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# November: A "Frenzy" Month for Aircraft Sales



November was a really a "busy" month regarding the sales and delivery pace of commercial aircraft. It is indicative that Airbus booked (149) orders for its A320, A330 and A380 jetliner families and delivered (59) aircrafts from these three product lines. On the other side of the Atlantic Ocean, Boeing made history with a really remarkable week resulting

in orders and commitments for (359) airplanes. Boeing has now set a record for (777) orders in a single year with (192) to date. That surpasses the previous record of (154) set in 2005. The company also announced two record-setting deals with Emirates and Lion Air, as well as other deals during and after the Dubai Air Show.

The best-selling airplane for Airbus was the A320neo new engine option for the A320 Family. Orders came from key customers in the Middle East, United States and Europe. One of the main customers was ALAFCO, the Kuwait-based international aviation lease and finance company ordering (50) A320neo jetliners. Qatar Airways, ordered all three aircraft types

offered in this latest version: (30) A320neos, (14) A321neos and (6) A319neos. Additionally, the Aviation Capital Group – the United Statesbased global aircraft leasing company – signed a purchase agreement for (30) A320neo aircraft, while Transaero became the A320neo's first customer in Russia and CIS with its order for (8) of the jetliners.



Furthermore, Qatar Airways placed a repeat order for the A380 – adding (5) of its flagship airliners to its (5) already on contract. In addition, Hawaiian Airlines' ordered (5) more A330-200s – which will support the continued expansion of its network and replace the carrier's current 767-300s. Finally BOC Aviation an Asia-based aircraft leasing company, put contract for an A330-300.

During November, Airbus delivered nearly two new aircrafts per day. The deliveries were



composed of (45) A320 Family jetliners, (11) A330s (including another of the new A330-200F freighters), and (3) A380s (one each to Korean Air, Emirates and Qantas).

Boeing, Airbus' main competitor experienced a historic month. During and after the Dubai Airshow which ended on November 17<sup>th</sup>, Boeing exceeded expectation as it secured major orders:

- ✓ Emirates Airline ordered (50) 777-300ERs, with options for (20) more.
- ✓ Oman Air ordered (6) 787-8s.
- ✓ Qatar Airways ordered (2) 777 Freighters.

- ✓ Lion Air committed to buy (201) 737 MAXs and (29) Next Generation 737-900ERs. The agreement also includes purchase rights for an additional (150) airplanes.
- ✓ Aviation Capital Group (ACG) committed to buy (35) 737 MAX airplanes and finalized a firm order for (20) Next-Generation 737-800s.
- ✓ Singapore Airlines finalized order for (8) 777-300ERs.
- ✓ Unidentified customer ordered (8) 777s.

November 2011, was definitely a very "busy" month for the big aircraft companies. Nevertheless, it seems that even busier months are going to come as according to the estimations the need for new aircraft will keep getting bigger.

Kyriazis Vasileios,

**Epicos Newsletter Head Editor** 

# Aircraft Market: Regional and Global Estimations



Despite the recent economic standstill the aircraft market is on the rise. This positive trend is expected to continue. According to the forecasts made by Boeing there will be a \$4 trillion market for new aircraft over the next 20 years. The company's annual commercial aviation market analysis foresees a market for (33,500) new passenger airplanes and

freighters between 2011 and 2030. The main reason is that traffic will be more than double in the next twenty years as aviation becomes more accessible to those in emerging markets. It is indicative that people in China take just 0.2 trips per person per year, whereas in the USA they take on average nearly (2) trips per person per year. Increasing wealth in countries like China will automatically increase the need for more aircrafts as more people will have access to air travel.

According to the Airbus Global Market Forecast (GMF), the U.S. and Canada will require

(5,901) new passenger aircrafts of more than (100) seats between today and 2030. In that same time period, there will be a need for (414) new freighter aircrafts. This total of (6,315) new aircrafts deliveries has an estimated value of \$648 billion. According to Boeing's estimations air carriers in North America will take delivery of (7,530) new airplanes over the next (20) years at a market value of \$760 billion. Taking retirements of airplanes into account, the North America fleet will grow from (6,610) airplanes today to about (9,330) airplanes by 2030.

Regarding Middle East Airbus estimation is that the region will require (1,921) new passenger and freighter aircrafts (above 100 seats) between 2011 and 2030 valued at US\$347.4 billion. Of these, 1,882 are passenger aircrafts (US\$336.3 billion) and (39) are freighter aircrafts (US\$11.1billion). According to Boeing



airlines in the Middle East will need estimated of (2,520) airplanes worth \$450 billion by 2030. The forecast comes as the region's carriers continue to surpass global air traffic and



capacity growth rates. Boeing estimates that the Middle East's fleet of passenger airplanes will grow from a current fleet of (1,040) airplanes to a projected (2,710) airplanes, an increase of 160%, 34% of the projected demand will be for airplanes to replace current aircrafts, while 66% will be part of fleet expansion plans. The main reasons for the continued strong demand for new aircrafts are fleet expansion and

replacement, an increasing number of mega cities and the ongoing expansion of the region as a geographical hub and tourist destination.

Latin America's GDP is growing faster than the world at an average annual rate of 5%, while the region's middle class is expected to surge 75% in the next 20 years. These have as a result that the area will need more aircrafts in the forthcoming years. According to Airbus Latin America will require 2,028 new passenger aircrafts of more than (100) seats between today and 2030, including (1,653) single-aisle, (334) twin-aisle and (41) very large aircrafts and estimated at \$197 billion. Boeing's estimation for the area is that air carriers in Latin America will require (2,180) new airplanes worth approximately \$210 billion over the next 20 years.

The growing wealth of people around the globe gives them the opportunity to afford aviation travel. This effective and continuing democratization of aviation has as a result the increase of demands for new aircraft.

Kyriazis Vasileios,

**Epicos Newsletter Head Editor** 

# Epicos "Industrial Cooperation and Offset Projects"

epicos.com Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

### For Further Information Press Here

Design and manufacturing of advanced retractable light weight landing gear for Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicle (UAV) systems and general aviation aircraft under FAR PART 23



A company with long extensive experience in providing cutting edge technological services and products for the aeronautical and automotive markets is proposing, in the frame of an offset program, the collaboration with Aerospace and Defense Prime contractors for the design and manufacturing of advanced retractable light weight landing gear for Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicles (UAV) systems.

### For Further Information Contact our ICO Department

Mail at: g-menexis@epicos.com

### Development of an integrated parts' codification system complying with NATO standards



A company providing solutions for corporate and/or governmental organizations critical information systems is proposing the development of an Integrated Parts Codification System according to NATO Supply System standards. This system will provide supply items codification functions for the Armed Forces or other organizations where proper parts codification according to NATO standards and related information

exchange is crucial for the organization operations. An option is provided for integration with an existing life-cycle support product.

### For Further Information Contact our ICO Department

Mail at: g-menexis@epicos.com

# Epicos- Amazon



# FAR/AMT 2012: Federal Aviation Regulations for Aviation Maintenance Technician (FAR/AIM series), by Federal Aviation Administration



As the most accurate and reliable regulatory reference on the market for aviation maintenance technicians (AMTs), this volume of the Federal Aviation Regulations (FAR) and relevant advisory circulars clearly marks all changes from the previous year. Additional AMT references from the FAA Advisory Circular publication makes this book the most comprehensive regulations book available for aviation technician and repair centers. All data is indexed by subject matter and features the regulations from the original government text. Reformatted for better legibility, this edition offers access to a free e-mail and downloads service that posts FAR

updates throughout the year.

### Gas Turbine Propulsion Systems (Aerospace Series), by Bernie MacIsaac, Roy Langton



Major changes in gas turbine design, especially in the design and complexity of engine control systems, have led to the need for an up to date, systems-oriented treatment of gas turbine propulsion. Pulling together all of the systems and subsystems associated with gas turbine engines in aircraft and marine applications, Gas Turbine Propulsion Systems discusses the latest developments in the field. Chapters include aircraft engine systems functional overview, marine propulsion systems, fuel control and power management systems, engine lubrication and

scavenging systems, nacelle and ancillary systems, engine certification, unique engine systems and future developments in gas turbine propulsion systems. The authors also present examples of specific engines and applications.

### **Epicos Newsroom**



### Romania ratifies US missile shield agreement

The Romanian parliament on Tuesday ratified an accord to host US missile interceptors on its soil, a day before a meeting of the 28 NATO members in Brussels.

The Senate unanimously adopted the draft law ratifying the Romania-US agreement signed in September that would allow the establishment and operation of a US land-based ballistic missile defence system in Romania as part of NATO's efforts to build a continental missile shield.

"The location of some elements of the US missile shield represents a very important contribution to the security of Romania, the US and the entire alliance," Foreign Minister Teodor Baconschi told senators, according to Mediafax news agency.

The draft law was adopted by the lower house in November and is now set to be promulgated by President Traian Basescu. The deployment of the missile interceptors is expected to take place in 2015 at a former airbase in southern Romania.

The missile shield, which is based on US technology, is one of the transatlantic alliance's main development axes for the coming years, NATO Secretary General Anders Fogh Rasmussen has said.

Along with Romania, Turkey, Poland and Spain have also agreed to take part in the project.

Source: 2011 AFP, Agence France-Presse (AFP)

### IMF approves another bailout tranche for Greece

MOSCOW, December 6 (RIA Novosti) - The International Monetary Fund said it had approved a 2.2-billion (\$2.9 billion) euro installment of international financial aid to keep the Greek economy afloat. The Greek authorities earlier said they needed to receive cash before Christmas in order to avoid a looming default. On November 30 finance ministers from 17 eurozone countries (Eurogroup) agreed at a meeting late to provide Greece with an 8 billion euro (\$10.7 billion) bailout loan installment. "The Executive Board of the International Monetary Fund (IMF) today completed the fifth review of Greece's economic performance under a program supported by a three-year Stand-By Arrangement (SBA) for Greece," IMF said in a statement posted on its website."The completion of the review enables the immediate disbursement of an amount equivalent to about 2.2 billion euro." The installment would bring total disbursements from IMF under the SBA to about 20.3 billion euro (\$27 billion). The current installment is sixth under a 110-bln euro (\$150 bln) bailout package from Eurozone nations and the International Monetary Fund, approved in May 2010. At the end of October, eurozone leaders clinched a deal with private banks and insurers to write off 50 percent of Greece's debt, which currently stands at over 360 billion euros or 160 percent of the country's GDP, in exchange for a new austerity program, which Greece must implement in the next few years to get financial aid and prevent a default.

Source: Ria Novosti

### Airbus says it heads for record year with 1,378 orders

European aerospace giant Airbus said on Tuesday it had booked 1,378 orders this year by the end of November, confirming it was headed for a record year despite the cancellation of some orders for its A380 superjumbo airliners.

The company said it suffered a total of 143 cancelled orders between January 1 and the end of November, including the cancellation of 10 out of 19 orders for the A380.

The cancellations were made by US aircraft lessor ILFC, but an Airbus spokesman told AFP they this was not significant and that Airbus planned to speed up production of the A380.

"These cancellations are not significant because we cannot look at only one year. We must analyse orders over several years," the spokesman said.

"We are at 243 orders for superjumbos for 18 clients, which corresponds to about six years of production," he said.

At the end of November, Airbus was well ahead of US rival Boeing, which had taken a total of 518 orders so far in 2011.

Orders for Airbus's A320 family of planes accounted for 1,307 of the total orders so far this year.

Source: 2011 AFP, Agence France-Presse (AFP)

### Free Visitor Passes to the International Armoured Vehicles Exhibition Now Available

Free visitor passes to the International Armoured Vehicles Exhibition Hall are now available through application online at <a href="https://www.internationalarmouredvehicles.com">www.internationalarmouredvehicles.com</a>.

With the visitor pass, attendees can be part of the world's largest annual meeting point dedicated to the armoured vehicle community, benefiting from unlimited access to the Exhibition Hall/Solution Zone. This year's show features a newly enhanced Innovation Stage, the 2012 Innovation Awards, access to 100 leading defence companies, and more networking opportunities than before.

Annually, this major defence event attracts thousands of visitors from across the world, providing a platform at which to gain expert insights on armoured vehicle trends, global procurement activity and lessons learned from the battlefield, as well as to conduct business with the world's leading vehicle, system and component manufacturers and smaller specialist suppliers.

Although Defence IQ has not yet released their full Innovation Stage Schedule, they have just announced that briefings will be provided by representatives from Tawazun, IVECO, Fedders Lloyd, WEW, Barco Defence and Aerospace and Kaller.

Complete event information is available online at <a href="www.internationalarmouredvehicles.com">www.internationalarmouredvehicles.com</a>. Visitor passes are free of charge until January 2012. EPICOS readers can secure a free pass by using promotional code IAVMP EPICOS.

Passes to the conference segment of the event are also available for purchase. Email the Armoured Vehicles Team for all individual and group discount option at <a href="mailto:Armouredvehicles@iqpc.co.uk">Armouredvehicles@iqpc.co.uk</a>. EPICOS are eligible for a 20% discount using the same promotional code IAVMP EPICOS.

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Source: Epicos, IQPC

Elbit Systems' U.S. Subsidiary, Awarded \$38.5 Million IDIQ Contract for Upgrade of all U.S. Air Force Block 30 and Block 50 F-16 Aircraft Wide Angle Conventional (WAC) Head-Up Displays

Haifa, Israel, December 4, 2011 – Elbit Systems Ltd. (NASDAQ and TASE: "ESLT") announced today that its subsidiary in the U.S., Elbit Systems of America, LLC. ("Elbit Systems of America"), has been awarded a five-year, Indefinite Delivery/Indefinite Quantity (IDIQ) contract, in an amount of up to \$38.5 million, by the Defense Logistics Agency-Ogden for the manufacture of Reliability and Maintainability (R&M) Electronic Module Assemblies (EMA) for all U.S. Air Force Block 30 and Block 50 F-16 Wide Angle Conventional (WAC) Head-Up Displays (HUDs). To date, Elbit Systems of America has received initial orders in the amount of \$3 million under the IDIQ contract.

The Wide Angle Conventional Head-Up Display (WAC HUD) takes critical flight and mission data which is normally displayed inside the cockpit on an instrument panel and projects that information on a transparent surface directly in front of the pilot allowing for eyes out of the cockpit and improved situational awareness. The new design reduces total part count, lowering power consumption and significantly improving meantime between failures (MTBF).

Commenting on the award, Elbit Systems of America President and CEO, Raanan Horowitz, stated: "We are pleased to provide F-16 operators with this upgraded HUD and to enable increased mission availability through an order of magnitude improvement in reliability. Elbit Systems of America's Services and Support Solution business is a leader in providing innovation for cost effective system support. For the F-16 HUD, we partnered with the U.S. Air Force to develop a solution which significantly reduces life cycle cost. This is especially important considering the budget pressures faced these days by the U.S. military."

### **About Elbit Systems**

Elbit Systems Ltd. is an international defense electronics company engaged in a wide range of programs throughout the world. The Company, which includes Elbit Systems and its subsidiaries, operates in the areas of aerospace, land and naval systems, command, control, communications, computers, intelligence surveillance and reconnaissance ("C4ISR"), unmanned aircraft systems ("UAS"), advanced electro-optics, electro-optic space systems,

EW suites, airborne warning systems, ELINT systems, data links and military communications systems and radios. The Company also focuses on the upgrading of existing military platforms, developing new technologies for defense, homeland security and commercial aviation applications and providing a range of support services.

For additional information, visit: www.elbitsystems.com.

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Source: Epicos, Elbit Systems Ltd.