



HH GACA President Signs New Madinah Airport Project



# Vienna's Skylink Open For Business



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# HORIZONS

Dr. Faisal H. Al-Sugair \*

# Aviation Industry in the Gulf: Unprecedented Leaps

The civil aviation industry in the GCC countries is witnessing unprecedented growth in number of passengers and in airport projects for rendering appropriate services to passengers. Compared to other countries around the world, no other region with such limited area has witnessed such a growth rate in this industry.

Projects for increasing the annual capacity of Dubai, Abu Dhabi, and Doha airports will be completed in 2016 while it has been announced that Manamah and Kuwait airports will soon experience development projects.

As for the Kingdom of Saudi Arabia, the General Authority of Civil Aviation (GACA) is implementing a strategic plan for developing the Kingdom's Airport Network so as to accommodate the increasing demand and to raise the standard of their services in order to keep pace with international developments in this field.

This plan includes construction of new airports and development of existing ones. Stage one of KAIA New Project, which may be the most important of all, is expected to be ready by the end of 2014 with a capacity of 30 million passengers and a capability for additional expansion to a total capacity of 80 million. This is apart from the airport's Hajj terminal capacity which will be expanded as demand grows. This project is vital for meeting the increasing demand that reached 42% of the total number of passengers handled by all the Kingdom's airports. In 2011 this number was close to 17 million passengers addition to around 6 million pilgrims and Umrah visitors using the Hajj Terminal, representing a growth rate of 15% compared to 2010 and 88% compared to year 2000.

Total number of passengers in KKIA, Riyadh, close to 15 million passengers in 2011 representing a growth rate of 9.3% over a year earlier, and 77% compared to 2000. GACA is currently planning to raise its capacity in stage 1 to 25 million

passengers by 2015 and to 47 million passengers in stage 2 Two. Prince Mohamed Bin Abdul-Aziz International Airport in Madina is currently experiencing a completely new project in collaboration with "Tayba Consortium", a private sector entity, aiming to raise its capacity to 8 million passengers in stage 1 and 14 million passengers in stage 2.

As larger airports and increased demand necessarily mean larger fleets of advanced aircraft to meet the growing needs, GCC airlines have concluded several orders of new airplanes with different sizes, mostly from Boeing and Airbus. In this regard, Airbus is expecting the GCC air carrier's fleets to triple by 2028, while Boeing is estimating total number of orders to reach 2340 aircraft in 15 years time.

This enormous growth in Gulf Air traffic is an outcome of the flexible polices adopted by the GCC countries in their pursuit to attract passengers from the different parts of the world be they tourists, Umrah visitors, or mere transit passengers crossing this planet from East to West or vice versa. The Gulf countries central geographical location coupled with their strong economic performance that enabled them to survive international financial crises have considerably contributed to the development of this industry in this part of the world in an unprecedented manner.

The importance of Air Transport Industry in our region in general and in our beloved country in particular and its great impact and continuous presence in the economies of this region, will be translated into significant figures in terms of more jobs for national manpower, and more investment opportunities for indigenous businessmen. This in turn will have positive impacts on the overall economy, stability, and welfare of our country under the leadership of the Custodian of the Two Holy Mosques and his loyal Crown Prince

\* VP, General Authority for Civil Aviation



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## HH GACA President Signs New Madinah Airport Project

**H** is Highness Prince Fahd Bin Abdullah President GACA signed on Saturday the 30th of last June the financing agreement documents regarding the development and operation for the new International Airport in Madinah with the Saudi Banks financing the Project and the Airport Operator (Tibah Airport Development Co.).

The Project financing Agreement documents included the (BTO) Agreement, the direct credit agreement concluded with financing banks, (BTO) Direct Agreement, and the novation agreement. On the sidelines of the signing ceremony HH handed the Aerodrome Certificate issued by GACA to the Operator "Tibah Airport Development Co.".

The contracts signing ceremony was attended by the executive VP of GACA, Mr. Abdulaziz Al-Angari,



the Projects General supervisor, Eng. Alaa Saman and a number of GACA officials, representatives of Tibah Airport development Company and representatives of the Saudi banks financing the Project.

# Taif Airport to Receive Hajj and Umrah Flights

G ACA said that it is committed to upgrade Taif Airport to a regional airport capable of handling Hajj and Umrah flights. Several airlines are currently operating regular international flights to and from the Airport. GACA plans to attract more airlines to the Airport.



GACA has implemented a project this year to improve

the capabilities of the Airport so as to raise its capacity from 350,000 to 550,000 passengers a year.

GACA is planning to build a new airport in the region capable of receiving higher volume of passengers, and new generations of airplanes as well.

## Egypt Air receives the 80th aircraft with humanitarian shipment aboard

**E** gypt Air welcomed the newest B737-800 to its fleet which now consists of 80 modern aircraft. Onboard the maiden flight from Seattle was humanitarian shipment sent by the Egyptian-American Scientists and Engineers As-

sociation.

Noteworthy, with the arrival of this aircraft, Egypt Air now has 19 B737-800 which provides 160 seats with many electronic and entertainment facilities for their customers.





## Gulf Air achieves significant cost-savings

G ulf Air has made significant achievements across its business operations resulting in USD 67.6 million overall in cost savings in 2011.The airline's aggressive cost-saving plans and measures, started in 2010 following its new business strategy has yielded positive results in terms of costcontrol, cost-efficiency, expenditure reduction and manpower optimization.

Encouraged by the results, the national carrier is pushing forward with its cost-efficiency measures in 2012 and is targeting a further 15% reduction in its cost base for the full year; it has already achieved a savings of USD 18 million between Jan and May this year.



The arrival of new A320 fleet fitted with fuel efficient and environment-friendly engines have also helped it to achieve a total fuel savings equivalent to USD 3.7 million. One of the major achievements this year is the in-sourcing of the airline's fleet technical management services, which is expected to yield an estimated annual net savings of USD 14.3 million.

# Qatar Airways named best airline in the world for second consecutive year

atar Airways has once again triumphed at the annual Skytrax World Airline Awards, winning three top accolades including the main award World's Best Airline for the second year running.

The Doha-based carrier retained the coveted title of Airline of the Year 2012 and notched up two further awards – Best Airline in the Middle East for the seventh consecutive year and the Best Airline Staff Service award in the Middle East.

The winners were announced



at an awards ceremony attended by leading figures from the global aviation industry at the Farnborough Air Show.



## China set to build 82 new airports by 2015

hina is set to build 82 new airports between 2011- 2015, it was announced by Li Jiaxiang, director of the Civil Aviation Administration of the country. Plans also involve expanding 101 existing buildings. Huang Min, director of infrastructure at the National Development and Reform Commission states that after the five year plan is complete, China will have 230 airports, up from the previous 182.

By 2020, the increase in aviation transport aims to accommodate 89% of the total population. Accessibility will increase to within 100km for passengers.



## Airbus to build a manufacturing facility in USA

An historical month, Airbus announced the future establishment of a manufacturing facility in the United States to assemble and deliver A320 Family aircrafts. Located at the Brookley Aeroplex in Mobile, Alabama, it will be the company's first U.S.-based production facility. Airbus stressed that the assembly line, which will create jobs and strengthen the aerospace industry, is part of its strategy to enhance Airbus' global competitiveness by meeting the growing needs of its customers in the United States and elsewhere.

The facility in Alabama will assemble the industry-leading family of A319, A320 and A321 aircrafts.

Additionally, on the eve of the Farnborough International



Airshow, Airbus revealed the latest findings in a two-year global consultation with more than 1.75 million people which spelt out what passengers want from flying in the future: more sustainable; less stressful; and more of it, despite social media revolutionizing how we keep in touch. "Aviation is the real World Wide Web," said Charles Champion, Airbus executive VP, engineering. "The results of the survey show that there is nothing better than face to face contact. The world is woven together by a web of flights that creates ever-expanding social and economic networks: 57 million jobs, 35% of world trade, and USUSD 2.2 trillion in global GDP." The survey found that:

- 63% of people worldwide say they will fly more by 2050.
- 60% do not think social media will replace the need to see people face-to-face.
- 96% believe aircraft will need to be more sustainable or 'eco-efficient'.
- Almost 40% feel air travel (door-to-door) is increasingly stressful.
- 86% of people think less fuel burn is key and 85% a reduction in carbon emissions.
- 66% want quieter aircraft and 65% planes which are fully recyclable.

Source: AACO

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Optimising

Greener ATM?

and fuel consumption

. ....

Optimising flight profiles with reduced holding patterns, cuts carbon emission

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# Vienna's Skylink open for business: It Opened Years Behind Schedule and Way Over Its Original Budget Target But Now It Is Operational

### Tom Allett

Vienna's Skylink terminal extension has had a difficult birth. It was conceived before the aviation industry was hit by the shock of the September 11, 2001, attacks on the USA, and had a troubled gestation period.

T he whole industry stuttered for a while and many major projects stalled, at least temporarily. The Skylink's deadlines were among those that slipped, and managers came and went, but, like most major airport projects, Skylink's importance to Vienna's long-term future meant that there was no turning back.

My first visit to the airport

in connection with Skylink and the airport's wider Vienna 2015 project was in February 2002.

Back then, the airport's primary cause for concern was the reduction in services by Austrian Airlines and its subsidiaries which, like most other carriers, were then suffering from the effects of 9/11. However, at that time it was still envisaged that Stage 1 of the Skylink project would open in 2006, at a cost about [euro] 220 million (US\$277m), though the opening date was soon revised to 2008. The foundations for the extension were eventually laid in January 2006. Subsequently, several planning and building issues arose causing it to be delayed even further and the completion process of Stage 1 didn't get under way until February 2010.

The facility was given a trial run involving approximately

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3,200 passengers and some 1,800 arrivals and departures before its three check-in gates, and new arrivals hall opened for business on June 5, 2012. Around 37,000 passengers were handled on the first day. The airport's management team states that the final cost was "under [euro] 770 million" (US\$970m), all of which was funded by the airport itself without any state aid.

The new facility doubles the terminal's available space over three levels, using vertical connections to achieve short transfer times. It's a one-roof concept: the whole airport under one roof, with a minimum connecting time (MCT) of 25 minutes. Its glass facade with its integrated 'sunglasses' provides a fine view of the outside world--including the Alps--and gives it a light, open and stress-reducing ambiance.

Vienna Airport (IATA: VIE) is keen to be the primary European hub for passengers seeking transfer flights to Eastern



European destinations. Its MCT to all destinations make it a realistic gateway to the Czech Republic and beyond. VIE has similar ambitions for the Middle East.

Vienna handled over 21 million people in 2011 and, when the Skylink is fully developed, it should push the airport's annual capacity to 35 million a year. Currently, the split between business and leisure traffic is approximately 40% -60%.

As this edition went to press, Vienna's new Pier West central security control zone (CSCZ) was due to open. This will streamline the departure process for those leaving via its B and C Gates by either guiding them through the CSCZ and into the pier's shopping and food and beverage area or allowing them to go directly to their departure gate. The existing security control lines placed directly at the pier's gates will then be removed. Looking a little further ahead, a government environmental impact study concerning a planned third runway is expected to announce its findings in the next two months

\* Source: Airports International -August/september 2012



# FARNBOROUGH INTERNATIONAL AIRSHOW 2012

• he biennial show was held on the period from 9 to 15 July 2012. At the end of a busy trade week, orders and commitments announced at this year's Farnborough International Airshow have been confirmed at US\$72 billion covering a total of 758 aircraft. The figures represent a 53% increase on the 2010 show and close to the 2008 figure when sales peaked at US\$88 billion. To add further weight to the show's success, 20% of exhibitors have already rebooked for the 2014 show.

Airshow organisers, Farnborough International Ltd, can also confirm that over the five days of the show, the event attracted just over 107,000 trade visitors and over 1500 exhibitors with representation right across the supply chain. There were also



Boeing Orders										
	737 MAX 8 737 MAX 9 737-800 737-900ER Total								tal	
Customer	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)
Air Lease Corporation	60	\$5,712	15	\$1,525	-	-	-	-	75	\$7,237
ALAFCO	20	\$1,904	-	-	-	-	-	-	20	\$1,904
Avolon	10	\$952	5	\$508	10	\$840	-	-	25	\$2,300
GECAS	75	\$7,140	-	-	25	\$2,110	-	-	100	\$9,250
United Airlines	-	-	100	\$10,170	-	-	50	\$4,480	150	\$14,650
Totals	165	\$15,708	120	\$12,203	35	\$2,950	50	\$4,480	370	\$35,341

# Airbus Orders

	A320	Oneo	A32 <sup>-</sup>	1neo	A3	19	A3	20	A3	21	A3	50-	A330	0-300	То	tal
Customer	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)	Aircraft	Value (million)
Cathay Pacific		-		-		-	-				10	\$3,206	-		10	\$3,206
Drukair		-		-	1	\$80	-						-		1	\$81
CIT	-	-		-	-	-	-					-	5	\$1,155	5	\$1,155
China Aircraft Leasing	-	-		-	-	-	25	\$2,472	8	\$828	-	-	-		36	\$3,301
Middle East Airlines	5	\$483	5	\$566	-	-	-					-			10	\$1,050
UTAir	-	-		-	-	-	-		20	\$2,072	-	-	-		20	\$2,072
Avolon	15	\$1,450	-	-	-	-	-				-	-	-		15	\$1,450
Arkia Israel	-	-	4	\$453	-	-	-				-	-	-		4	\$453
Totals	20	\$1,934	9	\$1,019	1	\$80	25	\$2,472	28	\$2,900	10	\$3,206	5	\$1,155	101	\$12,769

eighty military delegations from 46 countries attended with a further 13 delegations from the civil sector. This year's event saw good engagement from decision-makers with the Prime Minister opening the show, a further six Cabinet members making keynote speeches, as well as senior ministers visiting from the UK and overseas.

153 aircraft took part in the static and flying displays at the Farnborough Aerodrome in Hampshire including the Boeing 787 Dreamliner which flew on the first three days of the show and the Airbus



A380 in attendance for the full seven days. Flying display highlights included the Bell

Boeing V22 Osprey, a Saab Gripen Fighter and the Korean T50 jet trainer

# The Dilemma in Repairing Aircraft Composite Primary Structures



Simple Composite Repairs in non critical aircraft parts

rior to the introduction of the A380 and the B787 (and soon the A350), composite materials use was limited to non primary components in the aircraft. This design decision made composite repairs in these components a trivial issue where repairs would usually be carried out at the workshop using mainly hand methods. This process generally involved surface preparation, placing fibers (either Glass or Carbon with or without honeycomb) on the damaged area then adding resin. The repair patch is then left under vacuum and heated with typically a heat blanket for duration according to the type of resin in use. Composite patches have also been used successfully in repairing metal (mainly aluminum) structures. However, it has always been anticipated all along the aircraft design stages, that incorporating composite materials in primary structures meant any future damage repairs would be highly challenging.

In January of this year, news



By Dr Mostafa Bourchak\*

came out of delamination occurring in the newly commissioned Boeing B787 Dreamliners. This failure mechanism in composite materials has already been recently discussed by the author in issue 67 of the Civil Aviation magazine on the occasion of the launch of the Dreamliner. Boeing has already announced that this problem will slow B787 deliveries in the near terms but denied that the repair modifications will take long. In addition, it has been only four years since the introduction of Airbus A380, but in February of this year news came that the entire A380 fleet of the world needs to be checked for wing ribs to skin attachment cracks. Although Airbus related this to a metal part that was not manufactured correctly, one would wonder whether composite parts were involved or whether they will be in the future! There are already composite ribs in the Airbus A380. Again, this issue could imply that there were design rather than manufacturing short comings by Airbus contrary to what we are led to believe by Airbus. Consequently, these failure issues although not critical, they should be considered by aircraft manufacturers such as Boeing and Airbus as a wakeup call in case more significant composite delaminations occur that require complicated repairs.

Fortunately, scientists around the world have been paying attention to the issue of aircraft composite repair in primary structures. Last year, a consor-



3-D digitizing, milling and post milling digital scanning process that is being integrated in one device

tium of US universities led by Withcita State University was awarded a grant by NASA to develop ways of better composite repairs. The researchers from this university argued that in current repair practice, resin is being cured at the wrong temperature band due to the use of thermocouples on the surface of the patch leading to the inability in estimating the mechanical properties during the cure cycle. Consequently they are proposing a new approach where micro-size wireless temperature sensors (microwires) are used to monitor the cure temperature of the bondline and repair patch at different thicknesses inside the material. The obtained data will be fed into viscosity models that determine the material state in real-time leading to the prediction of final mechanical properties of the repair patch.

New innovations in composite repair have started to appear

such as HEATCON stretchable heat blanket for repair of contoured surfaces and Zimac HBS Hot Bonder that has multiple controllable heat source cells with feedback from multiple thermocouples. Another innovation that was in use by NASA and Boeing is the Double Vacuum Debulking (DVD) technology which helps remove gasses and volatiles that are released from a composite repair patch while under the curing process.

However, the introduction of the A380 and the Dreamliner meant that composite components that might require repair will be thicker than what has been seen in previous commercial airliners. This big change meant another big change in composite repair which is moving from manual to automated repair because of precision requirements and certification purposes. Funded research projects have already started producing prototypes of automated devices that incorporate nondestructive inspection (NDI), laser projection, 3-D digitizing, machining, composite pre-preg laying up (or resin infusion) and curing . EADS is one of many companies that are currently still developing these automated devices.

In keeping up with composite use in aircraft primary structures, It is no wonder why international scientific forums such as the one organized at the end of this year (Aircraft Composite Repair Management Forum, October 9th, Amsterdam) are being held to discuss the development of repair processes required to ensure aircraft safety and to live up to the promise of maintenance cost savings in all-composite or partially-composite aircraft

\* Department of Aeronautical Engineering - King Abdulaziz University

#### Busiest Airports in Europe, Africa and Asia by passenger traffic 2011

Rank	Airport	Country	Total Passengers	% Change
1	London Heathrow (LHR)	United Kingdom	69,433	▲5.4
2	Paris-Charles de Gaulle (CDG)	France	60,971	▲4.8
3	Frankfurt (FRA)	Germany	56,436	▲ 6.5
4	Amsterdam Airport Schiphol )AMS)	Netherlands	49,755	<b>▲</b> 10
4	Barajas (MAD)	Spain	49,671	▼0.4
7	Munich (MUC)	Germany	37,764	▲8.8
6	Leonardo da Vinci-Fiumicino (FCO)	Italy	37,652	▲3.6
8	Atatürk International (IST)	Turkey	37,452	▲ 16.5
9	Barcelona El Prat (BCN)	Spain	34,398	<b>▲</b> 17.8

#### Top 9 European Airports by Passenger Traffic (in Thousands)

#### Top 9 Asian Airports by Passenger Traffic (in Thousands)

Rank	Airport	Country	Total Passengers	% Change
1	Beijing(PEK)	People's Republic of China	77,404	<b>▲</b> 4. 7
2	Haneda (HND)	Japan	62,263	₹2.9
3	Hong Kong (HKG)	Hong Kong	53,314	▲5.9
4	Soekarno (CGK)	Indonesia	52,447	▲ 19.3
5	Dubai (DXB)	United Arab Emirates	50,978	▲8.1
6	Suvarnabhumi (BKK)	Thailand	47,911	▲12
7	Singapore Changi (SIN)	Singapore	46,544	▲10.7
8	Guangzhou Baiyun (CAN)	People's Republic of China	45,040	▲9
9	Shanghai Pudong (PVG)	People's Republic of China	41,450	▲2.6

### Top 9 African Airports by Passenger Traffic (in Thousands)

Rank	Airport	Country	Total Passengers	% Change
1	OR Tambo (JNB)	South Africa	18,922	▲2.9
2	Cairo (CAI)	Egypt	13,038	▼19.3
4	Cape Town (CPT)	South Africa	8,437	<b>▲</b> 4.1
6	Mohammed V (CMN)	Morocco	7,290	▲0.6
7	Murtala Muhammed (LOS)	Nigeria	6,748	▲7.6
5	Hurghada (HRG)	Egypt	5,875	▼25.9
8	Jomo Kenyatta (NBO)	Kenya	5,804	▲5.8
3	Sharm el-Sheikh (SSH)	Egypt	5,476	▼27
9	King Shaka (DUR)	South Africa	5,038	▲6.0

Total Passengers enplaned, Passengers in transit counted once







Source: ACI

Civil Aviation Septemper 2012, Shawal 1433

# Forthcoming Aviation Conferences, Exhibitions & Seminars

#### 1 September – 31 October 2012

#### 5 - 7 September

2012 Airport Forum: ASQ Forum Americas Jacksonville, FL, USA aci.aero/cda/aci\_common/

#### 9 - 12 September

ACI-NA 21st Annual Conference & Exhibition Calgary, Canada 2012.aci-na.org/

#### 10 September

Legal Aviation Workshop – LAW London, UK aeropodium.com/law/ aircraftleaselon.html

11 September AACO MRO Task Force Meeting Cairo, Egypt aaco.org/EventsDetails. aspx?pageid=4120

#### 11 - 13 September

Ground Handling Council (GHC)Task Force Meetings Montreal, Canada iata.org/events/Pages/ghc-task-force. aspx

#### 11 - 13 September

Airline E&M: Asia Pacific Conference Kuala Lumpur, Malaysia airlineengineering-asiapacific.com/

12 September IATA/ALTA Aeropolitical Forum

Miami, FL, USA iata.org/events/Pages/iata-alta.aspx

12 - 13 September Asia Pacific Aviation Safety Seminar Ho Chi Minh City, Vietnam aapairlines.org/

#### 12 - 14 September ICAO High-Level Aviation Security Conference Montréal, Canada icao.int/meetings/avsecconf/Pages/ default.aspx

#### 13 September

Aviation Day Central Asia & Caucasus Astana, Kazakhstan iata.org/events/Pages/central-asia. aspx

#### 13 - 14 September

8th Annual Latin America Airfinance Conference Rio de Janeiro, Brazil euromoneyseminars.com/Calendar. aspx?CategoryID=0

#### 14 September

Mediterranean Business Aviation St. Julian's, Malta aeropodium.com/cp/mba.html

#### 17 - 19 September

13th Annual Aviation Industry Suppliers Conference Toulouse, France speednews.com/ConferenceInfo. aspx?conferenceID=3

AIAA Aviation Technology, Integration, and Operations Conference (ATIO) Indianapolis, IN, USA aiaa.org/atioma2012

#### 17 - 20 September

Airport Development Indonesia Jakarta, Indonesia indonesiaairportdevl.com/

#### 18 - 19 September

Ground Handling Russia & CIS Moscow, Russia events.ato.ru/eng/events/ imaintenance/

#### 19 September

64th Executive Committee Meeting Dubai, UAE aaco.org/EventsDetails. aspx?pageid=2633

#### 20 September

AACO MRO Special CEOs Meeting Dubai, UAE aaco.org/EventsDetails. aspx?pageid=4121

Business Aviation Regional Forum Seattle, WA, USA nbaa.org/events/forums/20120920/

#### 20 - 21 September

Passenger Experience Workshop Miami, FL, USA iata.org/events/Pages/passengerexperience.aspx

2012 Airport Forum Istanbul, Turkey aci.aero/cda/aci\_common/

#### 23 - 25 September

AAAE Airport Social Media Summit Alexandria, VA, USA events.aaae.org/sites/120909/index. cfm

#### 25 - 26 September

10th Annual Middle East and Africa Airfinance Conference Dubai, UAE euromoneyseminars.com/

#### 25 - 27 September

Aircraft Interiors Expo Americas Seattle, WA, USA aircraftinteriorsexpo-us.com/

#### 25 - 28 September

TRAINAIR PLUS Global Symposium Singapore, Singapore icao.int/safety/TrainairPlus/ Pages/TRAINAIR-PLUS-Global-Symposium-2012.aspx

#### 26 - 28 September

Northwest Chapter AAAE Annual Conference and Exposition Park City, UT, USA nwaaae.org/nwcalendar.html

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#### 27 - 29 September

JET EXPO-International Business Aviation Exhibition Moscow, Russia 2012.jetexpo.ru/

#### 30 September – 1 October

World Route Development Strategy Summit (WRDSS) Abu Dhabi, UAE icao.int/meetings/wrdss2012/Pages/ default.aspx

#### 1 - 3 October

28th Annual Basics of Airport Law Workshop and 2012 Legal Update Washington, DC, USA events.aaae.org/sites/121006/

#### 2 October

Annual Aviation Finance Summit New York, NY, USA aviationfinancesummit.com/

#### 2-3 October

Aviation Health Conference London, UK quaynote.com/ankiti/ www/?code=iata12&f=home

#### 9 October

Aircraft Composite Repair Management Forum Amsterdam, Netherlands events.aviationweek.com/current/ compos/index.htm

MRO IT Europe Amsterdam, Netherlands events.aviationweek.com/current/

#### 9 - 10 October

Cargo & Mail Supply Chain Security Forum Geneva, Switzerland iata.org/events/Pages/cargosecurity.aspx

#### 9 - 11 October 15th annual MRO Europe

Conference and Exhibition Amsterdam, Netherlands events.aviationweek.com/current/

#### 10 - 11 October

AAAE Airfield Construction Management Workshop Columbus, OH, USA events.aaae.org/sites/121002/index. cfm AAAE Parking and Landside Management Workshop Las Vegas, NV, USA events.aaae.org/sites/121011/index. cfm

#### 10 - 12 October

Eighth Symposium and Exhibition on ICAO MRTDs, Biometrics and Security Standards Montréal, Canada icao.int/Meetings/mrtdsymposium-2012/

#### 16 - 18 October

World Passenger Symposium Abu Dhabi, UAE iata.org/events/passengersymposium/Pages/index.aspx

4th China International Aircraft Interiors & Design Expo Shanghai, China interiors-china.com

#### 17 - 18 October

Latin America & Caribbean Engineering & MRO Summit Sao Paulo, Brazil alta-ubma-mrosummit.com/

Aviation Outlook Asia Singapore, Singapore terrapinn.com/2012/aviationoutlook-asia/index.stm

#### 17 - 19 October

8th Maintenance Cost Conference (MCC) Atlanta, GA, USA iata.org/events/Pages/maintenancecost-conference.aspx

#### 18 - 19 October

2nd Annual Aircraft Engine World China Summit Shanghai, China opplandcorp.com/engine/

#### 19 October

Airline Business Plan Development London, UK aeropodium.com/cp/startup.html

#### 20 October

AAAE Safety Risk Assessment Compliance Workshop New Orleans, LA, USA events.aaae.org/sites/121012/index. cfm

#### 20 - 21 October

AAAE/ABS Essentials of Airport Business Management Workshop New Orleans, LA, USA events.aaae.org/sites/121009/index. cfm

#### 21 - 23 October

F. Russell Hoyt National Airports Conference (NAC) New Orleans, LA, USA events.aaae.org/sites/120901/index. cfm

#### 28 October

USTDA Asia Pacific Business Aviation Access Workshop and Reverse Trade Mission (RTM) Orlando, FL, USA events.aaae.org/sites/121105/index. cfm

#### 29 - 31 October

AAAE/IAAE 18th Annual North America/Central Europe Airport Issues Conference Budapest, Hungary events.aaae.org/sites/121010/index. cfm

#### 30 October

AVSEC World New York, NY, USA iata.org/events/Pages/avsec-2012. aspx

Airline E&M: North America Conference San Francisco, CA, USA airlineengineering-northamerica. com/

#### 30 - 31 October

Engine MRO Europe Paris France events.aviationweek.com/current/ mroengeu/