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雷达性能监测与 质量评估的必备工具



RASS-R雷达质量实时控制系统

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近亲繁殖是民航发展最大的安全隐忧

继不久前国际公认中国民用航空总运行量达世界第二,是世界上成长最 快的国家之后,国际航空运输协会(IATA)12 月14日发布,中国国际航空公 司目前市值高达200亿美元,是全球最大的航空公司。在维持这么高成长率 的同时保持着最低可能的事故率。这些成就让我们不得不对中国民航刮目相 看并给于热烈的掌声。

在这快速发展的过程中,由于许多必要的配套在当时的节点无法从社会 上取得,所以在民航系统中衍生了许多相互支援互补协作的机构与单位,这 种现象随着时间的发展而越来越普遍也越来越理所当然。很快地,民航体系 内就产生了一个坚固而无法穿透的系统与组织。与外界产生了或多或少的隔 阂与距离。这种相互支援协作的功能在执行政府特殊职能与任务时,在历史 上可以看到它的效益与存在价值。但在日常运作的工作中却出现了诸多不合 理性, 违反规定, 影响飞行安全。

由于各衍生单位都源于民航,大家有相同的背景,类似的认知,习惯性 的行为准绳。所以在许多事务的处理上很容易达成共识而形成凝聚力,这个 凝聚力是中国民航发展的根基。是促成民航今日成就的磐石。但这种共识与 凝聚力在面对法规法令的要求时,时常产生似是而非的观点和行为,进而形 成一种文化,自我解释法规的定义和标准。这种自我定义的行为规范对航空 产业这样需要大量相互制约,复查,确认的高安全性行业造成极大的隐忧。

笔者近来亲身经历了一个民航停滞许久又开始建设的区管中心项目的招 标过程,整个经验让我体验到一种无奈与惶恐。无奈的是最终使用人,系统 设计公司和招标公司都是民航体系的相关机构,相互的推诿与护航,使一个 原本应该依法处置的公开招标项目, 运作成一个不回应, 不接触, 不处理的 悬案,使公开招标的公平公正公开精神荡然无存。让我惶恐的是这几个单位 的联合运作竟然已经超过传统的胁迫代理商就范的模式,进而以不处理招标 案来凸显代理的无助,再进一步要求制造商将代理业务交由指定人后再进行 新一轮开标。这种以国家赋予公务员的公权力来联合垄断,胁迫影响自由市 场的供需渠道,与民夺利的行为,终将制造社会的不和谐与对立。

这种延误工期,违背法令,相互护航的思维与行动只为了获得其某种利 益,而三个机构之间竟然都视为理所当然,没有违反规定。让人恐惧与担心的 是这些建设都是空管指挥调度的重要安全设施,这样以私人利益为先的运行模 式与思维在碰到与安全有冲突时,不知安全是会被妥协还是会被完全忽视?

中国民用航空的突飞猛进着实令人赞叹与推崇,已有的安全成效出自于 对程序与认证的坚持。但这种近亲繁殖所凸显的生产力与适应性下降的特性 将是民航持续发展的重要安全隐忧,不能不提早诊断医治,以避免灾难的不 幸发生。





Francis Chao 赵嘉国 Publisher 发行人

Sixth Generation Airport Noise and Operations Monitoring Systems

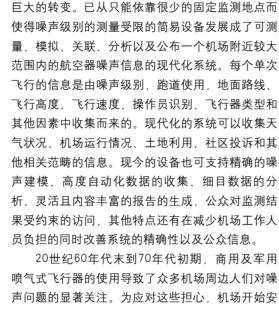
第六代机场噪声与运行监测系统

By Ted Baldwin, Senior Vice President, Harris Miller Miller & Hanson Inc. 作者:泰德 鲍德温, HMMH公司高级副总裁 Translated by: Vivian Chen / 翻译:陈春桦

This article introduces the current capabilities of systems that airports use to monitor airport activity. These systems have evolved significantly over the past four decades, from simple installations with capabilities that were limited to measuring noise levels at a small number of fixed locations, to modern systems which measure, model, correlate, analyze, and report a very broad range of information related to aircraft noise over extensive areas around an airport. Flight-by-flight information is collected on noise levels, runway use, ground path, altitude, speed, operator identification, aircraft type, and other items. Modern systems can collect information on weather and airport operational conditions, land uses, community complaints, and other relevant categories. Today's installations also support accurate noise modeling, highly automated data correlation, detailed data analysis, flexible and informative reporting, controlled public access to monitoring results, and other features that improve system accuracy and public information, with reduced burden on airport staff.

The introduction of commercial and military jet aircraft in the late 1960s and early 1970s resulted in significant noise concerns around many airports. In response to these concerns, airports started to install monitoring systems

to measure noise levels in surrounding communities and report them to citizens, local government officials, aircraft operators, and other interested parties. These installations have continued over the past 40 years; today over 400 airports worldwide monitor airport activity for a broad range of noise-related purposes. Because aircraft noise continues to be the primary community concern, airports and citizens still refer to those installations as "noise monitoring systems" in most cases. However, that term is extremely outdated and does not reflect the full capabilities, benefits, and applications of modern installations, which are properly called "Airport Noise and Operations Monitoring Systems" or simply "Airport Monitoring Systems," to reflect their far more diverse characteristics



这篇文章介绍了目前机场用来监测自身活动

的系统的性能。过去40年间,这些系统已经发生了

装监测系统用以测量周围社 区的噪声级别并将结果报告 给市民、当地政府官员、航 空器经营者以及其他有关当 事人。这些设备历经过去40 年时间一直沿用至今; 现今 全球超过400个机场为一系列 噪声相关的目的监控机场活 动。由于航空器噪声一直是 社区居民关注的主要问题 在大多数情况下机场及居民 仍将这些设备称之为"噪声 监测系统"。可是这个定义 已经严重过时且不能全面的 反应出现代化设备的性能。 优势以及应用。我们可适当 的称其为"机场噪声与运行 监测系统"或简称为"机场 监测系统"来反映其更为多 样化的特性。



Airport monitoring systems have evolved through the following five primary phases:

- Late 1960s mid 1970s: First-generation systems, limited to measurement and display of noise levels on a real-time basis, from a limited number of fixed locations, with no data storage, recall, or post-processing for reporting or analysis.
- Mid to late 1970s: Second generation systems that added capabilities related to storing and recalling noise measurements, and with limited postprocessing analysis and reporting functions. Some of these systems also collected limited weather data.
- 1980s: Third generation systems, with separate subsystems for automatically measuring three primary types of data: (1) noise levels, (2) weather data, and (3) flight operations and identification, including flight paths, altitudes, speeds, runway use, flight origins and destinations, aircraft type, aircraft operator, and other classifications. Most of these systems also permitted users to integrate data from portable noise monitors and to manually enter noise complaints. Data analysis capabilities were expanded to include rudimentary operator-initiated correlation of noise, weather, operations, and complaints, and enhanced reporting.
- 1990s: Fourth generation systems that included more automated and accurate correlation of noise, weather, operational, and complaint data; more advanced and flexible data analysis and reporting capabilities. Some of these systems also included basic tools to assist users to utilize data for development of modeling inputs and limited internet-based public access to historic noise and operations data. Some systems also added limited recording and playback of air traffic control radio communications, to assist noise office staff investigation of factors influencing flight operations
- 2000s: Fifth generation systems that included further advancements in data correlation, analysis, and reporting; highly automated noise modeling even to the extent of replacing noise measurement at some airports; more advanced internet portals permitting the public to conduct their own investigations into operations and noise events of concern, and to submit complaints; and improved air traffic control radio monitoring capabilities, with communications automatically linked to specific operations. Some systems also included audio recording of individual noise samples to permit noise office staff to listen to individual "noise events," to determine the noise source as accurately as possible. Will there be a "sixth generation" of monitoring systems? Yes! And its development is well underway! Over the next ten years, primary areas of advancement are likely to include:
- More advanced data correlation and analysis capabilities for more accurate separation and identification of aircraft and non-aircraft noise sources.
- Higher levels of system automation that reduce the day-to-day burden on airport staff.
- More extensive, automated, and meaningful feedback on operations and noise levels to airports, aircraft operators, pilots, and air traffic control staff, to improve compliance with and effectiveness of noise abatement procedures.

机场监测系统从以下五个主要阶段发展而来:

- 20世纪60年代末至70年代中期:第一代系统, 限于在实时情况下测量和显示噪声级别,数据 来源于少数固定位置,报告或分析资料没有数 据的存储、召回及后处理功能。
- 20世纪70年代中期至末期:第二代系统增加了有关噪声测量数据的存储、召回以及有限的报告及分析材料的后处理功能。其中的一些系统也可以收集有限的天气数据。
- 20世纪80年代:第三代系统,拥有三个相互分离的子系统用以自动测量三种主要类型的数据: (1)噪声级别, (2)天气数据,和(3)飞行器运行和识别,包括飞行轨迹、高度、速度、跑道使用、飞行的起点和终点、飞行器类型、航空器经营者以及其他类别的信息。大多数的系统同时允许使用者综合来自便携式噪声监测器的数据并手动输入噪声投诉信息。数据分析性能包含由操作者决定的噪声、气象、运行、投诉和增强的报告间的相互关联。
- 20世纪90年代:第四代系统包括了更加自动化和更加精确的噪声、天气、运行及投诉数据间的关联;以及更加先进和更加灵活的数据分析及报告系统的性能。某些系统也包括了一些基本工具用以协助使用者利用数据进行模拟输入开发和向公众有限的开放历史噪声和运行数据的访问权限。一些系统也增加了有限的空管部门无线电通信的录音及回放功能用以协助噪声办公室工作人员研究影响飞行操作的因素。
- 21世纪:第五代系统包括了更加先进的数据关联、分析以及报告功能;以及高度自动化的噪声模型—甚至已经到了可取代某些机场噪声测量的程度;还包括更加先进的因特网入口允许公众研究他们所关心的运行操作及噪声事件,同时可提交投诉信息;同时包括改良的通讯信息可自动连接到相应操作行为上的空管无线电监控性能。一些系统还拥有单个噪声样本的设定中,中个"噪音事件"来尽可能准确的确定噪声来源。未来将会有一个"第六代"监测系统出现么?是的!它正在开发中!在未来十年,主要部分的进步可能包括:
- 能够更加精确的分离和识别飞行器和非航空器 噪声源的更加先进的数据关联及分析性能。
- 减少机场工作人员日常负担的更高级的自动化 控制系统。
- 将更加广泛的、自动化的及有意义的飞行操作

- Further improvements in controlled access to monitoring results (measured and modeled) – largely through the internet – that will improve public understanding and acceptance of airports' noise abatement programs.
- Further integration and automation of air traffic control radio communications and noise event recording and playback capabilities, for efficient confirmation of noise sources.
- Measurement and analysis of noise "spectra" or use of video monitoring to improve the automatic identification of aircraft and non-aircraft noise sources.
- 和噪声级别信息反馈给机场、航空器经营者、飞行员,以及空管工作人员用以改善减噪程序的遵守和效果。
- 进一步改进对监测结果(测量结果和模拟结果)的访问权限限制-主要通过互联网-这样可以增进公众对机场减噪规划的理解和接受。
- 为有效的证实噪音来源增强空管无线电通信的整合和自动化以及对噪声事件录音及回放的性能。
- 测量分析 "噪声谱" 或使用视频监视器改善飞行器和非航空器噪声来源的自动识别。

The following table provides a basic cross reference of major monitoring system capabilities and the primary and secondary purposes that the capabilities support: 如下表格为监测系统的主要性能和这些性能所要达成的主要及次要目标的参照图:

	Major Modern Monitoring System Capabilities / 现代化监测系统的主要性能														
	Flight track monitoring 飞行轨迹描测	Flight altitude profile monitoring 飞行高度剖面监测	Near-real-time operations monitoring 近实时操作监测	Time-delayed operations monitoring 延时操作监测	Identify aircraft operator, type, etc 识别飞行器经营者、类型等	Permanent noise monitoring 永久性噪声监测	Portable noise measurements 便携式噪音测量	Single event noise measurement 单个事件噪声测量	NMT audio monitor, record, playback 噪声监控终端音频监测、录音、回放	Air traffic control radio monitoring 空管无线电监控	Meteorological monitoring 气象监控	Complaint data processing 投诉数据处理	Data correlation 数据关联	Noise contour modeling 噪声等值线图建模	Website capabilities 网络能力
Primary Monitoring Purposes / 主要监测目的															
Monitor noise levels in communities of concern 监测受关注的社区噪声级别	√	√		√		√	√	√					√	√	
Monitor airport flight operations 监测机场的飞行操作	√	√	√	√	√						√		√		
Monitor other flights within the regional airspace 监测整个地区空域内的其他飞行情况	√	√	√	√	√						√		√		
Improve public understanding of airport operations 改进公众对机场运行的了解				√	√	√	√		√	√	√	√	√	√	√
Investigate and respond to complaints 调查并回应投诉	✓	√	√	√	√	√	√	√		√	√	√	√		√
Enhance public outreach and communication 增强社区活动和交流	√	√	√	√	√	√	√	√	√	√	√	√	√	✓	√
Allow public to enter complaints via internet 允许公众通过互联网进行投诉												√			√
Monitor and evaluate noise abatement procedures 监控并评估减噪程序	√	√		√	√					√	√		√		
Automate noise reports 自动噪声报告	√	√		\	√	√	√	√			√		√	√	√
Analyze traffic flow, runway use, fleet mix 分析交通运输流量、跑道使用、机型情况	✓	√	√	√	√					√	√		√		
Develop accurate aircraft exposure contours 开发精确的飞行器暴露曲线图	✓	√		√	√			√			√		√		
Compare measured with modeled noise levels 对测量的及模拟的噪声级别进行比较						√	✓				√		√	✓	
Monitor air traffic control radio communications 监测空管无线电通信	✓	✓		√	√					√			✓		
Monitor weather effects on noise and operations 监测天气对噪声和飞行器运行的影响	✓	✓		√	√					√			√		
Conduct historical trend analyses 进行历史趋势分析	✓	√	✓	√	√	√	√	√	√	√	√	√	√	√	
Secondary Monitoring Objectives / 次要的监测目标															
Share data with other airport departments 与机场其他部门分享数据	~	√	√	√	√	√	✓	~	√	√	√	√	√		√
Provide inputs for air quality modeling 为空气质量建模提供数据输入	~	√			√						√		✓		
Provide inputs for airport capacity and delay analyses 为机场容量和航班延误分析提供数据输入	✓	✓	✓	√	√	√					√		√	✓	

As the preceding timeline and cross reference of capabilities and purposes suggest, there has been a significant transition in the focus of monitoring systems from noise measurement to operations monitoring. This transition is the result of the increasing sophistication of airports, airlines, pilots, air traffic controllers, citizens, local government officials, and other interested parties. These groups share a common interest in seeking to reduce noise impacts. Measuring aircraft noise only confirms what these groups already acknowledge – that aircraft make noise. Operations information is far more useful, in that it provides a basis for addressing how to minimize noise impacts in the most efficient and effective manner. In addition, most interested parties – including local residents – are more interested in how, when, and where aircraft fly than in their decibel levels.

The following figures provide three illustrative examples of modern operations monitoring capabilities that many airports find extremely useful in assessing noise abatement procedures and in communicating the information to local residents.

The first summarizes runway use in a combination of easily understood tabular and graphic formats, to assist in assessment and communication of adherence with preferred utilization percentages.

用简单易懂的表格和图解等相结合的方式概述优先跑道使 用情况,用以评估和沟通。 从前面提到的性能演变的时间表、对照图和对用途的建议可以看出监测系统的重点发生了重大改变,即从噪声测量转变为运行监测。这种转变是由日益复杂的机场、航空公司、飞行员、空管员、居民、当地政府官员以及其他有关当事人等原因造成的。寻找措施降低噪声影响可使这这群体共同受益。测量航空器制造了噪声。运行信息则更为有用,因为它为如何运用最有效且最高效的手段将噪声影响降到最低提供了基础。另外,大多数有关当事人一包括当地居民一对飞行器在何时,何地如何飞行比它产生了多少分贝噪声更加感兴趣。

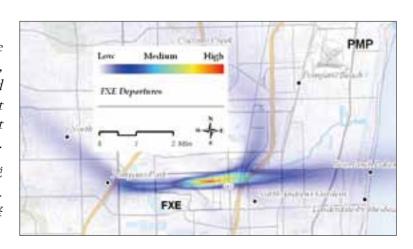
下面的图形提供了三个例证。许多机场发现 现代化运行监测性能在评估减噪程序以及和当地 居民进行信息沟通时非常有帮助。



		0%¬	
Runway	Departures	4%0%	
9L - North runway, east flow	26733	20%	- 0
9R - South runway, east flow	5200		■ 9L ■ 9R
27R -North runway, west flow	8575		□ 27F
27L - South runway, west flow	1572		□ 27L
13 - Diagonal runway, south flow	52	12%	■ 13 ■ 31
31 - Diagonal runway, north flow	52		

The second displays flight track "density" over an entire calendar quarter, as an example of how monitoring data can assist airports, pilots, residents, air traffic controllers, and other interested parties to understand overflight patterns and adherence to preferred flight corridors.

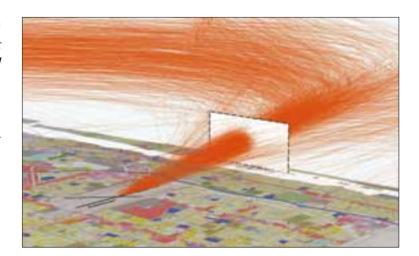
右图显示了一整个季度的飞行轨迹"密度"。这个例子说明了怎样监测数据可以协助机场、飞行员、居民、空管人员和其他有关当事人了解飞行器飞越上空时的模式以及坚持使用优先航路的情况。



 \overline{a}

The third depicts flight tracks penetrating an imaginary "gate" or window in space, to assist in assessing aircraft compliance with preferred routings in three dimensions.

图片描述了飞行轨迹穿透了一个空间中假象的"大门" 或窗户。以此协助对航空器遵守优先航路的情况进行立 体评估。



Hu Jintao Met with Nicolas Sarkozy China Ordered 102 Airbus Aircraft 胡锦涛与萨科齐会谈 中国订购102架空客飞机

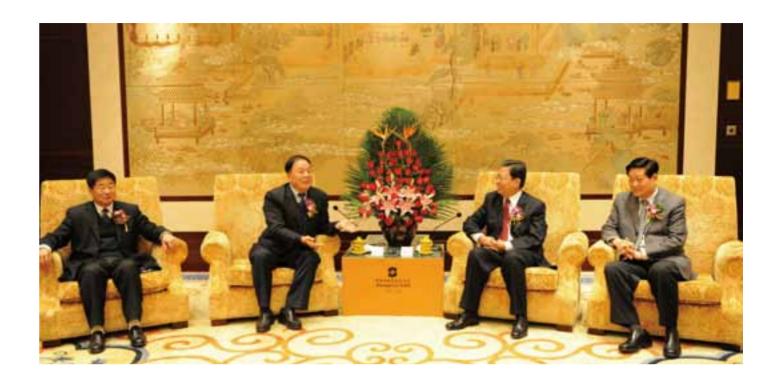


China Aviation Supplies Holding Company and Airbus S.A.S. signed in Paris, France, an agreement to purchase 102 Airbus aircraft on Nov. 4, 2010. Among them, 66 are new orders that include fifty A320 series aircraft, six A330, and ten A350XWB wide-body aircraft. The remaining 36 A330 aircraft are confirmed orders that were announced previously.

Li Hai, General Manager of China Aviation Supplies Holding, and Thomas Enders, President & CEO of Airbus A.S.A., signed the agreement. Hu Jintao, President of The People's Republic of China, who was on a state visit in France, Nicolas Sarkozy, President of France, Mark Prisk, Minister of State for Business & Enterprise of UK, and Louis Gallois, CEO of European Aeronautic Defence and Space Company N.V. (EADS), the parent company of Airbus, attended the signing ceremony held at The Elysee Palace.

中国航空器材集团公司(China Aviation Supplies Holding Company)与空中客车公司(Airbus S.A.S.)于2010年11月4日(法国当地时间)在法国巴黎签署了订购102架空中客车飞机的协议,其中66架为新订单,包括50架空中客车A320系列飞机、6架空中客车A330飞机和10架空中客车A350XWB宽体飞机。其中36架空中客车A330飞机为先前宣布订单的落实。

中国航空器材集团公司总经理李海和空中客车公司总裁兼首席执行官托马斯·恩德斯签署了协议。正在法国进行国事访问的中国国家主席胡锦涛、法国总统萨科齐、英国工业大臣马克·普里斯克和空中客车公司母公司欧洲宇航防务集团首席执行官路易·加洛瓦出席了在爱丽舍宫举行的签字仪式。



CAAC & The People's Government of Shaanxi Signed the Meeting Minutes at Xi'an 民航局与陕西省人民政府在西安签署会谈纪要

Oct. 26, 2010, the CAAC and The People's Government of Shaanxi Province held at Xi'an, the signing ceremony of "Meeting Minutes on Speeding Up the Civil Aviation Development of Shaanxi Province". Zhao Leji, Secretary of the Shaanxi Provincial Committee of the CPC, attended, with Li Jiaxiang, Minister of the CAAC, and Zhao Zhengyong, Acting Governor of Shaanxi Province, signed the Minutes respectively.

As stated by the minutes, the CAAC would actively support Shaanxi's priority strategic development of civil aviation, to research and draw up strategic plans for provincial civil aviation development as well as airport layouts; Shaanxi Province would strengthen the overall planning coordination, formulate and issue the relative policies in supporting civil aviation development.

Both parties agreed to speed up the aviation hub construction of Xi'an Xianyang International Airport as a highly efficient, swift, convenient, unobstructed and safe major aviation transportation hub nationwide; to keep with efforts in supporting regional airports construction and operation in Shaanxi; to increase the supportive intensity on development of Shaanxi based airline companies; to speed up the general aviation industry development of Shaanxi; to deepen coordination with military in civil-military combined airport construction, airspace planning and utilization. At the same time, both parties would establish the civil aviation development coordination working mechanism to coordinate and solve major problems on Shaanxi's civil aviation construction, reform and development, and promote actively in important projects of Shaanxi provincial civil aviation construction and development.

10月26日,中国民用航空局和陕西省人民政府在西安举行《关于加快推进陕西民航发展的会谈纪要》签字仪式,陕西省委书记赵乐际出席仪式,民航局李家祥局长与陕西省赵正永代省长分别代表双方签署了纪要。

根据《纪要》,民航局将积极支持陕西省优先发展民航战略,支持陕西省研究制定全省民航发展战略规划和机场布局规划;陕西省将加强统筹协调,制定出台支持民航发展的相关政策措施。

双方商定,将共同加快西安咸阳国际机场航空枢纽建设,将西安咸阳国际机场建设成为高效、便捷、通畅、安全的全国重要航空运输枢纽机场;共同努力支持陕西支线机场建设和运营;共同加大对陕西基地航空公司发展的支持力度;共同加快陕西通用航空业务发展;共同加大与军方在民用、军民合用机场建设,空域规划和使用方面的协调力度。同时,双方将建立民航发展协商工作机制,共同协调解决陕西民航建设、改革与发展等重大问题,积极推进陕西省民航重大项目建设与发展。



Beijing Capital International Airport Becomes the World's Second Largest Airport with an Annual Throughput of 70 Million

首都机场年吞吐将破7千万 成全球第二大机场

According to the latest statistics by Beijing Capital International Airport, the annual passenger throughput has reached over 69 million. It is expected that the annual throughput will breakthrough 70 million in mid-Dec. 2010, and the airport will become the second largest worldwide. It symbolizes that the Beijing Capital International Airport is advancing in a big step towards becoming a large international aviation hub.

The statistics showed the continuous growth in passenger throughput of the airport since 2005, from the breakthrough of 50 million in 2007, 60 million in 2009 to 70 million in 2010.

根据北京首都国际机场的最新统计数据,首都机场的年旅客吞吐量已高达6900余万人次。依据目前的日运力推测,到12月中旬,年旅客吞吐量有望突破7000万人次,稳居全球第二大机场。这标志着首都机场在迈向国际大型枢纽机场的道路上又前进了一大步。

数据显示,自2005年以来,首都国际机场连续实现旅客吞吐量的持续增长。从2007年突破5000万,到2009年突破6000万,到今年突破7000万。

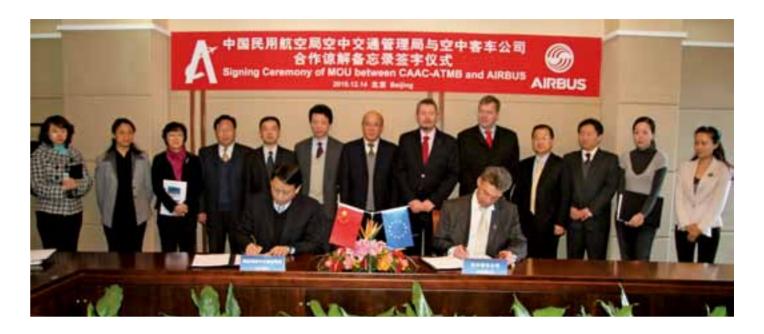
NCAR Specialists Visited CAAC Meteorology Center 美国国家大气研究中心的专家访问民航气象中心

Mr. William Mahoney, Director of Weather Systems & Assessment Program (WSAP), and Mr. Roelof Bruintjes, weather-modification expert at the National Center for Atmospheric Research (NCAR) of the USA, visited the CAAC Meteorology Center on Dec. 6, 2010.

The two experts introduced the advanced wind shear detection warning system at the Hong Kong International Airport, and the Wind Shear Detection Algorithm developed by the NCAR. They also introduced a number of new technical results of the NCAR's weather radar, including the special features of the multi-polarization radar and its future application in aviation meteorology. After their presentations, the attendees of the CAAC Meteorology Center discussed the airdrome detection warning system, windshear detection, and the multi-polarization radar with the US experts. They also talked about the intention of cooperation for the technicality of aviation weather services at plateau airports.

12月6日,美国国家大气研究中心天气和辅助应用系统项目主管William Mahoney和天气雷达应用技术专家Roelof Bruintjes到民航气象中心访问。

两位美国专家分别介绍了世界先进的香港 国际机场风切变探测预警系统以及美国国家大 气研究中心开发的风切变检测算法,还介绍了 NCAR天气雷达的新技术成果,包括多极化雷达 的产品特点以及在航空气象领域的应用前景。 报告结束后,气象中心与会人员就机场探测预 警系统、风切变探测、多极化雷达等问题与美 国的专家进行了讨论,还进一步探讨了在高原 机场航空气象服务技术方面的合作意向。



Airbus and ATMB Signed a Memorandum of Understanding on Air Traffic Management Cooperation 空客与空管局签署交通管理合作谅解备忘录

Recently, Airbus S.A.S. and the Air Traffic Management Bureau of the CAAC signed in Beijing a Memorandum of Understanding on Air Traffic Management Cooperation, in which both parties would strengthen their communication exchange and cooperation on air traffic management, and Airbus would actively support the modernization construction of China's air traffic management system. Wang Liya, Administrator of ATMB-CAAC, and Eric Stefanello, Senior Vice President, Head of the ATM at Airbus, jointly signed the Memorandum.

According to the Memorandum, Airbus S.A.S. would aid the ATMB of the CAAC to bring in and implement in China, the European advanced air traffic management technology, as well as the management experiences in support of China's future development in air traffic management systems. Airbus would provide support to the CAAC on Research & Development, technical verification and implementation, and personnel training. At the same time, Airbus would also unite with other related cooperative partners to provide the ATMB-CAAC full support on much needed technologies, experiences and training. These cooperative partners included Quovadis, a subsidiary of Airbus specialized in functional navigation service, Cassidian S.A., a service provider of aviation information management system under European Aeronautic Defense and Space Company (EADS), and DFS Deutsche Flugsicherung GmbH, a provider of air navigation services.

The ATMB of the CAAC suggested 16 potential cooperative aspects covering R&D, technical verification, setup support, airspace layout and training. As the first step of joint cooperation, both parties have chosen five substantial projects to carry out between 2010 and 2012, a foundation laid for further long-term cooperation in the future.

日前,空中客车公司与中国民用航空局空中交通管理局在北京签署空中交通管理合作谅解备忘录,双方将加强空中交通管理方面的交流与合作,空中客车公司将积极支持中国空中交通管理系统现代化建设。中国民用航空局空中交通管理局局长王利亚和空中客车负责空中交通管理事务的高级副总裁艾瑞克·斯特弗奈罗共同签署了合作谅解备忘录。

根据谅解备忘录,空中客车公司将协助中国 民航局空管局将欧洲先进的空管技术及管理经验 引入中国并加以实施,支持中国未来空中交通管 理系统的开发。空中客车公司将在研发、技术验 证与实施、人员培训等各个方面为中国民航局空 管局提供支持。与此同时,空中客车公司还将联 合其他相关合作伙伴为中国民航局空管局提供所 需技术、经验和培训等方面的全面支持。这些合 作伙伴包括专门提供基于性能导航服务的空客子 公司Quovadis公司、欧洲宇航防务集团旗下的航空 信息管理系统服务商Cassidian公司和空中导航服务 提供商DFS公司等。

中国民航局空管局提出了16个潜在的合作领域,涵盖了研发、技术验证、部署支援、空域设计及培训等方面。作为双方合作的第一步,双方选定五个具体项目在2010至2012年期间加以实施,为将来双方进一步的长期合作打下基础。

China-Philippines Aviation Forum Held in Beijing 中菲航空会谈在京举行

Recently, the China-Philippines Aviation Forum was held in Beijing. Mr. Li Jiangmin, Director General of the International Department of the CAAC, led the China delegation, made up of representatives from Southern Airlines, Air China, Eastern Airlines, Hainan Airlines, Shenzhen Airlines and Xiamen Airlines atteneded the Forum. Representatives from the International Affairs of Southern Airlines attended the Forum. The negotiators from China and the Philippines reached the Memorandum of Understanding based on equality and mutual benefits, and would become effective upon the confirmation through diplomatic notes by both parties.

During this forum, the Chinese delegation requested the Civil Aviation Authority of the Philippines to provide a convenient and unrestricted exchange channel for the Chinese airlines, allowing the Chinese airlines to contact directly with relative officials at the Civil Aviation Authority of the Philippines for communication and exchange upon any problems encountered. The Philippines delegation agreed accordingly. The two parties also discussed issues on the transport capacity quota, the Fifth Freedom Rights, and the connecting flight rights within domestic China.

近日,中国菲律宾航空会谈在北京举行。中方代表团由中国民用航空局国际司李江民司长担任团长,南航、国航、东航、海航、深航、厦航代表列席了会谈。中国南方航空股份有限公司由国际事务部派员参加了会谈。中国菲律宾双方谈判代表本着平等互利的原则达成了谅解备忘录。此备忘录将在两国通过外交照会确认后生效。

本次会谈中,中方代表团要求菲方民航局为中方航空企业提供便利通畅的交流渠道,即允许中方航空企业在遇到任何问题时不需通过任何中间人便可直接与菲民航局相关官员进行沟通和交流。对此,菲方表示同意。中菲双方还就运力额度、第五业务权、中国国内串飞权等业务进行磋商。

Singapore Civil Aviation Delegation Visited China 新加坡民航代表团来华考察

From Nov. 29 to Dec. 3, a 10-member Singapore civil aviation delegation headed by Lee Yuen Hee, Deputy Secretary of the Ministry of Transport of Singapore, came to the Civil Aviation Administration of the China for an investigation tour. Li Jian and Xia Xinghua, Vice Ministers of CAAC met the delegation separately.

During the visit, the delegation made business exchanges with relative departments of the Civil Aviation Administration of China and the CAAC's North China Regional Administration. In addition, the delegation also visited Beijing Capital International Airport, Air China Limited, Civil Aviation University of China, Civil Aviation Management Institute of China, and China Academy of Civil Aviation Science and Technology. This was the first official exchange visit between China and Singapore under the high official framework, aimed at strengthening deep understanding and discussing practical cooperation.



>考察民航大学

11月29日至12月3日,由新加坡交通部副常任秘书李源喜率领的新加坡民航代表团一行10人来我民航考察。李健副局长和夏兴华副局长分别会见了代表团。

访华期间,代表团还与民航局机关有关司局及华北地区 管理局进行了业务交流。此外,代表团还访问了北京首都机 场、中国国际航空公司、中国民航大学、民航管理干部学院 和民航科学技术研究院等单位。此访是中新民航高官会框架 下的第一次民航公务员互访活动,旨在加强深入了解,探讨 务实合作。

Regular Operation of Asian Aeronautical Meteorology Service Website Launched Officially

亚洲航空气象服务网业务化运行正式启动

The regular operation of the Asian Aeronautical Meteorology Service Website launched officially in Beijing on Nov. 4, 2010. Jeremiah Lengoasa, Deputy General Secretary of the World Meteorological Organization (WMO), Chi Ming Shun, Chairman of the Commission for Aeronautical Meterorology of the WMO, Xia Xinghua, Vice Minister of the Civil Aviation Administration of China (CAAC), and Shen Xiaonong, Deputy Director General of the China Meteorological Administration, attended the opening ceremony while related officials from the CAAC and the China Meteorological Administration observed. The regular operation of the website marked the outward extension of China's aeronautical meteorology services that provided free aeronautical meteorology information to developing and under-developed Asian and African countries.

The Asian Aeronautical Meteorology Service Website is an English website for aviation meteorology, including flight meteorology documentation, aeronautical forecast products, numerical forecast guidance products, basic synoptic charts information, meteorological satellite and radar imageries, with free access for all registered users. Within 3 years since the quasi-operational launch in 2007, the website has a fixed number of national users covering more than 20 developing and under-developed countries in Asia and Africa.



堪蚁 何子

11月4日,亚洲航空气象服务网业务化运行在京正式启动,世界气象组织杰瑞米哈·冷高沙(Jeremiah Lengoasa)副秘书长、世界气象组织航空气象委员会岑智明(Chi Ming Shun)主席、中国民航局夏兴华副局长、中国气象局沈晓农副局长出席了启动仪式,民航局及气象局有关负责人观摩了启动仪式。该网站的业务化运作,标志着中国航空气象服务冲出了国门,为亚洲和非洲地区的发展中国家和欠发达国家免费提供航空气象信息。

亚洲航空气象服务网是一个包括飞行气象文件、航空预报产品、数值预报指导产品、基本天气图资料、气象卫星与雷达资料等内容的航空气象英文网站,对所有注册用户免费开放。自2007年开始准业务化以来,运行三年中已拥有了一批固定的国家级用户,覆盖了亚洲和非洲地区的二十多个发展中国家和欠发达国家。

Beijing Capital Airlines A319 Got Successful RNP-AR Validation Flight at Lijiang Airport

首都航空A319丽江机场RNP-AR验证试飞获成功

Nov. 18, 2010, the RNP-AR (Required Navigation Performance - Authorization Required) validation test flight of Airbus A319-132 aircraft for Beijing Capital Airlines Co. Ltd. was organized by the CAAC's North China Regional Administration and took place at Lijiang Sanyi Airport. The validation flight was a success, and it was the high-altitude airport's 1st RNP validation among many aviation transport companies within the authority of thr CAAC's North China Regional Administration. The successful validation casted important purposes on increasing the operational ability, elevating the safety margin and guaranteeing flight regularity for airline companies.

11月18日,中国民用航空华北地区管理局(简称 "民航华北管理局")组织北京首都航空有限公司(Beijing Capital Airlines Co., Ltd., 简称 "首都航空")对空中客车A319—132机型的丽江三义机场(简称 "丽江机场")RNP AR (Required navigation performance Authorization Required需要特殊授权的所需导航性能程序)程序验证试飞成功。这是民航华北管理局在其辖区中的各运输航空公司中首次开展的高原复杂机场RNP验证飞行。验证试飞成功对航空公司提高运行能力、提升安全裕度、保证航班正常将起到重要作用。

China Civil Aviation Report



Beijing Capital International Airport & Amsterdam Airport Schiphol Are Now Sisters 首都机场与阿姆斯特丹史基浦机场结为姊妹

Oct. 19, 2010, Beijing Capital International Airport and Amsterdam Airport Schiphol signed a memorandum of becoming sister airports, and officially establishing the friendly partnership between Beijing Capital International Airport Co. Ltd. and Schiphol International B.V. Co. Dong Zhiyi, General Manager of Capital Airports Holding Co., Zhang Guanghui, General Manager of Beijing Capital International Airport Co. Ltd., and Nijhuis, CEO of Schiphol Group, all attended the signing ceremony.

Zhang Guanghui stated that the establishment of sister airports between Beijing and Amsterdam (being important international aviation destinations each other) fitted the basic benefits of both parties, and would become a crucial motivating effect for promoting economic, commercial trade between the two nations. According to the memorandum, both sides would strengthen further their cooperation exchanges on airport operation management, especially the hub airport construction and passenger services, encourage exploration and practice on new technologies and concepts, and promote swift development on the global airport industry.

Beijing Capital International Airport has established friendly partnerships with 7 international airports including Amsterdam Airport Schiphol, Eleftherios Venizelos International Airport, Singapore Changi Airport, Aeroport de Paris, Vancouver International Airport, Narita International Airport, and Sydney Kingsford Smith International Airport.

10月19日,北京首都国际机场与荷兰阿姆斯特丹史基浦机场共同签署了《北京首都国际机场股份有限公司与史基浦国际有限公司缔结姊妹机场备忘录》(以下简称"备忘录"),正式缔结友好合作关系。当天,首都机场集团公司总经理董志毅、首都机场股份公司总经理张光辉、荷兰史基浦机场集团公司总裁Nijhuis等出席了签字仪式。

首都机场股份公司总经理张光辉在签约仪式上表示,首都机场与荷兰阿姆斯特丹史基浦机场互为双方最重要的国际航点之一,此次结为姊妹机场符合双方的根本利益,并将为推动两国经贸往来起到重要的促进作用。根据《备忘录》,双方将在机场运行管理,特别是枢纽机场建设、旅客服务等领域进一步加强合作交流,推动双方在新技术、新观念等方面的探索与实践,共同推动全球机场行业的快速发展。

首都机场已同包括荷兰阿姆斯特丹史基浦机场、雅典机场、新加坡樟宜机场、法国巴黎机场管理公司、加拿大温哥华机场、日本成田国际机场、澳大利亚悉尼机场在内的7家国际机场建立了友好合作关系。

China Mainland, Hong Kong & Macao Aircraft Modification & MRO Mutual Recognition Seminar Held in Chengdu

内地与港澳航空器改装修理批准互认研讨会在成都召开

China Mainland, Hong Kong & Macao Aircraft Modification & MRO Mutual Recognition Seminar was held in Chengdu at the CAAC Building on Nov. 10-11, 2010. Representatives from the Airworthiness Department of the CAAC, Hong Kong Civil Aviation Department, Civil Aviation Authority of Macao, the SAR and Airworthiness Department of the CAAC's Southwest Regional Administration, all attended the seminar. Mr. Zheng Xuefeng, Deputy Director of the Airworthiness Department of the CAAC's Southwest Regional Administration hosted this seminar.

At the seminar, Mr. Zhang Sen, Deputy Director of the Airworthiness Department of the CAAC, introduced the project background of the Joint Certification Management (JCM) for China Mainland, Hong Kong & Macao, and related information of the mutual recognition team for the aircraft modification and MRO. The Airworthiness Department of the CAAC's Southwest Regional Administration introduced the current situation of the Designated Modification Design Organization Representative (DMDOR) in Southwest China, and its regulations and procedures, the designated approval procedure, and the postapproval management. All attendees discussed in details the related procedures, working process and concerned problems, and deepened the understanding of the details of DMDOR approval and management as well as relevant records and reports. Through the seminar, the administrations from Hong Kong and Macao could understand and get familiar with mainland's DMDOR application and management condition, the corresponding aircraft modification & MRO certification procedures, and provided the decision-making reference and basis for realizing the mutual recognition for the aircraft modification & MRO among China Mainland, Hong Kong & Macao.

After the seminar, the Airworthiness Department of the CAAC's Southwest Regional Administration accompanied the three teams to visit, observe and evaluate Air China Chengdu's MRO Base, the first DMDOR in Southwest China.



11月10日至11日,内地与港澳航空器改装修理批准互认研讨会在成都民航大厦举行。民航局航空器适航审定司、香港民航处、澳门民航局和民航西南地区管理局适航审定处出席此次研讨会。西南管理局适航审定处郑雪峰副处长主持本次会议。

会上,民航局适航司审定处张森副处长介绍了中港澳三方联合审定管理(JCM)项目背景,以及所属的三方航空器改装修理互认工作组相关情况,民航西南局适航审定处向港澳适航局方介绍了西南地区改装设计委任单位代表(DMDOR)现状,以及局方对其委任的规章和程序依据、委任批准程序、证后管理相关情况。与会各方对相关程序、工作流程和关心的问题进行了细致的研讨,并深入了解了DMDOR委任批准和监管的细节情况和相关记录与报告。通过研讨会,使港澳高局方了解和熟悉内地DMDOR委任和管理情况、以及相应的航空器改装和修理审批流程,为内地与港澳改装和修理批准实现互认并制定操作程序提供了决策参考和依据。

会后,西南局审定处陪同三方工作组对西南首家DMDOR委任单位国航成都维修基地进行了走访、考察和评估。

Yunnan Ying'an Airlines Got Approval for Setup 云南英安航空获批筹建

Yunnan Ying'an Airlines Co., Ltd. has passed the initial review by the CAAC's Southwest Regional Administration, and the CAAC approved its new startup on Dec. 7, 2010.

In fact, Ying'an Airlines is transformed from the established Yunnan Ying'an General Aviation Co., Ltd. to operate in the public aviation transportation. As it is designed, the base airport is planned to setup in Yunnan Puer Simao Airport, and expected to adopt the MA60 for regional passenger and cargo transportation within Yunnan province as well as with its neighboring provinces.

12月7号,一家新的航空公司即将获批筹建的公示,出现在民航管理局的网站上。这家名为"云南英安航空有限公司"(下称"英安航空")的航空公司,已经经过了民航西南地区管理局初审,民航局拟筹建。

事实上,英安航空是由已经在运营的云南英安通用航空有限公司(下称"英安通用"),转变为公共航空运输企业而来的。根据英安航空的计划,公司的基地机场拟放在云南普洱思茅机场,并拟用 MA60型飞机运营云南省内及云南省至周边省(区)的支线航空客货运输业务。

Relocation Construction of Ankang Airport Passed Preliminary Examination Designed as a Regional Airport

安康机场迁建项目通过预审 设计为支线机场

Lately, the feasibility report of Ankang Airport's relocation project has passed the preliminary examination at Beijing. It is to be relocated to the Fugiang Township of the Hanbin District as a domestic regional airport.

Ankang Airport is presently located 9 Km west of Ankang City, in the Shaanxi Province, about 3 Km on the road to Sichuan at the southeast of Wuli Township, Hanbin District. Built in 1938 and opened officially in 1964. It is a Level 3C airport for a gradually eliminated model D328-200 aircraft operation. Because of this, the CAAC listed the reconstruction-expansion of Ankang Airport as a priority project of the 11th Five-Year Plan, but the overall planning of Ankang City made the development focus shift north across the Hanjiang River; the expansion of the present airport, situated at the center of development on the north Hanjiang River, would seriously restrict the whole development scheme, so the airport would be relocated instead.

The new airport is a Level 4C airport which accommodates Boeing 737, Airbus A320, Modern Ark 60 (MA60), ARJ-21 and general aviation aircraft. It is located the hillside area, 15.5 Km northwest of Ankang City. The new airport will raise Ankang's geographical location advantage, meet the demands of external connection and communication, and provide a wider space for city establishment and social-economic development.

日前,安康机场迁建项目预可行性研究报告在北京通过预审。安康机场迁建场址确定在汉滨区富强乡,设计为国内支线机场。

安康现在的机场位于陕西省安康市中心以西直线距离约9公里、汉滨区五里镇东南方约3公里的川道上,始建于1938年,1964年正式通航。现机场飞行区等级指标为3C,只能满足D328-200飞机起降,而该机型飞机正逐步淘汰。为此,中国民用航空局(Civil Aviation Administration of China,简称"民航局")将安康机场改扩建工程列为"十一五"期间重点项目,但由于安康城市总体规划的修编调整使得安康城区发展重心"跨江北移",而现机场处于江北发展的腹地,如扩建将严重制约城市规划发展,故新机场由扩建改为迁建。

新机场飞行区标准为4C,设计机型为波音737、空中客车A320以及新舟60、ARJ-21等支线飞机并同时兼顾通用航空飞机需求。场址位于安康市西北部的丘陵区,距市中心直线距离约15.5公里。新机场建成后,将极大提升安康的区位优势,满足对外联络与沟通的需要,还将为安康城市建设和经济社会发展提供更广阔的空间。

Tibet Airlines Signed the Technical Documents with Airbus to Complete the Aircraft Framework Defination 西藏航空与空客签署文件 完成飞机构型定义

Tibet Airlines Co. Ltd. is an airline authorized by the CAAC to operate in a high plateau, and based at the Tibet Lhasa Gonggar Airport. Tibet Airlines chose Airbus A319 aircraft equipped with CFM56-5B powering engine, with the passenger cabin layout composed of first and economy classes. Through a 3-month effort, the type selection has been completed on Oct. 20, 2010, and the relevant technical documents were signed with Airbus S.A.S. to ensure the proper import of the aircraft.

Being the first domestic high plateau airline operating the high plateau routes, the aircraft selection has taken enough considerations on safety, comfortability and Tibetan culture for designs of aircraft system, cabin facilities & decorations. The cargo bay is installed with ventilation and heating systems that meet the needs for transporting animals and living matters, a rather humanistic feature.

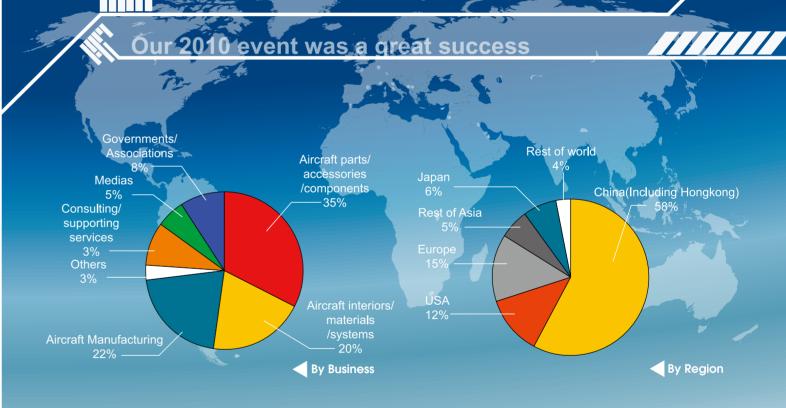
西藏航空有限公司是中国民用航空局批准成立的一家高高原航空公司,运行基地位于西藏拉萨贡嘎机场。西藏航空有限公司选择安装CFM56-58发动机为动力的空中客车A319飞机,客舱采用头等舱和经济舱的两舱布局。经过为期3个月的努力,选型工作于2010年10月20日全部完成,与空中客车公司(Airbus S.A.S.)的相关技术文件也签署完毕,保证飞机的正常引进。

作为以高高原航线为主的国内首家高高原航空公司,本次选型在飞机系统、客舱设施和客舱内饰等方面充分考虑到安全性、舒适性以及西藏人文元素,并且选装了具有通风和加温的货舱系统,可以满足动物及活体运输的需要,更具人性化。



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Two Scientific Research Findings Passed the CAAC's Scientific Technology Appraisal 民航二所两项目科研成果通过民航局科技鉴定

Oct. 29, 2010, the Personnel, Science & Education Department of the CAAC, organized and held at Chengdu, the Scientific Technology Findings Evaluation Meeting for two projects of The 2nd Research Institute of the CAAC: 1) Airport Geographical Information Management System and 2) CPU Intelligent Card Based Airport Personnel Consolidated Service Platform.



The appraisal council made up of specialists from Sichuan University, Chengdu Shuangliu International Airport, Information Center of Qingdao International Airport, Chongqing Jiangbei International Airport, Shenzhen International Airport, Chengdu University of Technology and Dalian International Airport. It was concurred amongst council members, that Project 1 widened the geographic information system's application in airport combined management, while Project 2 filled in the blank of intelligent card's application in domestic airport's personnel service. Both projects have reached the nation's leading level, and suggested to the Research Study Group to further develop projects on areas of application in civil aviation airports.

10月29日,中国民用航空局 人事科教司在成都组织召开了中国 民用航空局第二研究所"机场地理 信息管理系统"和"基于CPU智能 卡的机场员工综合服务平台"两个 项目的科技成果鉴定会。

来自四川大学、成都双流国际机场、青岛流亭国际机场信息中心、重庆江北国际机场、深圳机场、成都理工大学和大连周水

子国际机场的专家组成的鉴定委员会一致认为,"机场地理信息管理系统"项目扩展了地理信息系统在机场综合管理中的应用,"基于CPU智能卡的机场员工综合服务平台"项目填补了CPU智能卡在国内机场员工综合服务应用中的空白,两个项目均已达到国内领先水平,建议课题组进一步拓展项目在民航机场的应用领域,加快科研成果的推广和应用。

Next-Gen ATM System Approved by the Ministry of Science and Technology

国家863计划重大项目"新一代国家空中交通管理系统" 通过科技部验收

Next-Gen ATM System, a key project of the National 863 Plan hosted by the CAAC in the 11th Five-Year Plan, passed the acceptance test by the Ministry of Science and Technology in Mianyang on Dec. 6, 2010; simultaneously, the CAAC & ATM technical integration application demonstration, the key project of the aviation management with science & technology supports, was also initiated. Mr. Cao Jianlin, Vice Minister of the Ministry of Science and Technology, and Mr. Xia Xinghua, Vice Minister of the CAAC, attended the acceptance and initiation ceremony.

As part of the results, the implementation of RVSM increased 85% of the capacities of the national high-altitude air space. The ATC Automated System has been applied in 23 ATC units; the application of the Flow Management System decreased the flight delay rate by 20% for routes between China Eastern Area and Beijing. All the above-mentioned achievements have played an important role during both the Beijing Olympics Games and the Shanghai World Expo for aviation safety. Besides, the successful trial flight at Tibet Nyingchi Airport supported the implementation of night flights in Tibetan Area.

由民航局主持的"十一五"国家863计划重大项目"新一代国家空中交通管理系统"12月6日在四川绵阳通过科技部验收,同时国家科技支撑计划空管重大项目"中国民航协同空管技术综合应用示范"也在此启动。科技部副部长曹健林、民航局副局长夏兴华出席验收和启动会。

在该项目系列成果中,RVSM的保障实施使我国高空空域容量增加了85%;管制自动化系统已应用于国内23个空管单位;流量管理系统的应用使华东地区前往北京落地的航班延误率下降了近20%。上述成果使得该项目在北京奥运会和上海世博会的航空保障中起到了不可或缺的作用。此外,在西藏林芝机场的试验成功支持了西藏地区夜航的实施。

Newly Built Navigation Station of Gansu Tianshui Airport Successfully Completed the Trial Flight 甘肃天水机场新建导航台校飞已获得圆满成功

A King Air 350 of the Flight Inspection Center of the CAAC steadily landed in Gansu Tianshui Airport at 16:40 on Dec. 6, 2010, marking the successful completion of the acceptance tests for the DVOR/DME, LZZ, PAPI lighting system. The completion of the trial flight signified the ending of Tianshui Airport's lack of civil navigation facilities. It symbolized the first installation of the Italian THALES new model navigation system in the 1st Chinese airport to have passed the trial flight, and accomplished the final preparation for the formal operation of the navigation station in Tianshui Airport.

The navigation station at Tianshui Airport has been a bottle neck which restrained the development of Tianshui Airport in such the old military NDB system could no longer meet the rapid development demands. The implementations of the DVOR/DME, LZZ, PAPI lighting system were the thorough solution for resolving the current situation, and improving the navigation accuracy. It was of great significance to improve the infrastructure security capability, to increase the flight punctuality rate, and to secure the continuous safety operation before the relocation of the airport. It also showed the strong interests of the investment group towards regional airports and demonstrated its strategy of grasping the aviation field.

It was worth mentioning that the installed navigation system is an upgrade of the old THALES model. Although it has been used for many years overseas, it was the first installation and used in China. Tianshui Airport invited foreign experts to work with the technical team of the CAAC's Northwest Equipment Company and the airport navigation personnel for the on-site installation and tuning, which laid a concrete technical base for the successful trial flight and the future safe operations.

12月6日16点40分,中国民用航空局校飞中心的国王350飞机在天水机场平稳落地,天水机场DVOR/DME、LZZ、PAPI灯光系统设备投产校飞圆满完成。此次校飞的完成,标志着天水机场无民航导航设施历史的结束,标志着意大利THALES公司新型号导航设备首次在国内第一个机场安装并通过校验飞行,也为天水机场导航台的实际投入运行做好了最后准备。

天水机场导航台一直是制约天水机场发展的瓶颈,空军老旧的NDB设备已经不能满足机场快速发展的需要。机场新建航向台、全向信标/测距台及PAPI灯工程正是为了彻底解决现机场无民航导航设施现状,提高机场导航精度。对提升机场基础保障能力,提高航班正常性、保证机场迁建前的持续安全运营有着极为重要的意义。同时,投资1500多万的导航台工程标志着集团公司对支线机场的重视,也彰显出集团公司紧抓航空主战场的战略。

值得一提的是此次安装的导航设备为意大利 THALES公司老型号设备的升级版,虽在国外已安全 保障运行多年,但在国内还属首次安装使用。天水 机场做为国内第一家安装此型号设备的机场,特别 邀请外方专家与民航西北安装公司及机场通信导航 人员一起现场安装和调试,为投产校飞的圆满成功 和今后的运行保障打下了坚实的技术基础。

Qingdao Liuting Airport Passed the CAAC Special Approved HUD Catagory I Flight 青岛机场通过民航局特殊批准(HUD)I类飞行

Oct. 27, 2010, the B-5452 Boeing 737-800 passenger aircraft of Shandong Airlines Co. Ltd. carried out at Qingdao Liuting Airport the test flight utilizing the HUD (head-up display), a special catagory I operation approved by the Civil Aviation Administration of China (CAAC). Throughout the 55-minutes flight, the utilization of the HUD for approach-landing was tested and verified under various conditions. The whole ILS had proven to have stable signals, accurate and continuous altimeter indication, normal HUD parameter, and good guildlines that concluded a successful test flight.



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10月27日,山东航空股份有限公司(Shandong Airlines Co., Ltd., 简称"山航")B-5452号波音737-800客机在青岛流亭国际机场进行了中国民用航空局批准的使用平视显示器(HUD)特殊I类运行的验证飞行, 经过五十五分钟的飞行, 验证了飞机在各种情况下使用平视显示器(HUD)进近着陆。经验证整个ILS信号稳定, 机载无线点高度表指示准确连续无跳变, HUD参数正常、指引良好, 验证飞行圆满成功。

Chinese Engineers Participated in the Design Project of the A330-200F 中国工程师参与空客A330-200F货机项目设计

The newly produced A330-200F by Airbus S.A.S. was put into commercial operation as a mid-sized long-haul freighter in July, 2010. The A330-200F entered the international cargo transport market with steady steps by its outstanding efficiency, and welcomed by the aviation cargo transport companies. In Sept. 2010, Hong Kong Airlines Ltd. received the first of three A330-200F introduced through longterm leasing, and became the first airlines in East-Asia to operate this brand-new freighter.

The new freighter also combined the intelligence and effort of Chinese engineers. Officially operated in 2005, the Airbus (Beijing) Engineering Centre took on the responsibilities of multiple design work packages that contributed to the A330-220F project

The Airbus (Beijing) Engineering Centre got involved in this project in Sept. 2006. The responsible work packages included two main parts: First, responsible for the design of digital model for the fuselage sections between No. 15 to 19; and second. performing the damage tolerance analysis and obtaining the certificate for the movable parts.

空中客车公司 (Airbus S.A.S.) 全新推出的中型远程 货运飞机空中客车A330-200F货机于今年7月正式投入商业 运营。空中客车A330-200F货机以其卓越的运营效率稳步 进军国际航空货运市场,受到航空货运公司的欢迎。今年9 月,香港航空有限公司 (Hong Kong Airlines Limited, 简称 "香港航空") 接收其通过长期租赁方式引进的三架空中 客车A330-200F货机中的第一架,成为东亚地区第一家运营 这一全新货机的航空公司。

空中客车公司推出的这一全新货运飞机也凝结着中国 工程师的智慧和劳动。于2005年正式投入运营的空客(北 京) 工程技术中心, 承担了空中客车A330-200F货机的多个 工作包设计工作,为A330-200F货机项目做出了贡献。

空客(北京)工程技术中心于2006年9月开始介入该项 目。工程中心承担的空中客车A330-200F货机项目工作包主 要包括两部分内容:一是承担该飞机从第15到第19机身段 的数字模型的设计工作:另外一部分工作则是A330-200F货 机移动部件的疲劳损伤容限分析及取证工作。

Hu'nan Hengyang Nanyue Airport Construction Got Approval from The State Council of the PRC

湖南衡阳南岳机场建设项目已获得国务院批准

Nov. 3, 2010, the State Council of the People's Republic of China held an executive meeting, and passed the construction project for the Hu'nan Hengyang Nanyue Airport. The site of Nanyue Airport was set at Yunji Township, Hengnan County of Hengyang City. It is one of the regional airports listed in the nationwide civil aviation airport layout plan, and built in accordance with domestic regional airport guildance, a Level 4C flight zone designed for takeoffs and landings of Boeing 737 and Airbus A320 aircraft with major services to mid-southern 设。飞行区等级4C,设计起降波音737 regions of Hu'nan Province. At the completion of Nanyue Airport, it will radiate 40 surrounding counties and cities including Hengyang City, Shaoyang City, Chenzhou City, Yongzhou City, Yanling County, You County, and Chaling County of Zhuzhou City, and Shuangfeng County of Loudi City, a 86.7 thousand square kilometer area with more than 27 million people benefited.

11月3日,中华人民共和国国务 院召开常务会议,湖南衡阳南岳机场 建设项目获得通过。衡阳南岳机场地 点定为衡阳市衡南县云集镇,是列入 全国民用机场布局规划的支线机场之 一, 拟按照国内支线机场规划、建 和空中客车A320, 主要服务范围为湘 中南地区。衡阳南岳机场建成后,将 辐射衡阳、邵阳、郴州、永州四市及 株洲市炎陵、攸县、茶陵和娄底市双 峰等周边40个县(市),8.67万平方 公里,受益人口超过2700万。

Daging Saertu Airport: Characteristic Parameters Met Criterion and Passed Flight Inspection

大庆机场: 性能参数符合标准 通过飞行校验

The Flight Inspection Center of the CAAC had conducted a five-day flight correction for Daging Saertu Airport. All characteristic parameters for navigation equipments and the airfield lighting system met technical standards and successfully passed the flight inspection.

From Nov. 29 to Dec. 3, a Citation 650 airplane from the Flight Inspection Center of the CAAC had taken a whole set of flight correction for the Instrument Landing System, the navigation equipments, the airfield lighting system etc. and the flight procedure of the Daging Saertu Airport; the airport passed the flight inspection that ensured the airport would continue to provide accurate. reliable navigational information for safe takeoffs and landings of arriving and departing flights, and would also provide the powerful support for the safe production of Daging Saertu Airport.

民航局校验飞行中心对大庆机场 进行了为期5天的校飞。导航设备、助 航灯光系统等各项性能参数符合技术标 准, 顺利通过飞行校验。

11月29日至12月3日,校飞中心奖 状C650型飞机,对大庆机场的盲降设 备、导航设备、助航灯光系统等设施设 备及飞行程序,进行了一系列校验并顺 利通过校飞,确保了机场继续向进出航 班的安全降落提供准确、可靠的通信导 航信息, 也为大庆机场的安全生产提供 了强有力的保障。

Civil Aviation Radar Made in Hefei Broke Foreign Monopoly 民用航空雷达"合肥造"打破国外垄断

Anhui Sun Create Electronics Co. Ltd. was rewarded the first "Temporary Permit of ATC Navigation & Surveillance Equipment" by the CAAC, which marked that the ATC radar product possessed the market entry qualification of CAAC ATC standards.

Mr. Lu Jiaguo, General Manager of Anhui Sun Create Electronics Co. Ltd. said: "Currently, American and European companies' ATC equipments occupy China's military and civil airports." He believed that the construction of ATC system played a more and more important role in the powerful nation strategy due to the acceleration of opening-up the low-altitude air space. ATC radar holds an important position in the CAAC ATM system, and bears major responsibility for the safety of flights, take-offs and landings.

"Recently, the CAAC proposed to 'boost the construction of the Next-Gen ATM system, and structurally build the civil aviation ATC technology and equipment system with China's unique characteristic." Mr. Lu Jiaguo introduced that the localization process of China civil aviation has obviously accelerated. Anhui Sun Create Electronics seized the opportunity, and took the lead in obtaining the "Temporary Permit of ATC Navigation & Surveillance Equipment" by the CAAC. "Having the market entry qualification, we strive to recapture the market taken by foreign counterparts."

四创电子股份有限公司, 获得中国民用航空 局颁发的首张《民用航空空中交通通信导航监视设 备临时使用许可证》,标示着该公司空管雷达产品 具备了中国民航空管领域的市场准入资格。

"目前,国内的军用机场和民用机场空管设 备基本由欧美企业占据。"四创电子公司总经理鲁 加国向记者介绍,随着低空开放的步伐加快,民航 空管系统建设在强国战略中的地位也越来越重要。 空管雷达在民航空中交通管制系统中占有重要地 位,对飞机航行、起飞、着陆的安全性承担着重大

"近日, 民航局提出'推进新一代空中交通 管理体系建设,全面构建具有我国特色的民航空管 技术和装备体系'。"鲁加国介绍,我国民航国产 化进程明显加快,四创电子把握机遇,率先获得民 航颁发的《民用航空空中交通通信导航监视设备临 时使用许可证》。"有了市场准入资格,我们力争 把国外产品占领的市场抢回来。

Boeing B747 of Air China Successfully Completed the Trial Flight at the Second Runway of Chongqing Airport

国航波音B747飞机成功试飞重庆机场第二跑道

Dec. 6, 2010, an Air China B747-400 performed numerous takeoffs and landings on the brand new second runway at the Chongqing Jiangbei International Airport, which perfectly tested the maiden flight of the runway, and signified the successful trial flight of the second runway.

The successful trial flight of the second runway at Chongqing Airport lays a foundation for its official operation on Dec. 21, 2010, and further reveals Chongqing's position as the aviation hub in western China.

12月6日,在重庆江北国际机场崭新的第二跑道上,一架中国国际航空股份有限公司(Air China Limited,简称"国航")波音747-400型飞机用几次精彩的起降,完美检验了这条跑道的"初航",也标志着重庆机场第二跑道试飞成功。

此次重庆机场第二跑道试飞成功,为12月21日的正式投入使用奠定了基础,更加凸显了重庆市在西部的航空枢纽地位。



1st Radar Installed at Youyi Radar Station 极地航路友谊雷达站实现十一五规划中首部雷达安装

Oct. 31, 2010, the antenna hoisting of the secondary radar at Youyi Radar Station of Heilongjiang Provincial ATMB-CAAC, had been completed smoothly. Youyi Radar Station is a major contruction project of the National 11th Five-Year Plan, a sub-project of the radar management program for major aviation routes at the eastern and western regions. The Youyi Radar Station project was officially setup in 2006 with construction started in 2010. The completion of the supplemental projects including the radar antenna, oil engine, UPS, and lightning protection marked Youyi Station as the site with the 1st of 32 radars installed as stated on the 11th Five-Year Plan. The Station is expected to be in operation next Spring after the thorough adjustment tests and flight checks.

Youyi Radar Station is situated at Shuangyashan area of Heilongjiang Province. The new radar station will achieve radar coverages on international routes over the entering/exiting points of Heilongjiang and solve the management problems regarding the Heilongjiang blind zone in the polar region. The Station also has considerable meaning on aspects of strengthening the international aviation routes construction of China's northeastern region, improving the supervision environment, raising the security ability and increasing the airspace capacity.

2010年10月31日,民航东北空管局黑龙江空管分局友谊雷达站二次雷达天线吊装工作顺利完成。友谊雷达站是国家"十一五"规划中重点建设工程项目——东部地区及西部主要航路雷达管制工程项目的子项目,友谊雷达站2006年正式立项,2010年土建开工,此次包括雷达天线、油机、UPS、避雷等附属工程的完成标志着友谊雷达站成为"十一五"规划32部雷达中第一个正式进入雷达设备安装的现场。该站经过未来的调试、飞行校验等工作,预计明年春天投入使用。

友谊雷达站位于黑龙江省双鸭山地区,新雷达站的建成将实现国际航路黑龙江进出境点的雷达覆盖,解决极地航路黑龙江段部分区域的管制盲区问题,它的建设对我国东北地区加强国际航线建设、改善管制环境、提高保障能力、增加空域容量等方面具有重要意义。

Core Projects Settled in Shanghai Breakthrough Expected of Independently R&D Large Aircraft 核心项目相继落沪 大飞机自主研发突破在望

If the engine is the heart of an aircraft, the avionics are the nerves. On Nov 16, the Aviation Industry Corporation of China (AVIC) signed agreements with 5 companies including Shanghai Yidian Holding (Group) Company and Shanghai Guosheng Group Co., Ltd. for setting up a joint venture avionics company in Shanghai. After the settlement of the large aircraft engine project in Shanghai, this event signified that the nerves would also settle in Shanghai.

The traditional advantage of China's civil aviation manufacturing is mainly focused on the development of fuselage, enclosure and other key airframe parts. But on the core parts of engine and avionics system, limited by China's current technical background and development stage, our large aircraft with independent intellectual property rights still needs to purchase foreign leading products. Mr. Li Jibao, Deputy Director of the AVIC Commercial Aircraft Engine Co., Ltd., said that it is easy to be caught by the throat without seizing the core technologies of engine and avionics. Establishment of the AVIC Avionics Industry Company in Shanghai means the breakthrough is expected for R&D of avionic key parts right after the startup of the engine project.

Mr. Wang Xiaoming, Deputy Director of AVIC Avionics System Co., Ltd. revealed that six investors, namely AVIC Avionics System Co., Ltd., Shanghai Yidian Holding (Group) Company, Shanghai Guosheng Group Co., Ltd., Shanghai Minhang Investment Construction Co., Ltd., Shanghai Zijiang Venture Capital Corporation Limited, and Yantai Blue Sky Investment Holding Co., Ltd., are investing in setting up the AVIC Avionics Industry Company. The total registered capital reaches RMB 4.5 billion, with AVIC Avionics System Co., Ltd. holding 40%, Shanghai Yidian & Shanghai Guosheng holds 15% respectively. The company will situate in the Shanghai Zizhu Science-Based Industrial Park.

如果发动机之于飞机而言就像"心脏",那么 航电可以比作"神经"。11月16日,中国航空工业 集团公司(Aviation Industry Corporation of China, 简称"中航工业")与上海仪电、上海国盛等5家企 业签订协议,共同出资在上海成立航空电子产业公 司。这意味着在大飞机发动机项目落户上海后,大 飞机的"神经"也即将落沪。

我国民用航空制造业的"传统优势"仍主要集中在飞机的机身、机壳等关键机体部件的研制。但在发动机、航电系统等尤为关键的核心部件上,限于国内现有技术基础及发展阶段,我国自主知识产权的飞机型号目前还只能选购国外的领先产品。我国在大飞机发动机、航电系统两大核心领域自主知识产权的缺位直接制约航空装备制造产业的发展。用中航商用发动机有限责任公司副总经理李继保的话说:没有掌握发动机和航电等核心技术,就容易被人扼住喉咙。中航工业航空电子产业公司落户上海,意味着在发动机项目启动之后,航电产业核心部件自主研发突破在望。

中航航空电子系统有限责任公司副总经理汪晓明透露,此次航空电子产业公司的出资方包括中航航空电子系统有限责任公司、上海仪电控股(集团)公司、上海国盛(集团)有限公司、上海闵航投资建设有限公司、上海紫江创业投资有限公司、烟台蓝天投资控股有限公司六家;注册资金达45亿,其中中航工业控股40%,上海仪电与上海国盛各占15%,公司将落户于上海紫竹。

Zhangjiajie Airport's aerial port will be upgraded soon 张家界机场航空口岸即将升级 申请获得批复

Zhangjiajie Hehua Airport's Category 1 aerial port obtained the approval from the State Council of the People's Republic of China on Nov. 27, 2010.

Looking back, Zhangjiajie Airport was approved to be a Category 2 aerial port in 1997, with only opening the flights to Hong Kong and Macao. Over a decades, Zhangjiajie Airport finally welcomes the era of receiving overseas flights with the joint efforts of the Zhangjiajie Hehua Airport, the Port Office of the People's Government of Hu'nan Province, and the Port Office of the Municipal Government of Zhangjiajie. It is very good news for the Zhangjiajie Hehua Airport, which faces the current market environment and the developmental bottle necking.

11月27日,张家界荷花机场一级航空口岸 申请获得了中国国务院批复。

回顾往昔,1997年,张家界荷花机场二级航空口岸批准设立,开通航线仅限港、澳地区,10多年后,在张家界荷花机场、湖南省政府口岸办、张家界市政府口岸办等各方的努力下,张家界机场终于迎来对外籍飞机全面开放的时刻,这针对张家界荷花机场目前所处的市场环境,发展瓶颈,可谓是弥足珍贵的好消息。

CAAC East China Regional Administration Successfully Organized Two RNAV Inspection Trial Flights

华东局成功组织沪两场RNAV飞行程序验证试飞

Under the guidance of the CAAC on Nov. 25, Mr. Tang Weibin, Deputy Administrator of the CAAC's East China Regional Administration, as chief of the trial flight team, organized two RNAV trial flights by Airbus A321 at Shanghai Hongqiao and Pudong International Airports in collaboration with China Eastern Airlines, East China ATMB of the CAAC and Shanghai Airport Authority. The result proved that the procedure was easy to operate, the flight track was accurate and the trial flight was successful. At the evaluation meeting, Mr. Tang Weibin and the Flight Standard Dept. of the CAAC gave important instructions for the relevant follow-up issues.

The application of new technology will optimize the take-off and landing air route structures, and increase the air space capacities for both Hongqiao and Pudong airports. Bringing the advanced capabilities of modern aircraft into full capacity will lay a good foundation for further improving the airport's operational security and upgrading the quality of flight safety.

11月25日,在中国民用航空局指导下,以中国民用航空华东地区管理局(简称"民航华东管理局")唐伟斌副局长为组长的试飞领导小组组织中国东方航空股份有限公司(简称"东航")、中国民用航空华东地区空中交通管理局(简称"民航华东空管局")和上海机场(集团)公司等单位,使用空中客车A321型飞机,对上海虹桥国际机场、上海浦东国际机场两机场区域导航(RNAV)飞行程序进行验证试飞。验证结果证明该程序操作简便,航迹精确,试飞取得圆满成功。在验证试飞讲评会上,民航华东管理局唐伟斌副局长和民航局飞标司航务处就该项目的后续有关工作做了重要的指示。

新技术的使用,将优化上海虹桥国际机场和上海浦东 国际机场的进离场航线结构,增加既有空域的容量,充分 发挥现代航空器的先进性能,为进一步提高机场运行的安 全余度、提升飞行安全运行品质打下了良好的基础。

Shenzhen International Airport Fully Implemented the RNAV-1 Flight Procedure

深圳机场全面实施区域导航RNAV-1飞行程序

The CAAC's Central and Southern Regional Administration announced in Shenzhen on Nov. 9, 2010, that the RNAV-1 flight procedure was fully implemented and became official at 12 midnight. Being one of the portal hubs in southern China, Shenzhen International Airport, subsequent to Guangzhou and Beijing, is the 3rd international airport in implementing the RNAV procedure, signifying its opening of a new chapter on new aviation technology application and popularization.

The RNAV flight procedure is a new aviation technology which has great values in safety, punctuality and capacity. With building a strong civil aviation nation in mind, the CAAC promotes the RNAV in order to raise the airspace's aircraft capacity and operation efficiency, to increase flight frequency, to relief flight delays due to flight flows and to bring forth swifter travel for passengers.

Aviation specialists believed the implementation of the RNAV of Shenzhen International Airport would effectively alleviate its flight delay conditions and increase the flow at the same time so that the airport, the airline companies, as well as the passengers will all benefited from the procedure.

11月9日民航中南管理局在深圳宣布,深圳宝安国际机场区域导航RNAV-1飞行程序于当日零时起正式全面实施。作为华南地区门户枢纽之一的深圳机场是继广州、北京第三个实施区域导航程序的国际机场,标志着深圳机场揭开了航行新技术应用和推广的新篇章。

区域导航飞行程序是航行新技术,对安全、正 点和容量有很大的价值,民航局领导从建设民航强 国的核心技术的角度来推进这项工作,旨在提高空域的飞机容纳数量,提高空域的运行效率,增加航班的运行密度,缓解因飞机流量造成的航班延误,为旅客出行带来更快捷的保障。

民航专家认为,今天深圳机场实施区域导航 RNAV程序的运行,将有效缓解深圳机场航班的延 误情况,增大机场的流量同时,机场、航空公司及 旅客都是该项目的共同受益者。

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32 Renovated Accessibility Features for the Disabled were Put into Use at Zhuhai Airport

珠海机场32项无障碍设施改造投入使用



32 renovated-improved accessibility facilities for disabled people were put into use at Zhuhai Airport on Dec. 11, 2010, signifying that Zhuhai Airport has successfully finished the "request to build Zhuhai as the nation's accessible city for the disabled", and was fully prepared for the anticipated Guangzhou Asian Para Games.

Many facilities inside the terminal have been reconstructed and upgraded to be

handicap friendly; the signs are clear, and the functions are more humanistic to provide huge convenience to the disabled people using the airport. There are added low-access counters, low-access public telephones and all kinds of clearly, readily seen signs such as "accessible vehicle lane" and "accessible facility"; there are accessible ramps at the entrances of the departure and arrival halls with reserved parkings for the handicaps. Besides, the airport 机场安检开设无障碍通道,乘坐轮 security checks open passages for the disabled where wheelchair passengers can get through directly; the lifts in the restricted areas are equipped with voice prompt, braille signage and lower handrails; and in restrooms, the handrails are also lowered with the door opening-closing direction changed.

12月11日 珠海机场32项无障 碍设施改造完善项目投入使用,标 志着珠海机场顺利完成了"珠海市创 建全国无障碍城市的要求"和为即将 召开的广州亚残运会做好了全面无

候机楼内许多设施都已进行了 无障碍改建和升级,标识清晰,功 能更加人性化, 为残障人士进出机 场和乘机提供了极大的方便: 候机 楼内添置了供残障人士使用的低位 柜台、低位公共电话,各种"无障碍 车辆行进"、"无障碍设施"指示牌清 晰醒目,在候机楼出发和到达大厅 门口设置了无障碍斜坡, 并配合无 障碍斜坡设置专用停车位:此外, 椅的旅客便可直接通过, 升降电梯增设语音提示、盲道提示 并降低扶手, 洗手间也进行了扶手 位降低、更改门开关方向等。

BOC Aviation Ordered 8 Boeing Aircraft 中银航空和赁订购8架波音飞机

BOC Aviation, a wholly-owned subsidiary of Bank of China, signed a purchase contract with The Boeing Company lately for 8 Boeing 777-300ER aircraft, and would lease them in a long term to Thai Airways International Public Company Limited (Thai Airways InternationI).

The 8 GE90-115BL engine equipped aircraft would be delivered sequentially between August 2012 to October 2013. Such transaction is the first between BOC Aviation and Thai Airways International.

Including this transaction, the company has a confirmed order total of 13 wide-body aircraft and 4 purchase leaseback aircraft that would be delivered by the end of 2013. BOC Aviation has the newest aircraft fleet within the leasing industry with aircraft less than 4 years old on average.



中国银行全资附属公司中银航空租赁日前与波音签署8架777-300ER型飞机订购合同,并将其长期出租给泰国国际航空公司。

这8架配备GE90-115BL发动机的飞机将于2012年8月至2013年10月 间陆续交付。此交易是中银航空租赁与泰国国有航空公司的首次合作。

包括此项交易在内, 该公司共有13架宽体飞机确认订单及另外4架 已承诺交付的购机回租飞机,将于2013年底前陆续交付。中银航空租赁 拥有业内机龄最短的机队,平均机龄不到四年。

The Second Research Institute of the CAAC Signed a Contract with Hefei Xinqiao Airport

民航二所与合肥新桥机场签行李处理系统合同

Recently. The Second Research Institute of the CAAC signed a contract with Hefei Xingiao International Airport for its baggage handling system. The contract amount is 36 million RMB. This is the second cooperation between the two parties this year subsequent to the overall contract for the weak current project. The total amount of both contracts are valued at over RMB 100 million.

近日,中国民用航空局第二研究所(简称"民 航二所") 与合肥新桥国际机场共同签署了合肥新 桥国际机场航站楼行李处理系统项目合同,合同金 额3600万元。这是今年民航二所与合肥新桥国际机 场继签署航站楼弱电项目工程总承包合同的第二次 合作。两个合同的金额总价超过一亿元。

Two A320-200 Aircraft Delivered to Chengdu Airlines 中国飞机租赁向成都航交付两架A320-200飞机

The two Airbus A320-200 aircraft delivered to Chengdu Airlines Co. Ltd. by China Aircraft Leasing Co. Ltd. (CALC) on Sept. 30 had completed the spray painting, and flown from Jinan to Chengdu on Oct. 13, 2010, where they were put into operation on the 15th.

Such transaction casts an enormous meaning in the aircraft leasing industry of the greater China area. Before this, our nation's aircraft leasing companies generally used airline companies that have their own aircraft purchasing orders and provided finances, such as finance leasing or lease back after selling, and a few leasing companies bought directly from aircraft manufacturers new aircraft then leased to airline companies. Therefore in this transaction, the CALC directly selected and purchased aircraft from fleets of overseas airline companies that met the demands of Chengdu Airlines on program configuration and delivery time, and through operational leasing leased to Chengdu Airlines with aircraft and finance plans provided at the same time, a highly difficult, professional demanding task. CALC is the 1st Chinese aircraft leasing company using such operational structure, and successfully delivered two aircraft for Chengdu Airlines' operation.



10月13日,由中国飞机租赁有限公司 (China Aircraft Leasing Company Limited,简称"CALC")于9月30日成功交付给成都航空 有限公司 (Chengdu Airlines Co., Ltd., 简称"成都航空") 的两架 空中客车A320-200型飞机完成喷涂由济南飞往成都,这两架空中客 车A320-200型飞机将于10月15日正式投入运营。

此次交易在大中华区的飞机租赁行业中具有重大的意义。在此 之前,我国飞机租赁公司普遍采用为航空公司自有的飞机订单提供 融资方式,如融资租赁或售后回租等,也有极少数是租赁公司直接 从制造商处购买新飞机再出租给航空公司。因此,此次交易CALC 是通过直接从海外航空公司机队中挑选并购买工程配置及交付时间 均符合成都航空要求的飞机,再通过经营性租赁出租给成都航空使 用,同时为其提供飞机方案和融资方案,所以此次项目操作难度 大,对专业水平要求很高。CALC是第一次操作此结构的华人飞机租 赁公司,并且同时成功交付了两架飞机供成都航空公司运营。