

CHINA CIVIL AVIATION REPORT

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China's civil aviation in 2006

2006年中国民用航空回顾

Year marked surging air traffic, new deals, policies and oil slips



AVIC 1 to launch own airline

China signs air services agreements with Finland, Algeria, Macau

China to produce Maverick Jets

Shenzhen Airlines borrows \$1.25 B

Xi'an Phoenix to export 150 CH2000 aircraft

民航报导是由民航总局、国家新闻署核准，以《中国民用航空》英文版方式向全世界民航机构、企业，个人介绍中国民航改革开放成果和现状的刊物，印刷和电子版同步发行。免费订阅电子版，请浏览www.ChinaCivilAviation.com

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Cover: This new Boeing Next-Generation 737-800 is the first airplane in China to feature the Beijing 2008 Olympic Games livery highlighting the official mascots – the five "Fuwa" animal cartoon characters. This is Air China's 150th Boeing aircraft delivered on November 14. (Photo courtesy of The Boeing Co.)

From the Publisher's Desk

2006 was a banner year for China's civil aviation industry, which will benefit tremendously as the Chinese government starts implementing its 11th Five-Year Plan this year.

The year saw China's passenger and cargo traffic swelling to above-average growth, a clear indication that the civil aviation industry is developing well as planned.

This growth is not an overnight success. The Civil Aviation Administration of China has been working very hard to meet international standards and practices of the International Civil Aviation Organization (ICAO), US Federal Aviation Administration (FAA) and the International Air Transport Association.

The CAAC's priority is not only making sure that the continued growth in air traffic is sustained and that more aviation infrastructures such as airports are built but what is important is the issue of air safety and security.

The US-China Aviation Summit held last September served as the platform for the cooperation between the two countries on how to develop China's civil aviation industry by using the latest technologies and practices.

It is important that China's civil aviation industry is at par with the international community. And this is the main goal of the CAAC in the next few years.

If the development experienced this year is an indication, we can expect that China is on its way to claim its position as the second largest aviation market after the United States in the future.

2006年作为中国政府开始实施十一五计划的第一年，将会为中国民用航空带来巨大效益。

这一年看到了中国旅客与货邮运输大大高于平均水平的增长，明显地验证着民用航空业正如预期的成长中。

这一成长并非一蹴而就的成功。中国民用航空总局已竭尽所能地与国际民航组织 (ICAO)、美国联邦航空局 (FAA) 及国际航空运输协会 (IATA) 的国际标准与惯例接轨而努力着。

中国民航的当务之急不仅仅是确保持续增长的航空运输量，以及新建机场等更多的航空基础设施，而且还要解决至关重要的航空安全与保安问题。

今年9月份刚刚召开的中美航空峰会作为两国之间的合作平台，讨论到如何采用最新科技与手段来发展中国的民用航空事业。

中国民用航空事业与国际社会的同步发展是至关重要的，这也正是中国民航在未来几年内的主要目标之一。

如果说今年所经历的发展是一个指标的话，我们将能够看到中国正在朝着成为美国之外的第二大航空市场的道路前进着。



Francis Chao
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Aviation Headlines

Yang visits Spain

杨元元局长访问西班牙
探讨民航各领域合作

Minister Yang Yuanyuan of the Civil Aviation Administration of China led a Chinese delegation to Spain from October 16 to 29 on the invitation of Magdalena Alvarez, Spain's development minister.

China and Spain agreed to review the existing bilateral cooperation agreement and enhance cooperation on training and air traffic management. A civil aviation cooperation forum between the two countries may be held next year.

Alvarez was pleased with the plan of Air China to open the China-Spain-Brazil air route by the end of the year to boost tourism.

The Chinese delegation also visited civil aviation facilities in Spain, including Madrid Airport, Senasa Training Co. and Indra Co.

AVIC 1 to launch own airline

中国最大飞机制造商中国一航
将组建航空公司

China Aviation Industry Corp. 1 will establish its own domestic airline next year with a registered capital of more than RMB 80 million.

In the Zhuhai Air Show, Hu Wenming, AVIC 1 vice-general manager, said the company is talking to other companies for the project, but said AVIC 1 will hold a 51-percent controlling stake.

The new airline will serve China's regional routes and will use the ARJ 21 and MA60 aircraft produced by AVIC 1.

The China-made ARJ21 will acquire an airworthiness certificate by the end of 2007. It will make its maiden flight in March 2008 and be delivered to customers in 2009. ARJ21 has 41 orders and MA60 has 32.

Last November, the Civil Aviation Administration of China issued a policy to promote regional air transport development. Under this policy, airlines can open air routes and flights. Subsidy will be given to regional transportation.

Airbus, aviation university sign training deal

空中客车公司与中国民航大学签署合作备忘录

French aircraft maker Airbus will train Chinese maintenance technicians starting next year in an agreement signed with Civil Aviation University of China.

Airbus will fund the establishment of a computer-equipped training classroom, a plane installation, and a data room to be completed by 2009. Training includes plane structure, maintenance and repair. At least 30 maintenance trainers will be selected for advanced training in Europe.

According to Airbus, China needs about 5,000 maintenance engineers for Airbus aircraft until 2010.

Airbus also signed a research and technology frame agreement with four Chinese universities: the Tsinghua University, Beijing University of Aeronautics and Astronautics, Nanjing University of Aeronautics and Astronautics and Northwestern Polytechnical University (NPU).

Leaders of the four universities and Laurence Barron, President of Airbus China and Senior Vice President of Airbus, together signed the frame agreement. The signing of the agreement shows that developing strategic relationship between Airbus and China makes an important stride.

"Aviation is a challenging global

industry with blooming demand. I believe engineers of Airbus and four Chinese universities will develop research and technology cooperation, together study creative resolving plan, and benefit the whole aviation industry. Airbus and Chinese universities developing technology cooperation will further expand the cooperation space between China and us in the civil aviation area. We are very proud of this," stated Barron, president of Airbus China.



Airbus China president Laurence Barron (right) shakes hands with Wu Tongshui, president of the Civil Aviation University of China, after signing the agreement.

Since the first Airbus plane entered the Chinese market in 1985, the number of Airbus planes operating in Mainland China has risen from fewer than 30 in 1995 to more than 300 by the end of this past September.

In October, China signed an agreement to buy 150 A320 and an option to buy 20 A350-XWB from Airbus. Airbus will also establish a final assembly line in Tianjin.

China to launch flights to Africa

中国民航将首开中非国际航线

China Southern Airlines will launch flights between Beijing and Lagos, Nigeria, on December 30, the first China-Africa passenger air service by a Chinese air carrier.

This new service will be the first for a Chinese airline linking Africa to the vast China Southern domestic route network. China Southern's new service will use a new Airbus A330 aircraft.

Bilateral trade between China and Africa will reach US\$50 billion this year, a five-fold increase from 2000. Nigeria is Africa's largest oil producer and Beijing has pledged to loan the West African country US \$7 billion.

Lagos' Murtala Mohammed International Airport is located in Ikeja and is the major airport serving the city of Lagos, southwestern Nigeria and the entire nation.

The announcement for the new route was a result of the Beijing Summit of the Forum on China-Africa Cooperation.

Anhui Sun wins radar contract

四创电子签订716A-43雷达合同

Anhui Sun Create Electronics Co. won the bidding and signed a contract to supply 716A-43 radar to Liuzhou Airport Co. of the Guangxi Airport Group.

The radar will be installed next April. This is the first time that Anhui Sun has sold weather radar in Guangxi. The company will expand its weather radar business in the Southwest and Central South civil aviation areas. Anhui Sun's radar is being used in Qingdao, Xi'an and Changchun Airports.

Beijing Airport completes deicing

北京首都机场全面启动飞机定点除冰工作

Beijing Capital International Airport finished deicing work on 93 departing aircraft on November 25 as snowfall blanketed the city. The deicing work is being done on aircraft near the runway. It takes about 10 minutes to finish deicing each aircraft.

Authorities say ice can distort airflow on the aircraft wing, reducing wing's maximum lift and increasing drag.

HK airport posts 22.7-M passenger volume

香港机场二三季度旅客量达2270万人次

The Hong Kong International Airport registered 22.7 million in total passenger volume from April to September this year, a 9.2-percent increase over the same period last year.

Based on unaudited interim results released by the Airport Authority Hong Kong on November 29, cargo throughput rose by 3.5 percent to 1.77 million tons and aircraft movements totaled 140,700, up by 6 percent.

The authority earned HK\$993 million (US\$127.86 million) in net profit for the period, an increase by 13.2 percent, attributed to the continued increase in passenger and cargo volumes.

"During the period, we achieved a breakthrough on the Mainland with the conclusion of a joint venture with the Zhuhai Municipal Government that will see us manage Zhuhai Airport for 20 years. By making the Airport Authority an insider in the Mainland aviation system, the agreement is also a key step in our long-term strategy of supporting the coordinated development of a Pearl River Delta airport system so as to better serve

the PRD region," said David Pang, chief executive officer.

During the period, three new cargo airlines--Volga-Dnepr Airlines, Royal Khmer Airlines and ACT Airlines--and one passenger airline, Air Niugini, began serving the Hong Kong airport, boosting the total number of airlines operating at HKIA to 85.

Five new destinations--Taichung, Chiang Mai, Krasnoyarsk, Port Moresby and Stockholm--were added to HKIA's network, bringing the total to around 150.

In the six-month period, operating expenses rose to HK\$1.42 billion (US\$182.85 million) from HK\$1.08 billion (US\$139.07 million).

In October, the Hong Kong International Airport's passenger volume increased by 8.5 percent to 3.9 million and cargo volume grew 3.4 percent to 329,000 tons compared with the same period last year. Aircraft movements rose to 24,500.

For the 12 months ending on October 31, passenger volume grew 8.7 percent to 43.8 million and cargo volume increased by 5.9 percent to 3.5 million tons.

China Post to buy Y8F600 plane

中邮航签订购买运8-F600型飞机的意向协议书

China Post Airlines and Shaanxi Aircraft Industry (Group) Co. signed an intent agreement for the purchase of Y8F600 aircraft. The airline is the first client to buy the aircraft.

Y8F600, which could carry 20 tons cargo, is a civil freighter developed by SAC and Antonov ASTC. It is primarily used for transporting containers, bulk cargo and super long cargo, large and medium equipments such as vehicles, and various fresh lives.

Urumqi Airport uses Midas IV

乌鲁木齐国际机场新一代自动观测系统投入使用

Vaisala-made Midas IV, a new generation of automated weather observation system, was put in operation at Urumqi Airport on November 9.

The MIDAS IV was imported from Finland at the end of 2003. The new weather system adds front dispersion weather sensor.

The Midas IV can provide more detailed, accurate, and reliable weather data that could further improve weather service capability of Urumqi Airport.

Deer Airlines picks Beijing airport as base

金鹿航空有限公司成立

Deer Airlines has transformed its business from general aviation to public air transport enterprise and established its base at Beijing Capital International Airport. Its core services will include international and domestic charter flight for business

and tourism, airfreight, business jet rental flight, medical evacuation flight, aircraft entrusted management, and helicopter navigation. It is the only domestic airline to have the operation certificates of Part 121 and Part 135.

Chinese aircraft enter international market

中国小型飞机日益获得国际市场认可

The sales volume of China-made aircraft continues to grow through exports to other countries.

Eight countries in Africa, Asia, America and Oceania have ordered 32 MA60, the advanced regional turboprop developed by Xi'an Aircraft Co. As of October, all MA60 overseas fleets have flown nearly 5,000 hours and 5,000 landings and takeoffs.

The Little Hawk 500 light multipurpose aircraft has received 151 letters of intent, according to Shijiazhuang Aircraft Industry Co. of China Aviation Industry Corp. 2.

The CJ6 trainer aircraft is manufactured by Hongdu Aviation Industry Group Ltd. Since the initial production, more than 2,400 CJ6 have been manufactured. The aircraft is used to train pilots in China.

China, Macau sign new air transport accord

大陆与澳门签署最新航空运输协议

China and Macau signed a new air services agreement on December 4 to increase flights between the mainland and the special administrative region.

The agreement was signed by Ao Man Long, Macau secretary for transport and public works, and Gao Hongfeng, CAAC Vice Minister.

The Macau Civil Aviation Authority and Civil Aviation Administration of China started a new round of talks in October to discuss the new air transport agreement. Macau's economy is booming largely due to its gaming industry.

On November 20, MCAA signed a sister-airport agreement with Wuxi Airport to enhance aviation development and promote competitiveness.

Chairman Deng Jun of the MCAA said Macau's economy is booming, with travel and tourism industries growing, thus contributing to air traffic growth at Macau International Airport. He said the MIA will continue to expand its route network.

China to achieve 100% e-ticketing service

中国电子客票服务朝着100%目标迈进

Chinese airlines are poised to achieve a 100-percent use of electronic tickets by the end of 2007 as demand for paperless tickets continue to grow.

The Civil Aviation Administration of China is aiming to achieve the goal by next year, the deadline set by the International Air Transport Association (IATA).

The airline association is mandating to all its members the full use of e-tickets to reduce costs. It estimates that airlines can save US\$3 billion yearly by using e-tickets.

China Southern Airlines reported that from January to September this year, its sales of e-tickets reached RMB 10.4 billion (US\$1.2 billion). The airline said its e-tickets now account for more than 32 percent of the total e-ticket volume in China.

The airline launched its e-ticketing program in March 2000. Through last March, it had sold about RMB 4 billion in e-tickets.

Among Chinese airlines offering e-tickets are Air China, Shenzhen Airlines, Hainan Airlines, Xiamen Airlines and Shandong Airlines.

According to IATA, the use of e-tickets provides stress-free ticketing to customers. Airlines can save about US\$9 if an e-ticket is issued instead of a paper ticket.

IATA says it processes 300 million paper tickets per year, and that the use of e-tickets will translate to savings.

As of September, IATA says 193 airlines are already e-ticketing capable and 94 others have already planned a date to issue its first e-ticket. However, 109 airlines say they do not intend to implement e-ticketing.



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CAAC Updates



China, Algeria sign air transport agreement

中国与阿尔及利亚在京签署民用航空运输协定



Minister Yang Yuanyuan of the Civil Aviation Administration of China and Algerian Defense and Foreign Affairs Minister Mohamed Bedjaoui sign the civil aviation transport agreement.

Minister Yang Yuanyuan of the Civil Aviation Administration of China and Algerian Defense and Foreign Affairs Minister Mohamed Bedjaoui signed the civil aviation transport agreement on November 6. The signing was witnessed by Chinese President Hu Jintao and Algerian President Abdelaziz Bouteflika.

Algeria is an important trade partner of China in Africa. The air transport agreement is seen as boosting bilateral trade and tourism cooperation.

China, Finland to open new air routes

我与芬兰扩大双边航空运输安排

China and Finland signed a memorandum of understanding to open new air routes and add transport capacity between the two countries.

Vice Director Liang Nan of the International Department of the Civil Aviation Administration of China, and Matti Tupamaki, director of the Finnish Civil Aviation Authority, signed the air transport agreement in a meeting in Beijing on November 10.

In 1975, China and Finland signed the first air services agreement, which was amended in 2002 and this year.

Airspace management system completed

“空域管理与评估系统（ASMES）二期”在北京通过验收

The completed second phase of the Airspace Management and Evaluation System was presented in a ceremony in Beijing on November 21. Representatives from the Air Traffic Management Bureau and Civil Aviation University attended the event.

The ASMES Phase 2 is a key scientific research project of the ATMB this year.

The Civil Aviation Data Co. and Nanjing University of Aeronautics and Astronautics jointly designed and developed the system. The ASMES adopted ICAO-relevant standards and recommendations of the International Civil Aviation Organization (ICAO), using the strengths of the same type of system in foreign countries for reference. It also adopted advanced assessment theory, developed new algorithms, realized theory assessment of airspace capacity and operation performance, and complied with each function and technical index stipulated in the contract.

The system completed the following: the infrastructure of nationwide unified airspace database, collection and integration of varied data, the speculation of flight path and statistics and forecast of flight flow, multi-airport capacity simulation assessment, design of airspace and air route covered by the frequency of communication and navigation facilities, and the feasibility assessment of the ground-based RNP/RNAV route. Deputy Director General Lv Xiaoping ordered the implementation of the system.

Anhui's civil aviation market to be developed

安徽民航市场得以发展

Minister Yang Yuanyuan of the Civil Aviation Administration of China and Gov. Wang Jinshan of Anhui Province signed an agreement on November 29 to accelerate the development of Anhui's civil aviation, including the investment in aviation infrastructure.

The plan includes the relocation of the Hefei Luogang Airport. A new airport will be built starting next year.

The CAAC is also putting aside a special fund for the construction of feeder airports in Anhui.

During the 10th Five-Year Plan, Anhui had made considerable economic and social development progress. Average annual air passenger volume is likely to reach 863,000 in Anhui.

China's civil

2006年中国民用航空回顾

Year marked surging air traffic,

Air traffic

China's total air traffic continued to increase every year through this year, and it's poised to surpass the 2005 totals. From January to September this year, total passenger traffic already reached 118.91 million, which is just 19 million passengers away from the whole 2005 total of 138 million. With a monthly average passenger traffic of 19 million, China may breach the 150-million passenger mark by the end of the year. Cargo and mail traffic also rose to 2.48 million tons for the first nine months of the year, and it is likely that the 2006 total will surpass the 2005 total output of 3.03 million tons.

However, the rising price of jet fuel in the world market has overshadowed the increases in passenger and cargo loads. As a result, Chinese airlines posted combined losses of RMB 2.57 billion (about US\$322 million) in the first six months of 2006 due to high operating costs amounting to RMB 73.56 billion (about US\$9.22 billion). Analysts are predicting that the trend will continue up to the end of the year, and airlines may have the chance to recover the losses next year.

Regardless, China continued to beef up its fleet. In August, China's HNA Group ordered 100 planes from Embraer for US\$2.7 billion. The order consists of 50 ERJ-145s and 50 Embraer 190s, with delivery to start next year. The ERJ-145 will be produced by Harbin Embraer Aircraft Industry in China. In September, Boeing completed China's order of 150 Boeing 737NGs. The first 50 orders were placed last December, and another 20 last January. Then another 65 orders were placed this year, followed by 15 in September.

By JONATHAN M. HICAP

It opened its civil aviation market to foreign investors and poured in billions of dollars to build new airports and upgrade existing ones. To beef up its fleet, it ordered close to 300 commercial jets.

China accomplished all that this year with an aggressive campaign: to advance its civil aviation market and show the world that it is serious in its bid to become the second largest aviation market after the United States. Except for the US, in the last few years, no other nation in the world has invested so heavily in civil aviation as China.

The stakes are high and the world is watching the way that China, with a population of 1.3 billion and a rugged geography, advances its transportation sector.

The Beijing Olympics will be the acid test of just how far Chinese civil aviation has gone.

The Games is just two years away and the Chinese government is mapping out plans to accommodate the millions of people who will be coming to watch it. And the aviation sector will be a key indicator of the Games' success. Almost all the athletes and spectators will be coming to Beijing by plane.

China marked 2006 as the transition period to the 11th Five-Year Plan from its 10th Five-Year Plan, which was implemented from 2001 to 2005. Each plan sets the five-year goals of the Chinese government in all aspects, including civil aviation.

From increasing air traffic to the development of an infrastructure, 2006 marked milestones coupled with major challenges for China's civil aviation industry.



China is ordering more commercial aircraft to add to its fleet to keep with the increasing passenger and cargo volumes.



The CAAC announced this year that it will open its cargo market. Jade Cargo is one of the new cargo airlines which started operating this year.



Airports in China are undergoing expansion and renovation to meet international standards. More airports will be built to open new routes.



Shanghai Airlines

aviation in 2006

new deals, policies and oil slips

From 863 total aircraft by the end of 2005, China's fleet rose to 952 by the end of September.

Airport

In contrast, to the situation of Chinese airlines, 2006 proved to be profitable for airports as passenger and cargo traffic rose. For the first half of the year, China's airports posted profits of RMB 1.5 billion (about US\$191 million).

As air traffic increases, China needs to build more airports to serve more routes. In the last five years, China has built 21 airports and other aviation infrastructure at a cost of about US \$11.8 billion. As of 2005, China had 142 certified airports. Between now and 2010, the Civil Aviation Administration of China plans to build 48 new airports, as well as upgrade existing ones.

This year, the focus is on expanding the Beijing Capital International Airport in time for the Beijing Olympics. A third runway is being built to accommodate the expected increase in the number of flights during the Games.

Bilateral relations

China negotiated and signed new air services agreements with other countries in 2006. By the end of 2005, China had 98 air services agreements.

In March, China and Afghanistan signed an air transport agreement to open fifth-freedom flights between the two countries. In April, China and Croatia signed a new memorandum of understanding on bilateral scheduled flights.

China and South Korea agreed in June to increase passenger flights between the two countries to 401 per

week and cargo flights to 36 per week. In July, China and Japan agreed to open more flights. China also signed a bilateral air transport agreement with Uganda. Mainland China and Hong Kong also agreed to open more flights. And China also signed an agreement with Belgium.

In April, CAAC Minister Yang Yuanyuan announced that China will open its air cargo market. The announcement was made at the International Air Cargo Association (TIACA) Summit 2006, held in Beijing. This is the first time that the association has held its summit in China. At the summit, plans were unveiled for the construction of air transportation hubs to expand China aviation rights to foreign companies. Five air cargo companies were approved in 2006, including Jade Cargo, Great Wall Airlines, and Shanghai International Air Cargo.

The year also marked the holding of the US-China Aviation Summit in Washington, D.C. in September, covering plans to expand cooperation between the two countries in civil aviation. At the summit, China reported the development of its civil aviation market. Four US airlines are currently bidding to open a new route to China starting next year.

The peak of civil aviation development in China will be next year when air traffic plans for the Beijing Olympics are finalized. The Games will showcase how much China's economy has progressed through the years. For the aviation industry, it will be a test to determine whether China befits its claim to be the second largest aviation nation in the near future.



Chinese President Hu Jintao (right) met with US President George W. Bush when he visited the United States in April.



China ordered from Embraer 100 planes this year.



A Boeing worker in China

Draft of air traffic management regulation finished

《民用航空空中交通管理条例》调研工作圆满完成

The investigation by the Air Traffic Management Bureau (ATMB) for the Regulation of Civil Aviation Air Traffic Management is finished.

A draft of the regulation has been formed since the initial work was completed in cooperation with other departments. The draft was presented to different groups to seek their opinions on the air traffic management system.

The ATMB group visited the air traffic management bureaus in North

China, Southwest China, Northeast China, Xinjiang, Xiamen Air Traffic Management Station, Dalian Air Traffic Management Center, Shantou Air Traffic Management Station, Air China, Jiuzhai/Huanglong Airport, Hanzhong Airport, and Xinjiang General Aviation Company.

The ATMB organized a writing group in November to develop modification work for the questions posed during the investigation.

Regional aviation grows slowly

王昌顺：中国正逐步放开支线航空运输市场准入

China is gradually opening its regional air transport market to players as air traffic continues to increase, says Vice Minister Wang Changshun of the Civil Aviation Administration of China in the 2006 China New Regional Aviation Market Forum.

In 2005, the total traffic turnover of



China air route sections below 600 km is 2.12 times higher than in 2000, and the passenger traffic volume is 1.73 times more than in 2000. The total transport turnover by aircraft below 70 seats is 1 percent of total transport turnover in 2005, compared to just 0.5 percent in 2000. Passenger traffic volume is 2.8 percent of total passenger volume, up from 1.9 percent in 2000.

Wang says that, despite the increase, China's regional air transport output is still low. The total fleet of regional aircraft below 70 seats remains small. Small airports with 3C grade account for only 20 percent of total airports in China with their passenger throughput below 1 percent.

Airfreight business policies in China to be relaxed

港澳两地航运代理可独资

"Single air freight should be transferred to integrated air freight services, including air transport, storage, packing, distribution, information providing, and processing," said Vice Minister Yang Guoqing of the Civil Aviation Administration of China during the 2006 China International Logistics Week Forum in November.

He said companies in Hong Kong and Macau can operate their own business in Mainland China without having to

partner with local companies. During the 10th Five-Year Plan, cargo and mail volume increased by 15.7 percent per year.

According to Yang airfreight demand will increase in the 11th Five-Year Plan. Cargo and mail volume will reach 5.7 million tons, or an average annual growth of 13 percent. The airfreight environment will be opened by allowing foreign and private investors to start their own business with just one aircraft.

China-made radar antenna installed at Changchun airport

长春空管4#系统1、2次雷达天线安装工作完成

Primary and secondary radar antennas were installed at the new air traffic management radar station at Changchun Longjia International Airport.

This is a key project of the Civil Aviation Administration of China. It includes primary and secondary radar systems, an air traffic management automation system and support equipment.



All the equipment is made in China. The primary radar, secondary radar and air traffic management automation system are produced by No. 38 Institute, No. 14 Institute and No. 28 Institute of China Electronics Technology Group Corp. The project symbolizes the entry of China-made radar equipment in civil aviation.

The adjustment of the air traffic management automation is being completed, and the primary and secondary radar will be adjusted in mid-December. On-site inspection and acceptance will occur next February.

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Xi'an starts use of radar control

西北空管局西安高空管制区实施雷达管制

The Xi'an upper air control area began using radar control on November 23 to improve utilization of airspace, accelerate flight flow and enhance safety rate in the Xi'an region. Xi'an is the only upper air control area in the northwest region that has fully utilized radar control.

In recent years, the flight flows in Xi'an control area continue to increase, with an average annual growth of 16.6 percent. The implementation of radar control in the upper air control area has reduced the longitudinal horizontal interval from 150 km to 40 km, which is conducive to maintaining smooth operation of air routes.

It will be the basis for the establishment of an upper air area control center in the Northwest Air Traffic Management Bureau.

282 aviation supervisors undergo training

2006年度航空安全监察人员初始培训圆满完成

The Aviation Safety Office of the Civil Aviation Administration of China held a series of courses on safety for aviation supervisors from June to November this year as a way to improve management capability and the enforcement of laws.

A total of 282 personnel in charge of safety administration from various civil aviation units participated in the training.

This is the first time that the Civil Aviation Safety Institute of China held such courses since its establishment. The institute invited law and safety experts in civil aviation to teach the courses.

After the training, 280 personnel passed the exam and were given training certificates by Wang Changshun, president of the institute.

Shenzhen undergoes management safety audit

民航总局联合安全审计试点工作顺利结束

The Air Traffic Management Bureau of the Civil Aviation Administration of China completed the experimental work on October 18 for the management safety audit of the Shenzhen Air Traffic Management Bureau.

China will fully implement the safety audit program starting next year.

The aviation safety audit is a program of the CAAC using advanced methods from international civil aviation as reference. The targets of the program include airlines, airports and air traffic management units. The China Aviation Safety Audit Program will enhance government's supervision capability on safety.

The air traffic management audit, meanwhile, is a primary part of the civil aviation safety audit, which is in accordance with standards of the International Civil Aviation Organization (ICAO), China's own regulations and laws on safety, and civil aviation regulations, standards and documents.

The air traffic management safety audit group is headed by Wang Liya, Deputy Director General of ATMB-CAAC. It consists of an integrative safety management group, an air traffic control group, a radio and navigation group and an aviation weather service group.

Safety forum held

首届航空安全信息研讨会
在中国民航大学召开

The China Civil Aviation Safety Information Forum was held on October 26-27 at the Civil Aviation University of China, the first scientific symposium on China's civil aviation safety.



It was sponsored by the Aviation Safety Office of the Civil Aviation Administration of China.

More than 100 persons attended the forum, including principals in charge of safety information, aviation safety experts from the CAAC, and representatives from regional administrations of the CAAC, airlines, airports, and air traffic management. The main topic of the forum is "information benefits safety." The meeting was presided by Xu Xiaohao, CAAC vice president. Guests were Wu Tongshui, president of CAUC and Liu Yajun, director of the Aviation Safety Office of CAAC.

Xiamen-based Taikoo Aircraft Engineering Co. (Taeco) was hired by Boeing Co. to perform physical modification work on the 747-400 Boeing converted freighter which the aircraft maker delivered on November 30 to Guggenheim Aviation Partners, which leased the freighter to Martinair Cargo. Boeing says it manages every aspect of the conversion process from contract signing, design and production through redelivery.





Pilot Showichi Sakamoto prepares to fly the new composite aircraft designed by Zhuhai Jon Glass and Steel Products and produced in Zhuhai in the China Air Show.

Zhuhai Airshow Photo Essay

Photography and Text by Herb Lingl



Crowds watch the stunning performance of performance of the British Golden Dream aerobatic team in their three Pitts biplanes and one Extra.



Zhuhai Jon members pile sandbags onto the composite wing to test its strength. Even with a load of 1800 kg of sandbags, the wing needed additional force before it finally broke.



A young visitor poses in front of the Rolls Royce turbine display at the China Air Show.



"Anny" Chen Yan, China's first female private pilot, discusses a new idea with Peter Claeys, the Cirrus distributor in China currently based in Shanghai. Peter brought the Cirrus in the background to the airshow and had a booth in the exhibition hall.



Discussions at the booth of AVIC I's ARJ21 Advanced Regional Jet display. The ARJ21 is a 70-90 seat turboprop jet targeted at the regional air transport market, with a range of 1200 to 2000 nautical miles. The Kunming airport in Yunnan province is the base of design operations.



Signing Ceremony of the Long-Term Cooperation Agreement between X'ian Aero Engine Group Ltd., of AVIC I, CASC and Snecma Motors at the China Air Show.



Two of the Zhuhai Jon composite aircraft return to the air show tent at the Zhuhai airport after one of their performances at the China Air Show.

Herb Lingl

Herb Lingl specializes in aerial photography, film and video including advertising, construction, color infrared aerial and night time aerial photography and aerial film and video. Herb is a commercial pilot and will travel to any location in the world to complete an assignment; he is particularly interested in working in China.

Herb's firm Aerial Archives (www.aerialarchives.com) is an aerial photography stock library that has a very large collection of existing aerial photography it licenses as well as historical aerial photography of China.

Herb's aerial photography can be seen in the book *Above Mexico City*, printed in China, and his work has appeared in many magazines and advertising campaigns. Herb has made presentations about aerial photography at Eastman Kodak and the San Francisco Museum of Modern Art.

For additional information please visit www.aerialarchives.com



Zhuhai Jon pilot Masahiro Ichihara is ready for the air show performance with three other aircraft to demonstrate the capabilities of the composite material designed aircraft produced in Zhuhai.



Diamond Aircraft Industries' DA42 MPP multipurpose platform equipped with a Vexcel gyroscopically stabilized imaging sensor generated extensive interest during the professional as well as the public days of the airshow. This aerial imaging platform is well suited for highly stabilized aerial video capture, low light operations and infrared image capture. Shandong Bin Ao Aircraft (the joint venture between Diamond Aircraft Industries, GmbH, Binzhou Dagao General Aviation City Co., Binzhou Ding Yi Investment Management Co and another investor) begins larger scale production of Diamond Aircraft this year, with an expected output of more than 150 aircraft during the next year. The joint venture plans to reach an annual production of 1000 aircraft in the coming years.

Commercial Aviation

News



Shenyang Aircraft locates at industry zone

国内最大民机转包项目落户沈阳

Shenyang Aircraft Corp. held the groundbreaking at Shenyang Civil Aviation Industry Zone for its assembly site for Dash 8-Q400 aircraft parts subcontract project that it signed with Bombardier last July in England.

Shenyang Aircraft's project involves the manufacturing, assembly and service of three components of the Dash8-Q400-fuselage, rear fuselage and tail section, including six cabin doors. The assembly site occupies about 24,000 sq.m. and will be operational next October.

Vice Mayor Wang Ying of Shenyang City said the project is a milestone in the long-



term strategic cooperation among Shenyang City, Shenyang Aircraft Corporation, and Bombardier.

Dash 8-Q400 is a high-speed twin-engine turboprop regional jetliner with 68-78 seats developed by Bombardier.

Chengdu Hot Aviation passes FAA certification

成都华太通过美国维修适航认证

Chengdu Hot Aviation Technology Co. was awarded a Federal Aviation Administration certification after passing strict inspection. The company becomes the fourth aviation maintenance enterprise to earn an FAA certificate in Chengdu. The other three are Air China Chengdu

Maintenance Base, Snecma, and Haite Group. With the FAA certification, Chengdu can repair aircraft, engines, airborne equipment and component parts.

Chengdu Falcon Aircraft Engineering Service Co. also passed the FAA certification inspection on October 30 and is waiting for confirmation from the FAA.

Xi'an Phoenix to export 150 CH2000

西安凤凰飞机签订150架出口合同

Xi'an Phoenix Aircraft Manufacturing Co. signed a contract with GPA Fund to export 150 CH2000 aircraft to South America at a value of US\$37.5 million. Xi'an Phoenix is a Sino-British company that will manufacture the aircraft.

Xi'an Phoenix is a Sino-British joint venture that was created on October 8. The plane it will produce is a CH2000 aircraft with 2 to 8 seats. The company bought

property rights from the Zenair Ltd.

The CH2000 has a length of 7 meters, a wingspan of 8.78 meters and a height of 2.1 meters. More than 1,000 CH2000 have been sold around the world.

Xi'an Phoenix, with a registered capital of US\$29.8 million, is the first Chinese private aircraft manufacturing company to be approved by the Civil Aviation Administration of China.

Thales, TEDC form joint venture

中法民航将首次在空管领域建立合资公司

The French company Thales and China's TEDC (Civil Aviation Air Traffic Control Technology Equipment Development Co.) signed an agreement on November 20 to create a joint venture in air traffic control. The joint venture will be established in Beijing with TEDC owning 60 percent and Thales Group 40 percent. The new company will develop, sell and maintain air traffic control centers in China.

Witnessing the signing were Vice Minister Wang Changshun of the Civil Aviation Administration of China; Director General Su Langen of the CAAC Air Traffic Management Bureau; and Deputy Director General Lv Xiaoping of the CAAC-ATMB.

The joint venture will ensure the continuity of the North East and South Area Control Center (NESACC) programs which were designed to expand and modernize air traffic control systems in Beijing, Shanghai and Guangzhou. In 2001, the CAAC awarded Thales the NESACC contract and chose Thales' Eurocat air traffic management systems.

The three centers are in charge of monitoring the en-route air traffic control towards eastern China. Thales has supplied primary and secondary radars, navigation aid systems, and associated training services to China over the past few years.

The Eurocat is an advanced system and more than 100 Flight Information Regions throughout Asia Pacific, Africa, the Middle East, Europe and Latin America are controlled using Thales automation centers.

Maverick Jets to be produced in China

西安将建设全球轻型喷气式公务飞机生产基地

Xi'an Phoenix Aircraft Manufacturing Co. and Wyoming-based Maverick Jets signed an agreement to establish a manufacturing base for light business jets at Xi'an Yanliang National Aviation High Tech Industrial Base.

The joint-venture company will have a registered capital of US\$30 million, with the total investment exceeding US\$100 million. A single production line with a capacity to produce 500 jets yearly will be established. And, initially, SmartJet and Maverick Military aircraft will be produced.

The SmartJet, costing US\$750,000 for the custom version and US\$899,000 for the certified version, can carry five passengers and take off and land on short runways. The Maverick Military is



Representatives from Xi'an Phoenix Aircraft Manufacturing and Wyoming-based Maverick Jets sign the cooperation agreement.

a training aircraft that can accommodate two people and costs US\$1.25 million each.

Maverick Jets will provide four test jets for the joint venture to acquire the airworthiness certificate in China.

China Southern opens Beijing hub

南航北京基地投入使用

China Southern Airlines opened its Beijing base on November 1 to further expand its operations in China.

The airline's new base, constructed at a cost of RMB 1.1 billion, is located at Beijing Airport Industry Development Zone. The base houses an administration office, operation control, and marketing. The Beijing hub operates four A330 jets. There are 39 flights departing from the Beijing base, including 29 domestic flights and 10 international flights.

From January to September, the total number of seats allocated by China Southern Airlines in Beijing increased by 11.16 percent, with the number of flights up by 6.23 percent. Total passenger volume was also up by 16.64 percent, and passenger load factor increased by 5 percent on a year-on-year basis.

Shenzhen Airlines borrows \$1.25 B

深航获得百亿融资 将投入200亿扩充机队



Officials of Shenzhen Airlines and China Construction Bank sign the \$1.25-billion loan agreement.

Shenzhen Airlines borrowed RMB 10 billion (US\$1.25 billion) from China Construction Bank to expand its operations.

The airline borrowed US\$1.5 billion from Export-Import Bank of China in January and a US\$625 million loan from Agricultural Bank of China in July.

Shenzhen is planning to spend RMB 20 billion (US\$2.5 billion) to purchase or lease aircraft. It aims to increase its fleet from the current 40 aircraft to 160 aircraft by 2015.

Construction of biggest hangar in Asia begins

世界最大飞机维修库-北京首都机场A380机库工程开工

The construction of the A380 hangar, the largest aircraft maintenance hangar in Asia, has begun at the Beijing Capital International Airport.

The hangar is being built by Beijing Construction Engineering Group, which built the Boeing 747 hangar at Beijing airport ten years ago.

The A380 hangar, costing RMB 700 million, is owned by the Aircraft Maintenance and Engineering Corporation (Ameco Beijing), a joint venture company of Air China and Lufthansa.

According to Ameco Beijing, the hangar will be completed in March 2008, in time for the Beijing Olympics. Located north of Beijing airport's new terminal 3, the hangar will have a total floor area of 70,437 sq. m.

On completion, the hangar will accommodate four Airbus A380 planes or two A380 and four Boeing 747 at the same time.

Sichuan Airlines buys 20% of United Eagle

川航2000万参股鹰联航空

Chengdu-based Sichuan Airlines Group bought a 20 percent stake in United Eagle Airlines for RMB 20 million (about US 2.5 million).

E & Net Communications Co., Sichuan Airlines, and China Guoan Culture & Media Investment Corp. formally signed the capital increase and equity expansion agreement on November 20.

The deal is a new start for United Eagle, according to Li Jining, chairman of the

airline. China's private airlines have run into problems due to rising jet fuel prices, as well as a shortage of pilots and capital.

From January to August this year, United Eagle incurred a cumulative debt of RMB 35.01 million (US\$4.47 million) as a result the civil aviation fund, airport construction fee and late fees, according to data from the Civil Aviation Administration of China.

Sichuan Airlines currently has more than 20 aircraft in its fleet.



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