الهيئة العامة للطيران المدني
General Authority of Civil Aviation
Published Every 2 Months By The
General Authority of Civil Aviation, Kingdom of Saudi Arabia

CIVIL AVIATION

Issue 79, November 2013, Muharam 1435

GACA Issued the Second Tranche of Sukuk

2011

Reviving New Orleans International Airport

The New Najran Airport is Now Operational

Book now!
3 non-stop flights weekly from Saudi Arabia to Toronto

Starting from 28 October, fly non-stop 3 times weekly with SAUDIA from KSA to Toronto onboard our Boeing 777 and enjoy high levels of comfort, services and entertainment.

- Prices are inclusive of taxes
- Priority for early booking

KSA ⟶ TORONTO

Departure Airport	Departure Time	Arrival Airport	Arrival Time
RUH	01:00	JED	02:45
JED	04:15	YYZ	09:45
YYZ	12:45	JED	08:40
JED	09:40	RUH	11:15

Welcome to your world
www.saudiairlines.com

السعودية
SAUDIA
SKYTEAM

الهيئة العامة للطيران المدني
General Authority of Civil Aviation

Published Every 2 Months by the
General Authority of Civil Aviation,
Kingdom of Saudi Arabia

CIVIL AVIATION

Issue 79, November 2013, Muharam 1435

Edited & Designed by
Fikra, Media & Marketing Consultants
P.O.Box 8004
Jeddah, 21482
Saudi Arabia
Tel: 665-6669, 661-2601
Fax: 665-4719
E-mail: info@efikra.com
Web: www.efikra.com

contents

Dr. Faisal H. Al-Sugair *

Islamic Sukuk: GACA's Remarkable Initiative

The main characteristic that distinguishes Islamic Sukuk (Bonds) from other investment tools is that they are governed by the general rules of Islamic Sharia. These Sukuk are founded on a very important principle: "Profit/Loss sharing". Moreover, Islamic Sukuk are issued in equal values as they represent shares in the value of assets of a certain project or a special investment activity.

This idea of launching Sukuk emanated from the government's desire, represented by Ministry of Finance, to allow major public/private financial organizations to participate in financing projects sponsored by revenue generating government bodies capable of paying Sukuk profits and principal amounts at the end of their maturity. GACA was indeed the first government organization to participate in this initiative by issuing Sukuk for financing KAIA Development Project and later KKIA expansion Project since international airports are considered among the most successful major projects on the long run, and are usually among the strongest economic stimuli in the local and national levels.

The first tranche of Sukuk was issued in January 2012 for a total amount of SR15 billion. In September 2013 the second tranche was issued for an amount slightly higher than the first offering. An amount of SR 3 billion was allocated from the second offering to KKIA expansion project in Riyadh. The demand for both offerings was almost double the desired amounts which assures the soundness of the idea, the strength of our national economy, and the expected high growth of our air transport industry activities which guarantees yielding rewarding financial returns.

GACA has succeeded also in saving effort and time usually consumed in preparation, procedures setting, and companies invitation time, considering the big volume of potential investments and the fact that this process is surrounded by a complex network of procedures, systems, and financial, religious, regulatory, and economic queries. Time savings are usually accompanied by cost savings also.

GACA is well aware that this initiative would have never succeeded without Allah's blessings and the support of our wise leadership. Therefore, much thanks and appreciation is due to both Ministry of Finance and SAMA for their great support to GACA since day one up to the minutes of issuing the two tranches of Sukuk for financing the ultra big project.

I would like also to commend the great tiresome efforts exerted by His Highness the President of GACA in raising GACA's standard of performance in general, and ensuring the success of the Sukuk issuance supporting the financing of the construction of the new International Airport in Jeddah.

I would also like to extend my appreciation to all those who contributed to the success of this project ■

* VP, General Authority for Civil Aviation

GACA Issued the Second Tranche of Sukuk

In a press conference held on October 2nd, His Highness the President of the General Authority of Civil Aviation (GACA) stated that the Sukuk's second offering almost raised more than its double value. He added that the SR 15,211 billion Sukuk second offering was very much demanded by Saudi financial and investment establishments as the number of participating companies exceeded 31 companies compared to 25 in last year's offering which reflects the great strength of the Saudi Economy and the investors' confidence.

He added that this step comes as part of the government's plan to expand the Private Sector's role to participate in financing economically feasible development projects guaranteed by the Government. He pointed out that GACA has selected HSBC and NCB Financial Group as the main lead manager in addition to Standard Chartered Capital as an associate manager for organizing the launching of the second group of Sukuk.

In conclusion, he expressed his deep appreciation for the Ministry of Finance for backing up the project on behalf of the Government and SAMA.

It's worth mentioning that GACA has issued on Tuesday 24/9/2013 the second tranche of the Islamic Sukuk for financing part of KAIA Development Project in Jeddah and KKIA Development Project In Riyadh. The first tranche of Sukuk was issued in January 2012 for a total amount of SR15 billion ■

KSA Re-elected to the Council of (ICAO)

On 28 September 2013, the Kingdom of Saudi Arabia was re-elected to the Council of the International Civil Aviation Organization (ICAO). The Process took place during the 38th Session of the ICAO General Assembly (24 September – 4 October 2013).

The Kingdom of Saudi Arabia received (154) out of (172) total votes cast, and ranked fourth place in Part II which consists of 12 States.

This great achievement reiterates the important role played by the Kingdom of Saudi Arabia in civil aviation and air transport on the international level.

The Assembly meetings had several agenda items which covered issues regarding Aviation Safety, Aviation Security, Air Transport, Environment, Air Navigation and other prominent aviation-related issues. ■

Denver International Starts Concourse C Expansion

Construction has begun on a 5-gate westerly expansion of Concourse C at Denver International Airport (DIA). According to the gateway, the new 39,000 square-foot extension will be designed as an airy, light-filled, easy-to-navigate space.

Southwest Airlines plans to relocate their existing gates on Concourse A to Concourse C where the majority of their flights are currently located.

Construction of the new gate area is expected to be completed in November 2014. The five new gates will be C23 through C27

"Denver International Airport is vibrant, strong and growing. Our gates are fully leased, and in order to accommodate Southwest Airlines' quick and steady growth in Denver, we need to add five gates," enthuses manager of aviation, Kim Day.

"Denver ranks as Southwest Airline's fastest-growing station in the carrier's history. "They have grown their business from January 2006, when they offered 13 daily flights to three destinations to a Denver network today of more than 160 daily flights to nearly 60 non-stop destinations."

Three contractors will work on the $46 million expansion, which will be funded by Airport Capital Improvement Project revenues generated through airport revenues, not the city's general fund or taxpayer money.

Contracts include work on the building, apron paving and interior work ■

Dubai World Central Starts Operation

After issuing the certification for operation of its new passenger terminal, Dubai World Central-Al Maktoum International Airport launched its first passenger flight on October 27,2013. In a letter issued by GCAA's Air Navigation and Aerodrome department, the regulator accepted the implementation process for full passenger operations at the new airport and acknowledged the "hard work and commitment of Dubai Airports in achieving the status of full aerodrome operations".

Regulatory oversight is managed through the close co-operation of Dubai Airports airside operations staff who work closely with the GCAA to ensure that all aspects of operations at both DXB and DWC are fully compliant with the highest professional international standards and regulations set out in federal law.

"This is a welcomed and critical step forward in the process of preparing DWC for full passenger operations," says Jamal Zaal, vice president of airside operations at Dubai Airports.

Facility preparations culminate in advanced passenger trails on October 12, 2013 where the full passenger journey through the new terminal was tested by some 1,000 members of the travelling public to identify any areas for improvement before its doors open for business.

An advanced passenger trial using employees took place in early October as a dress rehearsal for the public trials.

Dubai Airports experienced overwhelming support from volunteers in its trial recruitment campaign and was oversubscribed within the first 48 hours.

"As was the case with Concourse A trials last year, the support from volunteers has been tremendous which only goes to prove that in Dubai, people are passionate about aviation," enthuses Paul Griffiths, CEO, Dubai Airports.

The new passenger terminal building is designed to accommodate five to seven million passengers per year.

When completed, DWC will be the largest airport in the world with five runways and capacity for 160 million passengers and 12 million tonnes of cargo ■

Source: AACO

London CIY Airport Seeks Permission for Expansions

City Airport (LCY) has submitted a planning application for permission to expand its current infrastructure to accommodate up to 120,000 aircraft movements and six million passengers annually by 2023.

The $320 million expansion program includes proposals for new aircraft parking stands (to accommodate larger planes), a parallel taxi-lane to optimise runway capacity in peak operating hours, and a terminal extension to ensure that LCY's convenience and speed-of-transit propositions are maintained.

Crucially, the airport is not proposing a second runway, or any extension to the existing runway. The gateway already has permission to handle up to 120,000 flights yearly under an application granted in 2009.

The gateway says its proposals will effectively allow it to double its passenger numbers (to six million) over the next ten years, while continuing to attract inward investment into east London and acting as a catalyst for the regeneration of the area.

LCY – based in the Royal Docks and predominantly serving the business and political centres of Canary Wharf, The City and Westminster – currently handles 70,000 flight movements and 3mppa.

The airport insists that the need for enhanced and expanded infrastructure is driven by three factors:

- The majority of passengers travelling through LCY are doing so for business reasons, and want to fly during the morning and evening peaks – freeing up capacity on the existing runway is the only way to meet demand and achieve the permitted level of movements.
- The next generation of aircraft, expected to arrive at the airport in 2016, are larger (and quieter and more fuel efficient) and require bigger parking stands.
- Increasing the capacity of the existing runway to allow more flights at peak, combined with larger aircraft, will mean greater numbers of passengers, all of whom will still want the convenience and time-saving of using LCY.

Declan Collier, CEO of London City Airport, believes that the expansion of the airport is vital – not just to satisfy growing demand for business travel, but also for the ongoing development of the Royal Docks and the east of London.

"The airport currently employs just under 2,100 people, of which more than 60% are local. The proposed development has the potential to create as many as 1,500 new jobs, providing further employment in east London.

"In terms of the wider UK economy, the airport already contributes £750m every year – through business and leisure tourist spend, the operation of businesses on site, productivity savings and air passenger duty – and when this project is completed, we can expect to double that amount." ■

Cape Town Plan to Build an Aerotropolis

Cape Town International Airport (CTIA) has confirmed its intention to become an aerotropolis, as it shares its ten-year strategic plan during its stakeholder planning session . When asked about the possibility of aerotropolis development, CTIA told GlobalAirportCities.com that: "It is our intention to move towards an aerotropolis however we need to partner with a variety of stakeholders to realise this."

Owned by the Airports Company South Africa (ACSA), CTIA is the continent's third largest airport processing over 8 million passengers annually. If realised, CTIA could become one of seven aerotropolis under development in Africa. The charge is led by neighbouring Ekurhuleni, also in South Africa, but there are also aerotropolis in production in Cairo, Dube TradePort in KwaZulu-Natal and four in Nigeria ■

Cover Story

Reviving New Orleans International Airport

In the 1930s, New Orleans was relying on a small municipal airport for its transportation. But soon, it was realized that the airport was not enough to cover the city's needs and thus began the planning for expansion. Before construction began, the United States became involved in World War II in 1941 and had started using the Moisant Field land as an air base.

2011

Prepared by: Eng. Ahmad Nada

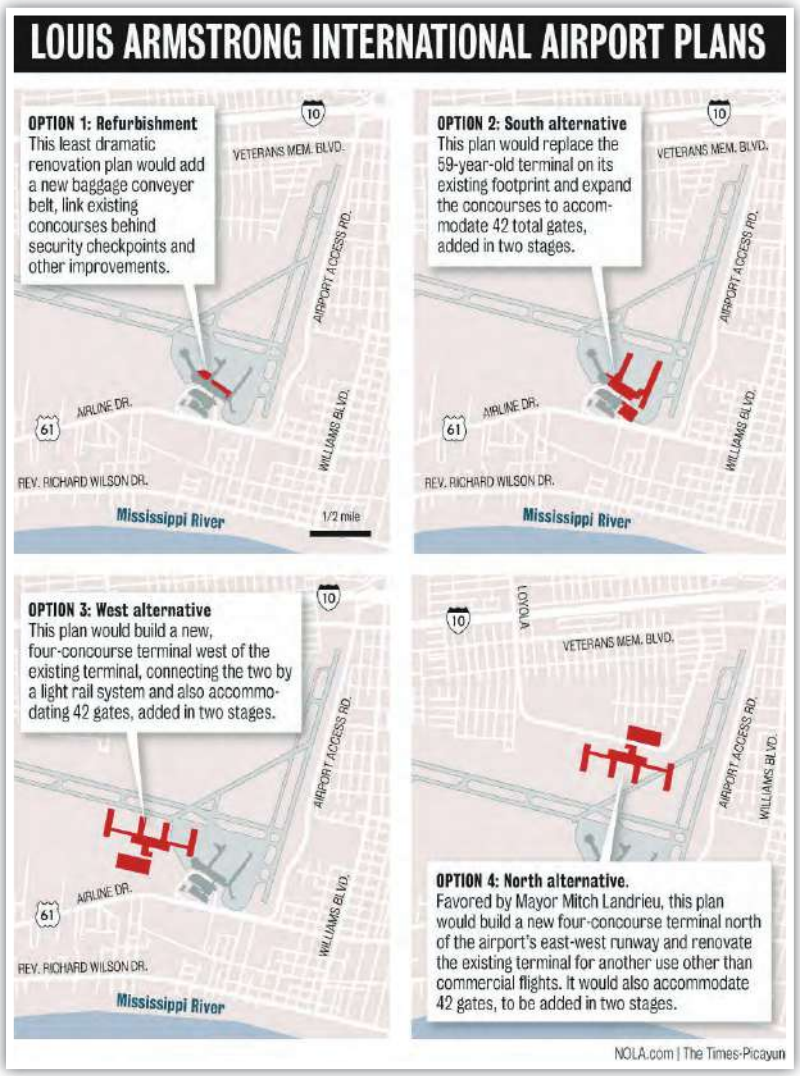
In 1946, after World War II had ended, the US government returned the land as well as an additional 295 acres to the city of New Orleans. In May 1946, commercial service began at Moisant Field. In 1959, a new terminal and two new concourses were added to the existing four runways. The official name of the airport was changed to New Orleans International Airport in 1960.

Amajor expansion was completed in 1974 after two new concourses were added to the main terminal. In 2001, the airport was renamed to Louis Armstrong New Orleans International Airport after the city's own famous Jazz musician's 100th birthday.

Throughout the past 12 years, the airport suffered damages from a couple of natural disasters. The first was in 2005 after Hurricane Katrina struck New Orleans. The airport was only open for military and evacuation purposes for about two weeks before it was reopened for commercial services. Most of the repairs were made by then. In February 2006, an F1 rated tornado caused some major damage to one of the airport's concourses. Many temporary repairs from the time of the hurricane had failed. Eventually, all of the damages were repaired by the end of 2006.

In 2011, the mayor of New Orleans, Mitch Landrieu, declared that it was time for the New Orleans International Airport to undergo a complete makeover. Aviation Director, Iftikhar Ahmad, said that such plans could cost as much as $1 billion. "When you come to our airport, you do not get the sense of place that you're in New Orleans," he said. "You don't get it in the food, you don't see it in the ambiance. And I think that's going to be part of the design criteria as we move forward."

Shortly after the mayor's declaration, the Aviation Board issued a request for proposals. A competitive selection process resulted in the formation of highly competent team of airport consultants who would evaluate different alternatives. The four best alternatives were as follows: refurbishment of the existing terminal, expansion on the south side, a new terminal on the west side and a new terminal on the north side. Each of the four options would allow for continued use of the airports runways and would be located within the airports existing footprint. All four plans had their different advantages



and disadvantages, but only one of them could be chosen to move forward.

Discussions and planning continued up to April 2013 when the New Orleans Aviation Board recommended an $826 million redevelopment plan to hurl the airport into the modern era. The plan was to build a new $650 million 30-gate terminal with three concourses and parking garage, as well as a $17 million privately financed hotel, all on the north side of the airport's east-west runway. The plan would also include a $72 million, state-financed power station and a new $87 million flyover from the I-10 road to direct eastbound traffic to the new terminal. The plan is known as the North Side Terminal Project.

Funding for the new terminal project will come from various airport self-generated funds along with federal and state aviation grants. The City of New Orleans will not be funding any part of the new terminal project. Additionally, by law, airport funding cannot be used for non-airport improvements.

"The Louis Armstrong New Orleans International Airport serves as a gateway to millions of tourists and business travellers each year and is a critical driver for the creation of jobs and economic development," said Mayor Landrieu. "Creating a new, modern airport is integral to our success as a world-class travel destination and hub for commerce. It makes economic sense and will create over 13,000 jobs in construction." The project also anticipates that at least 584 new permanent jobs will result from the north terminal and the redeveloped south facilities by 2018, and that an estimated 1,264 new permanent jobs are expected to result from the total program.

Construction is expected to start in 2014, with completion in 2018 – the city's 300th anniversary. Nolan Rollins, chairman of the New Orleans Aviation Board said that "For decades, the Aviation Board has studied the possibility of building a world class airport. We are now moving into action. This plan will create jobs and economic development for our community and will make our airport more competitive. Perhaps most importantly, we will have an airport worthy of our city." ■

Reference: Thompson, Steven. "Six of the best". Airport World

Studies

Will the Dreamliner ever be the meanest, leanest and most fuel-efficient plane on the skies?

The new Boeing Dreamliner 787-9

By Dr. Mostefa Bourchak*

As of May, 20th 2013, the Dreamliner was back flying and no longer grounded due to the infamous Lithium-ion battery problems. However, many issues have risen up since then which is making operators of the Dreamliner wonder whether it would really be the meanest, leanest and most-fuel efficient plane on the skies just as Boeing propagates it to be.

One of the most worrying incident was the fire that broke out on an Ethiopian Airlines 787 at London's Heathrow airport on July, 12th 2013, triggering the inspection of the planes' beacons, used to locate the aircraft in the event of a crash. This beacon is sourced by Honeywell Company. These so-called emergency locator transmitters are separate to the main electrical power supply battery faults, which led to the grounding of 787 aircraft worldwide earlier this year, after batteries overheated on two Japanese jets in quick succession in January 2013. In addition, three Dreamliners operated by the Japan ANA were found to have faulty electrical wiring in engines fire extinguishers. The faulty wiring may cause the engine fire extinguishers to malfunction in case of a real engine fire. The second Japanese Dreamliner operator, JAL, had to conduct checks on all its 10 Dreamliners. Additionally, JAL had to turn back a 787 plane travelling to Helsinki from Tokyo to check the wiring. A Norwegian Air Shuttle Dreamliner was forced to take one of its 787s out of service because of an issue with the aircraft's hydraulic pump. The most recent incident was in October of this year when a fuselage panel fell off an Air India Dreamliner midair without the pilots realizing. However, it is not yet known if this was a maintenance error or a design error.

However, despite these issues

Air India 787 losing fuselage panel in October 2013

The Dreamliner just out of the assembly line

the Dreamliner is still considered one of the most advanced planes in the industry and continues to remain popular. Ethiopian Airlines, which saw one of its Boeing 787 Dreamliners, catch fire in London, has expressed confidence in the plane and is proceeding with an order for eight more. British Airways has taken delivery of the first of its 24 Dreamliners, while Virgin Atlantic is due to receive the first of its 16 Dreamliners by the end of this year. Chinese carrier Xiamen Airlines has finalized a long-awaited deal for six Boeing 787 aircraft worth $1.27 billion at list prices, allowing it to begin long-haul services to the United States and Europe in 2014. Boeing and Australian carrier Jetstar Airways said they have marked the delivery of the carrier´s first 787 which is also the first Dreamliner for Australia. The carrier is the Qantas Group´s low-cost brand. It plans to introduce the 787 Dreamliner first on domestic routes and then its international network. Jetstar has a total of 14 Dreamliners on order and expects to fly an all-787 long-haul fleet by 2015. The most recent operator of the Dreamliner was Royal Brunei which made its Maiden Flight To Singapore in October of this year.

Moreover, Boeing is introducing a longer version of the Dreamliner which has already completed its maiden flight. The 787-9 can carry more passengers and fly further than the current model.

In general, Boeing increased its commercial aircraft deliveries in the third quarter by 14 percent compared to the same period a year earlier. The airframe manufacturer completed 170 commercial deliveries in the third quarter, compared to 149 in 2012. 23 of these delivered planes were 787s, up from 12 a year ago and 16 in the second quarter 2013. Boeing said it expects to deliver at least 60 of the 787s this year.

On the industrial side, Kawasaki Heavy Industries Ltd. will construct a new factory to produce larger fuselages for the Boeing 787 Dreamliner aircraft. The heavy machinery and engineering company will begin construction in 2014 on land adjacent to its existing facilities in Yatomi, Aichi Prefecture, and plans to start production as early as 2015. It plans to invest several tens of billions of yen into the factory. Boeing plans to deliver a 787 with a longer fuselage and increased seating from 2018. Kawasaki Heavy Industries makes the current model of 787 fuselages at its Yatomi factory, but will require a new plant for the larger version. The factory will include large-scale equipment to cure the carbon fiber used in the 787's body, the officials said.

Consequently, even though the Dreamliner is continuously suffering from minor incidents, many operators are still putting trust on the plane specially for its high fuel operational efficiency while other Boeing industry partners are willing to invest millions of dollars to continue supplying parts of the Dreamliner ■

* Aeronautical Engineering Department - King Abdulaziz University

Studies

SATELLITE COMMUNICATIONS

Part (2)

By Dr. Mohamed Elfatih Elamin*

A brief background material was presented in part (1) of the magazine issue 78 wherein the history and the different types of the Satellites generations was the main essence of the article. In this article {part (2)} some communications applications are presented.

(c) Structure

Communications Satellites are usually composed of the following subsystems:

- Communication Payload, normally composed of transponders, antenna, and switching systems
- Engines used to bring the satellite to its desired orbit
- Station Keeping Tracking and stabilization subsystem used to keep the satellite in the right orbit, with its antennas pointed in the right direction, and its power system pointed towards the sun
- Power subsystem, used to power the Satellite systems, normally composed of solar cells, and batteries that maintain power during solar eclipse
- Command and Control subsystem, which maintains communications with ground control stations. The ground control earth stations monitor the satellite performance and control its functionality during various phases of its life-cycle.

The bandwidth available from a satellite depends upon the number of transponders provided by the satellite. Each service (TV, Voice, Internet, radio) requires a different amount of bandwidth for transmission. This is typically known as link budgeting and a network simulator can be used to arrive at the exact value.

(e) SATELLITE APPLICATIONS

(e1) Telephoney

. The fixed Public Switched Telephone Network relays telephone calls from land line telephones to an earth station, where they are then transmitted to a geostationary satellite. The downlink follows an analogous path. Improvements in submarine communications cables, through the use of fiber-optics, caused some decline in the use of satellites for fixed telephony in the late 20th century, but they still serve remote islands such as Ascension Island, Saint Helena, Diego Garcia, and Easter Island, where no submarine cables are in service. There are

also regions of some continents and countries where landline telecommunications are rare to nonexistent, for example large regions of South America, Africa, Canada, China, Russia, and Australia. Satellite communications also provide connection to the edges of Antarctica and Greenland.

(e2) Radio

Satellite radio offers audio services in some countries, notably the United States. Mobile services go. Other services, such as Music Choice or Muzak's satellite-delivered content, require a fixed-location receiver and a dish antenna. In all cases, the antenna must have a clear view to the satellites. In areas where tall buildings, bridges, or even parking garages obscure the signal, repeaters can be placed to make the signal available to listeners.

Initially available for broadcast to stationary TV receivers, by 2004 popular mobile direct broadcast applications made their appearance with the arrival of two satellite radio systems in the United States: Sirius and XM Satellite Radio Holdings. Later they merged to become the conglomerate SiriusXM.

Radio services are usually provided by commercial ventures and are subscription-based. The various services are proprietary signals, requiring specialized hardware for decoding and playback. Providers usually carry a variety of news, weather, sports, and music channels, with the music channels generally being commercial-free.

Amateur radio operators have access to the amateur radio satellites that have been designed specifically to carry amateur radio traffic. Most such satellites operate as spaceborne repeaters, and are generally accessed by amateurs equipped with UHF or VHF radio equipment and highly directional antennas such as Yagis or dish antennas. Due to launch costs, most current amateur satellites are launched into fairly low Earth orbits, and are designed to deal with only a limited number of brief contacts at any given time ■

* Technical Advisor - GACA/ANS/SED/COMMUNICATIONS

Statistics

Top 30 North American Airports
Traffic Results 2012

Rank	City-Airport code	Passengers	% Change
1	ATLANTA, GA (ATL)	95462867	▲3.3
2	CHICAGO, IL (ORD)	66633503	▼ 0.1
3	LOS ANGELES, CA (LAX)	63688121	▲3.0
4	DALLAS/FORT WORTH, TX (DFW)	58591842	▲1.4
5	DENVER, CO (DEN)	53156278	▲0.9
6	NEW YORK, NY (JFK)	49291765	▲3.5
7	SAN FRANCISCO, CA (SFO)	44399885	▲8.5
8	CHARLOTTE, NC (CLT)	41228372	▲5.6
9	LAS VEGAS, NV (LAS)	40799830	▲0.6
10	PHOENIX, AZ (PHX)	40421611	▼ 0.4
11	HOUSTON, TX (IAH)	39891444	▼ 0.6
12	MIAMI, FL (MIA)	39467444	▲3.0
13	ORLANDO, FL (MCO)	35214430	▼ 0.4
14	TORONTO, ON, CANADA (YYZ)	34912456	▲4.4
15	NEWARK, NJ (EWR)	33993962	▲0.9
16	SEATTLE, WA (SEA)	33219723	▲1.2
17	MINNEAPOLIS, MN (MSP)	33125768	▲0.2
18	DETROIT, MI (DTW)	32205358	▼ 0.7
19	PHILADELPHIA, PA (PHL)	30228596	▼ 2.0
20	BOSTON, MA (BOS)	29315881	▲1.6
21	NEW YORK, NY (LGA)	25712030	▲6.6
22	FORT LAUDERDALE, FL (FLL)	23550249	▲0.9
23	BALTIMORE, MD (BWI)	22679680	▲1.3
24	DALLAS, VIRINIA (IAD)	22408105	▼2.8
25	SALT LAKE CITY, UT (SLC)	20096549	▼1.7
26	WASHINGTON Reagan, (DCA)	19630213	▲4.4
27	CHICAGO, IL (MDW)	19516127	▲3.4
28	VANCOUVER, BC, CANADA (YVR)	17747297	▲3.2
29	SAN DIEGO, CA (SAN)	17250103	▲2.5
30	TAMPA, FL (TPA)	16820859	▲0.9

Passengers enplaned and deplaned, passengers in transit counted once.

Rank	City-Airport code	Cargo	% Change
1	MEMPHIS, TN (MEM)	4016126	▲2.5
2	ANCHORAGE, AK (ANC)	2449550	▼ 3.7
3	LOUISVILLE, KY (SDF)	2168365	▼ 0.9
4	MIAMI, FL (MIA)	1929889	▲4.9
5	LOS ANGELES, CA (LAX)	1771907	▲3.7
6	CHICAGO, IL (ORD)	1512185	▼ 3.0
7	NEW YORK Kennedy, NY (JFK)	1283663	▼ 5.5
8	INDIANAPOLIS, IN (IND)	932105	▲2.7
9	NEWARK, NJ (EWR)	743762	▼ 7.5
10	ATLANTA, GA (ATL)	646459	▼ 2.5
11	DALLAS/FORT WORTH, TX (DFW)	602245	▲1.4
12	CINCINNATI, OH (CVG)	543784	▲11.6
13	OAKLAND, CA (OAK)	499138	▼ 0.1
14	HOUSTON, TX (IAH)	437998	▼ 1.8
15	ONTARIO, CA, CANADA (ONT)	413322	▲9.1
16	PHILADELPHIA, PA (PHL)	389007	▼ 6.3
17	SAN FRANCISCO, CA (SFO)	380791	▼ 0.3
18	SEATTLE, WA (SEA)	283643	▲2.0
19	PHOENIX, AZ (PHX)	272537	0.0
20	DALLAS, VIRINIA (IAD)	267875	▼ 11.5
21	BOSTON, MA (BOS)	246677	▼ 1.7
22	DENVER, CO (DEN)	236643	▼ 4.6
23	VANCOUVER, BC, CANADA (YVR)	226136	▲1.1
24	DETROIT, MI (DTW)	218513	▲6.1
25	PORTLAND, OR (PDX)	198946	▲1.5
26	MINNEAPOLIS, MN (MSP)	197824	▼ 8.1
27	WINNIPEG, MB, CANADA (YWG)	174882	▼ 0.7
28	ORLANDO, FL (MCO)	172193	▼ 8.0
29	SALT LAKE CITY, UT (SLC)	167263	▲5.8
30	SAN DIEGO, CA (SAN)	130616	▲0.4

Total Cargo: Loaded and unloaded freight and mail in metric tons. Data includes transit freight.

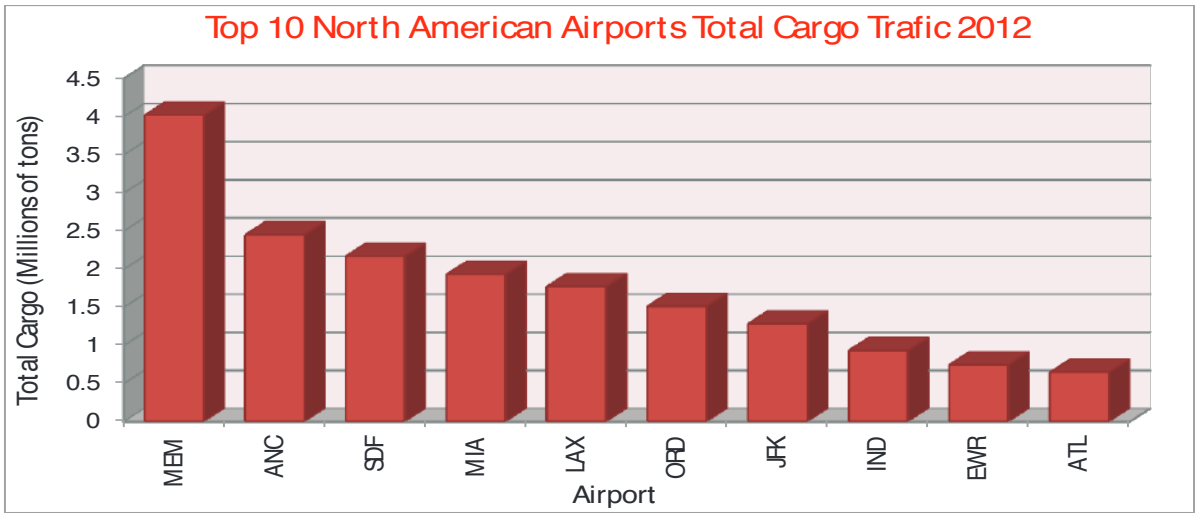
Rank	City-Airport code	Movements	% Change
1	ATLANTA, GA (ATL)	930250	▲0.68
2	CHICAGO, IL (ORD)	878108	▲0.26
3	DALLAS/FORT WORTH, TX (DFW)	650124	▲0.51
4	DENVER, CO (DEN)	612557	▼ 2.58
5	LOS ANGELES, CA (LAX)	605480	▲0.26
6	CHARLOTTE, NC (CLT)	552093	▲2.27
7	LAS VEGAS, NV (LAS)	527739	▼ 0.71
8	HOUSTON, TX (IAH)	510242	▼ 3.5
9	PHOENIX, AZ (PHX)	450204	▼ 2.55
10	PHILADELPHIA, PA (PHL)	443236	▼ 1.09
11	TORONTO, ON, CANADA (YYZ)	433990	▲1.32
12	DETROIT, MI (DTW)	427814	▼ 3.43
13	MINNEAPOLIS, MN (MSP)	426818	▼ 1.75
14	SAN FRANCISCO, CA (SFO)	424566	▲5.2
15	NEWARK, NJ (EWR)	414195	▲1.08

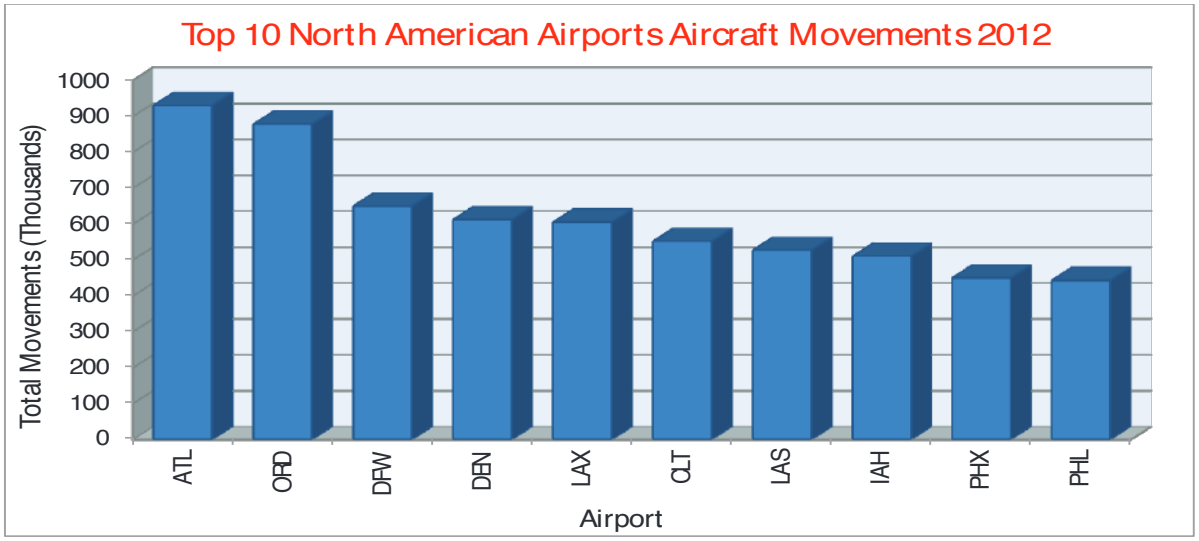
Rank	City-Airport code	Movements	% Change
16	NEW YORK, NY (JFK)	401950	▼ 1.67
17	MIAMI, FL (MIA)	391195	▼ 0.86
18	NEW YORK, NY (LGA)	370050	▲1.38
19	PHOENIX, AZ (DVT)	365432	▲15.12
20	BOSTON, MA (BOS)	354725	▼ 3.79
21	SALT LAKE CITY, UT (SLC)	328208	▼ 8.15
22	DALLAS, VIRINIA (IAD)	312070	▼ 4.71
23	SEATTLE, WA (SEA)	309597	▼ 1.7
24	ORLANDO, FL (MCO)	301102	▼ 2.83
25	VANCOUVER, BC,CANADA (YVR)	296394	▼ 0.15
26	WASHINGTON, DC (DCA)	288176	▲2.27
27	DAYTONA BEACH, FL (DAB)	284512	▲28.76
28	LONG BEACH, CA (LGB)	281103	▼ 9.78
29	MEMPHIS, TN (MEM)	271127	▼ 13.04
30	ANCHORAGE, AK (ANC)	270987	▼ 0.59

Total Movements: landing + take off

Source: ACI, Airports participating in the ACI Annual Traf¿c Statistics Collection


Top 10 North American Airports Passenger Trafic 2012
Total passengers (Millions)
100
90
80
70
60
50
40
30
20
10
0
ATL
ORD
LAX
DFW
DEN
JFK
SFO
CLT
LAS
PHX
Airport


Top 10 North American Airports Total Cargo Trafic 2012
Total Cargo (Millions of tons)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
MEM
ANC
SDF
MIA
LAX
ORD
JFK
IND
EWR
ATL
Airport


Top 10 North American Airports Aircraft Movements 2012
Total Movements (Thousands)
1000
900
800
700
600
500
400
300
200
100
0
ATL
ORD
DFW
DEN
LAX
CLT
LAS
IAH
PHX
PHL
Airport

Conferences

Forthcoming Aviation Conferences, Exhibitions & Seminars

15 November 2013–14 January 2014

16 - 17 November
133rd Slot Conference
Fort Worth, TX, USA
iata.org/events/sc133/Pages/index.aspx

17 - 19 November
AAAE Human Capital Strategies Conference
Baltimore, MD, USA
events.aaae.org/sites/131110/index.cfm

17 - 21 November
Dubai Air Show
Dubai, UAE
dubaiairshow.aero/

18 November
Satcom Direct - Dubai's Office First Year Anniversary
Dubai, UAE
aeropodium.com/satcomdirect.html

Gulf Aviation Training Event
Dubai, UAE
arabaviation.com/en-us/informationnews/eventscalendar.aspx

18 - 20 November
Regional Runway Safety Seminar, Asia Pacific
Kuala Lumpur, Malaysia
icao.int/Meetings/MalaysiaRRSS/Pages/default.aspx

18 - 21 November
Modern Airports Africa
Nairobi, Kenya
modernairportsafrica.com/

15th Annual Ground Handling International Conference
Madrid, Spain
groundhandling.com/annual/

18 - 26 November
Fuel Project - Tender 2014 - Negotiations Meeting
Casablanca, Morocco
aaco.org/EventsDetails.aspx?pageid=4441

19 - 20 November
3rd Cargo & Mail Supply Chain Security Forum
Limerick, Ireland
iata.org/events/Pages/cargo-security.aspx

19 - 21 November
Cargo Claims & Loss Prevention Conference
Limerick, Ireland
iata.org/events/Pages/cclp.aspx

20 - 21 November
Global Aviation Human Capital Summit
Lisbon, Portugal
iata.org/events/Pages/global-hc-summit.aspx

1st Aviation HR Conference
Madrid, Spain
groundhandling.com/aviationhr/

SAE 2013 Augmented and Virtual Reality (AR/VR) Technologies Symposium
Stuttgart, Germany
sae.org/events/arvr/

21 - 22 November
AVM Summit USA
Orlando, FL, USA
allconferences.com/c/avm-summit-usa-orlando-2013-november-21

Air Transport Marketing & Sales
Moscow, Russia
eventful.com/moscow/events/air-transport-marketing-sales-/E0-001-058703505-6

24 November
CANSO Middle East CEO Committee Meeting (MEC3)
Amman, Jordan
canso.org/cms/showpage.aspx?id=5137

24 - 26 November
45th AFRAA Annual General Assembly
Mombasa, Kenya
aviationbusinessjournal.aero/events/45th-afraa-annual-general-assembly.aspx

25 - 26 November
The Future of Air Transport
London, UK
marketforce.eu.com

CANSO ME ANSP, Airspace User & Stakeholder Engagement (MEAUSE) Conference
Amman, Jordan
canso.org/meauseconference2013

26 - 27 November
Airport IT & T
Copenhagen, Denmark
internationalairportreview.com

Developing Airline and Airport Commercial Synergies
Amsterdam, TBC
flightglobalevents.com/airlinesynergies2013

World Aviation Summit & CAPA Aviation Awards For Excellence
Amsterdam, TBC
centreforaviation.com/events/

26 - 28 November
CEPA Expo 2013: Connecting Business & Commercial Aviation
Prague, Czech
cepaexpo.com/

28 November
Fourth Annual Cargo Ball
Dubai, UAE
cargoball.com/

2 - 3 December
Ascend Aviation 2020 Finance Forum
San Francisco, CA, USA
rbiconferencetesting.com/ascendffsanfrancisco2013

2 - 5 December
Seventh Triennial International Aircraft Fire & Cabin Safety Research Conference
Philadelphia, PA, USA
fire.tc.faa.gov/2013Conference/conference.asp

2 - 6 December
2nd Integrated Settlement Week
Montreal, Canada
iata.org/events/Pages/iswtwo.aspx

3 - 4 December
China Aeronautical Materials and Manufacturing Equipment Summit
Beijing, China
galleonevents.com/CAMS2013/2013email/email_02.html

7th Annual Flight Operations Conference
Frankfurt, Germany
aircraft-commerce.com/conferences/default.asp

3 - 5 December
Expo Airport
Sao Paulo, Brazil
expo-airport.com

3 - 6 December
The 3rd China Aviation Summit
Shanghai, China
aviation-summit.com/

5 - 6 December
International Aviation Issues Seminar
Washington, DC, USA
aci-na.org/event/2421

5th China Airport Commercial Summit
Shanghai, China
china-acs.com/home

6 December
Legal Aspects of Aircraft Leasing & Financing
Washington, DC, USA
aeropodium.com/aircraftlease.html

Russia Airport Sector Briefing
London, UK
adsgroup.org.uk/articles/37082

8 - 9 December
Kuwait International Airport Expansion Summit
Kuwait, Kuwait
kuwaitairportshow.com/

9 - 11 December
ACI-NA/ACC Airport Planning & NEPA Workshop
Washington, DC, USA
aci-na.org/event/1039

9 - 13December
ICAO Air Services Negotiation Conference (ICAN 2013)
Durban, South Africa
icao.int/meetings/ican2013/Pages/default.aspx

10 - 11 December
Strategic Trends in Air Cargo - Regional Symposium
Sao Paulo, Brazil
icao.int/Meetings/Regional-Symposia/AC-SP13/Pages/default.aspx

AFRR - Aviation Fire, Rescue & Resilience
Dubai, UAE
tangentlink.com/event/aircraft-rescue-fire-fighting/

Aircraft Acquisition Planning
Scottsdale, AZ, USA
conklindd.com/Default.aspx

10 - 12 December
Next Generation of Aviation Professionals (NGAP) & TRAINAIR PLUS Regional Symposium
Johannesburg, South Africa
icao.int/safety/TrainairPlus/Pages/RegionalSymposia.aspx

Multi-crew Pilot License (MPL) Symposium
Montréal, Canada
icao.int/meetings/mpl/Pages/default.aspx

15 - 17 December
AAAE Military/Civilian Joint Use Issues Conference
San Antonio, TX, USA
events.aaae.org/sites/131203/index.cfm

7 - 10 January
28th Annual Aviation Issues Conference
Kohala Coast, HI, USA
events.aaae.org/sites/140101/index.cfm

12 - 14 January
Risk Management Conference
West Palm Beach, FL, USA
aci-na.org/event/3196

13 - 17 January
10th AIAA Multidisciplinary Design Optimization Specialist Conference
National Harbor, MD, USA
aiaa.org/EventDetail.aspx?id=18410

16th AIAA Non-Deterministic Approaches Conference
National Harbor, MD, USA
aiaa.org/EventDetail.aspx?id=18411

22nd AIAA/ASME/AHS Adaptive Structures Conference
National Harbor, MD, USA
aiaa.org/EventDetail.aspx?id=18389

AIAA Atmospheric Flight Mechanics Conference
National Harbor, MD, USA
aiaa.org/EventDetail.aspx?id=18406

AIAA Modeling and Simulation Technologies Conference
National Harbor, MD, USA
aiaa.org/EventDetail.aspx?id=18409

14 - 17 January
NBAA Schedulers & Dispatchers Conference
New Orleans, LA, USA
web.nbaa.org/events/sdc/2014/