China Civil Aviation Report
民 航 报 导

2009年2月 第1期

通航双月刊
GA Bimonthly

通航是航空产业的摇篮
General Aviation
is the Cradle of the Aviation Industry

创新的建筑解决方案由Sprung快速建筑公司设计与建造

Innovative Building Solutions Engineered & Manufactured by Sprung Instant Structures

“伊帕内玛”农业喷洒飞机——在航空领域应用清洁能源的一个范例

Ipanema crop duster--A typical example of using clean energy in aviation industry

2009年通用航空商务交流会
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通航是航空产业的摇篮

General Aviation is the Cradle of the Aviation Industry

Written by Capt. Ben Yuan 袁沛贤 翻译：胡明艳

通航产业支撑整体航空产业，以类似情况之先进国家美国为例，美国航空产业包括民航机、航空类武器、航天类别飞行器生产销售、零件维修后勤服务，占美国全国生产毛额GDP 相当高的比率，每年输出航空产业产品金额巨大，平衡美国贸易赤字功不可没。

想想看，一架747民航机销售金额高达十亿人民币，换算中国输美产品，要多少货柜的商品才能等值于一架747呢？

与此同时，中国航空业进展迅速，即使在现今经济前景不明的情况下还是继续维持成长，其中成长发展最大的障碍即为缺乏足够数量的驾驶员。虽然飞行驾驶员的训练学校，于国内航空公司全力支持下如雨后春笋般快速兴办，但是长远看来，适量的通航培养出来的驾驶员是否刚好能补上这个空缺？

除了驾驶员之外，航空业各领域也亟需全方位的人才培养储备，如管理人才、训练教学、销售业务、市场营销、策划、会计、金融、保险、服务等领域可说是包罗万象。

以中国市场估算，航空专业人才少说需要好几万人，训练学校无法百分百训练出有实务经验的人，于此层面来看，通航一样能储备训练这方面人才，同时提供训练学校学员实际操作的机会。

所以我们希望中国航空产业循着经济发展的脚步，趋近航空产业发达国家，走着自己规划的步伐稳定成长，在不久的将来能在航空产业占有更重要的地位，不只是世界第一大航空器进口国，也要是航空业重要航空器出口国。

但是航空业需要大量技术资源及工业水平，想当然无法一蹴可及，代工生产与发展参与通航开放，投入中小机型研发生产可以是锻练技术的不二法门。

通航开放后的方便与伴随而来的市场经济，中国一样也能享受。

中国占地辽阔，虽有铁路公路完善建设，但对于轻量而高价商品快递、伤员后送、谈生意讲究时效性、高档次旅游等不同需求，无法面面俱到，就如同地面通讯网络一般，地面运输网如铁路公路无法经济有效的全面到达偏远乡镇，反而通用航空配合较小型机场，直线建构空中运输网更能经济有效。

了解及分析未来航空产业趋势，以及探讨了解产业进程已引发的问题，中国于全面开放前先期规划法规，借重前车之鉴，了解先进国家面对的相同问题，应是发展航空产业前期应致力研究的项目。

航空产业的工业产品是完成度极高的产品，但是不同地区、国家的商品，背后所蕴藏的安全文化，也是得由政策法规面来引导，经过商品规划、设计、制造、销售、使用、维修、扩充、升级、换购而来发展其特有蕴藏的安全文化。这样讲也许有人不明白，就是如市场上一般人对于波音航机及空客公司生产的民航机使用(驾驶)后的评论一样，波音过度昂贵与保守、空客浪漫而先进(性能较易乐观高估)，除了代表工艺水平之外也代表生产国产品形象。想研发生产什么样的产品来逐鹿国内市场？什么样的海外市场是中国发展国内市场应兼顾的市场？平价、或高端市场？已开发国家、或第三世界？这些产品定位于开发前期就应详加考虑，当然问题也可能随着商品成熟而改善、进化，但就如同刚才强调的，研发、开发的第一天(DAY ONE)就是最好的律定时间，品牌形象即可于出厂前底定，且将随着使用者操作累积良好之体验而口碑更能与时俱进。

看来发展通用航空是一个不容逃避的选项，我们先来谈谈发展通用航空有哪些发展性，随后我们也将讨论有哪些可能遭遇到的问题。

开展全新市场及市场供应链

商用航空市场包括：

- 制造业，飞行器制造；
- 服务业，飞机销售、维修，FBO (上下客服务营业据点，服务项目包括加油、驾驶员飞航计划准备之文件服务、租赁车交车中心)；
- 金融消费、飞机融资、保险；
- 训练机构，驾驶员飞行训练学校，航空相关专门学校；
- 土地开发，机场、维修棚厂等相关产业(未来更可能发展度假中心、或AIR PARK等通用飞行相关房地产业)。

提供商用驾驶员来源

美国AOPA数据显示，现有商用运输等级驾驶员就业市场大约上万人，持有通航驾驶员大约十余万人，大部份专业运输级民航驾驶员由通航驾驶员或军方退伍飞行员通过多年通用航空操作，累积时数，取得分级执照，最后在通过各航空公司内部考试召募而来。由于通航驾驶员人数众多，一线航空公司可以好整以暇，精挑细选，选择符合各航空公司需求的驾驶员，因此每年排队等待的合格驾驶员只有最优秀与幸运者才有机会进入一线航空公司，享受一线航空公司较好的待遇与福利。支线航空或者低价航空、营业用途的通用航空公司也能因为通航驾驶员需要累积时数经验才能进入一线航空公司，而找到合适的驾驶员。

促进城乡平衡发展，包裹文件寄送，提高观光业高度

相较于航空发展发达国家，市场的形成或许也跟国家地理条件有直接或间接的关系！分别来看美国、欧洲、巴西、印度尼西亚，国家涵盖南北或东西跨距超过1000公里，甚或阻隔于高山恶水，不利于公路发展，或简单的环保理由、商业发展需要城市对城市支线航空频繁快速连结，以今日中国的发展趋势来看，民用航空与通用航空必能很快成熟，致力发展相同模式。

西线城市运补、无铁路网络连结城市的大重量货物或者时间紧迫的快递、降低对铁公路建设的全面依赖。

另外，国内与国外旅客于大众化形式旅游方式之外，第二第三次再度旧地重返旅游型态也将可能由走马看花型态进化至更为精致的定点、重复性高之深度旅游。通用航空类别的运输方式更能提供方便、私密性高的量身打造的个人化旅游。

紧急急难救助，伤员后送

蕴藏实力、藏富于民。国家与地方政府平时不需建置多余运输力、急难发生时可以在最短时间内招集民间救助团队或临时编组组成运输团队。以四川地震灾难救援为例，如果有民间救援团队加入，这些平时另有他用的装备即可随时征调，在黄金救援时间内增加伤员存活机率。尤其是这些征调来的装备，平时是不用政府花一分钱维护的。

国力延伸与航空业永续发展

最后，推动通用航空进而强化国人航空实力。航空运输力是一般大众无法想象的重要国力，国家实力的延伸与通航储备的实力密不可分。

航空业于许多国人心中就是航空公司，但是民航公司只是航空业其中一个部份，其它如工业设计、制造业、服务业、金融业、营销等范畴牵涉层面广，总体营造出深而广的事业体，比起汽车业的30倍，光航空器制造部分即可带动约200-300倍的相关产业链，以产业占GDP份量，又可以永续经营的观点来看，十分值得投入发展。

许多人提出论调，说中国民航已有专业民航学校培植基础人才，用不着通用航空驾驶员来填补空缺，但是我认为民航专业训练学校如只重视模拟机训练，培育出来的人才虽于操作程序、计算器操作上胜出，比起来通航驾驶员虽无法如此幸运接受完整的专业训练，但其较高时数的实务经验也有其可取的扎实基础。

民航学校其实也可通过学员受训于通用领域，或是透过建教合作于营业中的通用航空短期工作，建立实务经验，累积时数，补足专业学校时数低的遗憾。

但是通航的全面开放也不是没有隐忧的

通航发展的可能负面影响

GA 与较高失事率的关联

通航较高失事率通常与几个因素有关，天气、机型及参与人员。

通航参与人员专业度要求较低，通常大部分比例的通航飞行为休闲飞行，驾驶员每年飞行时数低，持续性飞行少，再下次飞行时间间距长，每次飞行前必须再次熟悉程序、飞行技巧，熟悉度较逊于经常飞行参加复训之民航专业驾驶员。加上通航机型如非具有经常性的营业用途，大部分飞机拥有者并不会投资大量装备于仪器设备，大多数的飞行也多是法规规范较松的目视飞行。不同于目视飞行，仪器飞行于事前必须花费较多心思准备，例如参加天气简报与分析，数据准备，申请航路计划等等，需详加计划。目视飞行一般都是轻松愉快，油加满，轮子一踢就要上路。因此在管理者与操作者皆不熟悉的开放前期，飞安事故有可能一箩筐，要等大家上手，经验足够又愿意遵守操作规范后，这些情况才有改善的可能。法规的制定与规范，执行的务实与方便都可以是改善这个问题的良好对策。尤其现代科技进步，通用机型以非昔日想象的阳春，举凡GPS加持的电子装备，简单可靠的发动机、紧急用的全机体降落伞，或是制造商提供的一流训练，都可以在装备方面提供一个可靠度高，犯错机率少的通航环境。通航驾驶员方面也可经由交流、复训训练提升到一个更安全的层级，

说来说去还是法规的制定啦，有效规划、有效执行，定能减少通航高的失事率。

空域与地形气候问题

空域；空域管理与共享、共谋其利。

空域与航线为国家无形产值，目前未开放发展通用航空前，空域及航线大多由军方及民航单位所用及管制。如何说服先期使用者放出独家使用权利，与公众分享这块资产需要当权者大智慧。空域除了是国家主权的延伸，更是蕴藏无限商机，每天航机飞越收取航路费用或服务费产值可观，除了航路规划与助航设施投入之外可说一本万利，但是低空空域开放要考虑的事情也是多的超乎想象，不宜全面快速开放，比较适合分区块、分计划阶段开放。

大部份国家开放前期，依样要面对空域界定与规划的相同问题。除了国家空防需求及国家安全理由之外，许多机场建设未经全盘协调使得空域重迭，空域划分缚手绑脚复杂万分，还不包括民航与军用机场空域重复问题！

目视空域或仪器飞航空域划分，是通航法规最需要着力的区块，目视飞机限飞部份繁忙空域，是大部分国家的作法。但这不是说禁飞，而是利用航管程序、收取较高费用等良善限制来诱导目视飞行机，减少或限制他们于仪器空域、航站进近空域的活动量，降低繁忙空域的负担及压力。

只要放下本位主义，师法借镜也不是无法找到出路，要的也不过是判断与执行力罢了。

天气；地区常态性与非常态性天气的掌握以及取得。

需要国家权责单位释出知识权，让驾驶员方便、经济的取得天气数据，举凡卫星云图、大气资料、高空风、个别起飞、目的地、备用机场实时与预报天气。完成整趟旅程可能遭遇的天气实时与预报数据，都需由国家专责机构精确的提供，至少能付出合理的代价完整取得吧。没有这些情报数据，是不可能有安全可靠的通航操作领域的。

地障；西部地区高海拔地形，沙漠高温与冬季冷天气的分别性能也得详加规划。高海拔地区低高度空域开放得视机型、视驾驶员接受的训练个别规划，此地区的全面开放也得特别谨慎。

中高低空域开放也得视个别机型性能善加规划，当今市场上产品众多，单以单引擎双引擎、活塞式涡轮式、螺旋桨喷射发动机来分野规划是不切实际的，须对产品本身性能与风险评估区分操作空域，以垂直高度控管区隔，这方面的规范，一样只要研究师法ICAO、FAA、JAR国际法规即可借镜，不是那么困难。难的是管制单位的心态突破，毕竟面对开放的声音，都是有许多功课要做、许多新的压力要面对的。

机场开发一窝疯

机场开发不可讳言将带来庞大商机，但无规划竞相开发的结果不是空域重迭就是市场重迭，资源无形浪费，但地方代表背后无形承受地方商业团体需求压力，是否能够依市场机制，透过协调依空域结构、发展进程制订城、乡、县公营或私营区域机场，一样考验管理权责单位智能。抓大方向秉公处理是我们的建议。

操作者守法精神

不可讳言，国人守法精神尚未成熟，加上创业家的冲劲，营运规范未明确以前一定会有人花心思研究投入，有热情但不一定守

规矩。

通航花费高，也不是人人都可以直接参予，经济条件上有一定的门坎。以车为例，硬件购置费用加商业营运费用将随着车型大小分级而上，车型与价格也影响营运费用与保险，如何强化法规及落实保险制度，也应于规范制度前期详加规划。

航空用语界定

航空用语一般皆使用国际语言英语，但是以英语为限制，规范国内航空业者可能有失公允，如果规范国内通航唯一使用中文也不无缺憾，通航驾驶员晋级国际航线的语言能力，端看权责机关与市场设定，通用航空市场是全面开放、面向全世界业者开放市场或是创建初期保障国内业者，语言也可是一个他人完全无可置啄的非贸易性障碍壁垒，可以开放讨论详加研究。

航管建置与人力

国内空域庞大，空中管制空域装备更新与人力培育需前置时间建置与培育，不是两三年可以轻松取得，所以通航的建置规划现在就应列入其它航空规划领域。

航管人员素质，也代表国家实力。航管人员视被分派管制位置而承受不同压力，需轮值上班，上座管制与休息时间需要特别关注，于先进国家也是薪资特高的一群，航空业也把资优航管员当宝一样照顾，培养到成熟一样需要时间。装备建置与定时升级也是必须投入资金，资金规划与后续保养维修升级计划一样依市场机制及前景投射需详加计划。

边界管制

有了通航有了方便，也要想到可能造成的治安隐忧。

边界管制与空域管制一样，有与他国交接的问题，有CIQ(海关、移民、检疫) 各方面的规范须事前研究，颁布执行。如事涉单位权责相互重迭，也应另外规划，统一职权，涉及各国边界者，选择几个口岸设立CIQ或特别另外规范几个国际机场处理即可，并不须要如同民航机一般大费周章，否则使用不方便又降低通用航空竞争力。

当然大部分使用者用心良善但是也要提防有心人士利用通航的方便从事不法。

雷达涵盖范围外也可以利用通航机材监视边界任何不法活动。

最后我们要再次强调，航空运输力是无法忽略的重要国力，国家空中力量的延伸与通航储备的实力密不可分。

领海、空域本为国土的延伸，已开发国家利用开放通航来建置厚植航空专业市场、从业人员，培植航空实力！不管透过专业从业人员、运动休闲，培植航空、航天英雄，甚至于参加国际竞赛，崭露头角，创造新一代空中英雄，激化普罗大众参与之热情，吸引年轻的下一代从事航空、航天事业。

相较于国际F1赛车运动背后培植出的专业车厂研发实力，通用航空也可培育航空制造的基础实力，国内国际民航公司、中国空军、中国航天也可以利用中国通航领域培养可用人才库，壮大航空人口。

再强调一次，已开发国家莫不以减税、或飞行休闲运动化降低门坎，鼓励民众参与，希望提升航空专业甚或业余飞行人口，实现以科技建国、强国、富国的终极理念，以中国如此泱泱大国，有什么理由不能在此领域占有一席之地呢？所以我们不断在此号召国家早日开放，鼓励全民踊跃参与，进而壮大国家实力。

The United States exemplifies how general aviation supports aviation as a whole. The complete American aviation industry includes manufacturing, sales, parts maintenance, logistic services, military aircraft, and space, accounting for considerable percentage GDP. Aviation-related exports help balance the country's soaring trade deficit, with one 747 selling for more than one billion RMB, for example, offsets the disproportionate volume of Chinese imports.

Meanwhile, despite a recession, the aviation industry is booming in China. What bottlenecks growth here however, is a lack of pilots. Although flight schools have been rapidly developing with the support of domestic airlines, in the long term, it remains unclear as to whether pilots emerging from general aviation can fill this vacancy. Besides pilots, the aviation industry also needs a full range of personnel in management, training, sales and marketing, planning, accounting, financing, insurance, and other ancillary sectors to sustain the Industry as a whole.

It is estimated that the Chinese aviation market needs at least 10,000 more professionals. Training schools cannot fully equip students with practical experience, but the proper development of a healthy general aviation sector may just fill the gap.

Therefore, we hope that the China can follow the steps that it has done in other industries to sustain a developed aviation industry, i.e., not just the largest aviation importing country of the world, also the largest exporting.

But the aviation industry needs a range of technical resources and industry levels, which cannot be obtained overnight. OEM production, developing general aviation activities, opening the market, and research and development in small- and medium-sized aircraft can be the only way to do this. Opening the general aviation market also brings its own set of conveniences for the rest.

China's landmass is vast, with well-constructed highway and railway facilities, but demands for the delivery of lightweight and high-priced goods, time-sensitive business, reliable transportation, and high-end tourism can not be satisfied solely by ground transportation. Highway and railway networks, moreover, are not cost-effective to reach remote townships, and in such cases small general aviation airport networks may be more effective.

With attention to aviation trends and issues in the industrialization process, China needs to re-plan its laws and regulations before opening up GA. During the initial development stage, a thorough understanding of the problems and successes encountered by GA developed countries can give China the foresight to anticipate potential difficulties In our own projects.

Industrial aviation products are often high quality, but attention to safety is complicated by production processes' distribution across different regions and countries, guided by different polices, regulations, market ecologies, designs, manufacturing styles and other factors. Branding, unfortunately, builds reputations orthogonal to the real record (e.g., Boeing is often talked about as too expensive or conservative, whereas Airbus is often talked about as advanced, even romantic).

What kind of products should be explored for domestic markets? At same time, what kind of overseas markets should be considered? Low-end markets or high-end markets? Developed or developing countries? Such prepositioning is important in early developmental stages. After sketching a picture of general aviation, we can envision what sort of problems GA may have in the future.

Starting Markets and Supply Chains

Commercial aviation markets include: manufacturing, manufacturing services, aircraft sales, MRO, FBO (upper and lower customer service business base, services programs including refueling, flight planning, car rentals, delivery centers, etc.), financing, insurance, flight schools, other aviation-related training institutions, land exploitation, airports, aircraft and engine maintenance, hangars, and other related industries (resorts, air parks, etc.).

Sourcing Commercial Pilots

U.S. AOPA data shows that the existing market for commercial transport pilots is over 10,000, and that there are over 100,000 general aviation pilots. The majority of transport-level professional airline pilots come from general aviation or military backgrounds. All of them have quite a bit of general aviation flight experience, having accumulated many hours and obtained a commercial license, finally passing internal examinations by the airlines to join those companies. But given the general

aviation pilot surplus, only the most outstanding (and luckiest) pilots get opportunities to join top-tier airlines. Hence regional airlines, discount airlines, and business general aviation still have access to a supply of high quality pilots.

Improving Urban and Rural Areas, Parcel Delivery, and High-End Tourism

Considering some countries with developed aviation infrastructure, market formation in China may be comparably determined by national geographic conditions. For example, aviation infrastructures in areas like the United States, Europe, Brazil, and Indonesia span more than 1,000 km North-South or East-West. Here mountain ranges, rivers, and other environmental concerns complicate highway transportation of certain goods. Businesses with frequent city-to-city contact needs often opt for regional aviation. Looking at the development needs of China, civil aviation and general aviation should mature quickly along the same developing pattern.

GA can supply transport of heavy or express cargo in Western cities and areas outside rail and highway networks, reducing dependence on those networks' continuous construction. Also, beyond common domestic and foreign tourism, GA provides more convenient, private, and customized personal tourism. Especially when visiting for the second, third, or fourth time, GA vectors provide certain tourists with richer and finer experiences of an area.

Emergency Disaster Relief and Medical Transport

A social benefit of GA is emergency relief by the people, independent of the government. The state and local governments would not need to build redundant transportation when emergencies occur, allowing for recruiting temporary rescue teams as quickly as possible. Disaster relief in the wake of the Sichuan earthquake is a prime example. Importantly, the government does not and cannot reliably maintain all disaster relief personnel, equipment, and other resources in peacetime.

National Capacity Extension and the Aviation Industry's Sustainable Development

The public does not often recognize the importance of aviation in economic development. In many respects the two are inseparable. In most people's eyes, the aviation industry is the airlines, but airlines only are a part of aviation industry: others like industrial engineering, manufacturing, services, financial services, marketing and many other industries form core parts of the national economy. It is a deep and wide industry: aviation manufacturing can be developed in some cases to 200-300 times the size of related industrial chains (30 times the size of the automotive industry, for example). Considering the impact to the GDP, it is a worthwhile development investment.

Many people argue that there are professional civil aviation training schools in China cultivating talent, and that general aviation pilots do not need to fill the vacancies. But civil aviation professional training schools frequently only attach importance to simulator training, and the talent is good at operational procedures and computers – but with little practical experience. General aviation pilots are not often so lucky as to receive complete professional training, but having more hours of practical experience is also very valuable. The civil aviation training school students can also be trained in general aviation areas, or civil aviation training schools can cooperate with general aviation operators, so as to build practical experience and accumulate flight times to fix the problem of low flight hours in professional schools.

Problems in Opening up GA

Possible Negative Impact of General Aviation Development

Correlation between GA and Higher Accident Rate

A higher accident rate in general aviation correlate with several factors, like weather, aircraft, and pilot skill. General aviation participants require a lower professional degree level. Many of them fly for leisure. Flying hours of these pilots per year is low, continuous flight even less, and the time between flights is often long, so that each time before flight they must re-familiarize themselves with many procedures and best practices. Their degree of familiarity is lower than that of professional pilots in civil aviation, who participate in refresher trainings. If general aviation aircraft are not regularly operating, most aircraft

owners will not invest heavily in equipment. Most flying here is rather casually regulated VFR; IFR paths, on the other hand, must be carefully prepared in advance, with weather briefing and analysis, data preparation, application for planned routes, etc. Therefore, today many managers and operators are yet immature, and, until more experience permeates the scene, accident rates may rise as GA opens up. Developing regulations and norms with an eye to their practical implementation is an available countermeasure. Also, though, technology is progressing, general aviation aircraft types are increasing, avionic equipment like GPS is becoming increasingly common, engines are becoming simpler and more reliable to operate and maintain, emergency parachutes are becoming more available, and training is becoming more professional. Through exchanging experiences and refresher training, in the long run GA pilots can improve themselves to a more secure level, and, in the short run, developing appropriate regulations, planning and implementation effectively, will be able to reduce accident rates.

Terrain, Climate, and Airspace Issues

Airspace: Airspace needs to be shared and managed for common benefit. Airspace and air routes have an intangible value for the country. They are now controlled by military and civil aviation authorities, who need to make sure that such exclusive rights and assets can be shared with the public. Airspace is not only the extension of national sovereignty, but it also contains potential opportunities: air routes or services for daily flying has considerable value. There are several things that need to be considered on opening up airspace. We suggest not a rapid comprehensive opening up, but opening up by district or block, by planned stages. This is part because airspace definition and division are really the same problem in a developing country. In addition to the national demands for defense and national security, the construction of many airports which were not coordinated with each other led to airspace overlaps, and the divisions are now very complex. In some cases, civil and military airspace overlap. The area that needs attention most in aviation regulation today is the division of VFR and IFR. In most countries, VFR aircraft are limited in busy airspace. This is not to say they are forbidden to fly, but ATC procedures and sometimes fees incentivize VFR traffic away from crowded IFR airspace, terminal approach, and airspace under peak time pressure. China needs enforcement here.

Weather: It's important to acquire the weather data in a convenient and economical format from the National Meteorological Center, such as satellite images, atmospheric data, high-altitude wind, individual take-off, destination, reserved airports, real-time weather reports, and weather forecasting. Some weather data needs to be provided by the private sector at a reasonable price. It's impossible to have a safe and reliable general aviation operation field without accessible weather data.

Geographical Barriers: The western regions are high-altitude terrain -- hot deserts and cold winters need to be planned for in detail. Opening low airspace in high altitude areas should be planned depending on aircraft type and other factors. Fully opening this region requires caution and prudence.

Swarming Airport Development

Airport development can bring huge business, but the result of poor or no planning is often airspace overlap, market overlap, or wasted resources. Local airport representatives often bear invisible pressure from local business groups. Whether or not according to market mechanisms, intelligence and political will are required to coordinate airspace structure in planning the development of the city, township, county, and public or private regional airports, we advise holistic, impartial, and flexible strategy here.

Operators and the Law

It goes without saying that a law-abiding spirit of citizens is

not yet mature enough in China. A new generation of aggressive entrepreneurs exacerbates this problem. There must be someone to do research where operating norms and rules are unclear. High costs can incentivize adversely. As in the cost of buying a car prices change according to type, in turn affecting operation fees and insurance, regulations in aviation should be standardized yet individually responsive.

Defining Aviation Terms

Aviation terminology generally implies using English as an international language. It might be either fair to be restrictive using English only in the domestic aviation industry – or to use Chinese only. GA pilots need to be able to speak in English to be able to fly internationally. From the side of ruling administration and the present market, the GA market is fully open to global aviation counterparts. At the elementary stage for protecting the local operators, language may be an non-trade barrier, which can be openly discussed and studied.

Air Traffic Control Setup and Human Resources

Airspace is huge in China. Purchasing air traffic control equipment and personnel training should be done in advance. Because this cannot be done within just 2 or 3 years, the plan of general aviation as a whole should be similarly long-term. The quality of air traffic controllers also varies according to the province. Air traffic control officers are assigned to different locations and endure different pressures: rotating work/rest schedules are a special concern here. Air traffic controllers have higher salaries in many aviation-developed countries, and they are taken care of by the industry, since to train and groom such a mature officer takes time. Equipment purchases and upgrades from time to time require investment in accordance with market mechanisms and prospects: funding planning and follow-up maintenance and upgrade projects need to be carefully evaluated.

Border Control

Along with the conveniences introduced by general aviation, we should also think of the potential security problems. Border control is the same as airspace management, There are protocol issues handing over and taking over problems with other countries, like CIQ(Customs□Immigration, Quarantine). All aspects of the regulations require research, promulgation, and performance. If there are responsibility overlaps between related units, the relation therein should be expressly codified, and unified in terms of references, choosing several ports to set up CIQ or choosing several international airports to deal with problems if involving international borders. It is not necessary to do much in GA on top of the regulatory infrastructure of aviation already established – otherwise the inconveniences can stifle what we are trying to open up. Most users have good intentions, but we should beware of those who want to use the convenience of general aviation to break the law. Of course, outside radar coverage, we can use GA itself to discover illegal activities.

Finally, we would like to reiterate that air transport power is an important national strength which cannot be ignored, and that national capacity extension is inseparable from general aviation power. Territorial waters and airspace are an extension of national territory. Whether through professional or through sport pilots, we need to create a new generation of avid aviators. Like the strength of the auto industry spurred on by the R & D and cultural enthusiasm of F1 racing internationally, GA can become a culture and way of life in China as it has in so many other parts of the world. Developed countries often take advantage of tax cuts or recreational or sport flying to lower the threshold of entry to aviation, to encourage public participation, to increase the general professionalism in aviation while increasing the amateur flying population, with ultimate benefits in the science, technology, and the economy. China has no reason not to play a big role in this area. Therefore, we appeal to open up GA early, to encourage everyone to participate, and thus to strengthen China's future.

“伊帕内玛”农业喷洒飞机

——在航空领域应用清洁能源的一个范例

Ipanema crop duster

-- A typical example of using clean energy in aviation industry

在二十世纪五十年代，南美洲幅员辽阔的国家巴西，在经过十几年的人才、知识和技术的储备之后，建立起了一个专门负责航空制造业的研发和机构：巴西联邦航空技术中心。这座中心正式开启了巴西自主研发并包括商用飞机、通用飞机、军用飞机等在内一系列航空器，并将其推向市场的道路。“伊帕内玛”农业喷洒机就是巴西联邦航空技术中心负责研发的最早期的飞机产品之一。

“伊帕内玛”诞生于1970年，是一款用于农业喷洒作业的通用飞机。目前的世界第三大商用飞机制造商，巴西航空工业公司于1969年成立之后，“伊帕内玛”飞机也是该公司最早投入批量生产的机型之一。这款飞机自诞生到今天，已经交付了超过1000架，在许多大型农场的上空都可以看到它的身影，是一款非常成功的农用机型。

这款成熟而传统的农用飞机在2005年焕发了新的青春：这一年，巴西航空工业公司成功将“伊帕内玛”改进为全乙醇燃料驱动的机型，并且批量生产并交付用户使用。针对2005年之前购买“伊帕内玛”的用户，巴西航空工业公司提供专门项目，将他们的传统飞机改装为乙醇燃料驱动。“伊拉内玛”成为了世界上首架出厂时就获得乙醇燃料飞行认证的系列化生产型飞机。

“伊帕内玛”飞机的这次“能源革命”，证明了替代能源的优势：它所使用的乙醇燃料，相较航油价格便宜三到四倍，其燃烧所产生的残余物更是比航油显著减少。与此同时，乙醇在其使用周期内对碳排放量有中性平衡作用，且其中不包含铅成分，这使得它对于生态环境更加有益。

航空运输行业是世界能源消费的“大户”，它在人类寻求清洁高效的替代能源这场“运动”中应该扮演什么样的角色呢？做为航空运输的“上游”产业——飞机制造领域的一员，巴西航空工业公司也积极地参与到这个思考和行动的过程中来。

巴西这个国家在替代能源的提炼和使用方面均处于领先地位。该国盛产一种特殊的甘蔗，以它为原料，能够十分经济地提取可供飞机、汽车等使用的乙醇燃料。得益于此，巴西航空工业公司用一款成熟的通用机型来尝试替代能源在航空器上的使用，这个“试验”的成功，在人类寻求与自然和谐相处的历史上，也可以称得上是一件有意义的事。

在谈到航空业的替代能源使用这一问题时，巴西航空工业公司总裁兼首席执行官科拉多先生的观点，也许能代表当前世界上一部分航空人的看法。他认为，航空工业同其他能源消耗产业一样，寻求使用替代能源，保护环境，这是大势所趋，也是未来对当代人的要求。正是因为认识到这一点，巴西航空工业公司采取稳健的步骤，从通用机型入手“试水”，相信不久的将来，就可以将这项技术应用到更多的机型中去。科拉多先生总结说，巴西航空工业公司为环境保护和可持续发展而做出的持久努力永远不会停止。

In the 1950s, Brazil, the big country with vast land in South America, established an institution which is called Comando-Geral de Tecnologia Aeroespacial (CTA) after more than ten years of talent, knowledge and technology reserving. Thanks to the establishment of this institution which functions as the research and development center dedicated to aviation industry, Brazil officially triggered its homegrown of a series of aircraft programmes consisting of commercial, general aviation and military airplanes, and put them into the international market. The Ipanema crop duster aircraft was one of the earliest products developed by CTA.

Ipanema, which was born in 1970, is a general aviation aircraft specially developed for agricultural crop dusting operation. Ipanema was designed and manufactured by the third largest aircraft manufaturer in the world today: Embraer- Empresa Brasileira de Aeronautica S.A. founded in 1969 and this aircraft was one of its earliest models to be produced in series. As of today, being a very successful aircraft for agricultural applications, there are more than 1000 units of Ipanema have been delivered which are serving for many large-scale farms.

Ipanema – this mature and traditional agricultural aircraft – turned into a new life in 2005 because Embraer had successfully modified it into a fully ethanol-powered aircraft which was in batch production and delivered to the operators within the same year. As far as those operators who had purchased Ipanema before 2005 is concerned, Embraer offered a special program through which their traditional aircraft would be retrofitted into the ethanol-powered models upon the customers' request. Ipanema became the first aircraft model worldwide that was certified to operate with ethanol-fuel when delivered from the factory.

The "energy revolution" happened on Ipanema proves the advantages of the substituted energy. Comparing with jet fuel, the ethanol-fuel burned by Ipanema is about three to four times cheaper, and what is more, it also generates much less combustion residues than that of the jet fuel. Meanwhile, ethanol-fuel has a neutral balancing effect on carbon emission and has no lead content in it, which will do a lot of benefits to the environment.

The aviation transport industry is a "mammoth consumer' of energy in today's world, therefore, what role it should play in the campaign of seeking a clean and effective substitute energy waged by the mankind? As an upstream industry of the aviation transport and a member of the aircraft manufacturering segment, Embraer is also taking an active part in longing for and executing this process so as to make contributions for the environmental protection.

Brazil is a global leader in both refining and using the alternative energy. In this country, there is a special kind of sugarcane from which ethanol-fuel could be economically extracted and used as a substituted fuel for aircraft, auto and other vehicles. Taking this advantage, Embraer carried a test of using this kind of substituted energy on a mature general aviation aircraft, and the success of this test is regarded as a significant even in the history of seeking a harmonic relation between human being and the nature.

When talking about using alternative energy in aviation industry, the view point expressed by Embraer President and CEO Frederico Fleury Curado, may share the common opinions with some other practitioners in aviation industry. Mr. Curado believes that it is the general trend of the times and also the requirement on the contemporary people by the future. The aviation industry as other energy consumptive industries should seek alternative energies and protect the environment. Just because of realizing this point, Embraer has taken steady steps to carry out test with a general aviation aircraft. It is believed that before long in the future, this technology will be applied into more aircraft models. Mr. Curado emphasizes that Embraer will never give up its persistent efforts in promoting the environmental protection and sustainable development.

创新的建筑解决方案

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项目描述：

马歇尔航宇公司作为领先的欧洲私有航宇公司之一，具备近80年飞机工程经验。

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在谨慎地参考了一些建筑物选项后，马歇尔航宇公司选择了Sprung快速建筑公司所提供的一座占地面积为40mx60m(130' x 200')，采用了杜邦Tedlar花岗岩灰与帝王蓝色调相结合的隔膜，以及先进的宽幅超大门（Megadoor）系统的隔热建筑。

“在高度自律的航空产业中运行的马歇尔航宇公司也是先进的欧洲私有航宇公司之一。我们的1,800位专业技术人员提供着世界级的高标准服务，拥有的机库占地面积约有120万平方英尺。一旦决定建造新的设施，我们就会有很高预期，并在非常广阔的市场上寻找最为理想的供应商。

Sprung快速建筑公司是唯一一家达成我们所有预期值的供应商，他们实现了每项承诺 – 一个一流的机库，按时按预算地建造，并实现了我们的所有预期。”

引自马歇尔航宇公司

“该项目由一个至关重要的必要条件，它必须按时、在预算范围内建成，而这一点的确办到了。令我们惊奇的是，建筑的速度、完工的质量以及在整个建筑过程中的少有问题的发生。作为航空工程公司，我们在看到它的设计之初我们就很清楚Sprung公司采用了世界级的智能工程设计。所有这些智慧结晶都通过Sprung公司在英国的项目合作伙伴Freespan公司，通过其脚踏实地而又认真负责地项目管理方式而得以实现。Freespan公司令我们相信一个建筑项目可以没有任何瑕疵地得以交付，而对用户可谓无任何后顾之忧。”

Allan McGreal
马歇尔航宇公司

地点:剑桥机场

项目:世界级维修机库

客户:马歇尔航宇公司

项目描述:高规格，非永久性设施占地面积130' x 200' (40mx60m)，由三部分组成的31m宽Crawford Megadoor大门，完全隔热，并且配备有高效节能的HVAC系统，日间自然采光节约照明成本，机库超过L2A部要求，保温值 0.18（墙壁），透气率4.0。

交付期:从接受订单到实际完工，包括设计、采购与建筑整个交付周期为12周。

成本:比常规建筑节约了45%。

PROJECT DESCRIPTION:

Approaching 80 years in aircraft engineering, Marshall Aerospace is one of Europe’s leading privately-owned aerospace companies.

Marshall Aerospace needed to add additional hanger space however at the same time needed to reduce capital expenditures and lower operating costs.

Rather than build a conventional hanger, Marshall Aerospace decided it needed a new approach. A design that could provide greater operational flexibility. The new hanger needed to be relocatable, energy efficient, rapidly built, and modular in design so that it could be reconfigured in the future.

After carefully considering a number of building alternatives, Marshall Aerospace selected Sprung Instant Structures to supply a 40m x 60m (130' x 200') insulated structure complete with Dupont Tedlar Granite Grey and Regal Blue architectural membrane and a state of the art Megadoor system.

“Operating in a highly regulated industry Marshall Aerospace is one of Europe’s leading privately owned aerospace companies. We deliver world-class services through our 1,800 highly trained personnel and an exceptional

Innovative Building Solutions

Engineered & Manufactured by Sprung Instant Structures

Marshall Aerospace
Cambridge Airport, England

range of facilities housed in 1.2 million sq ft of hangar space. When deciding to build new facilities we set very high expectations and carried out an extensive market search to find the ideal supplier.

Sprung was the only supplier to tick all the boxes and they delivered everything they promised - a superb hangar, built on time and on budget with all of the benefits expected"

Marshall Aerospace

ALLAN McGREAL AND GRAHAM FROBISHER:

"This project had one critical driver – certainty – would it be delivered on time, on budget and as expected – and it was. What amazed us was the speed of construction, quality of finish and the lack of problems during the build. As an aviation business we know good engineering when we see it and it is clear to us the Sprung product is based on world-class engineering and intelligent design. All of that cleverness is then supported by Sprung's Delivery Partners in the UK, Freespan, whose project management was surefooted and confident. It is unusual to see a construction project delivered with no problems but Freespan made sure that we, as the client, did not have to worry about anything."

Allan McGreal
Marshall Aerospace

Location: Cambridge Airport

Project: World-class Maintenance Hangar

Client: Marshall Aerospace

Project Description: High specification, semi-permanent facility 130' x 200' (40m by 60m), integrated 3-section 31m wide Crawford Megadoor, fully insulated and equipped with highly energy efficient HVAC system, natural skylight reduces lighting costs during daylight hours, hangar exceeds Part L2A Regulations, u-value 0.18 (wall), air permeability rating 4.0.

Lead Time: Total delivery from initial order to practical completion including design, procurement, construction was 12 weeks.

Costs: Delivered savings of 45% over conventional build.

黄山机场

完成保障浙皖赣铁路航空摄影飞行任务

Huangshan Airport completes aerial photography of Zhejiang-Anhui-Jiangxi railway

新年伊始，湖北荆门通用航空公司的一架运五型飞机以黄山机场为作业基地，执行浙皖赣部分铁路工程选线航空摄影飞行任务。为了保障好此次航空摄影任务，使航摄飞行安全、顺利、有序地进行，黄山机场认真做好地面保障和航行管制保障工作，在保证机场航班正常起降的同时，机场空管部门主动协调周边军、民航管制单位，抓住有利的天气时机，全力配合航摄机组开展作业，在短短的半个月时间内，保障了航空摄影飞行12架次、飞行时间23小时01分，从而圆满保障了此次浙皖赣部分铁路工程选线航空摄影飞行任务。

另据安徽省发改委消息，此次浙皖赣部分铁路建设项目是安徽省与铁道部签署的新一轮战略合作纪要的一部分，主要包括北京至福州客运专线安徽段、皖赣铁路扩能改造和黄山至杭州铁路项目。届时，上述铁路项目的建设完工将对促进沿线经济，加强区域经济合作都具有十分重要的意义。

In the beginning of 2009, a Y-5 from the Hubei Jinmen General Aviation Company shot aerial photography of the Zhejiang-Anhui-Jiangxi railways. Huangshan Airport served as the operational base for the mission. In order to protect this mission's safety and ensure smooth operation, Huangshan Airport had to be especially careful regarding their ground support and navigation control. Besides ensuring normal takeoffs and landings at the airport, the airport air traffic control departments corresponded with surrounding military and civil aviation control units and seized favorable weather opportunities to support the aerial photography operations. (12 flights of aerial photography totalling 23 hours of flying time)

It is said from the Anhui Development and Reform Commission that the Zhejiang-Anhui-Jiangxi railway construction project was a part of a new round of strategic cooperation between the Anhui Province and the Ministry of Railways, and it includes the Anhui section of the Beijing-Fuzhou passenger railway line, expansion of the Anhui-Jiangxi railway, and a railway project connecting Huangshan to Hangzhou. When completed, the railway projects will promote the economies along these routes and strengthen regional economic cooperation.

华东局向上海中瑞通航颁发商业非运输航空运营证

The CAAC East China Regional Administration Gives Noncommercial Permit to Shanghai Zhongrui General Aviation

12月12日，民航华东管理局在上海举行向上海中瑞通用航空有限公司颁发《商业非运输航空运营人运行合格证》暨签订航空安全责任书仪式。会上，郭有虎副局长代表局方向上海中瑞通航颁发了《商业非运输运营人运行合格证》和《运行规范》，并签订航空安全责任书，标志着上海中瑞通用航空有限公司正式取得经营和运行资质。

Raymond A. Syms & Associates

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我们是一家客观、中立，且不进行任何推销的直升机坪顾问公司。

我们并不建设或销售直升机坪，与其相关设备。我们提供我们的专业知识来协助您选择满足您实际需求的最佳配置与设备。

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On December 12, 2008, The CAAC East China Regional Administration gave a "non-commercial air transport operators permit" to Shanghai Zhongrui General Aviation at an Aviation Security Responsibility Signing Ceremony. During the meeting, Guo Youhu, Deputy Diretor General of the CAAC East China Regional Administration, awarded the "non-commercial air transport operators permit" and "running norms" to Shanghai Zhongrui General Aviation Company. He also signed the Aviation Security Responsibility Agreement, which means that Shanghai Zhongrui obtained official qualifications for operation and management.

三一重工直升机托管给南航珠海直升机公司

Sany Heavy Industry Entrusts its Helicopters to the China Southern Zhuhai Helicopter Company

南航珠海直升机分公司与湖南三一重工集团有限公司签署了《直升机执管服务》合同，合同约定，三一集团新购置的西科斯基公司S-76C++直升机将由珠直分公司提供飞行作业及维护管理等服务。

珠直分公司作为国内唯一一家S-76机群最大的通用航空公司，主要从事海上石油船台飞行服务。他们自2004年涉足海上救助业务，并取得骄人成绩以来，已先后在电力巡线、商务包机、大型活动航拍等方面也取得了不小的战绩，赢得了用户的认可。

The China Southern Zhuhai Helicopter Branch Company signed a "helicopter trusteeship services" contract with The Hunan Sany Group Co., Ltd. The contract states that Sikorsky S-76C++ helicopters newly purchased by The Sany Group will be operated, maintained, and managed by the Zhuhai Helicopter Company.

The Zhuhai Helicopter Company is the only company with an S-76 fleet, which is mainly engaged in offshore oil berth services. Since 2004, they started a sea rescue program. They also have won clientele for such activities as power line patrol, commercial charter flights, and large-scale ship aerial photography.

中信海直获得政府经济补偿

CITIC Offshore Helicopter Co., Ltd Gets Economic Compensation from Government

中信海直因抗震救灾任务中损毁一架直升机，获得政府经济补偿金3,699万元，将列入公司09年营业外收入。同时，公司还获得抗震救灾专项补贴762万元，有助于提升公司08年业绩。

2009年1月13日公告，财政部同意对公司在执行“5.12”四川汶川大地震抗震救灾任务中毁损的机号为B7960的AS332L1超美洲豹型直升机给予经济补偿金3,699万元。公告表示，该补偿款已于1月9日到账，并列入公司2009年营业外收入，对公司2008年度业绩没有影响。另外，公司获得抗震救灾专项补贴762万元，补贴资金已到账并列入公司2008年“营业外收入—政府补助”。

Because of a helicopter damaged during the Sichuan earthquake relief mission, the CITIC Offshore Helicopter Co., Ltd. obtained 36,990,000 Yuan in economic compensation from the government, which will be included in the company's non-operating income of 2009. CITIC also received a special subsidy of 7,620,000 Yuan for its work in earthquake relief, which will help to boost's the company's performance record from where it stood in 2008.

In an announcement made on January 13th 2009, the Ministry of Finance agreed to give an economic compensation of 36.99 million Yuan to the company for the super Puma helicopter AS332L1 No. B7960 damaged in the implementation of the "5.12" Sichuan Wenchuan earthquake relief mission. The announcement goes on to say that compensation and additional subsidies have both been delivered into the accounts, concluded as part of CITIC's non-operating income in 2009, not affecting the annual revenue of 2008.

上海2架轻型双发警用直升机首次公开亮相

Light Twin-Engine Police Helicopters Debut in Shanghai

10日，在上海市举行的“警营开放日”活动中，上海市警务航空队的特警直升机首次公开亮相。装备了2架轻型双发直升机的上海市警务航空队，是新组建的一支特警队伍，在承担反恐和维护社会治安方面将发挥重要作用。

据悉，上海市公安局警务航空队是新组建的一支队伍，目前已经拥有2架轻型直升机EC-135和1架EC-155，EC-135最大起飞重量是2.9吨，可承载8人，是目前世界各国警方普遍采用的机型。警航队的飞行员分别来自空军、陆军和其他各部队，大多数飞行时间在1000小时以上，曾经执行过抢险救灾、军事演习和其他空中运输等各种重要的军事任务，具有丰富的直升机驾驶经验。

Special police helicopters debuted at the Shanghai Municipal Public Security Bureau on January 10th, 2009 amid the activities of the "Police Opening Day." The Shanghai Police Air Force, now equipped with two light twin-engine helicopters in a newly formed police team, will play a vital role in fighting terrorism and natural disasters.

One is an EC-135 and the other is an EC-155. The maximum takeoff weight of the EC-135 is 2.9 tons, which can carry eight people, and is commonly used by police around the world. The pilots of the team come from the Air Force, Army, and other military services. The average flight time of these pilots is over 1,000 hours; they have flown helicopters in emergency rescue, disaster relief, military exercises, air transport, and other projects.

上海警用直升机首次正式执勤

Shanghai Police Helicopter on First Official Duty

11月30日上午，上海市公安局调派一架警用直升机，对2008“东丽杯”上海冬季马拉松比赛沿线进行空中观察，提供空中安保支援。这是上海警用直升机第一次运用于执行实战勤务。

据了解，上海市委、市政府为适应上海特大型城市管理和社会管理需要，决定为市公安局装备3架直升机。去年4月，市公安局与欧洲直升机公司签订合同，采购了2架EC135轻型双发直升机、1架EC155中型双发直升机。

为做好本次冬季马拉松赛事安保工作，上海警务航空队在驻沪空军、华东空管局的协调保障下，出动一架EC135轻型双发直升机，于8时许从浦东机场起飞，在赛事沿线顺利完成了首次空中观察和空中安保支援任务。

On the morning of December 30th, 2008, the Shanghai Public Security Bureau deployed a police helicopter to provide aerial observation and air security support for the "Dongli Cup", Shanghai's winter marathon. It was the first time the helicopter was called for use.

It is reported that the Shanghai Government decided to equip 3 helicopters for the Shanghai Public Security Bureau, to meet the needs of large city management, social order, and safety. In April 2007, the Shanghai Public Security Bureau signed a purchasing contract with Eurocopter for 2 light two-engine EC135s helicopters and a medium two-engine EC155.

For security, the Shanghai Air Police Team sent an EC135, a light two-engine helicopter, to take off at 8AM from Pudong Airport, where it successfully completed the mission of aerial observation and air security support with the help of the Shanghai Air Force and the ATMB of East China through the rest of the day.

沈阳召开东北地区通用航空政策试点推进研讨会

Inaugural Policy Seminar to Promote General Aviation in Northeast China was Held in Shenyang

中国民用航空局东北管理局于 2008 年 12 月 29 日在东北沈阳召开“东北地区通用航空政策试点推进研讨会”。

会议上民航局政策司副司长史博利介绍了《民航局关于加快通用航空发展的指导意见（征求意见稿）》。沈阳空军管理处领导高绪礼介绍了我国空域改革情况，东北管理局介绍下一步试点工作框架和工作计划。

同时，中国民航大学、沈阳航空学院、东北护林中心、农垦总局、沈飞公司、飞龙公司等六家代表分别发言，中国民航大学校长、通用航空委员会主任吴桐水做了“大力推进东北通用航空试点，促进我国通用航空事业又好又快发展”的主题报告。

与会代表针对民航局《指导意见（征求意见稿）》,试点下一步工作以及成立东北通用航空协会必要性三个方面进行了认真热烈的研讨。

An initial policy seminar to promote general aviation in northeastern China was held by the CAAC East China Regional Administration on December 29th 2008 in Shenyang.

During the meeting Shi Boli, Deputy Director General of the Policy & Regulation Department of CAAC, introduced a draft of the "Guidance for CAAC Speeding Up General Aviation Development". Gao Xuli, leader of the Shenyang Air Force, presented on the state of airspace reform. The CAAC Northeast China Regional Administration introduced an initial framework and the following steps.

Individual speeches were delivered by representatives from the Civil Aviation University of China, Shenyang Institute of Aeronautical Engineering, Northeast Forest Protection Center, Heilongjiang Agricultural Reclamation Bureau, Shenyang Aircraft Corporation, and the Fly Dragon General Aviation Company. Wu Tongshui, President of the Civil Aviation University of China and Director of the General Aviation Committee, gave a keynote address which was aimed to "vigorously promote GA pilot projects in the Northeast to promote the rapid yet sound growth of GA in China."

Delegates in attendance at the seminar engaged in close and heated discussions on the proposed guidelines for these projects, the next steps of those projects, and what to do next to establish the Northeast China General Aviation Association.

中国通用航空协会
第二次筹备工作会议胜利召开

China General Aviation Association's Second Preparatory Work Conference is a Success

2008年10月22日，在中国天津召开了成立中国通用航空协会第二次筹备工作会议。来自制造、运营、服务、保险各行业的单位共计33家，代表近50人。

The Second Preparatory Work Conference to establish the China General Aviation Association was successfully held on October 22nd 2008 in Tianjin, with 33 units and nearly 50 people from manufacturing, operations, services, insurance, and other related fields.

西北地区第一家通用航空协会在西安成立

The First General Aviation Associations of the Northwest Region is Established in Xi'an

陕西西北通用航空协会26日在西安正式成立，这是我国西北地区成立的首家通用航空协会。

为更好地促进我国通用航空产业的快速成长，西安阎良国家航空产业基地在西北地区10多家通用航空企事业单位和60多位航空专家的支持下，于26日在西安正式发起成立了陕西西北通用航空协会。

西安阎良国家航空产业基地主任金乾生说："陕西西北通用航空协会成立后，将团结政府、企业和社会的力量进一步推动我国通用航空产业国家政策面的改变，尤其是推动我国低空空域的逐步开放。尽快使通用航空从少数有钱人的玩具变为普通人的交通工具，使我国通用航空产业迎来自己的春天。"

On December 26th, 2008, the Shaanxi Northwest General Aviation Association was formally established in Xi'an, making it the first general aviation association to set up in Northwest China.

In order to promote the growth of GA in China, the Xi'an Yanliang State Aviation Industry Base launched the Shaanxi Northwest General Aviation Association with the support of more than 10 general aviation enterprises in the Northwest and the support of more than 60 aviation experts.

Jin Qiansheng, Director of the Xi'an Yanliang State Aviation Industry Base, said that the Shaanxi Northwest General Aviation Association will consolidate government, enterprise, and social power to promote GA, especially in gradually opening up low-altitude airspace and making GA accessible to common people as soon as possible, with hopes of ultimately spurring the GA industry in China.

国产大型直升机将首进通航市场

Chinese-Made Helicopter to be the First on GA Market

昌河飞机工业（集团）有限责任公司与中航工业国际租赁公司正式签订了《直8F型直升机合作协议》，双方将共同开发直8F型直升机市场，5年内昌飞公司将生产交付30架直8F型直升机，首批3架将于2010年完成交付。这标志着国产大型直升机开始进入我国的通用航空领域。

直8F型直升机是由昌飞公司和中国直升机设计研究所共同研制的通用运输型直升机，由国防科工委批准立项研制。该型直升机安装3台普惠加拿大公司生产的PT6B-67A涡轴发动机，最大起飞重量为1.3万公斤，主要用途为客货运输。直8F型直升机可按照昼夜目视飞行规则和仪表飞行规则飞行，满足高温、高寒气候和高原等复杂地区使用要求。

The Changhe Aircraft Industry (Group) Co., Ltd, officially signed a "Z-8F Helicopter Cooperation Agreement" with the China Aviation Industry International Leasing Company. The two sides will jointly develop the Z-8F helicopter market. Changhe Aircraft will manufacture 30 units of Z-8F helicopters within 5 years, and the first 3 aircraft will be delivered by 2010. This marks the beginning of Chinese-made large-scale helicopters in China GA.

The Z-8F is a general transport helicopter that is jointly developed by Changhe Aircraft and the China Helicopter Design Institute, a development project approved by CSTIND.

This helicopter has 3 PT6B-67A turboshafts manufactured by Pratt & Whitney Canada. Its maximum takeoff weight is 13,000 kilograms, and is mainly used for passenger and cargo transport. Z-8F helicopters can fly in accordance with full-time VFR and IFR, capable in demanding climates, temperatures, altitudes, and airspaces.

云南电网公司2008年直升机巡线任务全部完成

Yunnan Power Grid Corporation Completes Helicopter Patrol Line Task

12月2日，云南电网公司2008年直升机巡线任务全部完成。全年共航检输电线路9800公里，检查铁塔20195基。目前正在进行后期资料的处理工作。

On December 2nd 2008, the Yunnan Power Grid Corporation finished its helicopter patrol line task. 9,800 km of power transmission line and 20,195 towers were patrolled over the course of a year. Now all the information that was gathered is being processed.

中航工业八成资产拟明年实现上市

80% of CAIC's Capital to be Listed on the Market Next Year

新中航工业集团公司旗下资产的资本化运作路径逐渐明晰。在近日召开的中航工业2009年度峰会上传出消息，集团计划到2010年实现集团公司80%的业务和资产上市，并计划5年内实现集团公司整体上市。而中航工业旗下各部门和企业分别公布了资本运作计划，其中通用飞机和直升机分别计划在3年内整体上市。

中航工业集团资本运营部李平表示，据初步测算，要实现集团公司“万亿”目标，每年销售收入增长要超过22%，总资产每年递增的速度要超过16%，如此增幅仅依靠国家的投资显然是不可能实现的。而中航集团现在重组形成几个平台，就是要通过资本运作，实现专业化发展。

在几大业务板块中，通用飞机和直升机率先公布了上市的时间表。中航工业通用飞机公司总裁谭卫东介绍，公司将从内部做好重组整合，利用力源液压、贵航股份、中航三鑫3个上市公司的资本运作平台，搭建好航空、重机、机电3个业务板块，用3年时间实现中航通用整体上市。外部做好并购扩张，积极寻求海外合作机会，包括并购、技术合作，甚至股权合作，将目标瞄准国外通用航空的优势企业、高端企业，加快掌握先进技术的步伐，为通用航空的全面发展作好全方位的储备。

The path of capital belonging to the new China Aviation Industry Corporation (CAIC) has been clarified. At the recent 2009 annual summit of the CAIC, it was said that the Corporation will list 80% of its business and capital on the market in 2010, and all of the CAIC will be listed on the market in the next five years. All departments and branches have released their capital operation plan. General aviation aircraft and helicopters are planned to enter the market in the next three years.

Li Ping from the operation department of the CAIC said that, according to the initial survey, to realize the goal of 1,000 billion Yuan, the CAIC's annual sales income should exceed 22%, and annual growth of total assets should exceed 16%, which cannot be realized solely by investments from the states. CAIC formed a number of projects during its reform, whose specialized operations require the appropriate capital.

Among the various business segments, general aviation aircraft and helicopters took the lead and released their schedule of market entry. Tan Weidong, the president of the AVIC General Airplane Co., Ltd., revealed that, internally, the company is benefiting from the reformed integration with the three other listed companies (Guizhou Liyuan Hydraulic Co., Ltd., Guizhou Aviation Co., Ltd., and AVIC Sanxin Co., Ltd.), given the capital platforms to build up the three business segments in aviation, heavy machinery, mechanical, and electrical products. Externally, the AVIC looks to expand in international cooperation, including via mergers and acquisitions, technical cooperation, and through stocks, aiming at the high-end enterprises in GA overseas, establishing a pace to seize on opportunities in advanced technology in developing GA.