleet size will be 15, including the aircraft the company has based in Jordan under its Arab Wings brand.

Continued  
on Page 52

CONTINUED FROM PAGE 51

Ahmad Abu Ghazaleh, Gulf Wings chief executive officer said Arab Wings is aiming to be the largest aircraft services group in the UAE within two years. He added: "You may think this is ambitious, but to quote billionaire investor Warren Buffet, 'it is good to be fearful when people are greedy and greedy when people are fearful'. Our growth is organic and coming from revenues, which is great for us."

He added that the next logical step for the company is to establish a maintenance, repair and overhaul facility (MRO) in Jordan and said that Arab Wings already has: "several large MRO players in Europe talking about possible partnership with us". Arab Wings' fleet is comprised mostly of Bombardier aircraft, so any potential partner is likely to cater for that type.

**Luxury Wings**

Arab Wings is also preparing to launch Luxury Wings in Bahrain and has established Afaq Holding Company there, which is 70 per cent owned by a group of Saudi investors and 30 per cent by Royal Jordanian Air Academy (RJAA). Additionally, it set up Global Wings, a specialised global aircraft broker company.

Headquartered in Bahrain, Global Wings will also share offices with Arab Wings and Gulf Wings in Jordan and will sell aircraft on behalf of Arab Wings and other operators. With an initial investment of US\$1m, Ghazaleh anticipates that the company will do well for Arab Wings. He said: "We have seen the bottom of the market. A couple of years ago expansion here was exponential and unnatural. People were buying 20-30 aircraft at once but what we lack most in this industry is human resources, so we have seen lots of closures



**Ahmad Abu Ghazaleh: "Several large MRO players in Europe talking about possible partnership with us."**

in the last couple of months." The company also owns an aviation university and has said it is on the hunt for a European acquisition.

Fellow UAE operator Dana Executive Jets also has aspiration for 'superplayer' status and will take delivery of two new aircraft in the next few months – one large cabin and one mid-size. The company is remaining tight-lipped as to the aircraft types, but says that they form part of

ambitious expansion plans for the region over the next few months.

Wholly owned by the government of Ras Al Khaimah, UAE, Dana offers charter, management and line maintenance services. According to Ramon Molzun sales manager, the company has major growth plans for the region and will open a new office in Dubai in January 2010. This will augment the line maintenance facility it opened last year in Ras Al Khaimah with Turkish MRO specialist MNG to support its Hawker and Bombardier Challenger aircraft.

It has also established two satellite sales offices in Abu Dhabi. Molzun said: "We often have positioning flights to these destinations and this enables us to maximise this potential."

There are other possible 'superplayers' waiting in the wings. Qatar and UK executive charter operator Rizon is working toward a February 2010 completion on its new US\$16 million 13,000 sqm hangar and FBO/VIP terminal facility in London Biggin Hill Airport. It has five business jets based in Doha and one aircraft in London. The company has offices in Qatar, the UK, Bahrain and the UAE and is focused on providing travel solutions and business aircraft support in the Middle East, Europe, India, Russia, the Far East and Africa.

**Sizeable ambitions**

Austrian-headquartered VistaJet may not be a 'superplayer' in terms of reach across several market segments, but it certainly has sizeable ambitions for the Middle East. The block charter company has said it sees a significant proportion of its major order for Bombardier business jets being based in the region.

The company ordered \$1.2bn worth of Bombardier jets in 2008 and says many of those aircraft will be based in the Gulf region and Saudi Arabia. To ensure it fills seats it appointed former Netjets Middle East boss Dr Elias Maroun to help grow the business.

Chairman Thomas Flohr expects to achieve market growth of 10 per cent in the next three years. He said: "The Middle East is right in the geographical centre of Europe and Asia. By 2012 I expect the region to account for one third of our revenues."

He underscored the importance of relationships to create business. He said: "People who spend \$2m per year on 200-300 hours flying are happy and comfortable to talk to the principal; they feel an affinity with me. I like to get close to the real decision makers. I am VistaJet's biggest guinea pig. I represent the cost-conscious value buyer. I pay for value and the amount is not that important."

The new 'superplayers' are attracting specialists from all over the world eager to be part of the growth. Royal Jet's Morgan explained why: "This part of the world is extremely attractive and a vibrant and exciting place to live. It is great to be here. I can only see the pool of talent getting bigger."

**Gama radiating confidence in MENA region**

The charter and aircraft management company set up a representative office in the Dubai Airport freezone in 2007 as part of an international expansion that has subsequently seen it open businesses in the USA and Europe but it wasn't until MEBA 2008 that the company laid out its plans for the region.

By the time of the Dubai Airshow in November, Gama was ready to spend and it signed deals for two aircraft – a Bombardier Challenger 605 and a Challenger 850. Both aircraft were already based in the UAE and have now been handed over to Gama to join the Challenger 604 that was already based at Sharjah.

The company has said it is initially focusing on providing aircraft management and charter services before expanding significantly throughout the region into other aviation areas.

Dave Edwards, the group's general manager, who has been heading the development in the region said: "We're absolutely delighted to be increasing our regional fleet with the addition of these two aircraft in the UAE, which cements our launch into the market here."

"For the past 12 months we've been steadily building the business and finalising plans for our

FBO and hangar development at Sharjah International Airport, so to add two aircraft to our start-up fleet before the AOC is awarded is an incredibly positive leap forward in our plans."

Edwards said Sharjah is proving to be an excellent place to be based. "With the new road system it is very easy to access Dubai and the other nearby emirates. Also Dubai International is very busy and we can be away from Sharjah while we would have still been lined up behind commercial flights if we were operating from Dubai."

Edwards says the timing to launch the business in the Middle East may not have been ideal but it holds no fears for him.

"Global recessions have always tended to bring out the best in businesses and in our industry it's no exception – the experience from our 26-year history and the international coverage we have as a group are virtually unrivalled in the modern market – certainly limited it to only a very small handful of business aviation providers – and we're using all of those skills to bring new, focussed aircraft management and charter services to the region. We're confident that the unique strengths we have, both as a team and a group, will be very beneficial for both aircraft owners and charter clients alike."



# 850



**DEFINE YOUR SPACE**

[850now.com](http://850now.com)

**BOMBARDIER**  
**CHALLENGER 850**

Bombardier, Challenger & Challenger 850 are registered trademark(s) or trademark(s) of Bombardier Inc. or its subsidiaries. © 2009 Bombardier Inc. All rights reserved.

### Arrival Airports

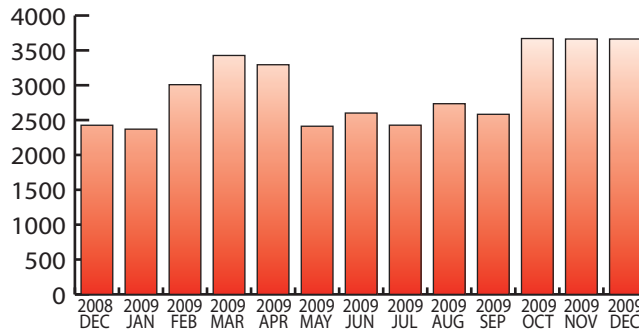
Per requests and aircraft category

Light Jet	
Airport	% of all requests
DUBAI INT'L	18.6%
BEIRUT	13.0%
KUWAIT INT'L	10.5%
QUEEN ALIA INT'L	7.2%
KING KHALID INT'L	6.0%
DAMASCUS INT'L	5.7%
DOHA INT'L	5.0%
MARKA INT'L	4.6%
KING ABDULAZIZ INT'L	3.9%
ABU DHABI INT'L	3.9%

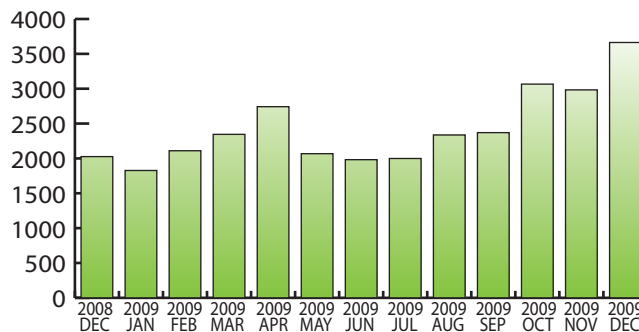
Mid Size Jet	
Airport	% of all requests
DUBAI INT'L	40.6%
BEIRUT	9.4%
ABU DHABI INT'L	6.7%
KING KHALID INT'L	6.2%
QUEEN ALIA INT'L	4.0%
KUWAIT INT'L	3.8%
DOHA INT'L	3.7%
KING ABDULAZIZ INT'L	3.3%
SEEB INT'L	2.4%
MARKA INT'L	2.3%

Heavy Jet	
Airport	% of all requests
DUBAI INT'L	41.9%
KING KHALID INT'L	11.0%
KING ABDULAZIZ INT'L	9.6%
BEIRUT	7.2%
ABU DHABI INT'L	6.0%
DOHA INT'L	4.0%
KUWAIT INT'L	2.9%
QUEEN ALIA INT'L	1.8%
BAGHDAD INT'L	1.5%
SEEB INT'L	1.1%

### System Searches

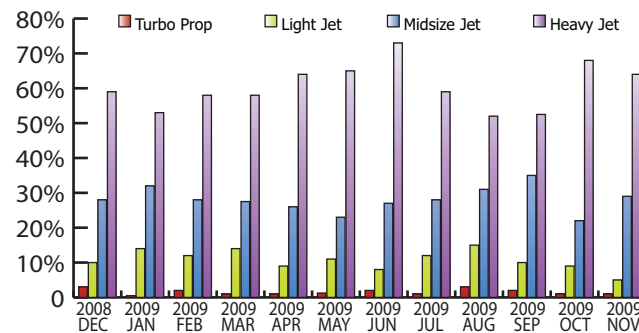


### System Requests



### Distribution of Requests

Per aircraft category



Avinode serves the global air charter industry to buy and sell charter flights. Over 60 000 trip searches per month are made through Avinode's marketplace sites which provide real-time availability, instant pricing and flight time calculation for over 3000 charter aircraft worldwide. The company which also provides an online suite of tools for the air charter industry to efficiently run their businesses regularly monitors charter interest. These are their data for the Middle East market.

### Departure Airports

Per requests and aircraft category

Light Jet	
Airport	% of all requests
DUBAI INT'L	20.8%
KUWAIT INT'L	14.1%
BEIRUT	12.7%
KING ABDULAZIZ INT'L	5.8%
KING FAHD INT'L	5.4%
KING KHALID INT'L	5.2%
BAHRAIN INT'L	4.5%
MARKA INT'L	4.4%
ABU DHABI INT'L	4.2%
AQABA INT'L	3.9%

Mid Size Jet	
Airport	% of all requests
DUBAI INT'L	41.3%
BEIRUT	9.4%
KING KHALID INT'L	8.5%
ABU DHABI INT'L	7.7%
KUWAIT INT'L	5.8%
DOHA INT'L	4.2%
KING ABDULAZIZ INT'L	4.1%
QUEEN ALIA INT'L	3.5%
BAHRAIN INT'L	2.4%
AQABA INT'L	1.9%

Heavy Jet	
Airport	% of all requests
DUBAI INT'L	32.2%
KING KHALID INT'L	19.7%
KING ABDULAZIZ INT'L	9.8%
BEIRUT	7.1%
ABU DHABI INT'L	7.0%
KUWAIT INT'L	5.2%
DOHA INT'L	4.5%
BAHRAIN INT'L	2.3%
RIYADH	2.2%
QUEEN ALIA INT'L	1.5%

### Departure Airports

Per searches and per requests

Departure (Searches)		Departure (Requests)	
Airport	% of all searches	Airport	% of all requests
DUBAI INT'L	36.2%	DUBAI INT'L	33.8%
KING KHALID INT'L	9.9%	KING KHALID INT'L	14.6%
BEIRUT	8.0%	BEIRUT	8.5%
KING ABDULAZIZ INT'L	7.1%	KING ABDULAZIZ INT'L	7.8%
ABU DHABI INT'L	6.1%	ABU DHABI INT'L	6.6%
DOHA INT'L	4.7%	KUWAIT INT'L	6.5%
KUWAIT INT'L	4.4%	DOHA INT'L	4.2%
QUEEN ALIA INT'L	3.0%	BAHRAIN INT'L	2.8%
BAHRAIN INT'L	2.5%	QUEEN ALIA INT'L	2.4%
DAMASCUS INT'L	2.0%	RIYADH	1.7%

The most popular departure airports in the Middle East based on requests sent and searches made. Please note that only the departure airport of the first leg in a multiple leg trip is considered.

### Arrival Airports

Per searches and per requests

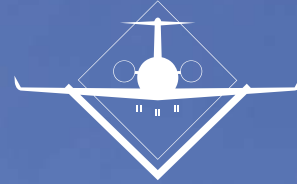
Arrival (Searches)		Arrival (Requests)	
Airport	% of all searches	Airport	% of all requests
DUBAI INT'L	39.1%	DUBAI INT'L	39.0%
BEIRUT	9.0%	BEIRUT	8.9%
KING KHALID INT'L	7.9%	KING KHALID INT'L	8.4%
KING ABDULAZIZ INT'L	7.1%	KING ABDULAZIZ INT'L	7.3%
ABU DHABI INT'L	5.5%	ABU DHABI INT'L	6.1%
DOHA INT'L	3.7%	DOHA INT'L	4.0%
KUWAIT INT'L	3.5%	KUWAIT INT'L	3.9%
QUEEN ALIA INT'L	3.3%	QUEEN ALIA INT'L	3.0%
MARKA INT'L	1.9%	BAGHDAD INT'L	2.0%
BAGHDAD INT'L	1.8%	DAMASCUS INT'L	1.7%

The most popular arrival airports in the Middle East based on requests sent and searches made. Please note that only the arrival airport of the first leg in a multiple leg trip is considered.



# The Registry of Aruba

International Air Safety Office, Inc.



Ministry of Transport & Tourism  
Department of Civil Aviation  
Sabana Berde 73-B  
Oranjestad, Aruba

## THE AIRCRAFT REGISTRY OF CHOICE

**Are you considering registering your aircraft in a credible category 1 assessed country, for political fiscal, economic, commercial or any other reason?**

Worldwide private aircraft owners and operators, commercial jet and regional airlines, international leasing companies, banks and financial groups, value our services for high safety oversight standards, superior customer service, efficiency, cost containment, financial benefits, premier tax advantages, reliability, maintenance conformity, regulations compliance to EASA & FAA standards, quickness and much more...

**US Office:** 8750 NW 36 St, Suite 210, Miami, Florida 33178  
Tel: +1.305.471.9889 Fax: +1.305.471.8122  
admin@airsafetyfirst.com . www.airsafetyfirst.com

**Aruba Office:** Belgiestraat 36 P.O. Box 1256 Oranjestad, Aruba

Member of:





# GSTF turns spotlight on regional space race

WORDS AND PICTURES: STEVE NICHOLS

The three-day Global Space Technology Forum at the Abu Dhabi National Exhibition Centre took place on December 7-9 after an official opening by Saudi Arabia's HRH Prince Sultan Bin Salman Bin Abdulaziz Al Saud, the president of the Saudi Commission for Tourism and Antiquities.

Prince Sultan is probably better known as the first Arab, Muslim and Royal to visit space, as a payload specialist aboard the Space Shuttle Discovery in 1985.

After a ribbon-cutting ceremony he gave a keynote speech in which he outlined how important space is to the region and how his mission success is still encouraging youngsters to follow in his footsteps to a career in the aerospace industry.

The prince said that space technology had a strategic role to play in regional economic development and encouraged countries in the Middle East North Africa (MENA) region to work together.

"When I was in space we spent the first day pointing out our own countries," he said.

"We spent the second identifying our



One of the panel sessions.

continents and by the third day we just saw the earth.

"We are all members of one large family on our journey through space."

His Royal Highness joined the Saudi Air Force after his space mission, becoming a pilot before retiring in 1996 with the rank of colonel.

The event came at an exciting time for the region's space industry with many successful projects in the UAE.

These include the launch of DubaiSat-1, the UAE's first satellite, and the announcement of

major multi-million dollar projects by Abu Dhabi-based companies Aabar Investments and 4C GEOC.

HH Dr Turki Bin Saud Bin Mohammed Al Saud, vice president for research institutes at the King Abdulaziz City for Science and Technology (KACST), also spoke and said that Saudi Arabia had the most developed space industry in the region.

"We have recruited and trained more than 120 Saudis and launched 12 satellites between 2000 and 2007," he said. "We are currently involved in the Islamic Mega Satellite Project, which is a





Far left: Saudi Arabia's HRH Prince Sultan Bin Salman Bin Abdulaziz Al Saud (left) and Mohammed al Ghanim, director general of the UAE's Telecom Regulatory Authority cut the ribbon to officially open the GSTF.

Above: Saudi Arabia's HRH Prince Sultan Bin Salman Bin Abdulaziz Al Saud addresses the forum.

feasibility study to look at a geostationary satellite system.

He said KACST is now working with the National Aeronautics and Space Administration (NASA) to launch a Lunar Science Institute and is planning its STAR mission for the launch of four satellites in 2015 to study general relativity by looking at the earth's gravity.

The rest of the first day included speeches by more than 15 space specialists, including NASA's Michael O'Brien; Surrey Satellite Technology Ltd's professor Sir Martin Sweeting; Dr Mohammed Argoun, the former director of the Egyptian Space Programme; Martin Gee, chief technical officer for Yahsat and Ahmed Al Mansoori, director general of the Emirates Institute for Advanced Science and Technology.

The forum continued with world-renowned space experts examining small satellite missions, sustainable earth observation systems, space education, and space borne security and surveillance systems.

The final day was devoted to satellite communications, with two secondary seminars on how to provide a skilled workforce for the new space industry and the applications of space data in the MENA region.

## NASA wants more strategic partnerships in MENA region

The National Aeronautics and Space Administration (NASA) is looking to form more strategic partnerships, according to Michael O'Brien, the organisation's assistant director of Office of External Relations.

Speaking at the Global Space Technology Forum (GSTF), O'Brien said he believed NASA could do more in the region. He said that this was the first time that a NASA representative had spoken at such a conference in the Middle East and that he welcomed the opportunity.

"We already have 3,000 agreements with more than 100 nations and these benefit both NASA and our partners. Sixty-three international astronauts from 15 countries have also flown on space shuttle missions he said.

"NASA has a number of agreements in the MENA region, including three in the UAE, one in Saudi Arabia, one in Kuwait and another in Qatar. We will also shortly be announcing yet another agreement in the next few days. Any cooperation must be consistent with US foreign policy objectives, but it can be done."

O'Brien said that international agreements were key to NASA's success, but they can take time to organise. "It took three-and-a-half years to negotiate the international agreements over the International Space Station," he said.

O'Brien said he was due to have many key discussions with interested parties both during and after the GSTF. He confirmed that NASA had also recently signed an agreement with the Arab Youth Venture Foundation by which UAE university students will work on a project with scientists at its Ames Research Centre in California.

The programme's goal is to engage outstanding college students from the UAE in the fields of science, technology, engineering and aerospace.

He said UAE student involvement will provide US students with valuable experience and knowledge about working together with representatives from other countries. The Education Associates Program

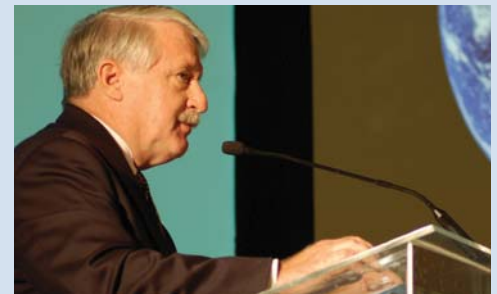
anticipates its first group of Education research fellows this month. Corporations and government entities in the UAE will sponsor the foundation's activities in full, including the costs related to student lodging, housing, and transportation.

NASA is also working with the UAE on a joint project to look at "aerosols" in the atmosphere over the Arabian Gulf.

Scientists have long known that cloud droplets form on tiny, microscopic airborne particles – or aerosols. These particles allow water vapour to condense on their surfaces. Pollution caused by humans produces very significant amounts of additional aerosols and these airborne particles can cause substantial changes in our weather and climate.

The US/UAE team is looking at how to calibrate instruments onboard spacecraft to better detect aerosols. The goal is to model and explain the complicated flow patterns in the coastal regions of the Arabian Gulf and the Gulf of Oman. Satellite data will be compared with remote sensing measurements made on the ground in the region by various instruments.

"We welcome discussion on other joint projects in the MENA region," O'Brien concluded.



NASA's Michael O'Brien speaking at GSTF.

## 4C looking for partners on GulfSAR project

The 4C group is looking for potential partners to collaborate on its GulfSAR synthetic aperture radar satellite project.

The first satellite is due for launch in early 2013 but, as Professor Riccardo Maggiora, chief technology officer for 4C SatImage explained, the company is still willing to talk to anyone who would like to discuss strategic opportunities in the MENA region.

GulfSAR is a high-resolution active satellite that can see through clouds or work day or night thanks to its ground-reflecting radar.

Its low inclination angle means it will be ideally placed for the Middle East, covering a maximum latitude of plus and minus 43 degrees.

"Nearly all low earth orbit (LEO) satellites, like Cosmos-SkyMed are in polar, sun-synchronous orbits, which means that they only pass over the region around, say, 6am and 6pm," said Maggiora. "GulfSAR will be overhead in the region up to 25 times a day, but the passes will be distributed more evenly over that time period."

The constellation will eventually consist of four satellites, with two being launched in 2013 and the others the following year. The constellation will mean that an area can be revisited in between one and four hours.

With a weight of around 1750kg, its X-band radar will give up to one metre resolution and be able to download more than 400 images per day.

Innovative multi-colour analysis will combine red, green and blue images taken on subsequent days. Anything that has moved in that time, such as shipping, oil slicks or water, will then appear as a brightly-coloured object on the processed image.

"We are in the fund-raising stage at the moment," said Maggiora.

"We are looking for a partner for the first spacecraft, which will cost around €240m."

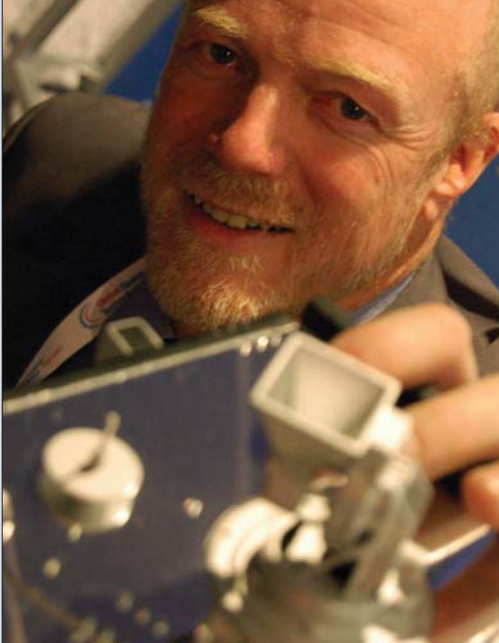
Images will be downloaded to any suitable ground station, but the new 4C Gulf Earth Observation Centre (GEOC) in Abu Dhabi, which was announced earlier this year, will be the local downlink point.

The 4C GEOC is being developed in a collaborative venture between US-based 4C Controls and Abu Dhabi-based Hydra Trading and will eventually cover a surface area of approximately 10,000 square metres.

Maggiora said they have completed the fabrication of the antenna structure in Italy and the ground station building is under construction.



Orbital Satellite Services' Baard Eilertsen aims to extend the life of satellites with SMART-Olev's helping hand.



## Rescue service for ailing satellites

Orbital Satellite Services told the GSTF that is hoping to introduce a new space breakdown service that will put ailing geostationary satellites back on track.

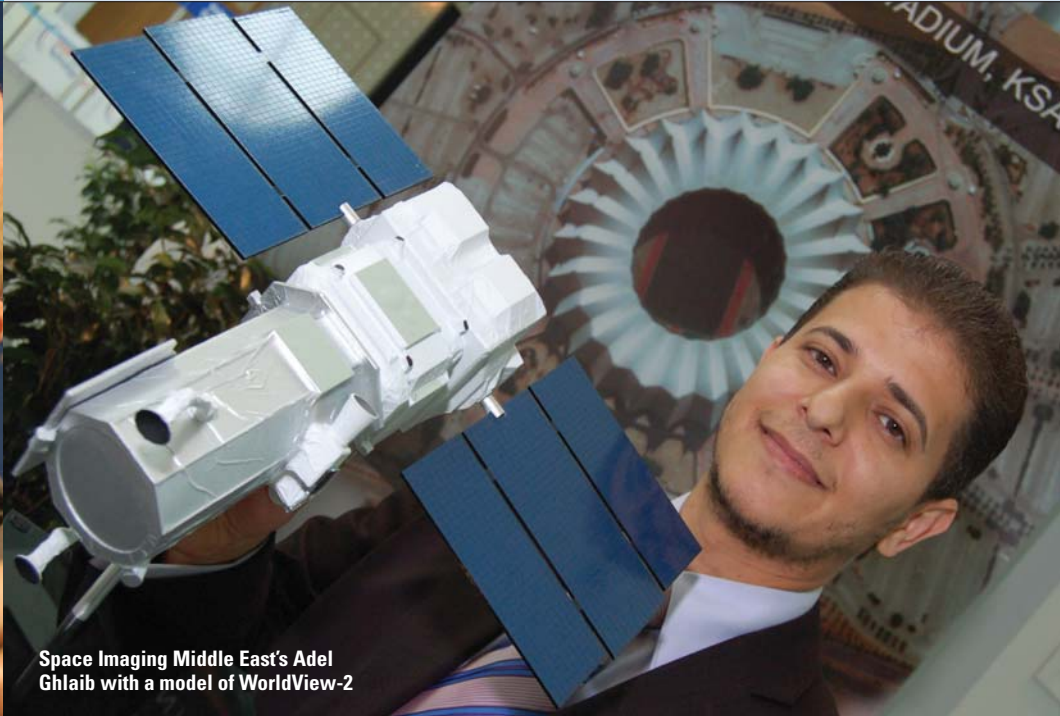
Called SMART-Olev, or the Orbital Life Extension Vehicle, it is an electrically-powered "tug" that, after launch, will attach itself to satellites that have run out of fuel, enabling them to be pushed back into position, moved to a new spot or even manoeuvred upwards and outwards into a "graveyard" orbit.

Baard Eilertsen, CEO of Swedish-based Orbital Satellite Services, says the market for such a service could be huge. "Extending the life of a satellite will save companies millions. In the next 10 years alone, there will be more than 140 viable commercial telecommunications satellites due for decommissioning that are suitable for life extension," he said. "Since we can offer this service at a relatively low cost it will be much cheaper than replacing a six-tonne satellite that is still functioning normally, but has run out of fuel or has a thruster malfunction."

Once launched, the SMART-Olev will use six solar-powered ion thrusters to make the 20-week journey out to the Clarke Belt, where the ailing satellite resides. Although it can generate up to 5kW of power, the Xenon-powered thrusters will only generate 85 milli-Newtons of thrust, so it is a slow journey.

Using cameras it will then home in on its target before using a stinger to dock into the satellite's main booster nozzle. Once locked in place it can then deploy its solar panels and move the satellite back to where it should be using the thrusters.

Eilertsen said the company already has a preliminary contract in place with a launch operator which is prepared to be a "guinea pig" for the first operation.



Space Imaging Middle East's Adel Ghlaib with a model of WorldView-2

## WorldView-2 sprucing up its image

Space Imaging Middle East is making the final adjustments to the new WorldView-2 satellite, which will come online in early 2010.

WorldView-2 is the next satellite in the series and will be the first high-resolution multi-spectral platform, offering 50cm panchromatic (black and white) and 184cm full-colour resolution images.

It is also the first satellite to offer eight-band colour imagery and is able to image in what Space Imaging calls "coastal (400nm-450nm)", "red edge (705-645nm)", "yellow (585-625nm)" and near infra-red light (860-1040nm) wavelengths. This will offer greater detail for specialist applications.

Space Imaging's Adel Ghlaib said this multi-spectral capability will offer many new opportunities.

"This new capability will be extremely useful for

environmental studies," he said. "At the moment the satellite is still being calibrated, but its imagery should be available to customers very soon."

WorldView-2 was launched in October into a 770km high orbit.

With an estimated mission life of more than seven years, it is also the first satellite to feature control moment gyroscopes (CMGs). These provide acceleration of up to 10 times that of other attitude controls and improves both manoeuvring and targeting capability.

With the CMGs, the satellite can swing to cover a new area 300km away in just nine seconds. This means WorldView-2 can create stereo images, in a single orbital pass. It will also be able to revisit an area, on average, every 1.1 days.



Martin Gee, chief technical officer of Yahsat

## Yahsat prepares launch of next-generation

Abu Dhabi-based Yahsat is preparing for the launch of its next-generation Yahsat 1A platform in early 2011. If successful Yahsat 1B would follow later the same year.

Martin Gee, chief technical officer of Yahsat, said that both were being produced by EADS Astrium and Thales and would be "heavy" geostationary satellites in the six-tonne range.

Yahsat 1A would offer a range of transponders, including Ku band support for up to 150 digital TV transmissions or up to 50 in high definition.

He added that there was a lot of interest in the region. "Many people now have high-definition TVs, but no signals that are compatible. Yahsat would solve that problem," he said.

The satellite's C-band capability would provide up to 14 transponders covering Africa and the Middle East.

It could also offer broadband internet access via its YahClick service, which would be provided through a third-party supplier.

Yahsat is also talking to the UAE military about its potential Ka band military applications Gee confirmed.



Professor Sir Martin Sweeting, of Surrey Satellite Technology Limited

## Little appetite for a regional administration

Does the Middle East really want a regional space administration – and if it does what form should it take?

That was the subject of a discussion forum held on the first day of the Global Space Technology Forum in Abu Dhabi, although the conclusion was far from positive.

The session, chaired by Professor Sir Martin Sweeting, of Surrey Satellite Technology Limited (SSTL), heard from a number of interested parties, including Dr Mohammed Argoun, the former director of the Egyptian Space Programme; Ahmed Al Mansoori of the Emirates Institution for Advanced Science and Technology EIAST; Martin Gee, chief technical officer for Abu Dhabi-based Yahsat and Dr Omar Al-Emam, space technology advisor for the Arab Science and Technology Foundation.

Sir Martin said that the development of space technology is best brought about by indigenous industries and that it takes a considerable amount of time to bring this about. "Countries really need to think about a 25-year plan," he said. "On top of this an educational plan is also required.

"Around the world there are many examples of regional space administrations that have not performed as well as people might have wished. Even the European Space Agency (ESA) has taken 40 years to get where it is today and the founding idea was that its partners could cooperate on projects that no one nation could manage on its own.

"So what is the best model?" he asked. "What type of coordination and cooperation is going to give this region the best value, while avoiding duplication and competition?"

He said that his personal view was that a regional agency was not yet needed. "A coordinated council is probably better," he said.



Professor Mohammed Argoun agreed and said that national space programmes must be in place and working well first. "We do have space programmes in this region that are active, but they are all based around small satellites. But what we don't have is extensive use of the data that those satellites are giving us," he said.

"Our number one goal must be to make better use of that data. Our second goal must be to encourage joint ventures between the countries in the region. A training organisation for the whole region would be also be a good precursor to a regional space agency," he said.

"Once we have all three we may have the necessary ingredients."

Ahmed Al Mansoori director general of EIAST, agreed and said that a regional agency is "just a dream".

"The main obstacle is that countries have different priorities," he said.

"From our own experience in the UAE we had support from our government and the goal that the educational development would help us transfer to a knowledge-based economy."

Martin Gee, chief technical officer for Yahsat, said that each country needed to have a national strategy. "You need a national agency in each country first before you can look at a regional one," he said.

When the question was put to the floor there was also little appetite for a regional agency.

Dr Saleh Al Shidani of Sultan Qaboos University in Oman said that a proposal for such a regional agency had been put to the League of Arab Countries more than 12 months ago, but nothing had come of it.

Other contributors were equally negative – on the basis of the debate there will be no Middle East equivalent of ESA in the foreseeable future.

## UAE plans launch of DubaiSat 2 in 2012

The United Arab Emirates plans to launch DubaiSat-2 in 2012, just three years after the launch of the first Emirati satellite to be sent into orbit, according to Ahmed Al Mansoori, director general of the Emirates Institution for Advanced Science and Technology (EIAST).

Speaking to Arabian Aerospace at the Global Space Technology Forum (GSTF) in Abu Dhabi, he said that DubaiSat-1, which was launched from Baikonour in Kazakhstan on July 29, is performing well and transmitting high-quality images of the region to its dedicated ground station in Dubai.

On display at the EIAST stand at GSTF were colour images from the 2.5-metre resolution satellite, including photographs of Fujairah in the UAE, the Emirates Palace in Abu Dhabi and the Eiffel Tower in France.

"The data from DubaiSat-1 is already being used in environmental research, including pollution and tracking sandstorms," he said.

Sandstorms originating in the Sahara and crossing the Gulf are particularly problematic in the region, as witnessed by the devastating one, which hit Riyadh in March of this year.

Mansoori also said that they were working with government departments on how best to use the satellite imagery and from 2010 they will look at how to commercialise the satellite's output.

"DubaiSat-1 inspires our children and acts like a magnet for Emiratis to stay in this country and study applied maths and science," he said. "Two graduate students are already using data from DubaiSat-1 as part of their masters degree studies and we are proud that DubaiSat-1 was an all Emirati project. We have almost finished the design of DubaiSat-2. Next we will get into the build phase of the satellite. Our current plans are for launch in the last quarter of 2012.

"Everything we learn we will share and it will help pave the way for the design of DubaiSat-3 in due course."

Around 20 female students from EIAST were at the first day of the forum to find out more about the space industry.



Steve Young of SSTL shows a group of female students from EIAST how its micro satellites can navigate themselves by fixing on to known stars at its Global Space Technology Forum display.



In Bahrain, you'll find more reasons to smile.



The Kingdom of Bahrain is the perfect location to base the headquarters of your Middle East operations.

With a well-educated, highly-skilled, local and expatriate workforce, Bahrain is the best destination for the technically advanced requirements of the aerospace industry. Find unparalleled expertise in engineering and manufacturing at your fingertips.

Situated in the heart of the Gulf, Bahrain has better access to the rest of the Middle East than any other country in the region.

Bahrain offers the most liberal, business-friendly and efficiently regulated economy in the Middle East. Its geographic location at the crossroads between the key Far Eastern and Western financial and business hubs makes it strategically appealing.

And to top all that, we have an outstanding education system, a booming real estate sector and a business culture that is friendly, hospitable and accommodating.

Now, doesn't that give you something to smile about?



شؤون الطيران المدني  
CIVIL AVIATION AFFAIRS



# FOCUS ON

# bahrain

For more than 225 years the Al Khalifa family has ruled the 741 square kilometres of desert islands that make up Bahrain. In the 19th century Bahrain became a British protectorate and remained so until 1971.

For many years it was the headquarters of the Royal Air Force and the country was very much the birthplace of aviation within the region.

Its small size and central location among Gulf countries and its geographic closeness to Iran requires it to play a delicate balancing act in foreign affairs among its larger neighbours.

Without the huge oil and gas reserves of its closest neighbours – Saudi Arabia (to which it is connected by a road bridge) and Qatar – Bahrain has turned to petroleum processing and refining and has transformed itself into an international banking centre.

But the aviation connections continue. For historical and geographic reasons Bahrain is the central air traffic management control for the approaches across the Gulf to Qatar, Saudi and the UAE. It also has a proud history as the home of the first Gulf airline and as a major stopping point since the birth of aviation for aircraft pushing from Europe to the Far East and Australia.

It was the first international destination for Concorde.

King Hamad bin Isa al-Khalifa, came to power in 1999 after the death of his father Sheikh Isa and has pushed economic and political reforms to improve relations with the majority Shia community and to create a better future for Bahrainis in a competitive market place.

Aviation is one of the key employment areas and the King and his cabinet have recognised that this could develop to match banking as a major source of foreign revenue and an opportunity for sovereign

investment. The country is opening its doors to aerospace and the King has personally backed the plans to launch the Bahrain Air Show at the end of January 2010 as a way to introduce the country to the industry.

Bahrain maintains the charm of the old ways of the Middle East, with hospitality and culture, and yet it embraces technology and commerce in a way many others in today's modern world can only envy.

ALAN PEAFFORD, PAUL DERBY and photographer IAN BILLINGHURST visited Bahrain in advance of the show to find out what the island has to offer the industry.



# KING AND AIR

## HOW AVIATION PLAYS A KEY ROLE IN THE DEVELOPMENT OF THE SOVEREIGN STATE



# bahrain



## The path to a professional air arm

**U**nder the command of His Majesty King Hamad bin Isa Al-Khalifa, the Royal Bahraini Air Force (RBAF) is a small but modern and highly professional air arm with ten squadrons at two main bases.

The RBAF has come a long way since Bahrain gained its independence in 1971, when the former Bahrain State Police (renamed as Bahrain Public Security) was the sole semi-public operator of aircraft, running two Westland Scouts and two Hughes H269Cs.

The Bahrain Defense Force established an Air Wing in 1976 and initially operated a handful of MBB Bo105 helicopters from Manama airport. Twelve Agusta Bell AB-212 Twin Huey helicopters formed the basis of a major expansion in 1978, and plans soon turned to the acquisition of fighters.

The Gulf Co-operation Council (GCC) agreed to fund the construction of a modern air base in the south of Sitra Island for the proposed new fighter unit (and also to be available for use by

other GCC members and allies) but funding proved problematic until the USA stepped in during 1987, allowing construction of Shaikh Isa Air Base to begin.

In the meantime, an agreement was signed for the procurement of a squadron of Northrop F-5E/F Tiger II fighters in December 1985 and these were initially based at the former RAF station at Muharraq (an enclave at Bahrain International Airport) until the new base was completed.

In 1987, the BDF was reorganised into a separate Army, Navy and Air Force with the Air Wing becoming the Bahrain Amiri Air Force (BAAF).

Even before the F-5s moved to Shaikh Isa, the US Government approved a Foreign Military Sale (FMS) of the F-16 to Bahrain, which thereby became the 15th international F-16 customer, and the first in the Gulf region. These were delivered in 1990 and were based at Shaikh Isa.

The Bahrain Amiri Air Force participated in Operation Desert Storm, flying defensive patrols

from January 25 1991 and offensive missions a day later. Bahrain was offered a variety of F-16s after the war, including former US Navy Adversary aircraft, surplus USAF A-models and even the undelivered, embargoed aircraft for Pakistan. None offered sufficient commonality with the BAAF's existing F-16s, and none were accepted.

The capability of the existing F-16s was enhanced with the 1993 order for three Lockheed Martin AN/AAQ-14 LANTIRN Sharpshooter targeting pods, delivered from 1996. These allowed the F-16s to designate targets for 500-lb GBU-12 and 2,000-lb GBU-10 laser-guided bombs. The F-16s were also armed with TV-guided AGM-65B and IR-guided AGM-65G Maverick air-to-surface missiles.

In 1994 Bahrain established an attack helicopter force, forming the first of two squadrons equipped with the Bell AH-1 Cobra. A second would eventually follow in 1997.

*Continued on Page 64*







CONTINUED FROM PAGE 62

The long-awaited second batch of F-16C/D Block 40s was finally put on contract in 1998, under Peace Crown II. The aircraft were delivered from 2000 in the same configuration as the initial batch, albeit with provision for LANTIRN targeting pods and AIM-120 AMRAAM beyond visual range air-to-air missiles. The BAAF F-16s had previously used the semi-active radar homing AIM-7 as its long-range air-to-air missile, and the introduction of the active radar homing AIM-120 marked a dramatic boost in capability.

In 1999, the Air Force took over responsibility for the nation's HAWK Phase III surface-to-air missiles and integrated these into a new Air Operations and Air Defense Center.

In February 2002, following constitutional changes that saw Bahrain go from being an emirate to a kingdom, the Bahrain Amiri Air Force was renamed as the Royal Bahraini Air Force.

To man its new combat elements, Bahrain signed a deal with BAE Systems to establish a new pilot training academy based on the same model as the Nato Flight Training (NFTC) in Canada, using Slingsby T-67 piston-engined basic trainers and BAE Hawks.

Accordingly, six BAE Systems Hawk Mk.129s were ordered on January 28 2003, with deliveries to No.5 Squadron following from October 2006.

The re-equipment of the RBAF continues, with an order for nine UH-60M Black Hawk helicopters having been placed in June 2007. These aircraft will probably replace No.3 Squadron's ageing AB212s, and will shoulder a combat search and rescue role, in addition to utility and border security duties.

## Air Order of Battle

### Sheikh Isa Air Base

#### The Fighter Wing

1st TFS	F-16C/D Block 40	Tactical fighter
2nd TFS	F-16C/D Block 40	Tactical fighter and F-16 conversion
4 Squadron	Slingsby T-67 Firefly	Basic flying training
5 Squadron	BAE Hawk Mk 129	Advanced flying training
6th TFS	Northrop F-5E/F	Lead in fighter training and ground attack

#### Bahrain Amiri Royal Flight

Detachment	BAE146-RJ85	VIP transport
------------	-------------	---------------

### Muharraq Air Base (Bahrain International Airport)

#### Bahrain Amiri Royal Flight

Flying unit	B727-2M7, B747-SP21, B747-4P8	VIP transport
	G-II TT, Bell 430	

### Rifa'a Air Base

#### Helicopter Wing

3 Squadron	Agusta-Bell AB.212	Transport/internal security
7 Squadron	MBB Bo 105C	Transport/liaison/communications
8 Squadron	Bell AH-1E	Attack helicopter
9 Squadron	UH-60A/L	VIP transport
10 Squadron	Bell AH-1E	Attack helicopter

### Royal Bahraini Navy

5 Squadron	MBB Bo 105C	Utility
------------	-------------	---------

### Manama Police Fort

#### Bahrain Public Security Force (Bahrain Ministry of the Interior)

Flying Wing	Bell 412, 412SP, 427	Policing/internal security
-------------	----------------------	----------------------------



# Reach new heights with Gulf Aviation Academy.

## Introducing a new standard in commercial aviation training.

Gulf Aviation Academy has opened its doors in Bahrain, offering modern facilities and training services for all aspects of commercial airline operations – from flight crew, to cabin crew and engineering. Through our unique business model, you have access to the latest simulators and training facilities, as well as highly experienced trainers from around the world who give your staff the benefit of their expertise.

To find out more, call +973 1735 7777 or visit [www.gulfaa.com](http://www.gulfaa.com)



Offering you the sky



Reasons to fly Gulf Air

Reason #30

# Fastest hub in the region

When you're flying in the Gulf, our hub in Bahrain offers the quickest and most efficient check-in, immigration, transfers and baggage claim. Getting you where you're going faster – one more reason to fly Gulf Air.

Lowest Fares Guaranteed at [gulfair.com](http://gulfair.com)



طيران الخليج  
Gulf Air



# A legend of the skies



**W**hen you enter the office of the man at the top of Bahrain's Department of Civil Aviation Affairs, you instantly feel the warmth and welcome that you would find in an officer's mess or anywhere that aviators meet, whether it be a flying club or a pilot's lounge.

Around the walls there are certificates and aerospace memorabilia that reflect a passion for aviation. Behind the desk is a man, known to all of the 700 staff in the CAA as just "The Captain". More formally he is Captain Abdul Rahman Mohamed Al Gaoud, undersecretary for civil aviation affairs.

The Captain is something of a legend. He grew up close to the Muharraq airport and was determined to work in aviation. Getting rides on the old BOAC Doves flying out to the airfields inspired him. His interest was noted and he was sent to Oxford College.

"I graduated as a pilot and went to work with Air Lingus on the 'flying shamrock', then to BEA (now British Airways) flying the BAC1-11 in Wales. I was then posted to Gulf Aviation, the forerunner of Gulf Air and became the first Gulf national to captain a commercial aircraft. I was very proud," said the Captain.

Al Gaoud is a firm believer in training nationals and, during his time with Gulf Aviation and Gulf Air as captain on VC10s, Tristars and 737s, he brought some four to five hundred students through the system.

"I have 30 different types of aircraft on my licence," the Captain said. "I still have my British licence. I qualified as a test pilot and flew with both Boeing and Airbus but in 1996, as deputy CEO and head of operations for Gulf Air, I was ready for new challenges and his highness, the late Amir, Sheikh Isa, offered me the role heading the CAA."

The Captain's influence has been widely applauded with many companies saying Bahrain CAA is the most cooperative they deal with. "We understand what the airlines and pilots need," Al Gaoud said. "We work with them to make sure that we deliver the best we can with safety our first priority."

Al Gaoud has seen a number of important changes in the way civil aviation operates in Bahrain over the past ten years particularly by adopting an "open skies" policy.

There are now 42 international airlines operating out of Bahrain International Airport to 56 destinations with more new carriers scheduled in the near future. More than nine million passengers and 377,000 tonnes of air cargo travelled through Bahrain International Airport last year and growth in both sectors, well above the average for the region, has been recorded over the past two years.

"Open skies has worked," the Captain said. "This airport has kept growing because of the liberalised sky. We were at 3.5 million in 97 and now it's around 9 million.

The Air Navigation Services Directorate handles more than 315,000 aircraft movements annually with over 87,000 movements per year at Bahrain International Airport. It also plans and implements new airways to improve air traffic flow and reduce costs, and maintains all communication services, particularly with neighbouring states. CAA, in addition to its responsibilities for all regulatory matters concerning air transport activities within Bahrain, also has responsibility for ensuring compliance with ICAO and IATA regulations and standards.

"We are very strict – an aircraft mustn't fly with Bahrain registration without being in full compliance or meeting audit standards. We were one of the first nations to blacklist an airplane," the Captain said. "People questioned us because it affected commercial activities but we were strong. Eight months later France blacked the same airplanes, then the ICAO blacklisted 95 companies. We are proud to have led the way.

"I know I would say 'kill me' if there was an accident and it was my fault for not having acted properly. I need to be sure that for every aircraft that operates here, I would be happy letting my family travel on it."

The Captain is a keen advocate of a single Arab air traffic management system and has met Saudi and other Gulf states. "The sky looks big but we operate in very narrow areas. The military uses so much more and I think there is room to plan better. Do what your military needs, but let us have at least a flexi time of operation. Military training mainly takes place from 7:00am to 1:30pm. Occasionally they need night training but the rest of the time let us use the whole air space," he said.

**"This airport has kept growing because of the liberalised sky."**



# Bridging the gulf...

*A world-class aviation academy is set to take on the competition across the region with the weight of Bahrain's sovereign wealth investment company behind it.*

**A** new approach towards holistic aviation training is under way in Bahrain with the newly-formed Gulf Aviation Academy (GAA) aiming to set standards for the industry in the region as well as providing an outsourcing service to help global airlines get staff to meet the peaks and troughs of seasonal operations.

"We are very aware of what is happening elsewhere in the region and we felt there was a niche that we could fill," said Ahmed Al Rayes, a board member of the Bahrain investment company Mumtalakat, who is leading the company's move into training.

Mumtalakat owns Bahrain carrier Gulf Air. It is the airline's former training facility, alongside the international airport at Muharraq, that has become the new headquarters of GAA.

The academy is no longer exclusively focused on the national carrier's needs but is now targeting third-parties throughout the region and Asia and developing new sectors.

"We have three main strands to our business," Al Rayes said, "pilot training, cabin staff training and technician training."

As the transfer of assets was going through, the company announced a \$34million investment for three new full-motion simulators for A320 training.

The new company has also begun working with its UK partner, Oxford Aviation, in providing ab-initio training to the first two classes of 20 Bahraini cadets as part of a move to get 100 young nationals into the right hand seats.

"The key thing is that they will get full Joint Aviation Requirements (JAR) licenses, which will enable them to work internationally," Al Rayes said. "A number of other schools in the region can only have licences from their own countries and so that limits the marketability of the pilots to those airlines that accept that country's licences."

The GAA advertised for pilots and was

delighted with the response that saw more than 350 applications for the 100 places.

The applicants have been carefully screened by Oxford Aviation and, although the Bahraini cadets are self-funded, they have been given loans by the Bahrain Development Bank (BDB), with the loans guaranteed by GAA and the interest on the loans paid by the country's employment agency Tamkeen.

"This agreement will enhance efforts towards training personnel for the aviation industry," said BDB chief executive Nedhal Al Aujan at the announcement of the programme. "The BDB is working to achieve closer integration between financing and training to develop the national human resource in line with the Bahrain economic vision for 2030, by creating a network of supporting companies with the same goal."

#### Investment in pilots

Al Rayes said the investment in pilots was essential to meet the growth in the industry and also added value to the Bahrain talent pool.

"Some may work for international airlines, some may work for Gulf Air, some may work with our outsourcing service, but it is good for the country."

Abdullelah Al Qassimi, chief executive of Tamkeen, added: "Our focus is very much on developing the skills of Bahrainis and making them the employees of choice in the private sector."

The aerospace industry had already been targeted by BDB, which has helped support a number of cadets on training programmes with schools such as Ayla in Jordan. The Pilot Training Financing Program, launched by the BDB in late 2007, has already disbursed BD3.3m (\$8.75m) of funding.

The cabin crew training is also breaking new ground. "We are looking at three different areas – aviation English, safety and service," Al Rayes said. "We have to add value and have included

partners to make sure we deliver the best. For example, we are working with expert hospitality trainers. This is about service and not aviation – how to deal with a difficult customer. Again we would want our trainees to be the very best and be valued by full-service airlines."

The third-party contracts will enable the airlines to pick and choose the elements they want. With a growing number of low-cost carriers in the region, GAA is aiming to become the training partner. "Crews of low-cost carriers may not require the service training but they will need safety training. We want to be able to provide all of the services they need at a particular time of their development."

The third string, technical, will again be welcomed by Bahrain. "There is a huge demand for vocational training. It is an area not very well served at the moment," Al Rayes said. GAA is working with City University in London for the degree-level training and also utilising knowledge from Boeing Airplane Services or Bahrain Airport Services (BAS) and SIA Engineering.

"Our ongoing links with Gulf Air will also keep us in touch with the changing needs of airlines. Our strategy and research team will be watching trends and building capacity to meet demands."

The final part of the jigsaw is the outsourcing service which, Al Rayes said, will set the company apart.

"Airlines in different parts of the world have different seasonal peaks. We have the Haj; in Europe there is Christmas and summer holidays; in India and the Far East there are different peak times. We will be able to provide staff who are experienced and well trained. They will bring more credibility to the brand and help transfer knowledge to other airlines because of their experience. Most of all they will prove the marketability of our products"





Turning around operations like clockwork.

BAS is the sole provider of complete quality ground support to more than 35 airlines operating through Bahrain International Airport.

Over the years, we have built an enviable reputation for efficiency across all four of our main operational departments • **Passenger Services and Airside Operations** • **Engineering** • **Cargo** • **Aircraft Catering**

For instance we maintain a turnaround time for a fully loaded 747 of no more than 90 minutes.

P.O.Box 22285, Kingdom of Bahrain, Tel:(+973) 17335304, Email: [mktg@bas.com.bh](mailto:mktg@bas.com.bh)



خدمات مطار البحرين  
Bahrain Airport Services

*Bahrain's investment company Mumtalakat is flexing its financial muscle and developing its management skills. Alan Peaford meets Talal Al Zain, Mumtalakat's chief executive.*

# THE MAN WITH A PLAN

In comparison to some of the other Gulf states, Bahrain is small in size and any wealth driven by oil and gas revenues are really a distant memory.

And yet, the country is packing a punch on the world stage.

It is a recognised major player in the global banking and finance markets and has led the technological and high security advances with a reputation that matches Switzerland.

And the country itself is investing to ensure security for its nationals.

That investment is carried out by Mumtalakat which was set up just over three years ago to focus on the Government of Bahrain's non-oil and gas assets

With more than 30 commercial enterprises within its portfolio, Mumtalakat's investment strategy is to enter into partnerships with local, regional and global institutions targeting opportunities for long term, sustainable financial returns and achieving high returns and spreading risk through geographic and industrial diversification.

The strategy is largely focused on investing in its domestic portfolio to grow its value organically ahead of an improvement in global market conditions. The portfolio includes the aluminium manufacturer Alba; national telecoms operator Batelco and the National Bank of Bahrain. It also holds a 30% stake in McLaren Group Limited, the parent company of the Vodafone McLaren Mercedes F1 racing team and more recently it has taken responsibility for Gulf Air, the Bahrain International airport company and the Gulf Aviation Academy.

The investment company is chaired by Sheikh Ahmed bin Mohammed Al Khalifa, Bahrain's Minister of Finance but is led by CEO Talal Al Zain.

It is rare for aerospace companies – particularly airlines and airports – to make high returns, but that does not faze Al Zain.

“The challenge is to transfer the excitement and best practices from Mumtalakat to the portfolio companies,” Al Zain said. “There is nobody in Mumtalakat that is not passionate about their work. There are so many challenges and so much much pressure here. Nobody is sitting around thinking am I bored? There is no time for that. I am lucky to have a fantastic group of people working with me. It is fun.

“The biggest challenge is Gulf Air, but we are seeing a change, especially with the new leadership.”

## The right culture

Al Zain said that instilling the right corporate culture across the portfolio is essential if the financial targets are to be achieved.

“Of course it is much easier to transfer best practices and better corporate governance to newly established companies. Gulf Aviation Academy for example will create that culture from the start. But the important thing for well established companies like Gulf Air and ALBA is to apply the best corporate practices and governance.

“Our ministry of industry and commerce is publishing a corporate governance code. Mumtalakat, must be 100% in compliance with the code. We are also changing the way companies work. Traditionally the board of directors control and manage the company, the Chairman is God and everyone is scared, They fire and hire. We are changing that. The board should protect the interest of the shareholder but also bring in the best talent to manage the company. When that talent comes on board that Talent needs complete freedom to manage the

company. That is the only way that person can be accountable to me. If I as Mumtalakat interfered in the business every day then how can I hold that Talent accountable. Its about having the right committees on the board level, and then within the management, having the right structure.”

Al Zain recognises the similarities between the direction being taken by Mumtalakat and that by Mubadala in Abu Dhabi.

“I have a lot of friends on Mubadala and have a lot of respect for them. As an investor in the aviation industry and developer of aviation clusters there are similarities. They did an MRO we doing an MRO. They are investing in the airport we are doing the same.

“For us, everything we do is aligned with the future of Bahrain and the 2030 vision laid out by the economic development board (EDB) of Bahrain. I am proud of this. The shared vision of HM the King, the crown prince and the prime minister is whatever is done is done for the people of Bahrain and that to me is very important. Not because expatriates are not as important, they are. But if you develop an economic plan that is built around the local people to improve their standard of living it becomes more sustainable.”

Unlike many other Middle Eastern states expatriate workers share the same employment rights as nationals and, said Al Zain, if you spend a certain number of years working in Bahrain you can apply for nationality.

“We are saying we will nationalise the right people, they get the nationality it enables them to be part of the community and share the loyalty. This way you grow the economy because the population is growing. It would be sad to grow an economy for people who are not part of the system.”

Mumtalakat, like its Abu Dhabi counterpart, believes the Middle East is ideally positioned to





**Talal Al Zain: "The important thing for well established companies like Gulf Air and ALBA is to apply the best corporate practices and governance."**

serve the global aviation industry and that the right economic and trade conditions exist to enable Bahrain to create an aerospace cluster.

Training is a starting point.

"Training used to be a cost centre for Gulf Air. The concept of spinning off that business to become a profit centre excited me," Al Zain said.

If you look at our vision or mandate we always, when we put any equity in any project, the first thing we look at how much we make on return. We always look at investment from commercial point of view first, but there are other boxes we need to check.

Is it in Bahrain or out? that's another check. Will it contribute to employment of Bahrainis? that's a check; what will it do to the economy? – if its positive that's another check. But the commercial part comes first otherwise we are not going to deliver on our mission and we fail in our first duty of adding to the wealth of Bahrain and the people of Bahrain.

"For GAA it was through detailed research, the studies say there is a need for world class training aviation academy to be built in the region to service companies operating here and in the Indian subcontinent.

"For us, it was so encouraging to see it starting. It made me so happy when we met the 100 cadets and saw them sitting there with a Bahraini lady sitting among them. That's a fantastic thing. The

first 20 are at Oxford now and there will be 80 more joining them. In the long run we want to generate jobs for Bahrainis.

"At the moment 37% of Gulf Air pilots are Bahrainis – I want to see that increasing. It's a good job, the pay is good. This is the kind of job the EDB is trying to push in Bahrain economy. Higher standards and higher paying jobs."

The investment in the airport is seen as essential said Al Zain.

#### **Leadership message**

"The leadership message is do not take away the convenience of our airport for the passengers. We don't want to build an airport around airplanes but build it around people. The experience from the minute they get out of their car to the destination it is a Gulf Air experience or for passengers in other airlines its the airport experience From the check in counters to the duty free, the facilities and the restaurants.

"Our airport was built for three million passengers yet we are now accommodating close to nine million. The masterplan will be ready during Q1 2010 It is an infrastructure project that is definitely going ahead

"Bahrain is a place of opportunity and so will the airport. In our minds, competition is the only way we will improve on our service. Right now we have a second catering company being set up and

will look to attract other business. We will open competition for fuellers, for ground handling and so on. We are open for business and operating with 100% transparency. For any interested party that comes in it is very clear these are the prices, these are the fees we will charge. Each operator is treated equally with no differentiation between anybody."

Al Zain is hopeful that the forthcoming Bahrain Air Show will give him the opportunity to meet others in the industry and to scope out the prospects.

"We are opportunistic, we will invest wherever it will generate returns for us. Given the size of our economy there are certain things I cannot do because the instrument may not exist. Diversification is important, when you are investing in one area and there is recession you need other areas that gives you a balance.

"My mandate is to diversify investments. In the long run 50 % will be here in Bahrain, 50% global. That doesn't mean I will reduce existing investments I will grow existing investments and then invest even more outside.

For Mumtalakat, the aviation industry has room to grow – and it will not be selfish. "We will share these projects with the private sector both local and international. There are companies that have interest in investing in infrastructure projects. We are talking to them."



## A new life begins at sixty...

**G**ulf Air will celebrate its 60th anniversary this year. Having been founded as Gulf Aviation in 1950, the airline is one of the oldest in the region and has, perhaps, been marginalised as its wealthier young cousins from the Gulf mainland have flexed their financial muscle.

If anything, in this era of consolidation, Gulf Air was ahead of its time – being owned jointly by the governments of Bahrain, Abu Dhabi, Oman and Qatar and using hubs in each of the countries.

The sudden emergence of Emirates in the 1980s shook the Gulf aviation world as Gulf Air – then flying its family of Tristars and recognised as being one of the best airlines in the world for service – saw its seniority challenged.

Since then Qatar, Abu Dhabi and finally Oman left the partnership to concentrate on their own national carriers – Qatar Airways, Etihad and Oman Air respectively – leaving Bahrain without the same level of financial backing to support the airline and its government with the unenviable task of renegotiating bilateral agreements and changing registration of the entire fleet.

After a succession of chief executives and endless rounds of debate about the airline's future, Mumtalakat – Bahrain's sovereign wealth fund – took over the airline with a single goal: To bring it to profitability.

There are many in the airline industry who have failed to achieve this and there were many who were vocal about Gulf Air's chances. Then, in August, in somewhat of a surprise move, Gulf Air announced that it had secured the commitment of a man who actually had a track record of bringing an Arab airline to profitability.

Samer Majali joined the airline from Royal Jordanian after successfully guiding Jordan's national carrier both into the black and into the One World alliance – the first Arab airline to be accepted by one of the major global alliances.

Chairman Tala Al Zain gave Majali a free hand to look at the way the airline should be shaped. A three-month review was carried out and Majali came to the board in November with a plan. On November 23, after long internal deliberations, Al Zain called the staff together to unveil the plan.

"We have a clear mandate: to build an efficient, commercially sustainable and dynamic airline that effectively serves the people and the economy of Bahrain and

represents the Kingdom on the world stage," he said. "To achieve this we must re-align Gulf Air to deliver a product that our customers need and want. At the moment Gulf Air currently relies on significant government support, spending far more than it earns. This is clearly unsustainable and the funds could be invested into other important areas of the national economy."

Al Zain is adamant that an airline is no different from any other investment that Mumtalakat makes on behalf of the people of Bahrain saying: "If we do not implement this programme, Gulf Air will continue to be an unacceptable burden on the national economy. No government, business or individual can continue to spend more money than it earns over a continued period of time. Gulf Air is no exception."

### More value for money

Samer Majali's strategy is to create more value for money, re-aligning the network to reflect customer demand and redesigning the product to deliver more customer value on a consistent basis.

"For the first time, Gulf Air will focus specifically on Bahrain, serving the kingdom with higher frequency, non-stop services to more destinations across three continents. We will also provide better services to some of the world's leading financial markets, helping to support Bahrain's significant financial services sector," he said.

Gulf Air's new strategy will focus on three core areas:

It will expand its operations into more than 20 new destinations in the Middle East, Africa, Asia and Europe.

It will improve the customer experience by introducing a number of attractive new product innovations, seating arrangements, in-flight entertainment and other on-board amenities, tailored to the Middle East region on a consistent basis.

The airline will also reduce fleet costs and minimise any expenditure that doesn't add customer value.

It will invest in aircraft that will be optimised for the new network and flight schedule, focusing primarily on narrow-body aircraft and regional jets, including a number of long-range narrow-body aircraft, which will connect Bahrain to key financial centres in Europe and Asia.



**Samer Majali: new strategy will focus on three core area.**





## Congratulations to

طيران الخليج  
**Gulf Air** 

on its 60<sup>th</sup> Anniversary.

As a leading maintenance, repair and overhaul (MRO) service provider, we understand that each and every one of our customers is distinctive and possesses different needs.

Our technical expertise and innovative ability have allowed us to be the chosen MRO service provider, offering integrated MRO solutions for Gulf Air. As a trusted partner of the airline, we provide reliable and high quality services for Gulf Air's entire fleet of modern Airbus A320, A330 and A340 aircraft.

Our engineering excellence, together with the airline's relentless pursuit for growth, will see us soaring to greater heights.





# Reach for the Open Skies



*Ali Ahmed Mohammed heads the Air Navigation Directorate for the Kingdom of Bahrain, with the onerous responsibility of ensuring safe passage for hundreds of thousands of flights every year. He spoke to **Paul Derby** about Bahrain's continuing investment plans and the chances of creating an 'Open Skies' environment in the Middle East...*

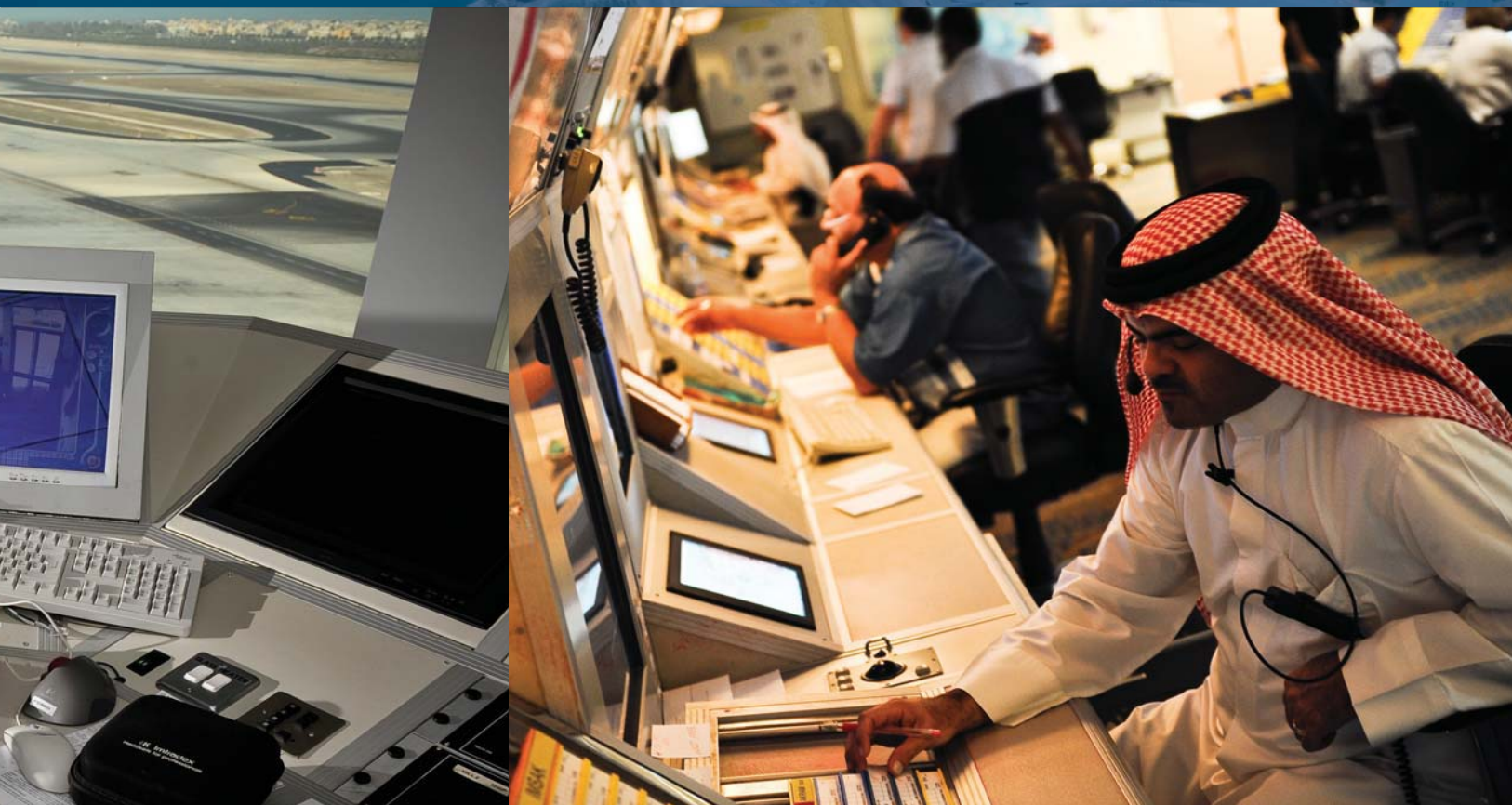
**P**ursuing the concept of a single, highly coordinated, air traffic management system in the Middle East is a little bit like finding a solution to the world's banking crisis – everyone knows it's the right thing to do, but finding the way forward involves a lot of head scratching.

It is, therefore, refreshing to hear the man with overall responsibility for Bahrain's provision of air traffic management (ATM) services speak with such passion and candour on the subject. Ali Ahmed Mohammed has a difficult balancing act; to look after the day-to-day management of a 186-strong team charged with keeping aircraft in and around Bahrain safe and to have one eye on how to deal with future traffic growth.

"Bahrain is fully behind plans to harmonise air traffic management in the Middle East," he said. "We very much hope that it will happen and we are ready to play a full and leading role." Describing the current system, with a multitude of so-called Flight Information Regions or FIRs as "fragmented", Ali Ahmed believes that a future Arab Control Unit or equivalent is achievable but remains some way from reality.

"There has been a study to establish a model based on the Eurocontrol concept. This would be an agency established on behalf of a number of states, providing harmonised procedures and harmonised airspace. There are some very clear benefits from this. The route freedom that it would bring is one, and also the possibility for airlines to improve fuel consumption through more direct routes. There is so much





sophistication in today's modern aircraft, yet to benefit fully we need to have that sophistication mirrored in the ATM environment."

So, how far away is this ideal and how best to make it happen? "I hope that it will be possible by 2020 but I am also realistic. We have very clear support from our Government in this area and we have wider support for these improvements. Overall, safety is our number one priority; anything that improves safety or has the potential to improve safety, we are for it."

He contrasts the experience of pilots flying into the Gulf region and their need to switch frequencies on a regular basis, plus the handing over of flights between so many FIRs, with the Eurocontrol concept in Europe. "This region has experienced a significant growth in traffic. There are some economic challenges right now but the long-term picture is still about growth. It is certainly my dream to see a 'Single Sky' in the Middle East.

"There is also the challenge of ensuring that we have the right number of well trained controllers. When you consider that it takes seven years for an area controller to qualify, it's easy to see that there is a challenge ahead, not just for Bahrain but for the industry as a whole."

The long-term forecasts for traffic movements in the Bahrain FIR underline the difficulties which undoubtedly lie ahead. Even at the lowest rate of predicted growth of five per cent movements in the FIR would reach almost 650,000 by 2015. At the higher annualised growth rate of 13 per cent

that figure rockets to 1,045,000, well over double the current amount.

Away from the longer-term strategic questions, Ali Ahmed is responsible for a day-to-day operation which covers 400,000km<sup>3</sup> of airspace, otherwise known as the Bahrain FIR. Its geography extends beyond the kingdom itself to include the eastern province of Saudi Arabia, the Peninsula of Qatar and a stretch of international waters.

The functional airspace block includes five sectors – East and Central, which are split into High and Low (31,500ft and above, and below 31,500ft), plus a West sector.

#### Approach control

The Bahrain FIR is bordered by the United Arab Emirates FIR, plus those of Iran (Tehran), Saudi Arabia and Oman (Muscat). Controllers are assigned to area control, approach control and tower control responsibilities and the Air Navigation Directorate, which is part of Civil Aviation Affairs, is split into five sections.

Air Traffic Management looks after the FIR itself, Aeronautical Electronic Engineering is responsible for the radar system and all navigation aids, including the instrument landing system, plus VOR and DME equipment. It also provides technical support. The Communications Operation section looks after ground communication between Bahrain International and other airports and also handles the link with colleagues in Europe and Asia-Pacific.

The IT section is focused on all aspects of

information technology, including overall networking and the provision of passenger information displays in the terminal, while Standards and Licensing is responsible for staff training and licensing of all air traffic controllers.

Bahrain's legacy as a pioneer of air traffic control systems in the Middle East goes back some 60 years and the country's influence is witnessed by the number of ICAO meetings it chairs in the region and its involvement in the strategic direction of the industry. "We were the first country in the Middle East to pioneer the idea of high speed digital links for communication between the ground and air traffic," said Ali Ahmed. "We also led the way with the first automated terminal information service." The service allows pilots to hear relevant information or to print off the data in the cockpit. It includes everything from weather and runway information to details or any works in progress on the airfield.

Elsewhere, Bahrain continues to invest in its ATM infrastructure. A new control tower opened at Bahrain International Airport in 2006, with its predecessor still operational if required in emergencies. Over the next 18 months another 8.2 million Bhd will be ploughed into a radar replacement project and significant ATM improvements. A longer-term project will see the creation of a new air traffic control centre.

"We don't stop when it comes to improvements," said Ali Ahmed. "There are lots of other projects being planned in addition to the coming investment. It's quite simple; we have to keep pace with the continuing demands of air travel."

# Johnny comes home...



**J**ohnny Eng, the cheerful general manager of the SIA Engineering Company (SIAEC) in Bahrain feels quite at home in the former airbase offices his company occupies at the perimeter of Bahrain's International Airport on Muharraq.

The former RAF Muharraq base has what Eng describes as the same "post colonial feel" that many of the Singaporean old-hands inherited when the British left the south east Asian island state half-a-century ago.

"There are a lot of similarities between Bahrain and Singapore," Eng said. "We are both small island countries striving for a modern and high-quality place in the world markets."

SIAEC – the engineering subsidiary of Singapore Airlines – is based in Bahrain as part of its contract, won in March last year, to provide the engineering and maintenance support to Gulf Air.

Gulf Air has long separated its MRO activities from the airline operation through initially GAMCO – then a subsidiary of the airline and managed by the four nations that partnered in Gulf Air. After the split from the other countries, GAMCO remained in Abu Dhabi and was purchased by Mubadala and Gulf Air moved to Swiss MRO specialist SR Technics, which also became majority-owned by Mubadala in 2009. In March, Gulf Air selected SIAEC to outsource the fleet management services.

The fleet management programme (FMP) and maintenance contract began in June 2009 and Johnny Eng and a small team from Singapore moved to Muharraq to begin providing the Bahraini airline with a wide range of services, including 'A' and 'C' checks, fleet technical management, material management and engineering services.

"It's quite a comprehensive contract," Eng said. "The 'A' checks are done here but the heavy work is done back in Singapore."

SIAEC had already been working with Gulf Air, having won a three-year contract for the heavy maintenance in February 2008. The contract is now worth some \$135 million over the three years and covers the work on 15 A320s, 10 A330s and nine A340s.

This is SIAEC's first contract in the Middle East but the company is no stranger to outsourced operations. Its fleet

**"There is a lot of similarity between Bahrain and Singapore and Bahrain could also become an aviation hub like Singapore has."**

**Johnny Eng**

management customer base comprises nine airlines with a total fleet size of 175 aircraft, of which 111 are currently in service and the remainder scheduled for delivery within the next five years.

Customers include airlines such as Tiger, Silk Air, Virgin Blue, Great Wall and Airbus's own leased fleet.

"The Middle East is poised to become an important springboard to Europe and Asia. SIAEC is honoured and privileged to partner Gulf Air in developing Bahrain into a vibrant aviation hub in the region," said William Tan, chief executive officer of SIAEC when the contract was awarded.

This contract is different to a standard FMP but is one that may resonate with other national carriers across the MENA region as SIAEC's target is to hand over the business to a Bahrain-owned and managed operation at the end of the contract period.

"While we brought about 60 per cent of the people from Singapore, we hired the rest locally from the previous MRO, because of the time frame. We really needed to bring people to get the system going but eventually the arrangement with Gulf Air is that we are committed to hand over the engineering system back to Gulf Air...so it will be self-sufficient," Eng said. "We are committed to transferring knowledge."

Eng praised the work being done with the Gulf Aviation Academy and the decision to bring through engineers.

"The talent pool is very small and the government has recognised that, which is why the academy is happening. We are also looking very actively to partner with the BAS training school for engineers for work experience. When people come out of the academies they will have the skills and will eventually replace the engineers we have here from Singapore."

SIAEC is still in it for the long haul. "We have a three-year contract but there are options to continue. We plan to make this work very well for Gulf Air and for ourselves. It is a first class airline and it knows what it wants. At the same time we continue looking at other opportunities. The fleet size is growing and there will be an opportunity for another player in this region," said Eng.

"There is a lot of similarity between Bahrain and Singapore and Bahrain could also become an aviation hub like Singapore has, so there are opportunities."





**AIRCRAFT MANAGEMENT**

Working alongside aircraft owners to maximize operational and financial efficiency

**JET CHARTERS**

Providing our guests with exceptional service, safety, quality and value

**AIRCRAFT MAINTENANCE**

Delivering comprehensive EASA, FAA and BCAA approved maintenance support and avionic installation and repair

**AIRLINE SUPPORT**

Offering airlines turnkey airside and landside operational and maintenance facilities

**CONSULTING SERVICES**

Providing qualified and experienced specialists for AOC applicants, airline startup, FBO development and other aviation-related projects

# Strong foundations are BAS keep its feet on the

*There is more to Bahrain Airport Services (BAS) than meets the eye. As well as providing extensive ground handling, maintenance, cargo and catering services at Bahrain International Airport, the company is now looking overseas for potential growth and has established a training first for the Middle East, as Paul Derby discovers.*

**G**azing around the tarmac at Bahrain International Airport it took approximately five seconds before a vehicle emblazoned with the BAS logo hove into view. Three seconds later and the process was repeated. This brief snapshot in time underlines the way the services BAS provides are woven into the fabric of the airport's day-to-day operations.

BAS is the sole handling agent at Bahrain International Airport.

Since its inception 32 years ago, the company has played an increasingly important role in keeping the wheels of aviation turning in the kingdom.

Now employing 2,184 people, 86 per cent of whom are Bahraini nationals, BAS is focused on present day challenges but also has ambitious plans for the future.

The scale and complexity of the BAS business is apparent in some of the figures for its operations – 179,000t of cargo handled annually, baggage handling for some eight million passengers a year,



**Salman Saleh Al-Mahmeed:**  
"We have a very broad business."

catering services supplied to 18 airlines – the list goes on.

Deputy chief executive Salman Saleh Al-Mahmeed said: "We have a very broad business that covers many aspects of the airport's operations. We are certainly one of the companies with the highest percentage of Bahraini nationals among our workforce.

"The 32nd airline to begin operating from Bahrain is Armenian Airlines and we work with all 32. It is a large responsibility.

"If you take the ground handling operation as an example, there has been an enormous increase in passenger

traffic through Bahrain. We look after all bags, from check-in through to the gate and loading on to the aircraft, so we are aiming to grow to meet this demand. We are investing between two to four million Bahrain Dollars a year in renewing equipment, for example."

BAS, which is 30 per cent owned by Gulf Air, with the remaining 70 per cent in the hands of private investors, has experienced the effects of

## Middle East training first aids growth

The concept of a company, recognised primarily for its ground handling expertise, branching out into the field of training engineers might seem a little curious. Yet, since establishing the BAS Aircraft Engineering Training Centre in 2004, this side of the business has gone from strength to strength.

"We are European Aviation Safety Agency (EASA) 147 approved and the only organisation approved for the basic training of engineers in the Middle East," explained Shaker Kamal, acting manager of engineering training. "We are also qualified to perform type training on the Airbus A320 family, the A330, A340 and the Boeing 727."

Achieving this regional first was no easy task. The multi-stage approval process took a year and the rigour of the UK's Civil Aviation Authority, both in the approval work and in subsequent twice-yearly audits, has ensured that BAS demonstrates its expertise in the field on a regular basis.

"In many ways people can't believe what we are achieving in training," said Kamal. "We are able to cater for as many as 300 students when at full capacity and the course will provide an important new stream of skills into the Bahrain economy. The vast majority of our students are Bahraini."

Deputy chief executive Salman Saleh Al-Mahmeed agreed: "We studied the market very closely and found that there was a significant need for local engineers

in the Gulf region. We envisage students going on to work both in Bahrain and in other countries in the region."

The four-year course, which ultimately provides students with an EASA licence, includes two years of theory and the equivalent of 24 months of hands-on experience in large civil aircraft. Potential students are vetted in their English skills as well as aptitude in mathematics and physics.

Some 62 of the current intake are being sponsored via a partnership with Tamkeen, the Government-run training organisation, and will be placed with Gulf Air on successful completion of their studies. The strength of the course is also attracting interest from other airlines, including Oman Air.

In the workshop area a King Air 90 is used specifically to test the skills of the students in everything from component replacement to skin repairs. The opportunity to experience older technologies, such as those on the 727, alongside their more modern counterparts is a valuable mix, according to Shaker.

The training centre has recently relocated to a new building right alongside the main BAS headquarters, with additional classroom space – now six classrooms in total. Courses are delivered by 13 instructors from all over the world, but with a common expertise in engineering disciplines. The first 'graduates' will complete their courses in June/July 2010.



# helping ground

the global recession in its cargo operation, where business is down by approximately three per cent in 2009. But the diversity of its business provides strong foundations.

The 250 staff who manage the cargo operation deal with seven freight specialists including Kalitta and, longer term, the annual 179,000t of material carried could increase significantly via plans for a 'cargo village', which forms part of the redevelopment blueprint for Bahrain International Airport.

Cargo is cleared from the aircraft, held in storage before onward transit to customers. BAS has even developed an innovative arrangement with Bahrain's Chamber of Commerce to allow goods to be held free of charge for three days as part of the service offered.

Line maintenance accounts for some 30 per cent of turnover with agreements in place with 14 airlines to provide inspections, repairs and maintenance routines in close co-operation with the airlines' own engineering teams.

The prospect of BAS venturing beyond Bahrain's shores is raised by Al-Mahmeed, who said: "We have proposals to go outside Bahrain to run the ground handling of other airports but these are still early stage negotiations. For example, we are looking at developments in India, Iraq, Malta and Yemen."



BAS produces 50,000 bread rolls every 24 hours.

## Menus that are tailored to the destinations

It is quite a daily shopping list: 1 tonne of melon, 1.5t of watermelon, 1.5t of pineapple. Throw in 10,000 eggs a day and the capacity to bake 50,000 bread rolls on site in just 24 hours and you get a sense of life at the heart of the BAS catering operation.

Walking through the 11,000sqm facility is eye-opening, with blast freezers, bonded stores, cold rooms and even a hygiene laboratory coming together to ensure that the culinary requirements of passengers from 28 airlines are met at all times.

BAS Aircraft Catering Services, to give it its full title, is under the supervision of Wolfgang Gortler. The 800-strong team also deals with Royal flights and charter services for operators such as Bexair, as well as the major challenge of serving airlines, including key customer Gulf Air, coming in and out of Bahrain International Airport.

The daily routine includes provision of 138 individual menus divided by airline, cabin class, special dietary requirements and destination. It is this last idea which is particularly intriguing – how the BAS team works with airlines to determine the menus which will be best suited to particular routes. More pasta for European destinations and greater proportions of rice and fish dishes for Far East destinations is just one simple result of the on-going analysis.

Customers are invited into the BAS operation in person to view, taste and fine-tune their own menu requirements, whether for first class passengers or for people flying economy.

Gortler said: "Turnaround times are a very demanding area for us; just 25 minutes to offload and reload an A340, for example. The ability to meet such deadlines requires precision planning and a significant scale of operation. We have 10 loading bays and 36 high loader vehicles with each aircraft requiring between two and four high loaders to be fully replenished."

The quality of service offered has been recognised externally with a 2008 award – the Pax International Readership Award for Best Middle East Caterer, among other accolades.

Looking to the future, the catering team is increasingly shopping closer to home for more of its

foodstuffs. Some 40 per cent of food is purchased in Bahrain, while the establishment of an in-house bakery means that any bread baked on site is loaded on to a flight a maximum of 20 hours after leaving the oven.

BAS Aircraft Catering Services has also found an unusual outlet for its culinary expertise by selling directly to the retail trade. The company has established the 'Greedy Goose' brand through a partnership with Eatcorp. The joint company, Airplate, already sells into a wide range of outlets in Bahrain, with products including smoked salmon, pastrami and smoked duck. The company is currently exploring export markets, including those in Europe.



Jakob Helm - BAS' development chef.



**Paul Derby** *meets the Bahrain Air boss and learns about his unique handwritten notes for improvement...*

**T**he unassuming offices of Bahrain Air, tucked away around the corner from the Kingdom's international airport, tell their own story.

There is no expansive smoked glass reception area bedecked with leather sofas and the heady aroma of coffee. The emphasis is on functionality and efficiency – deliberately so.

Inside, chief operating officer Ahmed Yaquby is studying a handwritten note. It contains his observations of the previous day's flight between Bahrain and Beirut – the levels of service, the flight's punctuality, the cabin crew's attention to detail. Nothing too ground-breaking there one might think, other than the fact that Yaquby himself was captain of the A319 for the very same flight.

"I fly our aircraft at least once or twice a week," he says. "It gives me a unique perspective on what our passengers experience and I always end up with a list of areas we did well and others where we could improve."

Nor is Yaquby alone among the ranks of Bahrain Air senior management who combine their boardroom responsibilities with hours spent at the sharp end in the cockpit. Managing director Ibrahim Alhamer and head of operations Suhail Ismael also name themselves among the airline's flight crew on a regular basis.

#### Carve a niche

Bahrain Air is still in its infancy, having begun flight operations in February 2008 with initial services to Dubai and Beirut.

The carrier is seeking to carve a niche for itself half way between the major airlines and their low-cost competitors. "We do not view ourselves as a low-cost airline," said Yaquby. "We have the mentality of a low-cost operator but with an emphasis on quality service. It's what we term a premium affordable service."

Positioning the airline in this way has its challenges, with the obvious danger of being neither one thing nor the other, but Bahrain Air has established its profile in the region and is adding new routes and increasing passenger numbers – 63,000 flew with the airline in the year to September 2009.

The carrier now flies to 22 destinations, with the Iraqi cities of Baghdad and Najaf being added to the route map in October 2009 plus a planned route to Dhaka in Bangladesh and expansion into Turkey in 2010 with flights to Istanbul.

Bahrain Air's fleet of nine A320-family narrowbodies, seven A320s and two A319s, fly to destinations as diverse as Kathmandu, Mumbai and Alexandria in a two-class configuration – one

# Captain's log that makes a world of difference...

of the key service differentiators, according to Yaquby.

"You do not tend to see low-cost airlines offering more than one class of seating. We were always very clear in our business plan that we wanted to offer a premium, as well as an economy, service. Our aim is to have low fares but for people to experience high levels of service, whether flying economy or premium."

Yaquby views the premium seats, typically 12 per flight, as the Bahrain Air equivalent of business class, with 35-inch seat pitch, dedicated check-in facilities and access to business and first class lounge facilities at key airports. Economy seats have a 32-inch pitch and, depending on destination, a meal service is included.

#### Offering meals

"We cater the aircraft depending on route and the types of passengers. If we are flying people from an airport in India for example, where they might have travelled for many hours before even taking a Bahrain Air flight, we should be offering meals on board and that's exactly what we do. There is a perception that lower fares mean poorer service. We don't accept that and, in fact, the quality of our cabin service is fundamental to what we are trying to achieve."

Yaquby is philosophical about the timing of Bahrain Air's first two years of operation, which have coincided with the toughest economic conditions in living memory for airlines the world

over. He says that the private investors from Bahrain and Saudi Arabia who provided funds to launch services asked themselves and the management team some tough questions.

"Why would we want to launch an airline in a Middle East market where we are surrounded by major carriers and where there has been a huge number of low-cost operators starting up in recent years? We believed then and still believe now that there is a gap between the major carriers and the low-cost market. This is our target customer and we are very clear about what we can and can't achieve."

#### Overall direction

Yaquby admits that the global recession had an impact on Bahrain Air's plans. "Our business plan went out of fashion very quickly," he said with a wry smile. But, he added, the overall direction of the airline is set and there is a clear picture of what customers want from their travelling experience, with punctuality at the heart of the carrier's attraction.

Of Bahrain Air's 305 employees, 240 spend their days in the cockpit or the cabin, equating to 34 people required to 'run' each aircraft. This figure is extremely low, according to Bahrain Air, which cites full service carriers operating at more than five times that number. Aircraft utilisation is, unsurprisingly, very high at 14 hours a day and there are plans to increase both fleet size and the route network in the coming years.





## Business Aviation ready to move to the next stage

Ahmed Yaquby - a new business with new ideas. Inset: Allaeddine El Hattab - a familiar business but with new prospects

Competition in the business aviation market in Bahrain is hotting up. For many years Bexair was seen as the lone operator as one of the first corporate operators in the region. But more recently Mena Aerospace Enterprises has been quietly growing its activities while Prestige Jet from Abu Dhabi has an application with the CAA for an AOC to operate from Bahrain.

Bexair is a Bahraini owned company and has been operating the FBO at the international airport.

President and CEO, Allaeddine El Hattab says it has been a tough couple of years for the charter and FBO company but in the latter part of 2009 the company has seen some recovery.

"The Formula One Grand Prix certainly made a difference," El Hattab said. "We handled around 100 jets during that week alone."

The company is in the process of developing its second base in Saudi Arabia. "This is the biggest market for us. I am optimistic about the future for Bexair," he said.

The Bahrain CAA is looking at additional facilities for FBOs and have also utilised BAS services. "We are seeing more demand and we need to see greater investment in this sector," said Captain Al Gaoud, the head of the civil aviation authority. "We have a number of requests for FBO, and more who want to position aircraft in Bahrain. We have just approved five aircraft from Saudi to

base here. To get facilities right you need shelter, a good setup and certainly something bigger than we have at the moment. Sometimes a company is in the charter business and doesn't want others coming in so competition is welcomed."

Bahrain's Mena Aerospace Enterprises is one competitive company in the reckoning. It set up shop in 2004, is 100 per cent Bahraini owned, and employs more than 40 people at its offices and facilities in various areas of the kingdom.

The firm has gone from strength to strength, particularly in the last 12 months. Mena earned its Bahraini AOC in January 2009 and started chartering a Bombardier Challenger 300 jet shortly afterwards.

By July, the company had added an Embraer Legacy 600 to its fleet. The same month the company's JV with Scandinavian Avionics, SA Mena Avionics earned its FAA ticket to complement the Bahraini and EASA approvals it already had in place.

A month later Mena was appointed as the exclusive representative for Germany's Airborne Technologies in the Middle East. The European firm provides proprietary image and data analysis services using fixed-wing aircraft. The two companies will focus on pipeline monitoring, leak detection, airborne surveying and digital mapping. At a later stage, the scope of services will be expanded to include surveillance, patrolling, border control and law enforcement solutions.

Mena COO Ralph Eisenschmid said: "This collaborative effort represents a new standard in airborne sensing, imaging and scanning. Real-time airborne data can be delivered in a multitude of formats and, of course, all data and imaging results are securely stored employing the strictest of protocols."

Then, in November 2009, Mena took yet another new direction when it announced that it had concluded a Memorandum of Understanding with Canada's CAF Aviation Group.

The new Bahrain airport-based venture will develop a VIP interiors refurbishment and installation workshop. It will also provide maintenance services to counter aircraft-on-ground situations, as well as offer mobile engineers to assist in such instances. Eisenschmid said: "We are very excited about the prospect of working with a professional and respected organization like CAF Aviation. By coupling their expertise and experience in these areas with Mena's regional presence, the region's aircraft owners and operators will certainly benefit from expanded and enhanced services."

Mena has ambitious expansion plans, deep pockets and now has interests across several sectors of the business aviation industry. As its fleet expands it is likely to become a major regional player. Watch this space.

*Logistics specialist DHL Express is well placed to assess the growth in Bahrain's aerospace industry having been a mainstay of the kingdom's economy since the early 1970s.*

# Express delivery

Since the formative years almost four decades ago, when DHL launched regional distribution services from Bahrain with a fleet of 15 Metro turboprops, the scale of its operations has increased dramatically.

Now occupying a central facility at Bahrain International Airport, DHL employs some 1,300 people in Bahrain and has established its Middle East hub in the kingdom, from where it manages a wider network throughout the region and services for customers worldwide.

"Our core business is what we call 'time definite international' services," said Garry Kemp, managing director for the Middle East, North Africa and Turkey. "That means as fast as possible, to anywhere in the world for an all-inclusive price. But around that central aspect of the business, what we do is evolving constantly."

## High-volume letters

As the designated cargo carrier of the Kingdom of Bahrain, the profile of DHL's operations spans everything from high-volume letters and small parcels through to large-scale consolidated shipments for customers globally. Bahrain is home to DHL's customs gateway for the kingdom, plus Kuwait and Saudi Arabia.

The road network, which interfaces with air-freight services, is based in Bahrain, connecting with all the Gulf countries, plus Jordan, Lebanon and Syria, as well as a link to the European network through Turkey.

"We operate a mixed fleet," explained Allan Baird, VP of airline operations. "We have five DHL-owned Boeing 727s, which are an excellent size aircraft with the right capacity for us on the short-haul routes. These aircraft fly to Jeddah and Riyadh in Saudi Arabia, Dubai and Kuwait. In addition, we also wet lease A300s and DC8s in the three-hour plus range. A sixth 727 is operated on a wet lease basis and we have one wet leased 737-300, which we added in 2009."



DHL also operates a chartered Boeing 747 on a twice-weekly, soon to be three-times-weekly, route into Afghanistan, delivering to US military personnel based in the country. The company has a number of contracts with the US military, the largest of which with the US Postal Service involves managing deliveries to bases in Iraq, Kuwait and Afghanistan.

The history of DHL's presence in Bahrain dates back to the kingdom's position as the commercial gateway to the Middle East. "It has been a win-win situation really," said Kemp. "We have always enjoyed an extremely strong relationship with the community and the authorities here. Civil Aviation Affairs has been very helpful in terms of

encouraging our expansion plans and supporting our needs. In turn we have created jobs and helped to support Bahrain's growth. Most people recognise DHL as one of the major employers here."

Rumours that began to circulate a year ago that DHL planned to re-shape its Middle East operations and relocate its regional hub away from Bahrain are given short shrift by Kemp. "We are committed to Bahrain and we have no plans to change that at all."

The changing profile of DHL's Bahrain operations in some ways mirrors the wider global economic picture. Whether it is the financial sector, construction or the energy markets, the worldwide economic slowdown finds its way into the cargo and logistics sector eventually, as Kemp explained:

## Significant growth

"We have been experiencing significant growth in the high 20s to 30 per cent mark in recent years. That reflects the strength of the world economy. As the economy began to slow down, we did see a change but it took a while to filter through.

"We didn't really feel the effects until the latter part of 2008 and, in common with other emerging markets, we had a lag time of maybe three to four months. Lots of companies began looking for economies of scale and instead of shipping daily, they were consolidating into twice or three times weekly and negotiating very hard on price."

Reductions in troop numbers in Iraq and the subsequent easing in demand for cargo services into the country has combined with the tougher economic outlook and lower fuel charges to squeeze DHL revenues by 6.9 per cent in 2009, but overall the picture is far from gloomy. Although not reaching peak volumes such as those experienced at Christmas time in 2007, when the facility handled 550,000kg of material



Garry Kemp - seeing encouraging signs.



per day at one stage, the long-term prognosis is healthy.

“The retail sector, for example, is showing encouraging signs,” said Kemp. “Their logistics people are planning for growth, so that is positive from our perspective. We have also seen a shift in recent years towards a much higher proportion of our consignments requiring customs clearance.

“If you get that part right, it is a very important step in providing the right levels of customer service because with the complex nature of the customs requirements there is certainly the capacity to fall short if you don’t put the right resource there and invest in the systems. It’s an area we work very hard on.”

#### **Tried and tested**

The well-oiled logistical machinery, which ensures all consignments arriving at DHL’s Bahrain hub are offloaded and processed as rapidly as possible, is tried and tested. Once offloaded, material enters the sort system. Every item is individually bar-coded and containers are built for each destination before assignment to road or air transport. The system is optimised to allow customers to be able to track the progress of their orders at any point.

Security is also taken extremely seriously, with full in-bound and out-bound X-ray checks in place, as well as X-ray capability in the field.

DHL operates a maintenance base in Bahrain, performing line maintenance for the fleet including A-checks. Heavier C-check work is carried out by third-party providers in Jordan or Turkey.

Baird sums up the mutually supportive relationship which exists between DHL and the Bahraini authorities. “Our relationships have always been excellent. We really can’t say enough about the co-operation that exists between the organisations. I’ve worked in many different locations and it is the best I have experienced anywhere.”





**We are very proud of the professional customer service and the range of goods."**

**Abdulla Buhindi**

## Counter evolution

*Bahrain was one of the first Middle East countries to see the potential of the duty-free concept. Since the 1970s the kingdom's shopping experience has been transformed.*

**F**rom a time when the term duty-free in Bahrain meant a collection of individual airport shops, each seeking to capitalise independently on the airline passenger's thirst for a bargain, the current Bahrain Duty Free operation is unrecognisable.

Ever since the idea of combining these individual traders into a professionally-organised and more cohesive single operation was finally brought to life in the 1980s, Bahrain Duty Free has gone from strength-to-strength.

With somewhere in the region of eight million passengers flying into or transiting through Bahrain in 2009, one key difference is the size of the potential customer base. Yet, the transformation of the operation itself and the sheer range and quality of goods now on offer has been equally instrumental in creating a thriving retail enterprise at the heart of Bahrain International Airport.

Bahrain Duty Free, operated by experienced duty-free specialist Aer Rianta, turns over somewhere in the region of 68 to 70 million Bhd a year. And, despite the gloomy economic conditions, the man at the helm believes the company is performing well financially.

"We are on target to match our 2008 performance in terms of turnover and profitability," said Abdulla Buhindi, managing director of Bahrain Duty Free. The company employs around 240 people, 60 per cent of whom are Bahraini nationals.

The quality of the kingdom's duty-free operation has been recognised numerous times with industry awards, including the 2006 award as the "World's Best Duty Free", at the World Duty Free Shop Symposium in Cannes.

Shoppers can indulge themselves with an amazing array

of gifts ranging from jewellery and clothes to the latest electronic gadgets and fragrances. "We are very proud of the professional customer service and the range of goods that passengers can choose from," added Buhindi. "The training we provide for our staff is all important."

As the planned expansion and redevelopment of Bahrain International takes shape, the duty-free area will also increase in size and scope, although the details have yet to be finalised. "We are in discussions with Bahrain Airport Company to expand our footprint and to invest in the expansion programme. We have also been working in partnership with Bahrain Airport Services (BAS) to upgrade the public areas of the airport."

Buhindi said he expects the area occupied by Bahrain Duty Free to grow by at least 50 per cent over the next decade, while more near-term innovations include the addition of touch-screen monitors for customers to peruse goods. The existing land-side ANZ shop is also being expanded.

In line with the Bahrain Government's commitment to increase employment opportunities for Bahrain nationals, Bahrain Duty Free also owns a 75 per cent stake in the training organisation Bahrain International Retail Development Company, with Aer Rianta owning the remaining 25 per cent.

The organisation has delivered training for more than 2,000 people interested in a retail career – some of whom will eventually work for Bahrain Duty Free, while others will find opportunities in the wider retail sector. The training has also been opened up to other Middle East countries with similar requirements for skilled retail employees.



IN 1969 ARMSTRONG, ALDRIN,  
AND COLLINS SET OUT TO BRING  
THE MOON A LITTLE CLOSER.

IN 1969 DALSEY, HILLBLOM,  
AND LYNN SET OUT TO MAKE  
THE WORLD A LITTLE SMALLER



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

In 1969 Adrian Dalsey, Larry Hillblom, and Robert Lyn pioneered the express industry in a way that helped to bring the world a little closer together. Over the last 40 years, we've fostered this entrepreneurial, innovative spirit, and today we are The Logistics Company for the World. And now, as recognition of these achievements, we have been included in the Top 100 Most Valuable Global Brands. We would like to say thank you to all our customers and our employees, and we look forward to continuing this incredible journey.

**40** YEARS  
**DHL**  
The Logistics Company for the World

**DHL**



# HORIZON **أفق**

International Flight Academy L.L.C. الأكاديمية الدولية للطيران ذ.م.م.

## HIGHER DIPLOMA AVIATION BUSINESS ADMINISTRATION

- C Accelerated Higher Diploma Program
- C Accredited by the UAE Ministry of Higher Education
- C Fast track to bachelors degree at select universities abroad
- C Improve your job prospects in the rapidly growing aviation sector
- C State of the art facilities
- C Conducive academic environment for both Male and Female Students



## HELICOPTER AND AEROPLANE PILOT TRAINING

- C Private Pilot License (PPL)
- C Commercial Pilot License (CPL)
- C Air Transport Pilot License (ATPL)
- C Night Rating
- C Multi Engine Class Rating
- C Instrument Rating (Single and Multi)
- C Flight Instructor Rating
- C Sky Diving
- C Tandem Jumps
- C Accelerated Freefall Course

**Together We Will Build Your Future**

For More Information

Contact us: 03 7855550

Toll Free: 800 5355

Email: [info@horizonacademy.ae](mailto:info@horizonacademy.ae) [www.horizonuae.ae](http://www.horizonuae.ae)



*In this 16-page special feature **Jon Lake, Steve Nichols and Liz Moscrop** look at the world of training and in March at Airport Expo in Dubai the region's professionals will be able to see for themselves what is happening to meet the growing demand for civil and military aerospace training, recruitment and simulation.*

# SHOW TIME FOR TRAINING

A Cessna 172 soars over the Gulf of Aqaba in Jordan.

The aircraft which is equipped with the latest glass panel screen that introduces the trainee pilots who fly this aircraft to the world of airline technology cockpits is one of many coming to the region to help develop the next generation of pilots.

A few miles away across the desert trainee fighter pilots wait to hear whether they will be learning their skills on a turboprop or a new fast jet.

On the ground pilots hone their skills with simulators and cabin staff get life-size cabins with real slides and galleys to practise for every occurrence.

Training is now big business in the Middle East and in a first for the region, F&E Aerospace will launch the Aerospace & Defence Training

Show (ADTS), from March 3 to 4 this year, in association with the Halldale Media Group.

Alison Weller, director of organiser F&E Aerospace, said: "As the aviation industry recovers from the economic downturn and airlines prepare to raise their staffing levels to meet demand, training and development specialists within the industry will be looking to equip their teams with the necessary skills to enlarge their pool of professionals.

"Similarly, with current predictions of increased defence spending across the Middle East, a good proportion of funds will be earmarked for military training systems and equipment. I am confident that the show will be a welcome platform from which aviation training institutes, airlines and aircraft manufacturers can attract and inspire aviation professionals of the future."

ADTS comprises two parallel conferences and an exhibition and is supported by the UAE Armed Forces, the Arab Air Carriers Association, Dubai Civil Aviation Authority, Dubai Airports, Emirates Airline and Emirates Aviation College-Aerospace & Academic Studies.

The conferences are aimed at tackling issues within the civil and military aerospace industry. The airline training conference will be led by Halldale's CAT magazine; the other, on defence training, will be led by its MS&T magazine.

The supporting exhibition will feature companies offering the most up-to-date training courses and simulation equipment and programmes, in addition to recruitment agencies, vocational and academic institutes and universities.

*Though there has been a slow but steady standardisation in what were once very varied approaches to aircrew training, basic pilot training remains an area where there are still real differences in approach, with some nations continuing to favour side-by-side seating over tandem and others preferring jet aircraft over turboprops.*

# PROPS V JETS

**T**he initial phase of primary, ab initio or elementary flying training is usually conducted on piston-engined light aircraft and aims to teach the fundamentals of effects of controls, basic and general handling, navigation and, perhaps, an introduction to formation flying and instrument flying.

This phase is often comparable to the kind of training required to obtain a civilian private pilot's licence, though air forces will frequently aim to add greater workload, and to look for higher levels of skill and ability in order to weed out students who would represent a training risk at later stages.

Occasionally, air forces may omit the elementary phase, sending students straight into basic training, perhaps after a very brief screening, which may take a student to solo standard, but with the primary purpose to chop weaker students. Such training may be carried out in civilian light aircraft types and is frequently sub-contracted to commercial operators, though the leading air forces prefer to use their own instructors and to inculcate a military ethos from the start.

After completing elementary training, student pilots typically progress to a more advanced and sophisticated, higher performance aircraft for basic training (a few air forces – like Bahrain's – send pupils direct from an elementary trainer to aircraft like the BAE Hawk, though this is most unusual). At one time, this tended to mean a jet-engined trainer (usually with side-by-side seats) like the Cessna T-37 Tweet or the Hunting Jet Provost, but in recent years there has been a widespread move to use tandem-seat turboprop trainers like the Embraer and Shorts Tucano and the Pilatus PC-7 and PC-9.

These aircraft gained a foothold in the market following the oil crisis of the 1970s, which rendered turbojet running costs much less

affordable. Their designers did everything possible to ensure that, from the cockpit, these aircraft provided a realistic, jet-like environment and that performance was as competitive as possible, though aircraft like the 220kt Pilatus PC-7, the 270kt Tucano and the 320kt PC-9 were still significantly slower than the 380kt Jet Provost and 369kt T-37.

Despite this, they have proved popular and successful and even the UK Royal Air Force and the USAF traded jet-engined basic trainers for turboprops, while Korea was prompted to develop the KAI KT-1 Ungbi, which could be seen as having been an unlicensed near-copy of the PC-7.

In the former Eastern Bloc, Poland developed the PZL-130 Orlik, which might have become the Warsaw Pact's first turboprop trainer but which was, in the event, adopted only in its own home country.

#### Performance gap

Today, with aircraft like the 370kt Pilatus PC-21, the performance gap has narrowed, and even greater efforts have been made to ensure that the latest turboprop trainers handle like jets, with single power lever engine controls and with similar glass cockpits, with head up displays (HUDs) and hands on throttle-and-stick (HOTAS) controls.

Lightweight zero-zero ejection seats are standard. Like the previous generation of turboprop trainers, these aircraft are usually offered with basic air-to-ground weapons capabilities and can fulfil the light strike and close air support roles.

But at the same time, there has been growing interest in small jet-powered basic trainers, with the SIAI S211 and FMA IA-63 Pampa being evaluated by the USAF as possible contenders (under

Grumman and Vought auspices, respectively) to meet the Joint Primary Aircraft Training System requirement, alongside a derivative of Aermacchi's MB339 (offered by Lockheed) and a number of other types. In the event, the USAF selected the turboprop-powered Pilatus PC-9, which is built under licence as the Beech T-6 Texan II.

More recently the S211 and Pampa have spawned modernized derivatives in the form of the Aermacchi M-311 and AT-63, while India's Hindustan Aeronautics Ltd has developed an indigenous basic jet trainer – known as the HJT-36 Sitara Intermediate Jet Trainer.

Crucially, the increased performance of the latest turboprop and jet basic trainers offers the possibility of 'downloading' training tasks from the advanced phase and going on to more expensive advanced training aircraft, though in many air forces all pilots are required to complete a common basic phase before being streamed fast jet, rotary wing or multi-engined.

Obviously the relevance of 'downloaded' training is questionable for the pilot destined to multi-engined training on (say) the King Air, but a modern basic trainer can usefully undertake sorties downloaded from (say) the BAE Hawk, Aermacchi Alenia M-346 or Aero L-39.

With a maximum speed of 370kts the PC-21, for example, can fly a representative, high workload low-level navigation training sortie as well as a 400kt Aero L-39 Albatros and can do so while offering significantly lower operating costs. Similarly, the new light basic jet trainers offer jet-type performance at significantly lower cost than current advanced jet trainers.

The leading contenders among today's turboprop trainers are probably the Raytheon (Hawker/Beechcraft) T-6 Texan and the new Pilatus PC-21.



**Hawker-Beechcraft's T-6 shows its aerobatic capability. Inset top: the M-311 and inset below, the Pilatus PC-21, successful winner of the UAE contest.**



The T-6 is a derivative of the Pilatus PC-9 completely redesigned from the ground up to meet US requirements, to the extent that the production T-6 shares no parts in common with the PC-9.

The aircraft has a new engine cowling, a new, re-shaped canopy, and a redesigned rear fuselage designed to give improved flying qualities. The wing has greater incidence and incorporates redesigned fuel tanks and enhanced maintainability features. The aircraft has a PT-6A-68 engine with increased horsepower and digital engine control, and single-point pressure refuelling is provided for minimum turnaround time.

The aircraft has an onboard oxygen-generating system to improve aircraft availability, and the landing gear designed to withstand a 13-feet-per-second sink rate, and features redesigned wheels and brakes.

The T-6B Texan II is an improved version with a refined digital glass cockpit, while the T-6C has wing hard points to allow weapons carriage.

Pilatus launched the development of a completely new training system, the PC-21 in January 1999, using the out-of-sequence designation PC-21 to reflect its aim to produce a 21st century training system. The design team focused on three core objectives, hoping to provide a superior aerodynamic performance when compared to any other turboprop-trainer on the market, with a more powerful, flexible and cost-effective integrated training system and life-cycle support costs that would not exceed those of current turboprops.

Though a turboprop trainer like the PC-7 and PC-9, the PC-21 was

**Continued  
on Page 90**

CONTINUED FROM PAGE 89

a “radically new design”, with unusually short-span wings incorporating of 12.3 degrees of sweepback on the leading edge, and using a combination of ailerons and spoilers to give fighter-like rates of roll. The aircraft features a five-bladed propeller and has a state-of-the-art cockpit with three large main multi-function active matrix liquid crystal displays and two smaller stand-by multi function displays (MFDs) for each pilot – all displays being fully night vision goggle compatible.

The handling characteristics and performance of the PC-21 can be tailored to reflect the stage of training which the student has reached. For basic flying training, engine power can be limited and roll-rate can be restricted to give more benign handling characteristics, while for advanced training full power and faster roll rates can be allowed. There is also an automatic yaw compensator to adjust for variations in propeller torque, making the aircraft feel more like a jet from the cockpit.

The first of three PC-21 prototypes flew on July 1 2002 and six aircraft were ordered by the Swiss Air Force to replace the Hawk (in the basic and advanced training roles), from April 2008.

The type entered service with the Republic of Singapore Air Force on July 13 2008, and 19 are now in service with No.130 ‘Eagle’ Squadron, based at RAAF Pearce in Australia. The UAE has now ordered 25 more.

But the turboprops face increasing competition from a new generation of jet-powered basic training aircraft, with Aermacchi’s M-311 leading the field.

The M-311 is a completely redesigned derivative of the SIAI S-211 (operated by Singapore and a handful of smaller users), with an all-new avionics suite, and extensive airframe and powerplant changes.

The M-311 features a more powerful Pratt & Whitney Canada JT15D-5C high by-pass ratio turbofan developing 3,200lb (14.2kN) a 30 per cent increase compared to the S-211.

Though the M-311 looks much the same as the S-211, it does incorporate aerodynamic refinements, including new wing tips and ventral fuselage fins. But the big changes lie under the skin, with a strengthened airframe giving a 15,000 hour fatigue life and +7 / -3.5 g operating limits. The landing gear is redesigned for a 4m/s (13ft/s) sink rate

Even more important are the changes inside the cockpit, where Aermacchi has aimed to provide a truly state-of-the-art man-machine interface, with a completely revised avionics suite and displays.

### Embedded simulation system

The aircraft has three identical 5x7in (125x180mm) colour liquid-crystal multifunction displays in each cockpit, a wide-angle HUD in the front and a full-size HUD repeater (using a fourth dedicated MFD) in the rear cockpit. The aircraft features the embedded simulation system used in the Alenia Aermacchi MB-339CD and M-346 advanced trainers.

An avionics demonstrator for the M-311 (originally built as the prototype for the upgraded, JT15D-5C-powered S-211A, and reconfigured as the M-311 prototype and technology demonstrator) made its first flight on June 1 2005.

Alenia insists that the M-311 offers a significant reduction in acquisition and life-cycle costs, bringing its costs to a level that is broadly similar to those of the higher powered turboprops, while offering less limited performance, and much greater teaching effectiveness.

Life-cycle costs are further reduced by the use of built-in Health and Usage Monitoring System (HUMS) equipment, which constantly monitors

the airframe, engine and systems and which reduces maintenance and inspection requirements. The aircraft also features single-point pressure refuelling and has an On-Board Oxygen Generating System (OBOGS). These features reduce maintenance manpower requirements and allow quicker turnarounds, which can allow a fleet to sustain more sorties per day.

The M-311 offers significant performance advantages compared to competing turboprops, able to fly at more operationally representative low-level and attack speeds, offering typical swept-wing jet ride and gust response characteristics, and giving the pilot a more realistic cockpit environment as well as an improved field-of-view directly forward and down over the shorter jet nose.

Moreover, the M-311 provides these advantages while using the same amount of fuel and with similar life-cycle costs and broadly comparable acquisition costs.

In the Arab world, a number of air forces have significant fleets of basic training aircraft that need to be replaced, including Egypt, Jordan, Kuwait, Saudi Arabia, Tunisia and Turkey.

Elsewhere, trainer fleet recapitalization efforts have seen Iraq, Israel and Morocco select the Raytheon (Hawker/Beechcraft) T-6 Texan, while the newer PC-21 has scored its first sales success in the region in the UAE.

And while this may look like (and is, to some degree) a competition between US and European offerings, with the Raytheon trainer’s designation recalling the wartime Harvard, it should be remembered that both are basically Pilatus designs from Switzerland!

But there are other contenders and, since the May 2008 co-operative marketing agreement between Boeing and Alenia, the M-311 may win orders from any forward-looking air arm which wants to embrace a jet-powered basic trainer.

**The PC-21: can be tailored to reflect the stage of training which the student has reached.**





China's L-15 demonstrates to the MENA defence force at the Dubai Airshow.



# Trainers move into a different class

**T**oday's front-line fast jets are ever more expensive and complex than their predecessors, with more capable sensors and weapons systems – they are also often easier to fly.

Typhoon test pilot Keith Hartley once boasted that, thanks to the aircraft's benign handling characteristics, he could get an "average private pilot" to fly a solo circuit with just an hour's instruction!

By contrast, yesterday's advanced trainers needed to prepare pilots for high-performance fighters with demanding handling characteristics – aircraft like the Lightning and F-104 that needed "ace" pilots with the best possible flying skills who could cope with the demands of map and stopwatch navigation tasks in aircraft with busy analogue cockpits and an array of traditional gauges and displays.

As such, aircraft like the Folland Gnat were

*With new combat aircraft entering service and with air forces coming under growing pressure to cut costs, **Jon Lake** reports there is an emerging demand for a new generation of advanced trainers that are better matched to today's front-line fast jets.*

themselves hard to fly and were quite capable of killing their pilots if badly mishandled.

When the RAF introduced the BAE Hawk in 1976, there were real concerns that it was too easy to fly and to mitigate this perceived problem, the syllabus was 'tweaked' to impose higher workload on the student pilots.

Throughout the Cold War a significant accident rate during training was acceptable, though it would become progressively less so. But the financial costs of training a front-line fast jet pilot were of less consequence, and it was not uncommon for a pilot to have flown five different types of trainer before converting to his first front-line type.

An RAF Lightning pilot, for example, might have flown the Chipmunk for elementary flying, Jet Provost T.Mk 3 and T.Mk 5 for basic, the Folland Gnat for advanced and then the Hawker Hunter for tactical weapons training.

Continued  
on Page 92



Alenia's M-346 awaits final go-ahead from UAE.

CONTINUED FROM PAGE 91

The use of redundant former front-line fighters for a pre-OCU (operational conversion unit) or 'lead in fighter training' phase was entirely routine, though India's experience with using the MiG-21 in this capacity dramatically highlights the pitfalls that can be encountered.

Today's advanced trainers need to produce a pilot with different skills – one who can manage his aircraft's systems and mastermind the tactical air battle but whose mount may be relatively easy to fly.

Moreover, they must do so as cost-effectively as possible. Since through-life and support costs represent the vast bulk of any military aircraft, there is a real incentive to reduce the number of 'steps' in military training and to minimize the number of different aircraft types in use (and thereby reduce the number of expensive, capital intensive logistics support chains that have to be maintained).

This means that the advanced and pre-OCU or lead-in fighter training are increasingly being combined, or at least being flown by the same aircraft type.

**Representative cockpits**

And rather than using redundant, previous-generation fighters, where operational equipment, cockpits and sensors are not representative of today's combat aircraft, there is a trend towards using new-generation advanced trainers which have representative cockpits and systems, and which have appropriate weapons systems and sensors, or which are able to emulate such systems and sensors synthetically.

The ability to realistically emulate or simulate operational systems and sensors opens the door to being able to fly some training exercises on a modern advanced trainer that would previously have been flown on operational aircraft types. This is known as "downloading" training and it can save considerable amounts of money, because advanced trainers are inevitably much cheaper to operate than front-line fighters, and every hour downloaded from the OCU stage represents an extremely worthwhile goal.

This kind of downloading is rapidly becoming an economic necessity for even the largest and

most well-funded air forces, and the ability to download training from the OCU stage is becoming a vital capability for all advanced trainer aircraft.

In some cases, air forces are trying to use the same aircraft type for basic, advanced and lead-in training. Although some air forces clearly believe that aircraft like the Pilatus PC-21 can be used for advanced training, others demand heavier, jet powered types with higher performance and more representative handling characteristics.

But, even among air forces which agree on the need for the kind of aircraft that are traditionally viewed as advanced trainers, there are a number of debates and controversies.

There is disagreement as to whether there is a need for the use of live weapons in training, or whether weaponising can be simulated. After decades of dropping practise bombs, firing unguided rockets and practicing 'academic strafe' using a centerline 30-mm cannon on its BAE Hawk T.Mk 1s, the RAF is introducing a new Hawk T.Mk 2 which will not drop live weapons and which is not even equipped for the carriage of a gun pod.

There are similar debates surrounding the levels of performance and handling required in an advanced trainer aircraft, particularly whether such aircraft need to be capable of supersonic speeds in level flight, or whether they should be capable of the kind of high alpha handling and super-manoeuverability that characterize the latest front-line fighters.

Selected by the UAE but not yet ordered, Alenia Aermacchi's M-346 Master is arguably the most modern of the advanced trainer aircraft now competing for orders. Derived from the Russian Yak-130, the M-346 is designed to offer manoeuvrability and controllability at very high angles of attack, using vortex lift and a sophisticated Fly By Wire (FBW) flight control system (FCS). The aircraft is powered by twin Honeywell F124 engines.

The first of three prototypes flew for the first time on July 15 2004. The Italian air force has ordered six aircraft and has options for nine more and the UAE has a stated requirement for 48

more – 20 advanced trainers, 20 light attack versions and eight to equip a formation aerobatic display team. Aermacchi has worldwide marketing rights for the type outside Russia and the CIS.

Korea's KAI T-50 Golden Eagle is loosely based on the design of the F-16 and the company has co-operated closely with Lockheed Martin in the design, development and subsequent marketing of the aircraft.

Unusually for a trainer, the General Electric F404-GE-102 turbofan-engined T-50 has an afterburner and is supersonic in level flight. The aircraft is aimed at advanced/lead-in fighter trainer requirements and is being offered as a lightweight fighter in its own right, with the FA-50 version having a different radar and combat-optimised avionics and systems. The RoKAF has ordered 25 T-50 trainers and the type has been marketed widely.

**Massively improved capability**

BAE's Hawk remains in production in the UK and India. The latest versions of the Hawk closely resemble their forebears in appearance but the new variants offer massively improved capability and have aerodynamic refinements, a modern glass cockpit with new generation avionics and a more powerful engine.

In Russia, the Yak-130 appears to have finally won the competition for a new trainer for the Russian air forces, though only 12 have been ordered so far, with 16 more having been ordered for Algeria.

The rival MiG-AT has failed to attract a domestic order but the type continues to be marketed to export customers.

China's aerospace industry has long produced trainers to meet the requirements of the People's Liberation Army Air Force and a small number of client states and export customers.

But, as the China's aviation industry closes the technology gap with that of the West, and as its aircraft erode the qualitative edge that has hitherto been enjoyed by European and US trainers, China's new trainer designs are likely to become increasingly important in the international market.





There was just a model of the T-50 at the recent Dubai show, but the real thing has good prospects.

Two trainers are being offered to meet PLA requirements. The first is the Guizhou JL-9 (known as the FTC-2000 Mountain Eagle on the export market), a derivative of the Chinese-built MiG-21 (the J-7 in single seat form, and the JJ-7 trainer). It retains the same wing planform, empennage, rear fuselage and powerplant of the JJ-7 but with a redesigned forward fuselage with stepped tandem cockpits, a nose-mounted radar and lateral air intakes. The prototype made its first flight on December 13 2003 and about ten have reportedly been built for evaluation.

The rival Hongdu L-15 Falcon is an all-new design, with a configuration that is reminiscent of

the Yak-130 and M-346. The first prototype made its maiden flight on March 13 2006 and four limited-rate initial production versions are being built for evaluation by the PLA Air Force. Compared to the JL-9, the L-15 offers a better replication of the performance and handling characteristics of the latest frontline fighters and has a modern all-glass cockpit.

Finally, there remains a small market for older, cheaper advanced trainers and aircraft like the CATIC K-8 and Aero L-39 continue to be marketed to smaller, less prosperous air arms.

The market for advanced trainers is significant, with many nations shopping for advanced, new-

generation fighters, while still relying on previous-generation trainer aircraft.

In the Middle East region, in particular, large numbers of Hawks, Alpha Jets and MB339s need replacing. In some air forces new pilots face too great a step between existing basic trainers and front-line types, while in others there is a pressing need to replace previous-generation fighters like the F-5 in the LIFT role.

The Aermacchi M-346 Master, KAI T-50 Golden Eagle and BAE Hawk (new build and upgraded) are facing off in a number of regional competitions and many other manufacturers are trying to break into this lucrative and important market.

PILOT TRAINING  
THAT FOCUSES ON THE FUTURE....



COMMENCING OPERATIONS IN  
DECEMBER 2010

*Etihad was voted the World's Leading Airline at the 2009 World Travel Awards – a big achievement after only six years of operations. Steve Nichols visited the airline's training academy in Abu Dhabi to find out what makes its cabin crew training and selection different to the rest.*

# CREWS CONTROL

**S**itting in Etihad's reception area, a 50-inch plasma TV announces that the airline's vision is to be the number one in the world.

Having achieved that goal in November 2009, I asked Captain Peter Mitchell, Etihad's vice president for training and standards, where they go from here?

"We are going to be under the microscope now," he admitted. "Passengers are going to choose Etihad to see how good we are, so it is even more important that we perform."

Mitchell said the Etihad culture is one of paying close attention to every detail and delighting its customers: "For example, our new 'Inspired Service' for first and business class passengers is all about treating customers as individuals. In a legacy airline you might be given a drink, fed a meal and then be expected to go to sleep. With us, customers can mix and match – more of an à la carte service where we offer what they want, when they want it."

Parts of the Inspired Service culture are now being used in economy class as well, complete with hot desserts.

#### The number of courses may grow

Etihad currently employs more than 3,000 cabin crew from over 100 different nationalities. At the moment it is running one or two courses a week for up to 14 people at a time in its training academy, overlooking the new Formula One racing circuit on Yas Island. With new aircraft coming in 2011, the number of courses may grow. During our visit a group of recruits from Japan were being put through their paces ahead of the launch of Etihad's new services to Nagoya and Tokyo in early 2010.



**Maija Eklof: "The most important thing is that they respect everyone else's culture and religion."**

But how does Etihad select and train its cabin crew?

Maija Eklof, vice president of Etihad's in-flight service, says the selection process starts the minute a prospective candidate walks through the door. "We are looking for just the right character," she said. "We want them to be engaged and interested – not leaning back in their chair and not leaning too far forward either."

I shuffle back in my seat as I take my notes and Eklof laughs. With a degree in sociology, group dynamics and communications from the University of Helsinki, she is an expert in non-verbal communication. She says her 25-year career with Finnair before joining Etihad three years ago prepared her for what she calls a challenging, but fascinating job.

Delegates who pass the "Maija test", who can swim, have excellent English skills and the right qualifications, join the team for a three-week training course.

#### Arabic speakers

"We also want Arabic speakers as it is a regulatory requirement to have one on every flight," she said. "These come from a wide variety of countries, including Syria, Jordan and North Africa. We recruit from the UAE too but, as 80 per cent of the population are non-indigenous, it's not surprising that there are very few true Emiratis in our cabin crew."

Many recruits will be Muslim, but Eklof said that someone's religion isn't important to the airline. "The most important thing is that they respect everyone else's culture and religion – both passengers and crew – and can work as a team," she said.

"When they first arrive they are given a welcome pack that explains everything they need to know about the Muslim culture in the UAE, its laws and rules. But we are equally interested to make sure they understand other cultures too. We are all equal."

Once they graduate, the training doesn't stop. They have to come back for the obligatory annual regulatory training and undergo continuous





assessments, including one-to-one interviews. There are also Abu Dhabi-based conventions to attend three-four times a year, plus intranet and printed newsletters for them to read. If they get recognised for good performance, they can win concert tickets or vouchers for High Street stores. Etihad is currently reviewing its recognition package to see how it could be improved.

The rigorous training course includes product and customer service training, fire and evacuation drills, and even emergency drills in a full-motion cabin simulator – or Cabin Emergency Evacuation Trainer (CEET).

Hadi Hattar, Etihad's safety training manager, said they try to make the simulations as real as possible. "We can simulate anything," he explained. "From emergency decompressions to violent turbulence. In the decompression simulation not only do the masks fall down, but the cabin mists up as well – just like real life."

#### Swimming pool

The CEET can simulate everything from taxiing, take off, the cruise phase and landings. And when the worst happens trainees evacuate down the slides into the adjacent swimming pool.

Another simulator gives trainees a feel for what it is like to use the evacuation slides on dry land – like the CEET escape, but 30 feet in the air and steeper.

"If you don't get it right you can really hurt your feet or ankles," Hattar warned. "We also have giant bean bags on the ground and to the left and right – just in case."

Everything is a little too realistic – even the cabin door simulators have video screens behind



**Etihad staff get to experience real situations at the training centre.**

the windows showing real-life scenarios.

"You don't want the crew opening the door if there is a raging fire outside," Hadi said. "We expect our crew to check the window before opening the door."

On the subject of fire, one of Etihad's training simulators can mimic all sorts of blazes. "We can create real fires in the toilet, in an oven, in the overhead locker – even fires in the seat and seat

back," Hattar said. "And if they don't use the extinguisher properly they won't be able to put it out."

It's this attention to detail that is bringing others to use Etihad's training facilities. While we were there a group of cabin and flight crew from Abu Dhabi's Presidential Flight for VIP and VVIP passengers were undergoing safety training. They used to train with Emirates, but Etihad is just down the road and they've got to know each other very well.

#### One step further

Mitchell added that safety training may be regulatory but Etihad is taking it one step further. "We are considering putting cabin staff into the full-motion flight simulators along with the flight crew so they can get a sense of what it is like to fly an aircraft under difficult conditions," he revealed. "When the workload goes up like that, the last thing you want is someone asking you if you want a cup of coffee."

The cabin crew already have to train to extract the pilots from their front seats in the event of an emergency and Mitchell said that, as both flight and cabin crew are a team, the training must overlap.

Etihad also uses a lot of computer-based training for its staff but prides itself on its "train the trainer" scheme too. "We make sure that our trainers get regular cabin crew experience as well," said Mitchell. "If you are going to teach people to do a job you need to be doing it yourself on a regular basis."

Mitchell takes this literally. He may be VP of training but, as an Airbus A320 pilot, he tries to fit in as many flights with Etihad as he can. "If only I had more time," he said.



# الشركة العربية المتقدمة للمشبهات

شركة سعودية تقوم بتصميم، تطوير، تنفيذ، تصنيع وتوفير الدعم الفني اللازم للتدريب وحلول المشبهات - وصولاً إلى نتائج مضمونة وفريدة للتدريب وتوفير امكانيات المساندة الفنية للمشبهات محلياً. ونسعى لتكون الشركة الرائدة والمفضلة للمشبهات في الشرق الأوسط.

## ابتكارات مشبهات قدرات محلية الحل الأمثل لمتطلبات التدريب

الشركة العربية المتقدمة للمشبهات (AASC) هي مشروع مشترك بين شركة الإلكترونيات المتقدمة (AEC) وشركة طاليس للتدريب والمشبهات (THALES). وهي الشركة المعترفة في المنطقة في مجال المشبهات وتستمد امكانياتها من الشركتين المالكه عن طريق دمج منشأتهما وخبرتهما ومهارتهما. مما يدعم ويعزز أعمال التدريب وأنظمة المشبهات في منطقة الشرق الأوسط.

الشركة العربية المتقدمة للمشبهات

ص ب ١٢٥٣٠

الرياض ١١٤٨٣

المملكة العربية السعودية

الموقع الإلكتروني [www.aascl.com](http://www.aascl.com)



الشركة العربية المتقدمة للمشبهات

Advanced Arabian Simulation Company

## Advanced Arabian Simulation Company

A Saudi Company that designs, develops implements, manufactures and supports training and simulation solutions – guaranteeing a unique regional training, technical and logistic support capability as the leading Simulation Company in the Middle East.

**Innovation Simulation Localisation**  
**Your Training Solution**

AASC is a joint venture between the Advanced Electronic Company (AEC) and Thales Training & Simulation (THALES). AASC is the regional activator and enabler for the Companies combining their assets, knowledge and expertise; promoting the training and simulation business in the Middle East.

Advanced Arabian Simulation Company

P.O. Box 12530

Riyadh 11483

Saudi Arabia

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





The Dreamliner cockpit.

## Boeing comes out fighting in training price-hike row

*Will airlines be able to afford the training to go with the new aircraft?*

**B**oeing's new move to impose 15 per cent royalty fees on training providers using its data packages in commercial simulators has raised serious safety concerns in some quarters.

Regulators and attendees at the recent Flight Simulator Engineering and Maintenance Conference (FSEMC) in Cairo were fearful about the impact the new prices could potentially have on training.

Speaking at the event, Arnab Lahiri, an aerospace engineer for the Federal Aviation Administration (FAA) national simulator program said: "It really concerns me that the fall-out is going to be safety. Whenever the cost of doing business goes up, safety is probably one of the places where you start making compromises."

Boeing's director of intellectual property management Luis O Valdes replied: "While I understand that a change in the pricing model may have significant impacts on other things, I think impacting safety should never one of those

things. Safety should be paramount. I leave it to the regulators to make sure that safety is not compromised."

However, according to Mike Jackson, FSEMC's chairman and Fedex's manager, acquisitions and programs for flight simulator engineering, the new charges present a significant risk to the training industry. He said: "Package upgrades can come in at well over \$1 million for a data pack. FSEMC tries to make sure that training equipment is as widely available and at as reasonable a price as possible. A 15 per cent fee for marginal operators may mean that upgrading equipment is beyond their means."

He added that governments frequently set budgets for such devices and that many operators would be constrained by these.

Boeing's rationale for the new fees is that it has invested heavily in creating data to build an aircraft and that when that intellectual property is used "for the purpose of creating a business, that is not

Continued  
on Page 98

CONTINUED FROM PAGE 97

what we intended". It argues that it should have a slice of any revenues generated by using that data.

From now on training providers who sell third-party training to others using Boeing data (ie any airliner simulator for one of its aircraft) will have to sign a licence with the original equipment manufacturer (OEM) to pay 15 per cent of any revenues generated. The same fee will apply when a company updates its data. An extra twist is that although Boeing will not charge users for upgrades to older simulators under existing licence agreements, it will charge third-party engineers to perform such installations. The new prices will have a huge impact on flight training providers, such as schools and airlines, which outsource some facilities.

For example, should a training school upgrade a simulator data package from one level to the next at a cost of half a million dollars, it would have to pay another \$75,000 to Boeing.

Valdes said: "The general principle is, any time you are using Boeing intellectual property as a business, we expect a license and it should be royalty-bearing."

**Highest levels of safety**

He said he could not see where safety was compromised, adding: "I'm concerned that someone can have a commercial transaction and all of a sudden safety is involved. I think whether there is a royalty or not, everybody should be operating to the highest levels of safety. The only difference between a situation where there is a royalty or not is 'What is the price? What is the associated benefit'? It does not necessarily mean that if you have a royalty or model change, that safety should be compromised."

FSEMC is traditionally a forum where manufacturers get together to discuss ways of lowering the costs of simulator training. Some airlines questioned how Boeing's new approach fitted into that environment.

Valdes countered: "Everybody seems to think that the OEM has 100 per cent control of every single price out there. We do not. All we are trying to do is recoup the investment that we made when we actually put the airplane in the air... Everybody wants to make money with somebody else's intellectual property."

There was also concern about the fact Boeing no longer publishes its charges. Airbus publishes a price list for data packages, which run at 11 per cent and 17 per cent royalties for lower-level devices. It says it has no plans at present for major changes to its existing data licensing agreements, although it admitted that prices for the A350 data packages may be steep if it could not negotiate affordable deals with all its vendors.

According to Jackson the next FSEMC steering committee, which meets in January, will look at what members can do about Boeing's new moves. He said: "Members have asked us to take some sort of initiative but we don't know what that will be yet until after we have met."



**EgyptAir to launch e-learning package**

EgyptAir Training Centre (ETC) has beefed up its capabilities with the creation of a new e-learning course in conjunction with Italy's NEOS Airline training centre.

The online course offers a complete EASA package, teaching engineering technology and mechanics.

Director of marketing and sales Eng. Gamal Said said: "This will enable many more technical staff to enter the industry. I believe it is the first such course available."

According to Said, the e-learning course will be available "some time in 2010". The partners are finalising details. Said continued: "The course is aimed at students who want to become maintenance technicians. They can learn at their own pace."

ETC is also just about to open a new physical training centre. Located at Cairo Airport, the newly-built facility provides flight crew, cabin crew and technical training, as well as ground services, cargo, financial, commercial and administration courses. Tuition is available for parent EgyptAir's crew, as well as third parties.

ETC is ISO 9001, 14001 and 18001 approved and an Arab Air Carriers Organisation certified regional training centre. EASA Type Rating Training Organisational status approval is in process.

Said said: "We offer Egyptian rates for our customers, including accommodation for all the hotels near the training centre. We are very cheap compared to such places as Dubai. We have an on-site café open 24/7 and offer complementary meals and free transport to and from the hotels."

The facility is wholly owned by the government, which has pumped

\$95,000,000 into its development. It comprises two buildings – a simulator building, 94 classrooms and ten simulator bays, of which four contain JAR-approved Level-D full flight simulators (FFS) by Thales for Airbus 320, A330 and A340 types and the Boeing B777, plus a Flight Safety International FFS for the B737-800NG.

EgyptAir is about to take delivery of 12 Embraer types, so has ordered a CAE 170/190 FFS, which is scheduled for delivery in early 2010 along with another Airbus A320 simulator. There are also several computer-based training machines and two briefing rooms. It costs around \$60 per hour to hire a flight management system computer and roughly \$8,000 per hour to use the FFS machines.

ETC conducts training for 2,000 cabin crew each year. Most airlines want to attract business class customers, so ETC focuses hard on that sector. Maria Takan Nosseir heads up the in-flight service training. She said: "We train crew how to offer first class

service. It takes a month and we use different cabin mock-ups and video the sessions and play them back to pupils."

However, the most important piece of equipment is the cabin emergency evacuation trainer (CEET), which is equipped to show crew how to deal with four common types of fire: overhead bin, toilet, under-seat and galley. There is also the facility to deal with decompression or captain incapacitation. The CEET device has a motion system, as well as fire and smoke capabilities and the sessions are recorded.

Said said: "We are confident that our new offerings will help us evolve into a premier training facility for this region."



Maria Takan Nosseir heads up ETC's in-flight service training.



"Thales - keen to share simulator results with delegates".



*FSEMC is the largest worldwide event in the simulator industry calendar, where users, parts vendors, and civil aviation authorities congregate to pick up the latest industry trends. Liz Moscrop reports.*

## Cairo hosts simulating first

The Middle East has played host for the first time to the Flight Simulator Engineering and Maintenance Conference (FSEMC) supported by Arinc. The 15th annual event took place in Cairo late last year organised by Egyptair Training Center.

Attendees from all over the world discussed topics such as qualifying new simulators, the impact of new regulations on flight training and new developments in avionics.

Safety is always the key theme. Mike Jackson FSEMC's chairman said: "The FSEMC is a small group of specialists in this field. When we get together we can talk to regulators and influence the industry. Suppliers and peers speak together to resolve issues and problems."

The conference is highly organised with customers and suppliers posing questions directly to manufacturers in a forum where everybody gets to hear the solutions.

The major players were present. CAE, Flight Safety International and Rockwell Collins all took part in the daily discussion. Jay Nair, Thales's customer support account manager for EMEA said: "The value of an open conference like this is that different manufactures can put their dirty washing out. One simulator will likely have a similar problem to another. We can also support and listen to what our customers will need in the future."

He cited the new MPL/one cockpit training from ab initio and new air traffic control (ATC) training as examples of where FSEMC discussions between OEMs and suppliers were

likely to provide future industry-wide solutions. He said: "Simulators lack ATC chat and proper communications. An instructor does that currently, which cannot truly replicate the cockpit environment. New software could provide simulated ATC in a full flight simulator so that students can practice manoeuvres they would not research on a real aircraft while taking instruction."

Thales already has customers in the region and last year was selected to supply three full-flight simulators to Azerbaijan Airlines – an Airbus A320-200, a Boeing 767 300ER and an ATR 72-500.

### Expanding market

Nair believes that the Middle East will be a strong customer for Thales in future. He said: "The first requirement in an expanding market of new airlines is flight training."

Other suppliers evidently thought so, too. There was also a small exhibition hall on site, giving smaller companies a platform to sell their wares. Germany's Skysoft, for example, was promoting its integrated database systems for training centres. Peer Meier chief executive said: "Many sophisticated simulator centres still use excel spreadsheets to cover huge quantities of data. We have built one whole database that covers the entire process, which you can buy in several modules and install in a simulator." One of its add-ons is the "Smart Display" system, which allows trainees to see their sessions and whether a simulator is in use via a panel outside

the door. Meier said: "It is a cheap and easy way to show scheduling and to display information."

Holland's Sim-Industries was also present. The company offers Level D certified flight simulators for a wide range of commercial aircraft and supplies institutions such as Sabena Flight Academy.

Jean de Goederon, service manager, said: "We maintain the entire machine remotely and also come and train on site when we install a simulator. The Middle East is a growing market for us. There are not many high quality Level D machines around." The company uses original aircraft hardware components for the majority of the critical flight deck instrumentation and controls.

Jackson said the conference was a valuable industry event for everyone. He said that his company – FedEx – had saved "thousands of dollars" by speaking directly to vendors at FSEMC events.

He added: "We also create industry standards that benefit the entire simulator community. There is value for all the stakeholders – manufacturers, suppliers, OEMs and operators."

Jackson also paid tribute to Gamal Said, Egyptair Training's director, who, he said, had "worked tirelessly" for several years to bring the conference to the Middle East.

Said replied: "This is the first time to have the FSEMC in the region, which reflects the growing confidence of the simulator community in the future direction of air training in the Middle East."

*In many regions of the world flight training schools are shutting their doors or struggling to survive the downturn. In the Middle East, however, some of the players are flourishing. Liz Moscrop examines why.*

# Middle East takes on the recession with a flourish



**Y**ou would not know it if you visited Mubadala Aviation's Horizon International Flight Academy (HIFA) in Al Ain but we are in the middle of a recession.

The school has witnessed steady growth since it opened in 2002. Flexibility is the key to its success. Mohammed Humaidan Al Zaabi, general manager said: "We have been fortunate. As we cater to a niche market our clientele still have training requirements, which need to be met. By expanding the range of courses we are able to cater to a wider economic spectrum and to continue our growth and development plans."

Al Ain is proving popular with training institutions.

In December Ireland's Edgewater College launched its Middle East Training Centre there. It will teach aviation English, focusing on the development of aviation-related vocabulary. Chief executive Finian Connolly said: "We are delighted to open another branch allowing us to have an experienced personnel on the ground servicing the region."

In Jordan Ayla Aviation Academy, based at King Hussein International airport in Aqaba, trains pilots from airlines all over the region and was the first in the Middle East to receive Joint Aviation Authority (JAA) approval to conduct Airline Transport Pilot License (ATPL) theoretical knowledge training.

CEO Marwan Attalla's Near East Group also



**Ayla's CEO Marwan Attalla awaits news of Coventry Airport future.**

owns Atlantic Flight Training (AFT), based in Coventry in the UK. Students can obtain their Jordanian CPL/IR and "frozen ATPL" (for pilots who do not yet have the flying experience to have the full ATPL License but have successfully passed all the JAA ATPL exams) as well as a fully approved JAA license by completing most of their course at Aqaba and then finishing off at AFT.

At the time of going to press Coventry Airport had declared bankruptcy and Ayla said it had "not come up with a final decision on the relocation of AFT".

In a move that could see it attract even more business, Ayla is now looking seriously at offering the new Multi Crew Pilot's Licence (MPL), an accelerated learning programme that could see first officers enter service in as few as 240 hours.

Jordan is at the forefront of a burgeoning regional flight-training sector.

Last year the Royal Jordanian Air Academy paired with the Queen Noor Civil Aviation College to become a university.

It now takes on more student engineers and pilot cadets than any other training establishment in the Middle East.

Dubai Aerospace Enterprise Flight Academy (DAEFA) also offers a GCAA frozen ATPL using scenario-based training.

The rapid, airline-focused flight-training regime is set to create a pool of skilled personnel for the region's





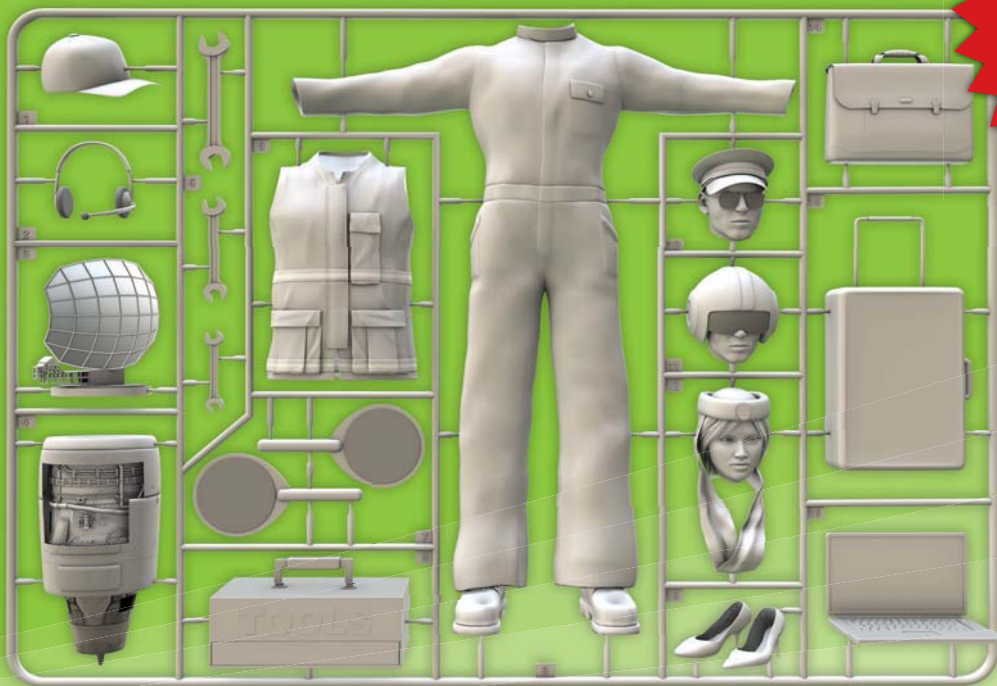
**ADTS** | aerospace  
& defence  
training show

# ADDRESSING THE TRAINING NEEDS OF THE MIDDLE EAST'S GROWING AVIATION AND DEFENCE MARKETS

**AEROSPACE & DEFENCE TRAINING SHOW**

**03 – 04 MARCH 2010**

AIRPORT EXPO, DUBAI, UAE



Supported by



Organised by



In partnership with



CONTINUED FROM PAGE 100

growing airline industry. Based at Ras Al Khaimah International Airport, UAE, the academy was the first to use a jet aircraft as its basic multi-engine trainer.

**Thales enjoys a Reality check**

As aircraft become increasingly sophisticated, technological training has to keep pace.

In April Thales unveiled its “New Reality” package, which includes a full-motion flight simulator called RealitySeven, so named because Level Seven is the highest level of simulation available.

The RealitySeven consists of several modules and operators can switch aircraft types in a matter of days, which will help broaden its appeal. ATCT in Tunisia has already ordered one.

Thales’s rival, CAE, has been in the region for more than 30 years and has a JV with Emirates – Emirates-CAE Flight Training. The company predicts strong growth for the foreseeable future. President Jeff Roberts said: “As the market matures we will expand where the market manifests.” He cited the rapid development of the airline industry as the reason for such a strong flight-training sector, adding: “There are robust aircraft delivery schedules here.”

CAE was heavily involved in the development of the new MPL and Roberts said he expects the



Horizon keen to train more nationals.

Beta programme will start “in the not too distant future”. The minimum experience that an MPL holder will be required to have is 240 hours total time, which may be obtained in either an aircraft or a simulator. Roberts said: “This will be a way to satisfy requirements for pilots and we plan to participate in supporting that ethic to evolve and grow.”

Fellow simulator provider Flight Safety International spokesman Steve Phillips said: “Training is a growth area for us. Aviation has

slowed down in the US but outside it has increased in the last year.”

Although FSI has no centres based in the Middle East, Phillips said that many students go to its Farnborough UK and Teterboro US facilities. He said: “There are several large Gulfstream aircraft based in Saudi Arabia and we also have pilots from there using our Beechjet 400 training devices at Farnborough.”

Practical flying training is not the only industry supporting the region’s aerospace sector. The Academy of Technical Training in Dubai says it is the only privately-owned college in the Middle East and has trained 2,600 students since it opened in 2005. Shabab Attarzadeh head of training said: “Our reputation is growing and we gained several new contracts during the Dubai Airshow.”

The company works with clients all over the world, including Turkish Airlines and the Italian government. In five years time it aims to offer flight training at Jebel el Ali. Attarzadeh added: “The recession didn’t have an impact on aviation training here. We still have lots of customers.”

Horizon’s Al Zaabi echoed his words. “The economic crisis has led to the closure of quite a number of training academies around the world. With the opening of satellite branches, we are able to offer the same quality of training, but at a competitive price to our clients.”



Saudi Arabia’s plans to establish a first class pilot training academy in the country’s capital took a major step forward when SAFA – the Saudi Aviation Flight Academy – confirmed the purchase of 20 Diamond DA42 and DA40 aircraft and five flight simulators

SAFA is a joint venture with the Saudi Aviation Sciences Company Club at the Saudi Aviation Club in Riyadh and is headquartered at Thumamah Airport north of Riyadh.

The Diamond fleet will be equipped with the new 170hp turbo diesel Austro AE300 engine, which can run on Jet A1 fuel.

The final contract was agreed at the Dubai

## Diamond deal for Saudi academy

Airshow by Mohammed Bin Mohammed Bin Ladin and is part of the SR300 million allocated to fund SAFA, of which 60 million is destined for training aircraft.

The project is the first partnership the academy has entered into with the private sector.

Saudi Aviation Club chief executive Abdullah Al-Ju’eiwi said the academy had received approval from the Civil Aviation Commission and the go-

ahead from the High Commission for Riyadh City Development. Prince Salman Bin Abdul Aziz, Emir of Riyadh, laid the foundation stone.

“Works on SAFA will begin at the beginning of the new Hijri year,” Al-Ju’eiwi said. “The academy expects to take on approximately 400 trainees a year over the first five years, with a total of 120,000sqm allocated for the project at the Saudi Aviation Club Airfield in Al-Thamama. The first trainees are expected to begin training in the last quarter of 2010.

The school will work with both airline-funded and privately funded cadets. Al-Ju’eiwi said: “The academy expects to take on approximately 400 trainees a year over the first five years.”





# Global standard training, delivered locally

At CAE, our comprehensive training solutions are designed to enhance safety and efficiency. We keep you one step ahead by customizing our flexible training portfolio to reflect your operational reality. Our innovative training programs are tailored to your requirements and delivered by world-class instructors with years of experience. An example is Emirates-CAE Flight Training (ECFT) in Dubai, a world-class aviation training centre in the heart of the Middle East. Here you will find innovative training programs for commercial airlines, corporate and business aviation and helicopter operators.

**For training solutions that are real world and built on a foundation of safety, consider CAE as your training partner to help keep you one step ahead.**

In touch with your business  
anytime, anywhere!

[sales@onair.aero](mailto:sales@onair.aero)



You travel with your BlackBerry, iPhone or other favorite smartphone, and thanks to OnAir you're always on, even when flying. With our onboard GSM service you can enjoy all the features of your personal device — from email to voice calls — exactly as you do on the ground. No need to change your phone for onboard use, or to extract your SIM card. Simply switch on your favorite device and use it. And your contacts can reach you at your usual number without needing to know where you are. Onboard communications are invoiced by the mobile operator — easy for you and easy for your guests. Whether you are a commercial airline, a governmental or a corporate jet owner, OnAir offers you the best price-performance proposition for tomorrow's inflight communication solutions. With Mobile OnAir, inflight communications are no different from ground communications — and that's what makes the difference!

Stay connected



[www.onair.aero](http://www.onair.aero)



*The Aircraft Interiors Middle East (AIME) returns to Dubai from 28 February – 01 March 2010. This two day exhibition and conference provides the ideal platform for interiors suppliers, providers and buyers to network and establish new relationships in the Middle East. Middle East operators and passengers are seeking the*

*ultimate in aircraft refinement, connectivity and efficiency and there is a conference running concurrently with the event.*

**Brendan Gallagher, Marcelle Nethersole and Liz Moscrop** look at the ideas that will be shaping the agenda for the conference and the show.

# ALL THE BEST

*The Middle East's airlines are brushing off the recession with a string of dazzling new cabin products, writes **Brendan Gallagher**. And the desire of the corporate/VIP operators for the very best simply never went away.*

In the heady days before the Airbus A380 entered service there was much excited talk about what the operators would do with the windfall of space offered by the big double-decker. Gyms, casinos, double beds – all that extra volume was going to usher in a new era of ease and grace for the travelling public.

It's now more than two years since the first A380 scheduled service and the type is flying with four operators. Cabin reveals have come and gone, slightly underwhelming the market with their bars and lounges, and only one airline has done anything to truly grab the attention of the aircraft interiors world. That's Emirates, with its unique "shower spas" – real airborne bathrooms for use by first-class passengers.

This bold push of the envelope by the Dubai-based carrier is typical of the Middle East's approach to passenger comfort and amenity, not only in air transport but also in the rarefied circles of corporate and VIP aviation. Other airline pacesetters in the region include Etihad Airways and Oman Air. Saudi Arabia's Prince Al-Waleed bin Talal moved the VIP bar to new heights when he ordered his own A380 in 2007, while Middle Eastern charter operators are among the most go-ahead in offering new communications options in their cabins.

Emirates has just taken delivery of the sixth A380 out of the 59 it has on order. Like the first

Continued  
on Page 106





# preview

## AIRCRAFT INTERIORS MIDDLE EAST

CONTINUED FROM PAGE 105

five, the aircraft has a couple of shower compartments in its first-class cabin on the upper deck. They are at the disposal of the occupants of the cabin's 14 private suites – individual rooms containing the best the interiors industry can offer in the way of work, rest and play.

Each suite, tucked away behind remotely-controlled doors, features a flat-bed seat with massage function, a desk, an electrically-controlled minibar and large-screen Panasonic eX2 hardware delivering Emirates' highly regarded information, communication, entertainment (ICE) in-flight entertainment offering, which is available throughout the aircraft.

In business class the seats all have aisle access. Each reclines fully flat and features connectivity ports, a work table, laptop stowage and a minibar. All premium passengers have access to a lounge and bar located at the rear of the upper deck and furnished with leather seats.

Economy features what Emirates describes as more generous seats and wider aisles, while ICE is delivered to seatback LCD screens, which at 12in are significantly larger than those provided in economy by other carriers. Mood lighting delivering a starry-night effect is installed throughout the aircraft.

### Sliding screen doors

Following in Emirates' suite footsteps is Etihad Airways, which introduced the concept in its fleet last year aboard a pair of Airbus A340-600s and an A330-300 and plans to outfit a further 13 aircraft. As in the Emirates offering, the occupant can shut out the world by closing a pair of sliding screen doors. Facilities within include the customary flat-bed seat, a vast 23in IFE screen, a power socket and iPod, USB, ethernet and audio sockets, a wardrobe with internal lighting, and a personal mini-bar. The first-class cabin itself features a changing room with full-length mirror, washbasin and leather fold-down seat.

While Oman Air has stopped short of fully enclosing its new first-class mini suite, introduced last October, it is piling the plate high with technology on its new Airbus A330-300s. Broadly matching Emirates and Etihad for creature comforts, Oman Air adds live in-flight television via Rockwell Collins Tailwind direct-broadcast satellite equipment and plans to introduce not only the OnAir mobile phone service but also the company's Internet access capability. Supported by the Inmarsat SwiftBroadband 432kbit/sec link, the connectivity package is due to arrive this March.

In-flight entertainment is supplied on a lavish scale throughout the aircraft via Thales' TopSeries i-5000 system, which delivers a wide range of on-demand audio and video content, along with eight channels of television, to the in-seat screens. The latter measure 23in in first-class, 17in in business and 10.6in in economy.

But, however lavish the provision now being offered by the three airlines, it can never come within a mile of what's being planned for Saudi prince Al-Waleed's personal A380.



The international businessman announced his intentions in 2007 and since then there has been mounting speculation about when the project would get under way and which of the world's leading completions companies would be entrusted with the massive contract. European wide-body completions provider Jet Aviation Basel, widely regarded as the front-runner for the work, believes that while there might be a decision this year, the selection process could go on even longer.

In the meantime, the stories doing the rounds speak of a \$150 million interiors budget to be spent on a marble-panelled dining room, a whirlpool bath and sauna, a cinema with leather seats the colour of desert sand, a gym with running machines and Nautilus exercise equipment, and several bedrooms with en suite bathrooms. The overall effect is described as "Lawrence of Arabia meets Star Wars".

Far less exotic but just as indicative of Middle Eastern interest in making the cabin a more pleasant and productive place is the activity currently under way at business jet and helicopter charter provider Falcon Aviation Services. Based at Abu Dhabi's Bateen Executive Airport, it has a

fleet that currently comprises five fixed-wing aircraft – three Gulfstream 450s and a pair of Legacy 600s – as well as a large number of turbine-powered helicopters. The Gulfstreams are fitted with first-generation Inmarsat satcoms avionics supporting passenger phone, email and Internet access, and ACARS operational datalink for the flight deck.

The company also has four Embraer Phenom 300 light jets, two Legacy 450 mid-size aircraft and a pair of Lineage 1000 19-seaters on order for delivery over the next few years and is now preparing to decide on the connectivity it will offer to customers travelling in these aircraft.

Taking the lead for Falcon Aviation Services is fixed-wing fleet manager Jason Martin. "Our customers include members of the Abu Dhabi royal family, corporations, individual business people, government officials and holidaymakers," he said. "With the fixed-wing aircraft we operate all over the world – to the USA, Tokyo, Hong Kong, Russia – wherever the clients want to go."

When it comes to onboard amenities, it all depends on whether the mission is business or pleasure. "Leisure travellers just want to watch a



DVD and relax,” said Martin. “But business people consistently ask for phone and Internet access. We’re also beginning to see interest in videoconferencing.”

Looking to the arrival of his new Embraer fleet over the next few years, Martin sees Inmarsat’s SwiftBroadband 432kbit/sec service playing a significant role..

Satcom1, which specialises in software applications designed to make the most of the SwiftBroadband link, currently does most of its business in the Middle East, supporting connectivity on corporate/VIP Airbus A318s, A319s, A320s, A330s and A340s.

“The A318s are mostly Elites completed by Lufthansa Technik and fitted as standard with Rockwell Collins SwiftBroadband avionics,” said Satcom1 chief executive Karina Larsen. “The customers generally take delivery of the aircraft and then we design an upgrade based on SwiftBroadband and our AvioIP software. We are also talking to some of them about our solution to support individual billing of passengers.”

**High-definition-capable**

As well as providing SwiftBroadband hardware, Rockwell Collins offers a broad range of other cabin systems to the corporate VIP market. The company is contesting the market for advanced, high-definition-capable digital networks with fellow avionics giant Honeywell, pitching its Venue system against the latter’s brand-new Ovation Select. Rockwell Collins also offers the Tailwind in-flight live television system, and eXchange hardware to work with ARINC’s SKYLink Ku-band satellite communications service.

“The Middle East already has a high proportion of the world’s air-transport-category VVIP aircraft and is set to become even more significant,” said Andrew Mohr, the company’s director of product marketing for cabin systems. “For instance, 70 per cent of the Boeing BBJ2s and BBJ3s on order are for customers in the region, as are half of the VIP 787s and all of the 747-8s.”

That concentration of big aircraft, combined with a matching density of high-net-worth individuals, makes the Middle East a prime market for the most advanced cabin systems. “There’s a high degree of discretionary spending in the region, along with a taste for the newest and the best,” Mohr observed.

Honeywell business development manager Paul Lafata reports a similar fondness for the new and exceptional. “Our customers in the region want high-definition video, ultra-large screens, surround-sound and satellite TV,” he said. “And when it comes to satellite connectivity, they want to use their BlackBerries or iPhones rather than laptops.”

As the travails of Dubai continue to show, the Middle East enjoys no special immunity from the woes of the world economy. But the region’s aircraft operators, both the airlines and the corporate/VIP sector, continue to show an undiminished appetite for the best of cabin systems and amenities.

# ***Galloping ahead with hologram technology***

**From soaking in the hot tub to eating a 12-course banquet, there are few forms of pleasure that are not available on board a VVIP private jet. Texas-based Gore Designs has just raised the bar again by offering its customers a galloping horse in the cabin – a virtual one that is.**

Recently a customer from the Middle East approached the world famous design house with the request to have a hologram projected into his VVIP Boeing B777 aircraft, similar to those he had seen at trade shows. Gore is now working to make that vision a reality. Design manager James Hall said: “We already offer a display cabinet with pieces of artwork, such as a vase of flowers, that people can change. Our customer wants us to do something new with technology.”

At present, Gore’s research indicates that a projector to produce a suitable image would be large and heavy – at least two or three feet in diameter. The image would also be large – around ten feet x ten feet. Hall continued: “We could also do something with mirrors and project an image off glass, which would be less complicated. Both technologies would produce 3-D artwork images, moving if necessary.”

It is easy to see why the concept would appeal to customers. Today’s large-scale holograms, illuminated with lasers or displayed in a darkened room with carefully directed lighting, are incredible. They are two-dimensional surfaces that show absolutely precise, three-dimensional images of real objects.

Looking at holograms from different angles offers different perspectives, just as it does when looking at a real object. Some holograms even appear to move. Others change colours or include views of completely different objects, depending on how they are viewed.

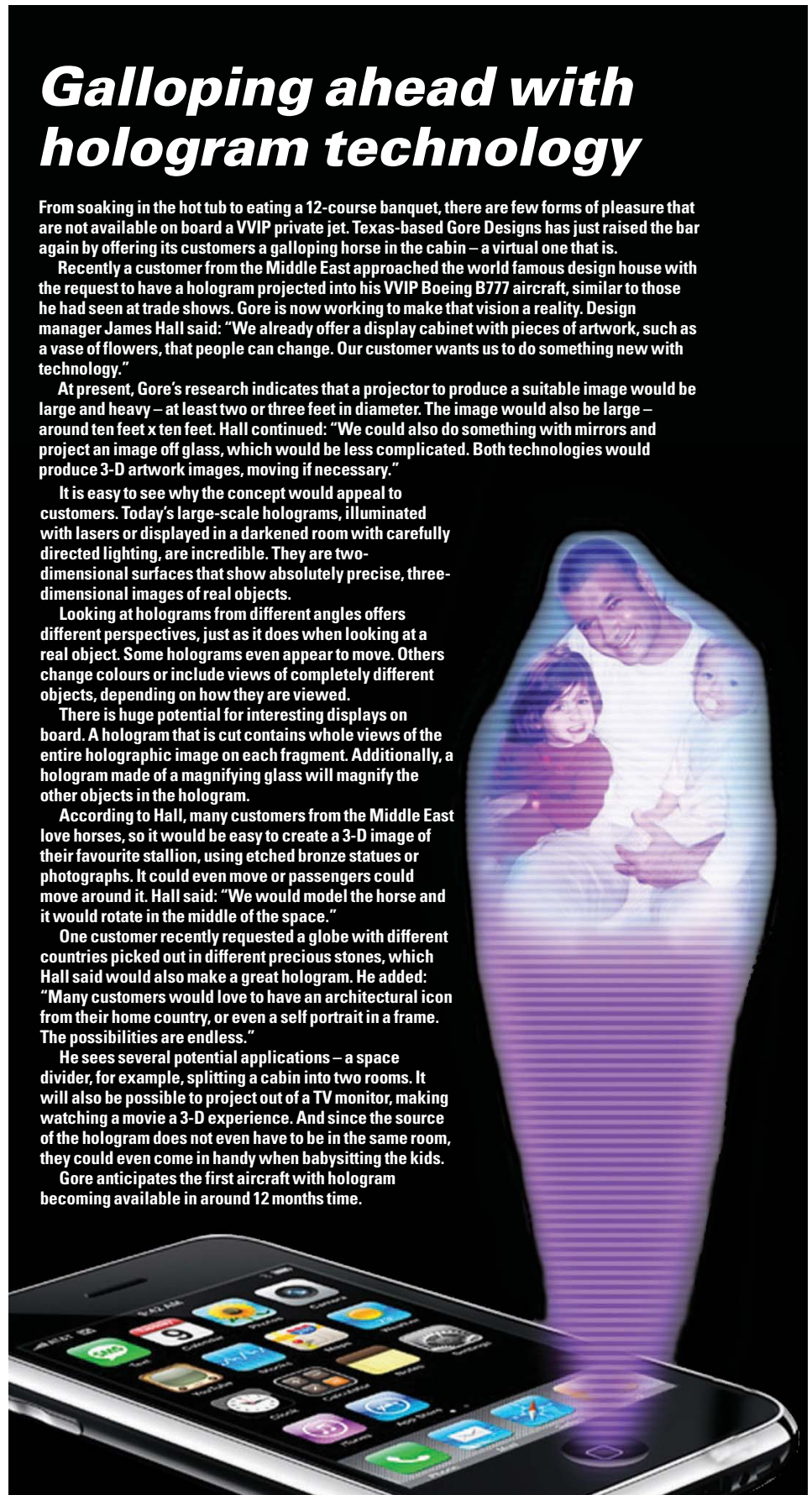
There is huge potential for interesting displays on board. A hologram that is cut contains whole views of the entire holographic image on each fragment. Additionally, a hologram made of a magnifying glass will magnify the other objects in the hologram.

According to Hall, many customers from the Middle East love horses, so it would be easy to create a 3-D image of their favourite stallion, using etched bronze statues or photographs. It could even move or passengers could move around it. Hall said: “We would model the horse and it would rotate in the middle of the space.”

One customer recently requested a globe with different countries picked out in different precious stones, which Hall said would also make a great hologram. He added: “Many customers would love to have an architectural icon from their home country, or even a self portrait in a frame. The possibilities are endless.”

He sees several potential applications – a space divider, for example, splitting a cabin into two rooms. It will also be possible to project out of a TV monitor, making watching a movie a 3-D experience. And since the source of the hologram does not even have to be in the same room, they could even come in handy when babysitting the kids.

Gore anticipates the first aircraft with hologram becoming available in around 12 months time.





AIME AIRCRAFT INTERIORS MIDDLE EAST

# Making connections in the Middle East



**AIME 2010**

CREATING CONTACTS IN THE AIRCRAFT INTERIORS MARKET

**28 FEBRUARY-01 MARCH 2010**

DUBAI, UNITED ARAB EMIRATES

[www.aime.aero/exhibit](http://www.aime.aero/exhibit)







# COVER STORY

*Fabric and carpet manufacturers are keen to pave the way for constant improvement, particularly in the Middle East. Marcelle Nethersole finds out why.*

**F**amily-run Sabeti Wain Aerospace, designs and manufactures aircraft seat covers – with a difference. “We design, cut and sew seat covers in fabric and leather,” said director Paymen Sabeti. “But we specialise in a very unique type of seat where the fabric and leather is laminated to a foam-backing, giving the same look as luxury car seat covers.”

This latest innovation is designed to replace the back foam on the seat, therefore giving a unique shape to the cover and laminating it with a thin layer of foam. “By doing away with the back foam you save weight and costs,” explained Sabeti.

The UK-headquartered company says lamination is the future of aircraft seats.

“We specialise in lamination. It definitely gives the best results as it enhances the look of the seat covers and allows designers to realise their designed shape from rendering into sharp, crisp, fresh looking seat covers. Designing the cover at the same time as the back and bottom foams can lead to a reduction in the foams while retaining comfort and saving weight, as well as cutting costs,” said Sabeti.

“Normal seat covers are made from an unstable

Continued on Page 110

CONTINUED FROM PAGE 109

fabric and are therefore prone to looking limp but the laminated cover takes the limpness out of the fabric and creates a shape which is tooled and therefore always identical. It is dry-cleanable, fire retardant and you can also easily emboss logos into leather or fabric, so we can custom make. It is unlike others on the market.”

Sabeti Wain is the only company with in-house lamination facilities within the aerospace industry. The robust process has not only been tried and tested over the last 15 years but also for at least 12 in major airlines.

The company’s lamination is in use on Emirates across all classes, Fly Dubai and Etihad business and first class covers, Qantas across all classes, JetAirways, and British Airways business class.

The company has a manufacturing facility in the UK but, due to demand, Sabeti explained a second facility was opened in Dubai in 2007. “The region is one of great importance for us. We have many major Middle East customers so it was natural to open a second facility based at the Dubai Airport Free Zone, which provides high-quality low-price products closer to customers in the Middle East, Asia and North Africa. In 2009 this facility was further expanded to meet customer demand.

“The Middle East, in terms of aviation and distances, is a natural midway point between the East and the West. Its decision makers have the foresight to see growth and expansion as a necessity, hence the incredible number of aircraft on order by the major airlines of the region, and the number of passengers visiting and transiting through on their way to Africa, Asia and Australasia. The people of the region have a warmth and hospitality rarely seen in other places; the major trading centres of the region are truly international, which adds to the pleasure of doing business here,” said Sabeti.

**The future**

Besides lamination, what does Sabeti think about the future for aircraft seat covers?

“As the cost of fuel rises we will see a greater move towards lighter weight everything, particularly seats, foams, fabrics and seat covers. It makes sense for short-haul flights of less than two to three hours to have very thin foams or no foams at all and sit on 5mm foam, which is designed ergonomically to create a comfortable shape.”

The company is displaying its seats at AIME and is looking forward to discussing its other range of products, including leather covering of arm caps, seat support covers, life vest pouches, curtains and baby basinet covers.

“As the only show in the whole of the Middle East dedicated to aircraft interiors AIME is very important for us. We will be there to speak to existing customers and also make new contacts, including business jet customers,” said Sabeti.

Sabeti Wain is not the only manufacturer hoping to improve on saving weight and cost. Carpets can play a ‘heavy’ part in an aircraft



**Paymen Sabeti meets Sheikh Ahmed. Above: The Emirates Economy Class fabric laminated seat covers shown as a concept.**

interior and Swiss company Tisca Tiara knows that the top current specifications is for lightweight carpet.

“We have developed an innovative lightweight carpet quality resulting in 25 per cent weight saving compared to standard aircraft types,” said Matthias Tischhauser, division manager. “Most cabin carpets need to be replaced after around three months due to damage from trolleys, foot marks and general wear and tear, but our carpet is also durable and long wearing.”

The company develops and manufactures a broad range of premium quality textiles for both commercial airlines and the VIP business jet market, which includes lightweight seat cover fabrics as well as fabrics for curtains, headrests, pillow cases and machine-woven and machine-tufted carpets, hand-tufted and hand-woven carpets and embroidered carpets.

**More choice**

“The Middle East market is important to us and also a challenge because the region likes more choice than customers in the west. So, besides carpets being lightweight, we have designed many different patterns and colours to make them more attractive,” explained Tischhauser.

“Waron is a production technique of embroidered carpet solely for VIP and business jet market while our ‘Silk in the Sky’ is made with top-end raw materials, including Swiss mountain silk – a high grade silk yarn which is carefully

combined and interwoven with pure new wool from New Zealand. Both these products are perfect for the booming aviation market in Middle East as there are more customers and operators who can afford this luxury choice,” said Tischhauser.

Kydex, the makers of thermoplastic sheets, has chosen AIME to launch two of its new designs.

“We are launching new designs in our KYDEX 6565 line: Pearlescent finishes and high gloss sheet,” said Ronn Cort, international business manager.

**Importance of branding**

“We are attending AIME because our materials are being used on many of the airlines in the Middle East. The region’s market has been one that is making innovative use of our materials and the importance of branding in the Middle East fits well with our model of small, quick production of bespoke colours and designs. We also have direct contact with the emerging maintenance, repair and overhaul (MRO) interiors market in the region and many of our customers will be attending this exhibition.”

The sheet meets with toxicity requirements for cabin interior components like seating, tray tables and literature pockets.

“We recognise that the future of our business will be through developing products and designs which meet customer branding and design requirements,” said Cort.





*The Middle East leads the world in the introduction of in-flight mobile phone services, writes **Brendan Gallagher.***

# ***Flying by numbers***

**B**y the end of last year mobile phone service was available aboard more than 70 Middle Eastern airliners. The comparable figure for the rest of the world put together stood at just over 50.

Confident that passengers would welcome being able to use their own phones to make voice calls and send text messages, the region's carriers are forging ahead with making onboard mobile a standard part of their offering.

Leader of the pack – as in many other areas of

cabin service – is Emirates of Dubai. The other airlines with fully operational services are Kuwait's Wataniya Airways, Royal Jordanian and Qatar Airways. And Egyptair, Jazeera Airways of Kuwait, Libyan Airlines, Oman Air and Saudi Arabian Airlines are all set to follow suit this year.

Two months ago Emirates passed the milestone of a million passenger log-ons. Provided by UK-based AeroMobile and using Inmarsat

Continued  
on Page 112



# preview

## AIRCRAFT INTERIORS MIDDLE EAST

CONTINUED FROM PAGE 111

satellites for the air-to-ground link, the service was launched in March 2008 to make Emirates the first airline in the world to offer mobile phone on a completely commercial basis. The landmark figure was reached on a flight from Dubai to Melbourne when an Australian passenger logged on and sent 11 text messages and received two phone calls.

“We’re not surprised at the number of passengers who like to keep in touch in-flight, as we’ve always seen pretty good traffic from the earlier in-seat phone, email and text messaging service,” commented Patrick Brannelly, the airline’s VP for passenger communications and visual services. “But it’s clear that being able to use your own phone is even more convenient – the phone is familiar and there’s no need to swipe a credit card.”

Just over 160,000 passengers logged on in the first 12 months to March 2009. The following seven months saw a surge as the service continued to roll out across the Emirates fleet, with a further 840,000 passengers switching on up to the beginning of November.

“This is the count of people switching on a phone,” explained Brannelly. “Some then choose not to use it, or to wait and see if they get a call or text. The numbers might be even higher, but some passengers have not signed with their mobile providers for international roaming, and some service providers have not yet concluded roaming agreements with AeroMobile.”

Emirates now has nearly 70 AeroMobile-capable aircraft – Airbus A340-300s, A340-500s and A330-200s, Boeing 777-200s, -300s and -300ERs – and intends to equip its whole fleet. “As well as continuing to install the system, we plan soon to offer GPRS data, which will allow passengers to use BlackBerry and other email services,” says Brannelly.

While AeroMobile can boast the biggest equipped fleet so far, rival OnAir dominates the contract race, with a worldwide total of 20 carriers signed up compared with AeroMobile’s three or four. The OnAir tally includes no fewer than eight Middle Eastern airlines and chief executive Benoit Debains is convinced that there are more to come. “There is clearly a market effect going on in the Middle East,” he said. “The airlines in the region know that this is something they have to offer. Besides our existing



Above: Patrick Brannelly: “It’s clear that being able to use your own phone is even more convenient.”



Left: Benoit Debains: “The airlines in the region know that this is something they have to offer.”

commitments, there are a couple more which are looking to launch a service.”

Wataniya Airways became OnAir’s launch customer at the beginning of last year. The Kuwaiti-based premium-only carrier now has all of its present fleet of four Airbus A320s equipped – making it the only airline in the world with a mobile phone fleet fit – and plans to extend the service to another three A320s later this year. “We are pleased with the feedback from our guests,” said Wataniya chief executive George Cooper. “We can now offer up to 12 simultaneous calls, and usage of both voice and data, primarily BlackBerry, exceeds our expectation.”

According to OnAir’s Benoit Debains, the fleet fit is a key

Continued on Page 114

**160,000**  
Number of passengers logged on in the first 12 months to March 2009

**840,000**  
Number of passengers switching on from March 09 up to the beginning of November 09

**70**  
Number of AeroMobile-capable aircraft in the Emirates fleet

**12**  
Number of simultaneous calls available on Wataniya



# For your eyes only

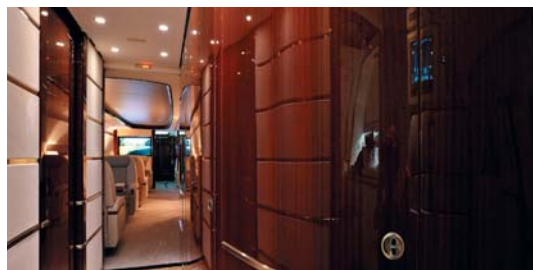
Operating a VIP or Executive aircraft demands the latest technology and the highest quality and safety standards. It is our challenge to secure all these standards in your unique interior requirements. You can fully rely on our airframer in-house design and engineering capability. With a highly experienced team we cover a comprehensive range of expertise from refurbishment to full completion.

Fokker's conversion & completion services extend further than designing and integrating your requirements. We know that you want to perform maintenance without jeopardizing your treasured interior. That is why we also provide MRO capabilities incorporated in our completion centre.



Meet us at  
Booth 305

28 Feb – 1 March 2010,  
Airport Expo, Dubai, UAE



With a heritage of 90 years building aircraft to the highest standards, we will be glad to take care of your Airbus ACJ, Boeing BBJ, Bombardier or Gulfstream as if it were one of our own.

Contact us at +31 622 571 973 or e-mail [sales.acc@stork.com](mailto:sales.acc@stork.com).



FOKKER AIRCRAFT SERVICES, PASSIONATE ABOUT YOUR AIRCRAFT



# preview

## AIRCRAFT INTERIORS MIDDLE EAST



**“Passengers know that when they fly Wataniya they will definitely have the service.”**

**Benoit Debains**

### CONTINUED FROM PAGE 112

contributor to the 20-25 per cent log-on rate currently being recorded by Wataniya: “Passengers know that when they fly Wataniya they will definitely have the service, so they are ready to make use of it.”

Royal Jordanian was the next Middle Eastern airline to go OnAir. It now has a couple of A320-family aircraft equipped and plans to offer the service on a further seven. Like Wataniya, it has enabled the voice capability and also offers text messaging and email with mobile phones and BlackBerries.

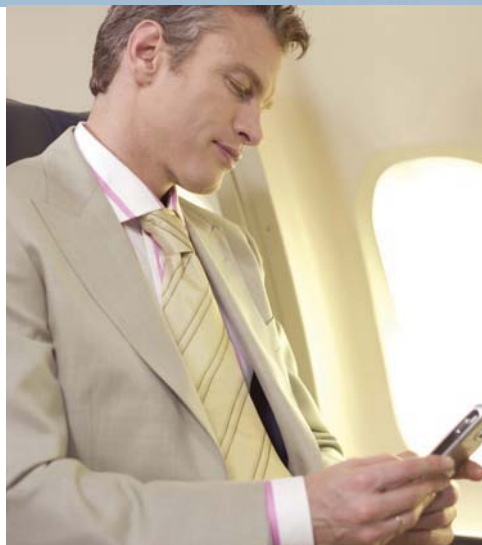
Last month Qatar Airways became the next to join the club, launching service aboard a single Airbus A320-family aircraft. The airline plans to implement OnAir across its entire single-aisle Airbus fleet, which currently numbers 22 aircraft, with a further eight on order.

Next up will be Oman Air. OnAir offers two types of service: the GSM/GPRS-based Mobile OnAir for mobile phones and other hand-helds, and Internet OnAir, which supports both wired and wireless Internet access via passengers’ own laptops. Oman Air recently took delivery of the first wide-body aircraft to be equipped for both. One of four Airbus A330-300s currently entering the airline’s fleet, the aircraft will feature the services from March.

The A330s are fitted with the latest version of Airline Network Architecture (ALNA V2), Airbus’ own onboard infrastructure for mobile phone and Internet services.

The earlier ALNA V1 is compatible with Inmarsat’s 64kbit/sec service, while V2 supports the 432kbit/sec SwiftBroadband link used to deliver Mobile OnAir and Internet OnAir. ALNA V2 also facilitates access to OnAir via the seatback in-flight entertainment system.

Saudi Arabian Airlines has similar plans for the eight Airbus A330-300s it will begin receiving in April, as does Egyptair for the same number of -300s it has on order for delivery from August. Completing the picture are Libyan Airlines (Mobile OnAir in seven new Airbus A320s) and



Jazeera (Mobile OnAir in A320s), both of which are expected to offer service from later this year.

When it comes to making it simple for passengers to make mid-flight calls, Middle Eastern air transport is moving confidently forward while others hesitate. It could also be setting the tone for the rest of the world, OnAir’s Benoit Debains believes. “Once you open up a market like the Middle East,” he declared, “it can only be a matter of time before others follow.”

**Wataniya: “We can now offer up to 12 simultaneous calls, and usage of both voice and data, primarily BlackBerry, exceeds our expectation.”**

**Qatar: The airline plans to implement OnAir across its entire single-aisle Airbus fleet.**



# GATES AND PARTNERS

## SOLICITORS



Gates and Partners is recognised independently as one of the worlds pre-eminent aviation and commercial law firms.

We can assist you in all areas of aviation and commercial law including:

- Aircraft purchases and sales
- Aviation insurance and reinsurance
- Aircraft finance and leasing
- Regulatory issues and registration of aircraft
- Operational and management issues
- Offshore Structuring
- Aviation Litigation

As a niche firm, we offer the advantage of a more direct, personalised service but with the depth of expertise that you would expect a substantial international law firm. We have lawyers admitted to practice in mainland China, Hong Kong, Singapore, the United States, Russia, Greece, the Cayman Islands, the Eastern Caribbean and various jurisdictions in Australia. Our head office is based in London, UK with an office in Singapore and representatives in key locations worldwide.

For more information please contact Aoife O'Sullivan, Partner.

In London:

**Gates and Partners**

20 St. Mary At Hill  
London EC3R 8EE  
United Kingdom  
T: +44(0)20 7220 5950  
F: +44(0)20 7220 5951  
E: [info@gatesandpartners.com](mailto:info@gatesandpartners.com)

In Singapore:

**Gates and Partners**

9 Temasek Boulevard  
42-03 Suntec Tower 2  
Singapore 038989  
T: +65 688 44600  
F: +65 688 44655  
E: [info@gatesandpartners.com](mailto:info@gatesandpartners.com)



*When issues of maintenance are discussed about the Kingdom of Saudi Arabia there is one name that comes to the fore. **Jon Lake** met with Alsalem Aircraft leadership to find out what makes it tick.*

# ALSALEM'S NOSE FOR ADDED VALUE

**D**espite the global economic climate, 2009 has been a very good year for Alsalam, according to Mohammed Fallatah, president and CEO of the Riyadh-based company.

“We have had a 15-20 per cent improvement in revenue and in profits and we are investing in the growth of the company and our people, who are our biggest resource,” said Fallatah. “We are looking forward to more involvement in manufacturing, final assembly of aircraft and a growing VIP aircraft business.”

The Alsalam Aircraft Company was formed in 1988 and Boeing’s Integrated Defense Systems’ Global Services and Support division remains a majority shareholder. Unsurprisingly, the core of the company’s initial work was on Boeing platforms but it has become much more than a Boeing partner company, respected as such by its partners and competitors, and is now a profitable and independent entity in its own right.

“Our work philosophy – our business philosophy – is that yes, we were established as an offset company at the beginning, with the help of the Government and our partners, but at the end of the day we have to be a business-run company. We have to add value





for our customers and our shareholders. That is very important for us and if those things are not there, at the front, the relationship cannot last. So while we were established with Government help, that cannot make us survive for ever; we have to be a business, we have to win business on our merits – because we are Alsalam.”

“A lot of the work I’m getting is nothing to do with Boeing, oddly. The Royal Saudi Air Force is my biggest customer and BAE is my second biggest,” Fallatah said.

**Military activities**

Thus, while the company’s military activities naturally include providing maintenance and support for the Boeing-supplied aircraft serving with the RSAF, including the F-15C/D/S Eagle/Strike Eagle, AH-64 Apache, and E-3A Sentry at its facility at King Khaled International Airport in Riyadh, it has also won contracts to provide programmed depot maintenance (PDM) for other aircraft. These include the 50-aircraft RSAF Lockheed C-130 fleet and all RSAF and Royal Saudi Land Forces Aviation Command helicopters, including the Bell 412, 212, 206 and 406, UH-60 and Blackhawk, and VIP-configured Agusta-Sikorsky ASH-3D, as well as the AH-64. Alsalam also supports the RSAF’s British-

supplied Tornados using its facilities at Dhahran.

But Alsalam has already moved beyond simple depot maintenance, helped in part by the drive by BAE Systems to bring more engineering to the kingdom as part of what it calls the development of a ‘home market’. The intention is to make its operations in the kingdom self-sufficient in providing assembly, maintenance, repairs and overhaul, creating a local industrial base. Alsalam is a key partner for BAE in this area.

Alsalam is also well into re-engineing the RSAF’s F-15S aircraft, having finished re-engineing the aircraft based at Dhahran, and now being well into the process of re-engineing the aircraft at Khamis Mushayt, expecting to complete the programme in early 2010.

Alsalam also partnered with Boeing to install Link 16 on board Saudi Arabia’s fleet of five E-3 AWACS aircraft, with the first being upgraded in Seattle, and the remainder following in-country, with unparalleled levels of security. The overall programme was completed one-and-a-half months ahead of schedule (with each aircraft on time or ahead of time), an achievement saluted by Torbjorn Sjogren, vice president of Boeing International Support Systems. Link 16 is also being installed on the RSAF’s F-15s.



**Mohammed Fallatah:** “We have to add value for our customers and our shareholders.”

Continued on Page 118



## MAINTENANCE

CONTINUED FROM PAGE 117

The company is, as well, heavily involved in the Tornado Sustainment Programme (TSP) – a two stage upgrade that aims to equip the RSAF Tornado IDS fleet with a range of enhanced targeting equipment and new precision-guided weapons. This is a more major upgrade and includes electrical and structural work.

Alsalam also uses its three climate-controlled wide-body hangars in Riyadh (each capable of housing B747-400 sized aircraft) for the maintenance and modification of commercial aircraft, including a growing number of VIP completions.

Even on the commercial side Alsalam is not limited to Boeing airliners, working on the A300 and actively looking for EASA certification on the A320 family in 2010 – primarily the A318, 319 and 320.

### VIP aircraft completions

And Alsalam is moving away from heavy maintenance of large airliners, turning its attention to VIP aircraft completions and maintenance, and to component manufacturing and even airframe final assembly, while maintaining a heavy presence in military aircraft upgrades and maintenance.

Alsalam is an active player in the kingdom's 'Saudization' strategy and has an aggressive 'Saudization' programme that extends throughout the company at all levels. As a result of this, and of the company's hard-won reputation for quality, it is a natural choice for the most prestigious local programmes.

It has been widely reported that Alsalam will be heavily involved in the local manufacture of the RSAF's second batch of 48 Eurofighter Typhoons, but Fallatah was coy.

"We are hopeful that we will be part of the Typhoon final assembly in-country, whenever it takes place.

"We have the indigenous capabilities, we have the Saudi nationals who can do this work – 60 per cent of our workforce are Saudis. We have the facilities to do this, and if we don't we could make it! I am always hopeful," he said.

Fallatah suggested that the existing RSAF facility at Dhahran "could be made suitable" for Typhoon final assembly, pointing out that there are "engineering ways of doing things differently to the way they do things at BAE Warton, with



**Alsalam staff are regularly now working on projects from outside the Kingdom for commercial air transport customers and VIP operators.**

sophisticated laser alignment, and if you go to the German Eurofighter assembly line, it's not similar to Warton, it's a different set up".

But while Alsalam is committed to 'Saudization' of its workforce, the company has

ambitious plans to expand its customer base far outside the kingdom.

Though much of Alsalam's work comes from operators within the kingdom – the Royal Saudi Air Force on the military side and Saudia on the civil – the company is increasingly working with customers from outside Saudi Arabia. "Air Atlanta sends its 747s to us all the way from Iceland – we're very proud of that," Fallatah observed.

### Engineering excellence

Fallatah also hinted broadly that some of the company's VIP completion work had been for non-Saudi government/head-of-state aircraft.

Alsalam's success is founded on a real commitment to engineering excellence – Fallatah himself is an ex Saudia aircraft electrical technician and subsequently engineer – and customer service.

"When I get a repeat customer he is coming back because he sees quality work, because he is getting value for money and because he sees an environment where he is welcome and where he is taken care of."

Alsalam justifies its CEO's proud boast to be the Middle East's leading provider of heavy maintenance, repair and overhaul for both wide- and narrow-body aircraft, and of programmed depot maintenance and technical support for military aircraft, fixed wing and rotary. The company aims to move increasingly into manufacturing – particularly of components and composites.

**EGYPTAIR**  
MAINTENANCE & ENGINEERING

EGYPTAIR MAINTENANCE & ENGINEERING Company is considered a great maintenance hub as it conducts all types and levels of maintenance for aircraft, engines and components including checks, replacements, repair, modification, as well as offering technical studies. The range of activities available to customers is very comprehensive and ranges from line maintenance to any hanger letter checks and overhaul. Noteworthy, the number of our customers exceeded 70 customers. The company is approved by many authorities including EASA.145.0290 and ISO 9001:2000 for different activities of the company. Meanwhile, we are in process to obtain the FAA approval.

[www.egyptair-me.com](http://www.egyptair-me.com)





**MSI** is known worldwide as a reliable partner for commercial aircraft operators, airlines and government customers for almost 20 years.



**MSI** offers repair and maintenance services for engines, components and systems and provides spare parts, components and standard hardware for commercial aircraft, business- and VIP customer aircraft and helicopters.



**MSI** holds ISO 9001:2000 / EN9120, EASA Part 145, GCAA CAR 145 and FAA Part 145 Approvals.

With its Maintenance Facilities and Support Organization **MSI** offers following Services:

#### **Ruesselsheim / Germany:**

Maintenance Organization for the PW100 family Engines, its Components and QEC Kits

Avionics retrofits, providing of STCs & Installation Kits.

Authorized Distributor for Spare Parts and Components from Manufacturers such as Sennheiser, Universal

Avionics, Alcoa, Souriau, Stabilus, Barry Controls, Rhotheta, ATEQ, etc.



#### **Dubai / UAE**

Maintenance Organization for electronic, electrical and mechanical Components. Authorized Repair Station for products manufactured by Franke Aqua Rotter,

Rheinmetall Defense Electronics, Barry Controls, ATG, etc.



#### Head Office:

##### **MSI**

Pommernstrasse 8  
65428 Ruesselsheim  
Germany

Tel. (49) 6142 955 115

Fax (49) 6142 955 111

##### **MSI**

Flughafenallee 15  
28199 Bremen  
Germany

Tel. (49) 421 557 1913

Fax (49) 421 557 1930

#### Middle East Office

##### **MSI**

PO Box 17462  
Jebel Ali, FZS1 BH02  
Dubai, UAE

Tel. (971) 4 886 1122

Fax (971) 4 886 1121

[www.msi-air.com](http://www.msi-air.com)

[info@msi-air.com](mailto:info@msi-air.com)

## \$30m facility taking shape at Fujairah

Work has started on an MRO facility at Fujairah International Airport being built by French specialist European Aviation at an estimated cost of \$30million.

It is being constructed in phases, with the first having started in December. The project is expected to be completed by mid-2010.

Announcing details at the Dubai Airshow in November, Fujairah Airport general manager Dr Khalid Al-Mazroui said the emirate was working to make the airport a regional and global air transport and cargo hub and aircraft maintenance base and would be attracting various types of investment. He added Fujairah Airport will provide all kinds of support to European Aviation for further expansion.

European Aviation chairman Greg Bgot said the company planned to establish integrated services to meet the needs of the aviation market in the region and the Indian subcontinent from the new Fujairah base.

## India MRO challenge

Air Works is promoting India as a base for international airlines, including those from the Middle East, after receiving its European Aviation Safety Agency certification.

It is the first time an Indian airframe MRO company has received the EASA repairs station approval, for its facilities at Hosur, in Tamil Nadu. It allows Air Works to service aircraft from all over the world, including the Middle East, which is seen as potentially big market.

The approval covers airframe and component maintenance on ATR 42s and ATR 72-500s and Boeing 737s. Air Works says it intends to add Airbus A320 capability.

The company has also signed a letter of intent with SuperJet International to become the authorised service partner for the Sukhoi Superjet 100 in India.

## Etihad enjoys services boost

Etihad Airways could soon be carrying out aircraft line maintenance work on behalf of other major European airlines, following a successful recent audit of its MRO capabilities.

The national airline of the United Arab Emirates has been awarded EASA Part 145 certification by the European Aviation Safety Agency (EASA), following a comprehensive audit by the Swiss Federal Office of Civil Aviation (FOCA).

The approval effectively means that the Etihad Airways technical division is now fully accredited to provide line maintenance services on Airbus A319, A320, A330, A340 and Boeing B777 aircraft types for all European carriers.

Werner Rothenbaecher, the company's executive vice president technical, said: "Receiving this important certificate effectively validates our technical capabilities and means we can expand our MRO services to handle other major European carriers, both at our Abu Dhabi hub and also at our satellite bases overseas."

To obtain the certification, Etihad had to submit a Maintenance Organisation Exposition (MOE), supported by a fully-documented set of processes and procedures.

## Contract double for JorAMCo

Amman-based JorAMCo has won two major international contracts – further establishing the company's credentials as a serious contender in the rapidly expanding Middle East MRO market.

The company signed agreements at the Dubai Airshow with UK charter carrier Thomas Cook and Turkey's Tailwind Airlines.

The Thomas Cook deal covers three Airbus A330 C checks, the first of which was recently completed. It is the first time JorAMCo – which has been trying to expand into the European

market – has overhauled an aircraft for a UK carrier.

JorAMCo said the Tailwind contract covers maintenance services and modification work for the airline's Boeing 737-400 fleet. The Turkish charter and wet-lease carrier now operates three 737-400s, with another two to be delivered by the end of 2010.

Tailwind launched charter services earlier this year and is also planning to begin scheduled services in 2010.



## Royal Jet to set up maintenance facility

Abu Dhabi International Airport is to get a new MRO facility aimed specifically at business aviation and big enough to handle the Boeing 737-based Boeing Business Jet (BBJ).

Executive charter company Royal Jet said at the Dubai Airshow that it is to open a maintenance facility next to its private terminal at the airport in 2011.

Royal Jet is the world's biggest BBJ operator with a fleet of five – and will be partnering with an as yet unnamed overseas maintenance provider to staff the new facility and share knowledge.

The company's chief executive Shane O'Hare has been hinting at a move into maintenance for some time, but in a presentation at the Dubai Airshow the company confirmed its plans.

Part of the reason for the move is that the company has, until now, had to ship its BBJs overseas for heavy maintenance and wanted to offer owners whose aircraft it manages an all-in package.

## LHT signs link with Oman Air at Muscat

Lufthansa Technik (LHT) and Oman Air have signed a letter of intent to form a maintenance joint venture at Muscat international airport.

The new company will operate from a new state-of-the-art hangar and provide support for Oman Air's growing fleet as well as those of other carriers based in the region. Due to become operational in 2012, the hangar will be capable of accommodating up to two wide-bodies and two narrow-bodies simultaneously.

Employing 300 technicians, the facility will offer maintenance through to light C checks for Airbus A330s and Boeing 737s, as well as Embraer and ATR regional aircraft.

"We are strengthening a well-established co-operative relationship," said LHT executive board chairman August Wilhelm Henningsen. "In future we will be able to offer technical services directly in Oman to customers in a region that is one of the growth markets of international aviation."

On the basis of the intended contract, LHT will overhaul 15 Oman Air 737s from January 2010 at its European facilities in Malta, Budapest and Sofia.



### Aircraft Capabilities

- **Airbus**  
A300-600, A310-200/300, A320 Family, A330 and A340
- **Boeing**  
727-100/200, 737-200,  
Classic and NG series
- **Embraer**  
170,175,190 and 195
- **Tri-Star**  
L1011-series



### Base Maintenance Services

- Periodic & Scheduled Maintenance up to D check, 6- and 12-year inspections
- Supplement Structural Inspection
- Major Minor Airframe Repairs
- Avionics Major Modifications
- Ageing Aircraft Inspection
- CPCP
- Cabin Interior Refurbishment
- Aircraft Painting and Polishing
- Back shops Support Services

### Certifications and Approvals

- FAA & EASA Part 145 certified, in addition to many others.

### Aircraft Maintenance Services

- Maintenance Management
- On-site Inspections
- Aircraft Modification
- On Wing Engine Service
- Aircraft Delivery
- Maintenance Consultancy
- Personnel Assignment
- Structural Engineering

## Address

P.O.Box 39328  
Queen Alia International Airport  
Amman 11104, Jordan  
Tel: +962 6 445 1 445 | Fax: + 962 6 445 1186





## ***Etihad splashes out on Lufthansa's Lido***

Etihad is about to introduce sophisticated flight planning software to reduce fuel burn by some two per cent and make other savings through improved routing.

The UAE airline signed a deal at the Dubai Airshow in November with German aviation IT specialist Lufthansa Systems, which will see the airline use the flight planning solution Lido/Flight.

"Lido will enable our pilots to get a flight plan that will optimise the routing, taking account of weather and the overfly costs. Reducing fuel burn will cut costs and at the same time we reduce emissions," said Capt Richard Hill, Etihad's chief operating officer.

Hill said the airline had been working with IATA to reduce costs and emissions for almost two years. "We identified the potential from the planning area," he said. "We already had a manual system but by introducing the new technology we will be able to make significant savings of up to two per cent from the basic fuel burn and up to five per cent from some of the overflights."

The contract with the German IT specialist also includes a number of Lido/Flight add-ons, which further improves the flight planning processes, including Traffic Flow Restrictions (TFR), Inflight Monitor (IFM) and FreeFlight.

Drawing on its own powerful database, Lido/Flight uses a number of parameters to calculate the optimal route for each flight.

Stefan Auerbach, senior vice president sales EMEA at Lufthansa Systems said the savings could be even higher, particularly as the airline grows.

"Lido targets not only minimum fuel burn but also other flight charges and allows you to choose minimum time or distance. It files data from various sources, such as notices to airmen (NOTAMS), into the system and becomes the base for optimisation. It gives the pilots complete briefing for their flights. Going forward, you can manage a growing number of flights without increasing the numbers of dispatchers."

This could benefit Etihad as it continues its rapid expansion. Hill said: "Etihad Airways is one of the world's fastest-growing commercial airlines. The addition of these new planning systems provides the

modern technology and tools we need to manage our future growth more proactively and effectively.

"As we continue to grow our network, the Lido/Flight system will help us achieve significant cost savings as well as enhance the airline's operational flexibility. This is a powerful solution capable of much more than just providing route planning and monitoring of flights. With valuable functions running in the background, we will be able to operate our flights using the best possible routings and with minimum emissions."

TFR achieves fuel savings by factoring in the impact of temporarily restricted airways, while the IFM system provides updates on airspace restrictions, airport data and weather and automatically suggests alternative routes to the dispatcher if necessary.

Auerbach said: "We are proud that Etihad has expanded its cooperation with Lufthansa Systems and will rely on our flight planning solutions to enhance their operational efficiency. As the national carrier of the United Arab Emirates, Etihad's decision will help us to further increase our customer base across the Middle East."

Etihad already uses the NetLine/Plan and NetLine/Sched solutions for planning and scheduling, as well as managed Wide Area Network (WAN) services from Lufthansa Systems.

Richard Dawson who heads IT for the airline said the system will be introduced during the first quarter of 2010 and would be fully operational by the third quarter.

Planning ahead: From left, Richard Dawson, Richard Hill and Stefan Auerbach.



## ***Honeywell powers to \$5.5m deal***

Honeywell is to provide auxiliary power units (APU) and long-term APU maintenance for Bahrain Air's Airbus A319/A320 single-aisle aircraft in a contract worth more than \$5.5 million.

Honeywell's 131-9A APU, the most commonly used for single-aisle commercial transport, is averaging more than 10,000 hours between unscheduled repair events, a more than 60 per cent improvement over other APUs in its class size.

Speaking at the Dubai Airshow, Mike Madsen, Honeywell's vice president of airlines, said: "This selection for Bahrain is the right choice to help this growing airline reduce maintenance and manage spares costs. The on-aircraft maintenance costs are up to 36 per cent less than other APUs because of the simple design."

An APU is a small gas-powered turbine engine that provides bleed air for main engine starting and electrical power for cockpit and galley systems.

More than 1,700 Honeywell 131-9A APUs are in service, including forward-fit and retrofit.

## ***Security warning for vulnerable older airports***

New airport security technologies have not yet been totally embraced by Middle Eastern airports as they plan investments in infrastructure.

Speaking in the Doha aviation summit, Jerry Tobey, vice president international business development for Raytheon's Network Centric Systems division, said a number of airports in the region were still vulnerable.

He said there is a burgeoning market in the Middle East and beyond for airport security systems as governments replace or refurbish ageing infrastructure and confront new terrorist threats.

He said the problem is that many of the airports were developed more than 20 years ago. "In those days, it was more about people stealing things or someone straying on to the runway. Today it is a completely different environment," he said.

The growing population of the Middle East, where many airports were built close to city centres, is also a challenge. "There are also cities which have grown up against the perimeter and airports which have expanded, pushing a lot of services which used to be within a secure environment, like catering, outside," he said.

Raytheon has won a deal from the Kurdistan

regional government in northern Iraq to provide security solutions at the new Erbil International airport. Under the multi-phased contract, the company will provide point-of-entry security, including monitoring and access control, vehicle screening, as well as passenger and baggage screening.

Follow-on phases will include multiple integrated sensors and equipment to secure the entire airport perimeter and beyond.

It has also secured two Middle Eastern deals for its air traffic management solutions. One is a three-year agreement from the Saudi Arabia General Authority of Civil Aviation (GACA) for nationwide air traffic management surveillance. The contract will extend air traffic control radar coverage throughout the kingdom.

It will also enhance flight safety for the rapidly growing domestic airline sector and improve the efficiency of Saudi Arabia's air traffic management system.

The other contract is from the Oman ministry of transport and communications, which has selected Raytheon to supply a state-of-the-art radar system at the new Muscat International airport.





## Crane raises the bar on tyre testing

Jebel Ali-based Crane Aerospace & Electronics – part of the US-headquartered electronics and systems giant – is seeing significant interest in a new technology to sense tyre pressure in aircraft after unveiling the system at the Dubai Airshow.

“It’s the first of its kind as you don’t even need to touch the valve. It replaces existing tyre inflation valve stems and doesn’t require batteries as it is powered wirelessly during interrogation by a hand-held tyre pressure reader,” said Martin McCarthy, Crane’s vice-president strategy.

“The reader displays the tyre pressure and temperature along with the date, time and aircraft tail number and wheel position, and the data is automatically logged and easily downloaded. It saves time.”

As well as the SmartStem tyre system, Crane offers manufacturers and airlines one source for sensing, such as controlling the landing gear and door systems, power, braking fluid management and seat actuation.

“Our products are found in some of the toughest environments, from aircraft engines and landing gear to space satellites and power systems and from missiles to unmanned aerial systems. We are excited to show off our new products and let the region know how we have improved and upgraded existing systems and products,” McCarthy said.

Crane opened the new office in Jebel Ali to serve its growing customer base in the Middle East and Africa. “With the world’s fourth largest airline fleet, the Middle East is key to the Aerospace Group growth strategy,” said Nigel Duncan, Crane’s vice president, sales & marketing.

## Sabre survey cuts to the chase

Possessing a good ‘brand’ is vital for any airline. Customers’ perceptions of a carrier may ultimately be critical in deciding whether it flourishes or folds.

That is particularly so in the Middle East, according to a new survey.

“Especially in the Gulf region, brand is really important,” said Nadja Killisly, responsible for strategy marketing in the Middle East and Africa for Sabre Airlines Solutions, the aviation software solutions and consulting services provider.

Low-cost carriers in the region may face a problem because some customers perceive LCCs as being ‘cheap’, a perception that extends in some people’s minds to casting doubt on safety. “People really care about the image of the airline they’re flying with,” she added.

Despite the development of LCCs in the region, with travellers being given more choice as to how they fly, a Sabre survey found that there remains some resistance in the Gulf to the newcomers. “Middle Easterners still seem reluctant to accept this trend and prefer established carriers,” it notes.

It adds that 56 per cent of Gulf residents name Emirates as their favourite carrier; LCC Air Arabia received only three per cent of the votes.

Developing a brand to give customers a more positive image

should be made a priority, says the report. This is particularly the case for the LCCs.

One aspect of the Middle East market is that Arab passengers like to fly on Arab airlines but will take a European or other airline if the latter’s route network better suits their itinerary.

According to Killisly, even if Arab carriers are competing among each other they would be better working more closely together in some ways – to offer extended route networks, for example – rather than losing Arab passengers to non-Arab airlines.

Sabre’s survey, the Airline Industry Trends survey for 2009, looked at problems and priorities facing 90 airlines worldwide in the stressful current economic situation.

Fuel cost instability and revenue management were, predictably, two of the main concerns identified by airline managements over the next 18 months.

However, customer loyalty and retention efforts were viewed by an overwhelming 86 per cent of the survey’s respondents as having the most positive impact on their business.

The survey also found that although the airline industry in the Middle East had not seen consolidations between carriers, these were, nevertheless, being discussed at regional events and many airlines believe there will be an increase in mergers and alliances in this part of the world.

## Top speaker line-up heads for Cairo

Cairo is the location for two major air transport events under one roof in April.

The third annual Aviation Outlook MENA 2010 will bring together the key stakeholders in the region's aviation industry.

Following on from last year's successful event in Abu Dhabi, organiser Terrapin has put together a top-rate list of speakers for the two-day conference, which takes place on April 13-14.

The conference is followed by a further day of workshops.

Speakers include Adel Ali, CEO, Air Arabia; Stefan Pichler, CEO, Jazeera Airways;

Walter Prentzler, CEO, Nas Air of Saudi; Kustav Dhar, CEO, MDLR Airlines; George Cooper, CEO, Wataniya of Kuwait; Driss Benhima, CEO, Royal Air Maroc; Hamdi Chaouk, director general, CAA Lebanon and Abdul Wahab Teffaha, secretary general, Arab Air Carriers Organization.

But delegates who get in early have the opportunity to attend another of the region's major events. On April 12, the Low Cost Airlines World MENA conference will also take place.

More details about attendance and cost can be found at [www.terrapin.com](http://www.terrapin.com).



## Space already going fast for IDEX anniversary show

Organiser Abu Dhabi National Exhibitions Company (ADNEC) has reported very strong exhibitor interest in the run-up to next year's 10th anniversary IDEX show. Already 26,500sqm of the 36,000sqm indoor exhibit space has been reserved at the show, which runs from February 20-24.

"Our sales campaign for IDEX 2011 is well under way and we are very pleased that a number of players from the global defence and security industry, including BAE Systems, MBDA, DynCorp International, and the UAE's Mubadala Development Company and Offset Program Bureau, have been quick in confirming their participation," said Mohamed Al Mashgouni, IDEX show director.

"The excellent response we are receiving reiterates the status of IDEX as a 'must-attend' show, not only for equipment, service or technology systems providers in defence, but for every stakeholder globally who is involved in defence and security."

Underlining the strategic nature of the show, country pavilions at IDEX will once again be coordinated by embassies, trade associations and defence export organisations from a number of countries.

Twenty pavilions, including the USA, the UK, Germany, Italy, France, Turkey, Switzerland, Austria, Czech Republic, Sweden, South Africa, Russia, China

and Australia, are among those confirmed so far, with the USA and Turkey increasing space requirements by 50 per cent and 20 per cent respectively.

Besides these 20 pavilions, which are repeat participants, Poland will host a country pavilion for the first time.

In another significant development, the UAE's Tawazun, returns as headline sponsor for the show following the excellent return on investment achieved by the company last year.

Organised by ADNEC in association with the UAE Armed Forces GHQ at the Abu Dhabi National Exhibition Centre, the show is regarded as one of the world's premier defence and security events and the largest in the Middle East North Africa region.

It showcases defence equipment and services for land, sea and airborne systems and attracts national and international delegations, procurement officials, industry analysts and military strategists, besides the world's leading defence contractors.

IDEX's last show, held in February, had around 900 exhibitors from 50 countries, 150 official delegations participating and 50,000 visitors attending.

Contracts worth billions of dollars were signed at the show, including a combined AED 18.4 billion signed by the UAE Armed Forces.

## Enjoy the thrills at Al Ain

Those who prefer their aviation to be thrilling and fun rather than business-to-business should head for Al Ain international airport, Abu Dhabi, from January 27-30.

Organisers from the Abu Dhabi Tourism Authority say the world's top aerobatic pilots will be coming to the Al Ain Aerobatic Show to compete in three disciplines of air racing, which features pylon racing and barnstorming competitions. Airplanes, helicopters, gliders and wing walkers from 15 countries will be displaying their aerial skills.

The event is fine for all the family, with other features of the show including a children's play area, the Etihad Simulation zone, mini go-kart, paint-ball and more.

## Road to Morocco

The Moroccan city of Marrakesh will play host to exhibitors from across North Africa when it features the second edition of Aeroexpo Marrakech from January 27-30.

Show organisers say it will attract 400 exhibitors, delegations from around the world, including Ministries of defence, civil aviation delegations, advisors, industrialists, representatives of local, regional, national governments who find Aeroexpo Marrakech an ideal opportunity to network and to establish potential trade and future partnerships.

Morocco is planning 30 per cent growth in aerospace employment over the next three years and the show is expected to reflect this commitment.

## Airport Expo – two events in one

The MRO Middle East Conference and Exhibition, organised by the Aviation Week group, will be showing the newest and most innovative concepts and best practices, while encouraging the advancement of the airline and aircraft maintenance, repair and overhaul industries.

The event runs alongside AIME, the aircraft interiors event at the Airport Expo in Dubai from February 28 until March 1.

Access to the exhibition is free but there are charges for the conference, which features a top class line up of speakers including Chris Doan, president & CEO, TeamSAI and David Stewart, principal, Aerostrategy – who will share market forecasts for both commercial and military.

Other speakers include Homaid Al Shemmari, associate director of Aerospace, Mubadala; Ajay Chaukulkar, general manager, The A Team - Aerostar Asset Management; Dr Stefan Weingartner, president & CEO commercial maintenance, MTU; Abdulla H Al-Hudaid, VP maintenance & engineering, Jazeera Airways and Frank Walschot, VP engine maintenance, SR Technics.





A RECORD-BREAKING  
\$88.7 BILLION OF TRADE  
WAS CONDUCTED AT  
FARNBOROUGH IN 2008.  
**AFTER A PERFORMANCE  
LIKE THAT EVERYONE'S  
FLYING IN FOR 2010.**

# FARNBOROUGH

# 1ST

FOR BUSINESS

Farnborough International Airshow 2008 was a phenomenal business success story, with announced orders totalling \$88.7 billion generated by 1393 exhibiting companies for 40 countries – making Farnborough 1st for business.

No other aerospace exhibition provides you with such a wide range of key industry contacts and a team of organisers dedicated to helping you to be successful in business.

**Move Fast.** We are taking exhibition space bookings now.

To book your presence go online at [www.farnborough.com](http://www.farnborough.com)  
or call **+44 (0) 1252 532 800.**

A WORLD OF OPPORTUNITIES

 **Farnborough**  
INTERNATIONAL  
**AIRSHOW**  
19 - 25 JULY - 2010

## Shokralla answers the Aircell call

Airborne communications specialist Aircell has appointed Shoukry Shokralla as its sales & service representative in Abu Dhabi.

In his new role, Shokralla is responsible for supporting existing Aircell operators in the region and assisting prospective customers. He will also provide Tier 1 support services, supplementing Aircell's existing infrastructure in Europe and elsewhere. He reports to Andrew Geist, senior vice president – business aviation solutions.

Shokralla has more than 28 years' experience in avionics and communications services and has extensive knowledge in marketing and technical disciplines. Fluent in Arabic, French and English, he is an experienced FAA-certified pilot with multi-engine and instrument ratings. He holds an electrical engineering degree from California State University, Northridge, in the United States.

John Wade, senior vice president and general manager, Aircell, said: "Even with the challenges of the current economic climate, business aviation continues to experience growth in the Middle East. Aircell is a global company and it's important for us to provide comprehensive support and local representation in such a key region. We're delighted to have Shoukry join the Aircell team. His decades of avionics and communications experience and market

## EWING STEPS UP AS FIRST CHAIRMAN

The Middle East Aerospace Consortium (MEAC) has named Alan Ewing as chairman.

MEAC was launched at last year's Dubai Airshow and offers products, services, training and expertise to companies wishing to do business in the rapidly growing Middle East Aerospace market through networking, collaboration and mutual trade.

Ewing has worked in the aerospace and advanced technology industry for more than 30 years, starting his career at Westland Aircraft where he was responsible for setting up the Commercial Group to market helicopter and technology products throughout North America, South America, Europe and West Africa.

This was followed by work on some of Europe's largest projects, ranging from developing helicopter route networks for the Olympics to programme management of the building of the next-generation of nuclear submarines.

Aside from being chairman of MEAC, Alan is also the CEO of FutureEurope, a high-level networking and lobbying group that assists the development of commercial organisations in all sectors of the economy.

Ewing said: "I am honoured and excited at being made chairman of MEAC, which will become the leading global consortium for aerospace companies and individuals conducting business throughout the Middle East. By linking MEAC with companies of all sizes from various sectors we will achieve a truly global reach of members."



knowledge will be invaluable as Aircell expands its activities in the region."

## Haacker lands ADAT top job

Abu Dhabi Aircraft Technologies (ADAT) has appointed Juergen Haacker as chief operating officer. He joins the Mubadala Development-owned company from the International Air Transport Association, where he was director of operations.

ADAT has also named vice-presidents – Paul Horstink for airframe services, David Hope for technical services and Talal Yahiya Al-Riyami as executive vice-president quality and safety management.

"Their breadth of aerospace industry expertise and MRO experience with the

industry's leading aviation institutions is a huge addition to the company," said ADAT chief executive John Byers.

## Jet propels its crew scheme wider

Jet Professionals, the global aviation staffing subsidiary of Jet Aviation, has extended the scope and reach of its Crew Advantage membership programme to include MENA and Asia regions.

In addition, the company has launched a new Crew Advantage premium programme. While both the standard and premium programmes offer aviation professionals attractive discounts on training and insurance, premium members will also enjoy the benefit of priority consideration for relevant

positions as well as resume rewriting services.

## MAC Interiors appoints new MD

MAC Aircraft Interior Specialists has appointed Martin Longden as its new managing director.

Longden takes over from Steve Whittaker, who managed the business for more than a decade and will remain as the principal project manager for a number of contracts. The company develops aircraft interiors for both corporate and commercial sectors and has had a number of high-profile VIP projects. Recent successful deals include a five-year contract with Airbus Corporate.

Longden has a strong aviation background. Over the last ten years he has delivered significant

growth and management change in his role as MD of an international aircraft maintenance business.

## Etihad reopens Sri Lankan links

Etihad Airways has appointed Kumar De Silva as its country manager for Sri Lanka and Maldives. Based in Colombo, De Silva will re-establish the airline's office during January and oversee its operations. During his five-year association with Etihad Airways, De Silva has set up three new outstation operations in Colombo, Tehran and Kathmandu. He has a wealth of commercial airline experience in senior management positions at Singapore Airlines, Sri Lankan Airlines and Thai Airways.

## Fast track check-in

First Class Aviation Executive Search

Marlborough are experts at identifying aviation talent and are trusted advisers to air transport companies worldwide; both large and small.

When faced with a sudden departure, you can rely on Marlborough to swiftly plug the talent gap without delay.

Don't just take our word for it, see what our clients have to say on our [new website](#)

[www.marlborough.aero/testimonials](http://www.marlborough.aero/testimonials)







# MEAC - The leading regional aerospace consortium in the Middle East



## MEAC Membership Benefits

- Links within the Middle East Aerospace and Aviation Market
- Annual Meeting with MEAC Directors or relevant Board Members
- Networking events including speed networking, breakfasts and lunches
- Tender alerts
- Exclusive newsletters
- Full access to the MEAC members website and your company advertised online
- Collaboration with other members
- Discounts to industry events and exhibitions
- Exclusive training (at discounted rates)
- Access to the MEAC Members Directory and inclusion of your company profile
- Invitations to business workshops
- Members capability database
- Marketing and PR – assistance with bespoke marketing and PR campaigns
- Access to funding and investment
- Culture training courses (at discounted rates)
- Trade missions assistance
- Links to worldwide consortiums
- Organised visits to Airports, MROs and industry specific locations
- Use of Middle East Aerospace Consortium logo
- MEAC Members certificate

Silver, Gold and Platinum membership packages available.

Details on [www.MiddleEastAerospace.com](http://www.MiddleEastAerospace.com)

MEAC  
PO Box 112489, Dubai, UAE  
T: +971 (0) 4 398 5838  
F: +971 (0) 4 398 5837

PO Box 16485, Jeddah 21464, Kingdom of Saudi Arabia  
T: +966 - 92000 MEAC (6322)  
F: +966 (0) 2663 8065

60 Basepoint Business Centre  
Metcalf Way, Crawley, West Sussex RH11 7XX, UK  
T: +44 (0) 1293 817 747  
F: +44 (0) 1293 817 718

Information: [info@MiddleEastAerospace.com](mailto:info@MiddleEastAerospace.com) Sales: [sales@MiddleEastAerospace.com](mailto:sales@MiddleEastAerospace.com)

*What started as a child's fascination with birds and flight has become a major theme for 'Art of Flight' creator David Bent. He spoke to Chuck Grieve about the inspiration and perseverance behind his successful collections.*

# IT'S JUST PLANE ART...

If he thought about it, David Bent could probably trace a personal flight path from birds through model planes and a friend named 'Mad Kenny' to where he is today – a popular success and best-seller in the fickle world of art.

But Bent is too busy to think about it. Of course he's happy that his aviation-inspired art has captured imaginations and markets around the world, but that pleasure comes mainly from connecting with others. It's a "happy alignment of interest, art and public appreciation", he says – and it continues to surprise him because, frankly, aviation isn't everything.

His home in Wiltshire, where he has his studio and gallery, is a monument to an eclectic mind, an open book of the travels and interests that make him "an artist with a strong niche interest in aviation, rather than an aviation artist" which he would find too limiting in every sense.

The same goes for technique and medium. Bent satisfies his artistic impulse with whatever he considers the most appropriate tool for the job, whether it's responding to the stimulus of Dubai and the Middle East, celebrating the RAF's 90th birthday, or indulging in his quirky humanoid Aerobots. The paintings, photographs and limited-edition collages that result, now comprise a substantial body of work and are held in private and corporate collections around the world.

A major breakthrough in his aviation work was being picked up by the Society of British Aerospace Companies – now Aerospace, Defence and Security (A|D|S) which wanted new art when it moved into new offices in central London. The director general had seen something that resonated in an exhibition of his work at the Royal International Air Tattoo (RIAT).

Said Bent: "The thing I 'hit' in the industry is that it's cutting-edge technology – it couldn't be more so. And it's forward-looking, so it needs something contemporary and modern to reflect that." Among his work now on display at the ADS is a massive 8m x 2.4m work entitled *Flight of the Red Arrows* along Sheikh Zayed Road in the boardroom, plus another 30 individual pieces.

Bent has always had an interest in aviation, thanks to his father, who he describes as "an aviation nut case... an anorak", and an early love of observing and drawing birds. His father built and flew model aircraft, which he and his brother, Roger, chased through the fields of southern England. Bent became an air cadet in school and logged 18 hours in a De Havilland Chipmunk – his sum flying experience.

"I made corporal and caused a fair amount of chaos at various Royal Air Force (RAF) bases around the UK and Europe," he said. His brother made a career in the RAF, retiring with the rank of wing commander.

Perhaps surprisingly, his interest in aviation didn't come out in his art until around 2000. He was too busy exploring his many other interests and commenting, through, art on the social issues of the day – something he continues to do, with current themes such as global warming, genetic engineering and the creep of the 'big brother' state.

#### Benign influence

"I've always been conscious of the role of aviation in the modern world," he said. For the most part it is a benign influence but occasionally events such as Lockerbie, 9/11 and air-mounted military operations remind us of its other face. This drives Bent to his studio. "You can make a case that in such events, aviation plays a central role," he mused.

"From an artistic point of view, I like the atmospherics you get when you leave the ground; the fact that aircraft operate in three-dimensional space where it doesn't matter whether the horizon is horizontal or vertical.

"And I like the objects themselves – the shape and design of aircraft. They're generally very appealing. Some, like Concorde, are inspirational: people just liked it." What interests Bent sociologically is how an iconic leading-edge piece of kit became a popular cultural icon. He sees opening minds through art as part of his role.

"One thing I realised quickly, as my career in

aviation art developed, was what a huge subject it is. I've just scratched the surface."

That career started with a visit to RIAT in 1999 with 'Mad Kenny', an old friend. At the time, Bent was doing a lot of photo collage work with duplicate prints that he would double, turn and juxtapose for artistic effect. At RIAT, he walked along the static display line photographing aircraft nose-on with a telephoto lens. When he applied his technique of doubling and turning to the resulting prints and achieved "interesting" results. That was the start of his Aerobot collection and "the key that turned the tap on". All his latent interest in aviation came rushing out.

The following year he exhibited his Aerobots at RIAT where "basically they went down a storm", he recalled. The quirky anthropomorphic quality of the art – humanoid creatures made from aircraft – caught the imagination. "Part of their intrigue is figuring out what aircraft have been used." Pilots liked them, took them home in their cockpits and instantly his work was all over the world.

In successive years, Bent's exhibition at RIAT has become larger and his work more varied under his Art of Flight brand. He likes to explore themes and ideas, rather like a boxer circling and probing with his jab, and groups his work into collections. Art of Flight reflects the breadth of his fascination and has grown to 15 collections with themes now including Aerobots, Red Arrows, Tessellations, Stealth, Aerodynamics, Al Ain Aerobatics, Red Bull, Sky City Fusion and Mirror City Skyline. As well as original paintings, Bent creates art prints in his studio, using archival inks. Editions are limited to 50.

During one of his exhibitions at RIAT, members of the RAF Red Arrows saw his work in the VIP area and invited him to collaborate as the display team's artist in residence. That exhibition also opened a door to the Middle East, when the organisers of the Al Ain aerobatics show invited him to exhibit in the royal tent.

For Bent it was a pivotal experience. Fascinated by the culture of the region, he immersed himself in





Islamic design, immediately recognising common ground. "The basis of Islamic art is geometry, as with aircraft," he said. He applied his simple methodology of turning and overlaying aircraft shapes to form secondary and tertiary patterns reminiscent of the pierced stucco and carved wood seen in traditional mihrab and mousharabia screens, and named them Plane Tesselations. These works struck a chord with Gulf viewers at the next year's Al Ain show.

Meanwhile, he had become fascinated with the growth of Dubai, in particular the architecture of Sheikh Zayed Road. In an example of 'mad dogs and Englishmen', he spent half a day in the midday sun photographing buildings north of Jumeirah Emirates Towers until dehydration and "nearly killing myself off crossing the road" forced a stop to his expedition.

Off the ground  
But it was worth it. He made collages of architectural features from that shoot, merged them with aircraft and aircraft shapes, and his Sky City collection was off the ground.

"Things expanded from there," said Bent. Invitations followed to exhibit at the Dubai and Farnborough airshows, the Red Arrows collaboration bore fruit, and his aviation work began finding a wider public.

As well as inspiration, Arabia has proven to be a new commercial marketplace. Bent is comfortable with his popularity because he feels it has been achieved on his own terms. "I've tried all my life as an artist to keep my integrity intact," he said.

"No doubt, with aviation, the subject has been helpful commercially. There seems to be a need for somebody with my approach to the subject of aviation, which I classify simplistically as modern contemporary.

"A lady at RIAT once said to me, 'David, you nailed the niche'. I'm happy with that."

■ David Bent's art online is found at [www.bentartgallery.co.uk](http://www.bentartgallery.co.uk)

## AHMED NEMAT

*The Deputy Undersecretary for Bahrain's Civil Aviation Affairs, responsible for air transport, licensing and air navigation, talks to Arabian Aerospace about his job and the challenges.*

■ How did you get involved in the aerospace industry?

**1** When you are young, your choice of career can be influenced by many things. Such as what your friends are planning to do, or whether you are reluctant to travel because of a pretty girlfriend at home. I was at high school in Bahrain with a friend who wanted to go to aviation college and had no girlfriend, so the opportunity to go to the college in Doha beckoned both for a career and to meet more people. I enjoyed aviation college and my subsequent studies in areas like business administration. I worked for 10 years as an air traffic controller for the Bahrain FIR and then during the first Gulf War I had responsibilities for a sector and the airlift. I then got promoted into the CAA.

■ You have a responsibility to promote Bahrain to the aviation world, how successful are you in these difficult economic times?

**2** We are continuing to do well. We have recently welcomed Straits of Manila airline from the Philippines and will soon have United flying from Bahrain to Dallas. Bahrain has a great strategic position close to large markets in the Middle East. Of course we have the causeway direct to Saudi Arabia. We have a strong tradition in aerospace and have an experienced workforce. Our airport is well positioned and we have focused on strong partnerships with our customers. Their success is our success so there is a strong culture of customer service and of us offering the right product at the right price.

■ What has been the biggest challenge you have faced in your job?

**3** Moving the registration of 40 Gulf Air aircraft from Oman AOC to Bahrain was a massive task and involved everybody in the CAA working all hours to achieve this under a tight timeframe. There is always the ongoing challenge of maintaining safety and security for our operators and for the passengers. This is always top of our agenda.

■ The CAA is backing the idea of the Bahrain Air Show, what is the advantage of this?

**4** Bahrain has done very well with big events like the Formula 1 Grand Prix and we know the air show will be a great success. Although the idea for it came during the boom times we will be 99% full for our chalets and support from the aerospace industry. The show is an indicator of the strength of the Bahrain economy as a whole and of the strength of our claim to be an aviation hub. The aviation sector is an important one for the future of Bahrain and we are looking forward to welcoming the aerospace companies and professionals to Sakhir airbase.





# TIMIDITY DIDN'T GET YOU THIS FAR. WHY PUT IT IN YOUR BUSINESS PLAN NOW?

In today's corporate world, pity the poor executive who blinks. The good news is, in trying times like these, fortune tends to favor those who make bold, decisive moves. It's simply about adjusting, not retreating, starting with a good, hard look at your flight department. Are you flying the right aircraft for your missions? Can you adjust capacity to meet demand? One thing is certain: true visionaries will continue to fly. Because, in tempestuous times, leaders recognize it's not about ego. Or artifice. It's simply about availing yourself of the full range of tools to do your job.

**RISE.**



May we help you develop your plan?  
Visit [www.aerospace.cessna.com](http://www.aerospace.cessna.com) or call +00.800.6060.0005.





**Blenheim**  
CAPITAL

## Working in partnership with the Kingdom of Bahrain

Co-investing in the future of the Nation



Blenheim provides world-class expertise in offset and countertrade transactions through innovative financial structuring and global partnerships. Since 2006 Blenheim has provided unrivalled offset solutions to governments and companies across the globe. The Bahrain Air Show marks the beginning of Blenheim's commitment to a mutually beneficial partnership with the Kingdom of Bahrain.

**GLOBAL PARTNERSHIPS, INNOVATION AND OFFSET SOLUTIONS**

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