

ISTAT

September 2005

Jetrader

International Society of Transport Aircraft Trading



B777 World Tour +

Managing your PW4000-94

+ **U.S. Aircraft Finance Market**
Power by the Hour

Jetrader

OpEDs

Jetrader is a bi-monthly publication of ISTAT, the International Society of Transport Aircraft Trading. ISTAT was founded in 1983 to act as a forum and to promote improved communications among those involved in aviation and supporting industries, who operate, manufacture, maintain, sell, purchase, finance, lease, appraise, insure or otherwise engage in activities related to transport category aircraft.

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Jetrader Editorial Board



Bill Bath

Looking through some of my old ISTAT files recently, I came across a one page *Jetrader* (undated, but the contents indicate it was printed sometime in early 1983); I found the following paragraph to be of great interest:

"...ORGANIZATIONAL MEETING

In February, 1983, Joe Murphy met with George Dutton and Tim Watkins, representing Jim Bryan of Aviation Sales Co., and agreed on the general outlines of a charter for the new Society, its name, membership dues, and the scope of services it will offer to its members. Prior to the meeting, Joe Murphy had

obtained from Morten S. Beyer, President of AVMARK, Inc. the release of up to 25 percent of his time to devote to the development of the Society as an entity completely separated from AVMARK Inc. During its early period of organization, the Society will operate from AVMARK's offices but will reimburse AVMARK for any services at cost so that it can maintain its completely independent status from the very beginning...."

It was in November of 1983 at the Roosevelt hotel in New York, that George Dutton was elected as the first President of ISTAT, (until 1989 the "T" stood for Trad-ers). At a meeting in Washington, D.C. on January 26, 1984, a program was initiated to develop appraisal standards and ethics; with Jim Mathews as committee chairman, given the task of coordinating the proposals from the appraisers and ISTAT Board members. In February 1991, the ISTAT Board voted to replace the appraisers' committee with the Appraisers' Program International Board of Governors (IBG), with Jack Feir as its Chairman.

The first annual conference was held at the Doral Country Club, Miami, in April of 1984: the room was small with only fifty or so participants; the eight speakers stood by an easel with their flip charts or overhead projector, (the Brits call it an epidiascope); no microphone was necessary.

What changes have we seen since those early days: the evolution of the *Jetrader* from a one page news letter to today's professional trade magazine; the creation of the Foundation, the success of which has surpassed all expectations; all of this through the efforts of volunteers from all facets of the aviation and financial industries; Dawn Foster, who was retained by the Society at the beginning of 1991, as its only paid staff member. Faced with missing records and general disorganization left by the previous part-time administrator, Dawn set to work and the results today speak for themselves.

In this business there is no plateau, we must never be satisfied with the status quo. For the Appraisers' Program an in-depth review will be undertaken of its current status, and what direction it must go to retain its pre-eminent position in the aircraft appraisal profession. The review committee members will be drawn from all sections of ISTAT, including the IBG and appraisers. I look forward to working with them.

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this issue ::

ISTAT President **Tom Heimsoth**



The summer is drawing to an end, children and parents are getting ready for Back to School and you are probably asking yourself again, how did it go by so fast?

On the business side, it is almost quarter end and there is no shortage of things that need to get done. Am I going to get that award? Is this deal ever going to close? Did I pay too much? If this is such a distressed industry why do I seem to face so much competition? There is never a shortage of questions and the answers may not always be timed right or the ones you had expected.

As an ISTAT member, you are likely working harder than ever before and facing those 21st century, "new challenges" and "new opportunities". Yet we are each blessed knowing that somehow we have chosen this industry or by some myriad of events, it has chosen us.

Please take a short break and enjoy the latest edition of your *Jetrader*. There are plenty of interesting articles contributed by your fellow members or, as some members have suggested to me, just look at all the nice pictures!!!

After you have set down this issue of the *Jetrader*, please get registered for the 12th European Conference to be held at the Kempinski Atlantic Hotel in Hamburg Germany on September 11 - 13. We are looking forward to a great event with a terrific line up of speakers. I would like to express my gratitude to Peter Huijbers, our fellow Board member and Conference Chairman, for the months of hard work to create this spectacular venue for our membership. I look forward to seeing many of you there. Remember in a world filled with many more questions than answers, being a member of an organization like ISTAT and attending our conference in Hamburg provides you with an opportunity to listen to a great line up of speakers, and network some more with your fellow members. Just maybe you'll find a few answers to all of those questions?

If you have any questions, comments or ideas you wish to share, please don't hesitate to contact me at my email address istatpres@aol.com or Dawn Foster, our Executive Director, at istat@istat.org.

September 11 - 13

ISTAT European Conference will be held at the Kempinski Atlantic Hotel, Hamburg.

March 26 - 28 . 2006

Annual Conference will be held at the Omni Orlando at ChampionsGate, Orlando Florida

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The Himalayas were the backdrop for Pakistan International Airlines pilots and executives during a demonstration flight at the tour stop in Pakistan





Power-by-the-hour — the 'insurance policy' operators want

by Simon Clements, Business Development Director
A J Walter Aviation

In the fiercely competitive aviation environment operators are driven to manage every aspect of cost and minimise AOG time ensuring the customer remains satisfied with on time departures. To be successful, maintain their reputation and keep at the forefront of the market, these operators need guarantees that their parts supply and MRO service will function in the most efficient and cost effective way. Aircraft component management specialists recognise this need and have consequently developed programmes that help to reduce and effectively manage costs for these operators.

Controlling costs is all very well, and it gives the financial controllers peace of mind, however technical and operations directors must balance their financial constraints with client service. This balance can be created with a fixed price power-by-the-hour and spares service that enables operators to plan expenditure and manage cash-flow effectively across the year. If this can be tied into an insurance policy as an enhancement, or additional service, comfort and security throughout the business - and at the investor/shareholder level - is generated too.

It is generally much more cost effective for operators to have an external maintenance and repair provider in place to minimise fixed costs and expensive assets. The use of independent spares stockists who have a comprehensive inventory across all commercial aircraft types readily available, as and when they are needed by the airline, bypasses the need to order direct from the OEM manufacturer or the need for the airline to keep and manage their own stores of spares that may never be utilised.

How does 'fixed price' benefit everyone?

The aircraft spares market has developed considerably over the years and has consequently grown into far more than the simple provision of spare parts. The market is extremely competitive and it has become imperative for suppliers to differentiate through superior service, depth of inventory and stable financial support and partnership. Lease stock programmes have risen in popularity in recent years as an option for airlines who do not have the capital investment to acquire inventory, or as a means of allowing operators to achieve maximum flexibility by avoiding the side effects of decreasing asset value. Operators need a service whereby they have access to the parts they require, when and where they require them, whether they are purchasing or leasing the parts.

However once a third party is brought into the equation,

there is inevitably a cost implication, which needs to be evaluated against fleet operator managed systems. The development of programmes with a fixed price policy allows operators to manage expenditure and gain control from both an operational and financial perspective.

Power-by-the-hour rotatable spare parts supply and repair services are available 24/7 worldwide. Operators can effectively manage their expenditure based on a pre-determined hourly rate for these services.

Component management companies have traditionally targeted operators with power-by-the-hour schemes. This is because the benefits of the service are understood and accepted throughout the industry. Even though many operators have entrenched systems that are hard to unravel, the pressure on cost control has meant that the smaller airlines have had to out-source wherever possible. But, in order to keep at the forefront of the aviation parts supply industry and with more players coming into the market place, companies need to develop enhanced programmes that offer more than the standard service.

Parts supply specialists such as A J Walter Aviation, for example, have directed their energies into finding new channels to existing markets. This can involve partnering with other key service providers including the leasing companies, banks and third party maintenance providers, but also specialist aviation insurers, agents, consultants and brokers, and their client and partner base.

A J Walter Aviation have, for over 15 years, sold a power-by-the-hour rotatable spare parts supply and repair service to operators and MROs. But earlier this year AJW-FIX was launched aimed firmly at the insurance market and focused on enhancing brokers' policies for operators. This enhanced programme consists of a




Structured lease packages for Airbus and Boeing spare parts from A J Walter Aviation

- Operate with maximum flexibility to avoid the side effects of financing decreasing asset values
- Terms from one to ten years
- Stand alone support which requires no capital investment
- Sale and lease back, or lease purchase, contracts with guaranteed residual values
- Managed through FAA/EASA 145 approved partners

Airbus: A300-600, A310, A320 family, A330, A340
Boeing: 737 Classic, NG, 757, 767, 777

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fixed price power-by-the-hour and lease inventory service (Debt, Finance or Operating) that provides total control from an operational and financial perspective.

FIX ensures there are no limitations or restrictions to stock items and all spare parts are available without exemptions on a worldwide basis, backed up by 24 hour AOG provision. It is the only complete power-by-the-hour programme which enhances existing hull and liability policies and can be tailored to suit both large and small fleets of aircraft. Although the service was traditionally targeted solely at operators, it was introduced into the London Aviation Insurance Market at a launch to Underwriters and Brokers this Spring. It is generating a high level of interest with a number of potential partner brokers as a new and value-added service. In effect as a 'bolt on' to existing hull and liability cover extending to cover all airframe rotatables.

No Operational Downtime

The cover guarantees replacement rotatable parts on all aircraft within a fleet, these parts are supplied in a pre-defined timescale (typically less than 24 hours but in practice much quicker) anywhere in the world. The key benefit to airlines is the provision of another fixed cost option to run in conjunction, at point of renewal, with their fixed insurance premium programmes, plus the advantages of minimal AOG time, fixed spares costs and no stock/inventory problems. In effect, an added insurance against the risk of operational 'downtime' and the cost of component repair and replacement. This special service has been designed to appeal to accountants and engineers alike. The product can be sold as a stand-alone to operators as is currently the case, or as a bolt on to the normal hull and liability policies. AJW are offering service reliability levels which drastically cut down NO-GO flight cancellations and keep the passenger happy with on-time departures.

Peace Of Mind

It perhaps comes as no surprise that this programme has spread to include not just the core asset, the aircraft, but also to ancillary assets such as spare parts. Leasing developed over the years because it filled a real need, and now the spare parts operating lease, has become a ubiquitous tool in the operators' goal to achieve the optimum balance and cash control.

For the major lessors, lease transitions should cause minimal disruption resulting in no, or minimal, aircraft 'downtime' between leases. Despite the onus being firmly placed upon the lessee to comply to 'return conditions', unforeseen events do result in unpleasant surprises which manifest themselves in expensive work and subsequently regrettable delays.

At one extreme this involves repossession from insolvent operators. At the other extreme the simple matter of inaccuracies in an aircraft's documentation subsequently requires correct determination of component status on the transitioning aircraft.

One way of mitigating the loss of revenue incurred by the knock-on downtime is the provision

What's good for the goose should be good for the gander and the relevance of this rule to aviation

by Adam Pilarski



An old saying states that what is good for the goose should equally apply for the gander. This statement is generally used when discussing gender equality implying that men should be held to same standards as women. And since geese fly, the application of this statement to aviation seems obvious.

In this article I want to move away from gender issues and concentrate instead on political ones. The issue of national sovereignty figured prominently in the last US election. Mr. Kerry was attacked as willing to subjugate US to international law. Actually the accusations were slightly more nonsensical claiming that he wanted to cede decision making regarding US interests to the UN or the international community, a position no sane person has ever advocated. The real issue, though, is whether US citizen would ever be subject to international law and whether international law should trump US law. The very clear US position is and has been for some time that US citizens would never be exposed to any, by definition, evil international courts and that international law has no place in America. In most cases other countries are lucky that the US does not extend its laws into their territory to supersede their own, again by definition, inferior, laws. Imagine the poor British, Indians, Australians and the like who would face fines for driving on the wrong side of the road, clearly violating US law. This is though not always the case. Sometimes the US takes things into their own hands as when an Airbus commercial aircraft deal was vetoed by the US because the recipient country somehow violated US law and the plane had US components in it. US law took precedent over French contract law.

On the other hand, as economists are fond of saying, the US is a strong proponent of the universal acceptance of international law. US demands adherence to international (business) law and wants, for example, stringent protection of intellectual property, copyrights and the like. The US is among the leaders of demanding that the world respect private property or the right to pray freely. Nationalization of foreign (read US) business is definitely not an acceptable event even if it conforms with a given country's national law since it violates international law which the US supports. Ditto taking over an embassy, also not allowed. Or misappropriating medical patents even if a given country claims this is in line with its own national law and leads to saving many lives. Repossessing aircraft for which a foreign airline is not current on lease payments should be, according to US view, universal and codified by international law. So, international law should be respected in some circumstances but not others.

The US is, of course, not the only country with such a schizophrenic view. Many countries have clearly contradictory policies and most probably do not realize it. An interesting example of some contradictions emerged from the vote on the European constitution in France. The consequences of this vote are tremendous. Some people, mistakenly I am fairly confident, predict that this is



the end of Unified Europe or at least the end of the Euro. No matter what, Unified Europe will have to change substantially as a result of the vote of "non".

I want to offer here my own, somewhat biased analysis as to what has happened. I clearly realize that there are many more reasons for the vote including the high unemployment in France; the abolition of some holiday shortly before the vote and even some xenophobia, especially directed at Turkey. My explanation goes beyond these points and is related to a major part of French policy which has been the attempt to curtail US power and the emergence of English as the "lingua franca" of the world. France believed justifiably that the position of the US in economics and politics has been too dominant. It is not fair that one nation should be able to dictate to the rest of the world what to do. After realizing they (the French) could not diminish the US importance alone one way to achieve the first part (I presume the French admitted defeat re the language) was to create a counterbalance to the US. A unified Europe could achieve that goal and France was for the longest time the strongest proponent of "one strong Europe" capable of defeating America. The European community grew very successfully, adding in the process more and more members. Now, though, there are 25 members and not all share France's preoccupation with reducing the influence of the US and bringing more fairness into the world. Some of these new members had even the nerve to support the US against France in the debate re Iraq.

Now we are facing a simple contradiction. **France** is against one country (US) dominating the world and demands fairness. On the other hand, France wants to dominate the agenda of the European Union, its foreign policy, its farm policy, its social rules. It needs the other members of the EU to right the wrong the US is inflicting on the world and to help demolish the unjust dominance the US has in the world. On the other hand, France wants to dominate the policies of the EU with regard to relations with the US and various economic issues. As economists say, you cannot have your cake and eat it too. You cannot pursue a policy of abolishing the dominance of one country but dominating a bloc of others to punish the (other) dominating country.

An interesting variation on the theme is currently occurring in the US and involves an attempt by a Chinese oil company CNOOC to purchase Unocal Corporation, outbidding the giant Chevron in the process. The issue generated a lot of publicity under the guise of protecting US strategic interests and using the excuse that the Chinese company is government owned. As of my writing (mid July 2005) the issue is still not resolved. The US Congress got involved citing the danger to impair US security. A short look at the facts reveals that these concerns are ridiculous at best. Unocal is a mid level company not making the list of the top 40 energy companies in the world. It produces less than one percent of US oil output and there were no indications the Chinese were interested in these particular barrels for their own use.

Chinese investment in the US is miniscule and a successful purchase would only lift that investment to around one percent of total foreign investment in the US. US companies so far invested 30 times as much as what Chinese firms invested in the US. A short review of history should also give the US a more balanced view. In the 1980s Japanese invested heavily in the US and at that time there also was a strong xenophobic outcry against these investments. Of course, most of these assets were grossly overpaid for and eventually sold by the Japanese at great losses. Buying an oil company when oil prices are at their nominal record high levels is probably not a good idea. It is actually the Chinese government which should be hollering, not the US one, to try and stop this deal.

The Chinese were rightly so appalled by the US reaction. Since US investments were welcome or at least tolerated in the world, including China, shouldn't other countries be allowed to do the same? And shouldn't this include not only British firms but also those of different ethnic origin? The Chinese believed that maybe they could point out the inconsistency of US policies to the Congress. They are interested in paying (too) much money for a business. Shouldn't the beacon of free market allow this? The President of CNOOC was quoted

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Power by the Hour continued

of a specific spare parts pool, managed by a dedicated team on a fixed price exchange basis. If this team accompanies the lessor on a pre-return technical inspection, so much the better to prepare for a speedy transition.

In one recent example involving several aircraft moving from an insolvent airline, not only were there numerous discrepancies in the paperwork, but large amounts of paperwork were simply missing or separated from the aircraft. A quick turnaround on the aircraft required bulk unit exchanges and without a dedicated stockist agreement in place, the requirement would have gone out to the wider market incurring numerous third parties suppliers and the associated handling charges. A well managed power-by-the-hour service solved this problem quietly and efficiently.

Controlling variable costs

The provision of a power-by-the-hour service is in essence an insurance against the variable costs incurred through unscheduled work, hence the current link being explored by A J Walter Aviation with specialist aviation insurers. The next stage perhaps is a tripartite link between stockists, insurers and aircraft lessors looking at the area of product support, maintenance reserves, warranty and guarantee positions and trend monitoring.

Summary

The advantage of off-balance sheet treatment increases and fixes costs when third party parts specialists acquire existing and sometimes redundant inventory. Parts specialists who are willing to inject cash and transform non-performing assets into valuable resources are making a growing contribution to improving the bottom line of operators. Spare parts support can be provided on a simple, transparent and fixed price basis, as an item in the airline's operating costs. Therefore the airlines are willing to allow the support agency to carry the risk of investment for them and consequently they can spend more on activities such as branding, than on parts and enjoy the benefits of fixed costs as well.

Operators require flexibility, responsiveness, quality and competitive pricing.

Global power-by-the-hour agreements that meet these needs generate confidence in the operator and the industry's leading O.E.M.'s and suppliers.

The resulting spares and material support organisations are capable of making a real contribution towards the customer's competitive edge, whatever their needs.

Simon Clements may be reached at clements@ajw-aviation.com

Overview

U.S. Aircraft Finance Market

by Steve Gaal and Arif Husain

Take an industry that yields slim margins in the best of times, factor in a voluminous thirst for capital, sprinkle a dose of cutthroat competition, add a steep recession and massive losses to the mix, increase fuel prices to record levels and the situation seems ripe for an implosion of seismic proportions. While the aviation industry has avoided this extreme fate predicted by doom and gloom soothsayers following 9-11, the industry, nevertheless, is in the midst of a fundamental reorientation that has reverberated to its core.

It has been a relatively short period of time since the U.S. government had to step in as (quasi) lender of last resort, but the aircraft finance market is beginning to show signs of resilience. Aircraft, stigmatized as never before, are again being viewed with favor by financing parties.

A Discernable Shift—Operating Leases are “In”

The boom of the late 1990s also witnessed the heyday of the U.S. tax-based leveraged lease market. Companies as diverse as Pitney Bowes and Walt Disney became aircraft owners to benefit from U.S. tax laws. The theory was simple: U.S. tax laws allow owners of aircraft that are operated by U.S. airlines to depreciate the aircraft over seven years, reducing owners' tax burdens. Few airlines, even in the best of times, earn sufficient margins to make use of these depreciation rules for all of the aircraft they operate. Profitable companies, irrespective of their industries, took advantage of these rules by pairing with debt providers to own aircraft and lease them to airlines, creating a win-win situation.

A win-win, that is, until a terrorist attack, recession, bankruptcies and out of court restructurings led to a significant reduction of aircraft current market values, playing havoc with complex payment structures that in many instances no longer yielded intended tax benefits to equity owners. Not surprisingly, given the loss of appetite to participate in aircraft ownership (primarily) for tax purposes, tax-based leveraged leases are much less prevalent today and only a realistic option for the most credit-worthy of airlines.

In response many airlines have shifted their focus to operating leases. The aircraft is owned by a leasing company such as GECAS or ILFC, and the airline makes rental payments over a specified lease term that is usually a fraction of the aircraft's remaining useful life. While operating lessors typically have a preference for longer term leases (8-12 years) for

new aircraft, shorter term leases (5 years or less) are most commonly utilized for used aircraft. For both used and new aircraft, a variable lease rate tied to an index such as LIBOR that matches lessors' funding costs to aircraft lease payments may be preferred.

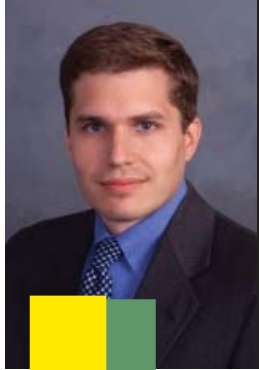
During the past two years, most of the large and midsized operating lessors placed their “speculative” aircraft orders with airlines. Today they are unable to completely satisfy the resurgent demand for new aircraft, creating an opportunity for principals willing to speculate in older aircraft models.

“Special Situations” Investors—Financing Market Shows its New Face

Highly depressed asset values have attracted private equity firms, hedge funds and other investment companies into aircraft financing. These types of firms have partnered with aircraft specialists to provide a much needed source of capital, especially for older aircraft. The oversupply of parked Stage 3 aircraft has dramatically decreased, and used aircraft values are likely to continue to rebound from their depressed levels (barring an unforeseen industry shock). These investors are betting that they can “ride” rebounding aircraft values, amortize part of the lease in the interim, and sell the aircraft at a book gain.

Restructuring losses drove a significant number of banks away from aircraft financing. An increasing number of banks have now been returning to the market as conditions have improved. In fact, the more active European banks are finding there is a scarcity of quality new aircraft lending opportunities at the moment. Banks, while a cheaper source of debt, tend to be more discriminating and risk-averse, and are less likely to be a viable alternative for weaker credit airlines. The exception would be for financing of new narrowbody aircraft types with strong backlogs (B737s, A320s).

Aircraft Finance Market continued page 8



Steve T. Gaal
Managing Director
and
Arif Husain
Vice President



Pilarski continued

as saying “the Chinese people and government are learning from the United States. We are adopting the free market system very quickly and even hired US bankers and merger specialists to help us with the deal”. Boy, was he wrong. Apparently he forgot a critical element of our system, hypocrisy. The heavily intellectual American paper USA Today ran an article on the sordid affair under the title “China, heeding Lenin, lectures on free markets” dragging the clearly non-Chinese Lenin into the whole affair. The President of CNOOC also forgot the royal class in the US, namely the Congress. He was promptly chastised by members of Congress. To show that being pompous, stupid and probably racist has strong bipartisan support in the US Congress here is a quote from a Democrat, Rep. Carolyn Cheeks Kilpatrick of Michigan: “How are they going to demand anything of us, elected members of the Congress, the highest branch of the government? We’re a democracy. We’re not communists.”

So, here you have it, folks. A solid intellectual rebuttal to the Chinese being upset at the political interference of US Congress in the free market. We’re not communists! The great imagination of those opposed to free trade is unsurpassed. The Chief executive of Chevron stated it clearly: “For Unocal shareholders, the most important issue is clear. It is a choice between a definite merger agreement with Chevron, which can close in the next four weeks, versus an uncertain and highly contingent proposal from CNOOC.” Or, as the child who murdered his parents said: “Have mercy on the poor orphan”.. Our (Chevron) deal is better because the other side plays fair and we are prepared to play dirty.



How is all this related to aviation?

Our industry thrives on free markets. Globalization, movement of factors of production including people and transparency are all enhanced and enabled by transportation. Aviation allows the forces of competition to move production of value all around the globe to generate the most efficient allocation of scarce resources. The consequence is an unprecedented standard of living enjoyed by an ever increasing number of people worldwide. Double standards and hypocrisy are an impediment to achieving those goals. Free movement of resources, be it physical goods, people (labor) or capital are the most important goal Western countries advocate. For the benefit of our industry and humanity as well we should actively promote these goals. This means, e.g., relaxing the ownership rules on airlines, reducing all subsidies and overall promoting economic efficiency. Hypocrisy and double standard should have no role in the world. Truly, what is good for the goose should be equally as good for the gander.

Banks will continue to return to aircraft financing as the industry recovers. However, certain borrowers can expect to pay higher margins than during the peak of the 1990s due to the high volatility in aircraft values demonstrated over the past four years. Banks have also partly shifted their past focus of lending directly to airlines, and now display a greater interest in partnering with operating lessors that serve as “built-in” remarketing agents.

Bear of a Market—Capital Markets in Hibernation

The capital markets have been relatively difficult for new issuers during the last 12 months. A combination of high fuel prices, stiff competition for market share, and lack of meaningful pricing power means that network carriers are under far greater “credit” pressure than their low cost brethren, making them a much harder sell in the capital markets. Enhanced Equipment Trust Certificates (EETCs), fairly prevalent during the 1990s, have not been a valid option during the past several years with the exception of the most creditworthy airlines (JetBlue Airways Corp. and Southwest Airlines Co.).

Even in the capital markets, a much higher level of structuring is required. Placements with financings that are guaranteed by a bond insurance entity (for instance, MBIA Insurance Corporation issued financial guarantees in support of JetBlue’s Pass Through Certificates, Series 2004-1) tend to have a greater chance of favorable execution. While capital markets favor stronger credits, weaker credits still have the ability to attract bond insurance companies to participate in offerings provided they have unencumbered aircraft assets and are willing to accept a lower loan amount relative to the value of the aircraft pledged.

The Asset—Aircraft Type Matters

Aircraft type is an important criterion in determining an airline’s ability to raise capital. Remarketability is the new buzz word in aircraft finance. Aircraft types with wide, diversified user bases are generally preferred, while aircraft types that are out of production or nearing the ends of their production cycles are more difficult to finance. Within aircraft types, specification now plays a greater role than ever before, with lessors and lenders favoring aircraft that have generic cockpits (avionics) and cabin specifications that are easier to convert for follow-on lessees in case of default.

Even before the aviation crisis, maintenance reserves were often a point of contention in negotiations with aircraft lessors. In the new world order, most operators can expect to pay maintenance reserves under operating leases—or substitute a power by the hour (PBH) agreement—for engine, airframe, component overhaul and/or refurbishment on an hourly, cyclical, or monthly basis.



Final Thoughts

In light of the numerous bankruptcies and out of court restructurings, investors are far more cautious in their approach to making aircraft investments. While some financiers have left the industry never to return, others with more risk appetite or bullish outlooks have entered the market. We expect operating leases to be the mainstay of aircraft financing in the short- to medium-term, with a number of smaller newly formed aircraft leasing companies helping to fill the void. "Special situations" investors will continue to play a role in the short-term, but many will likely be looking to exit the sector once the recovering industry pushes aircraft current market values closer to appraisal base values (the estimated fair market value assuming normal market conditions with balanced supply and demand). We expect banks to continue their foray back into the sector, albeit with a more asset focused orientation. Capital markets remain more of an option for airlines with strong credit ratings, with offerings having a greater chance of successful placement if wrapped by a bond insurance entity. Re-marketability is likely to be the focus under which investors operate going forward. All else being equal, aircraft with generic specifications will be more attractive to investors and therefore easier to finance than highly customized models.

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Part 1

Managing your PW4000-94

by Oliver Stuart-Menteth, Managing Director, Fintech Aviation Services

The PW4000 engine is one of the most popular engines in operation today, with some 1,900 engines powering over 700 aircraft. It is likely that a significant number of ISTAT members have exposure to the engine in one form or another and are therefore aware of the protracted operational surge problem, which, over the years, has been the subject of numerous modifications.

Pratt and Whitney (PW) has finally developed a modification that should resolve the surge problem once and for all. The final fix though comes at a cost for all associated with the engine. This article is split into two with a review of the current operational and termination requirements presented below, and in the next edition of *Jetrader*, an analysis of the cost of compliance and associated issues.

My association with the PW4000-94s unique problems started in July 1998. Whilst waiting to check out of the CKS Airport Hotel in Taipei, I watched an MD11 climb out after a seemingly normal take off. At around 300 feet 30 foot flames simultaneously leapt from the front and rear of both No.1 and No.3 engines.

A deafening and widespread 'boob-boom' reverberated through the air a short time later. The aircraft gingerly leveled off and completed a tight circuit landing on a parallel runway close to where I was now standing.

Whilst the airport's fire services bolted down the runway I managed to read the registration of the now stationary aircraft. With a heavy sigh, I turned and headed back to the hotel. I had surveyed the aircraft only 24 hours before, but had noticed nothing that could of produced such an event. It was time to do some research.

What causes the problem?

That particular event signaled to PW the need to implement a programme that would resolve, once and for all, the issue of surges on the PW4000-94 inch engine and also manage the risk of dual engine surge.

At the time of the MD11 incident some 150 Group 3 (take off) engine surges had already been encountered, with the first occurring in late 1992. PW identified the primary cause of these problems as deficient margin in the high pressure compressor, specifically the 13th-15th stages. The cause of the deficient surge margin is directly related to the differential thermal expansion rates of the compressor disk and the compressor case. The resulting transient increase of the blade tip blade clearances decreases the margin, which is at its lowest level some 60 seconds after take off thrust has been set. As the thermal stresses equalise throughout the compressor module, the tip clearances reduce and the margin is restored.

B 767	B747	A300	A310	MD11
PW4052	PW4056	PW4158	PW4152	PW4460
PW4056	PW4062		PW4156	PW4462
PW4060				
PW4062				

Table 1

Within the PW product range surge events are largely confined to the PW4000-94 inch engine. Table 1 illustrates the various engine and airframe combinations affected.

PW's Response

In response to the initial reported surges, PW reviewed the modification status fleet wide and recommended the incorporation of a particular set of Service Bulletins. These bulletins were collectively known as the New Build Standard (NBS) and were released in mid-1993. In mid 1994 PW released an additional modification relating to the 1st stage turbine vanes and in 1995 operators were advised to incorporate HPC blades that incorporated a ZircOx coating.

Most of the modifications assisted with reducing the occurrence of a surge. However, one particular PW proposed modification relating to the HPC stators actually led to an increase in surges, and forced the OEM to retrofit all new production and converted engines. It was a PR disaster for the OEM, the legacy of which is still apparent in current PW documentation and related FAA directives. Despite the introduction of these recommended modifications into new build and in service engines Group 3 surges still occurred.

The MD11 incident was the first dual engine surge event to occur and signaled to the FAA that a proactive management plan was required. Two Ads were subsequently released in close succession, AD 98-23-08 and AD 99-17-16, the latter requiring adherence to a Group 3 Surge Fleet Management Programme (FMP). The objective of the FMP, which is still in existence today and applies to all 94 inch engines of all modification standards, is ultimately to reduce the risk of a dual and single engine high power surge event. The first revision of the programme required operators to complete certain on and off wing tasks in order to determine that adequate surge margin existed. Whilst the tests and the stagger limitations have been progressively revised, the basic principles have not.

P + W continued page 16

'At around 300 feet 30 foot flames simultaneously leapt from the front and rear of both No.1 and No.3 engines'

B777-200LR

World Tour

A great adventure

by Connie Laudenschlager
with John Vitale



On July 26-27, 2005, my fellow ISTAT Board Member, John Vitale and I had the opportunity to take a very special voyage that we want to share with you. We had the good fortune to be invited by Boeing Capital Corporation (BCC), the financing subsidiary of Boeing, to participate in the Boeing 777-200LR “Going the Distance” world tour, and it was indeed – at least for me -- a great adventure.

We started the morning at the executive jet area of Newark International Airport, where along with our BCC hosts and about 30 of our friends and friendly competitors from other financial institutions and consultants/appraisers, climbed the stairs from the runway up to Boeing’s newest airplane, the B777-200LR, dubbed the “Worldliner”, painted in the very eye-catching Boeing blue and turquoise livery. While I was quite eager, I have to admit that I paused when I reached the top of the stairs and read “Experimental” painted in big letters across the door to the aircraft. I further questioned my sanity when I learned that the whole back half of the plane was filled with flight test instruments...what exactly were we getting into, I wondered.

My brief concerns were allayed when we were ushered into the very luxurious business class section of the aircraft and, of course, served our measure of champagne to commence the journey. As we all were gaily chatting, Kostya Zolotusky, BCC’s managing director of Capital Markets Development, informed us that a lottery drawing had been held, and John Vitale and I were the lucky winners (of what, we wondered). We were forced to leave aside the champagne and proceed to the front of the aircraft. Much to my dismay (and excitement!), we were strapped into the jump seats in the cockpit immediately behind the pilots and given our flight deck headsets (...which was certainly a first for me!).

Prior to take-off, we had a short briefing from the pilots, although they were very busy doing their pre-flight checks, as well as answering lots of “chatter” coming over their radios. It was quite apparent that every pilot within sight of us wanted to know all about the new “Boeing Heavy”—how fast it could go, how far, etc. We did learn that the aircraft has the biggest and most powerful commercial engines made so far, the GE-90s, and is capable of connecting virtually any two cities in the world while flying up to 18 hours nonstop. The pilot warned John and me to be ready, because once we were released by the controllers, we were going to “blast out of here” Little did I know he really meant it! Once we started take-off, it seemed only a matter of



During the entire 61-day journey, the 777-200LR flew to 24 cities across the globe and visited 17 countries throughout the Middle East, Asia, Europe, Australia and North America.

seconds before the horizon was long gone and the nose seemed to be heading straight up. (I glanced down at my hands, whose knuckles were awfully white at that point, and I also noticed John's were not much better.

Things did "normalize" shortly though, and then I really enjoyed the ride. One neighboring plane called over, "Hey Boeing Heavy, where can I get one of those?" The pilot quickly replied, "I know exactly where you can get one in your colors!"

Here are John's impressions: "The highlight of the trip was our departure from Newark, being invited to sit in the cockpit as the pilots used the GE-90 engines to their fullest extent allowed by Newark Air Traffic Control. This was the closest I will come to experiencing a shuttle launch. We seemed to rocket out of Newark on our way to cruising at 43,000 feet."

In addition to our cockpit experience, this is what Boeing shared with us about the plane: The 777-200LR, the world's longest-range commercial airplane, is the fifth Boeing 777 model. In service, it can carry 301 passengers in three classes and 11 tons of cargo up to 9,420 nautical miles (10,800 statute miles; 7,445 kilometers). According to Boeing Commercial Airplanes, "The 777-200LR's range is 1,700 miles more than the existing longest-range 777-200ERs and 700 nautical miles more – or an extra hour and a half flying time – than Airbus' competing long-range model, the A340-500."

Each section of the 777-200LR world tour airplane's cabin demonstrated new and innovative features. The airplane showcased the latest 777 interior offerings and cabin layouts that allow airlines to differentiate their product offering to passengers. One popular feature that we experienced was a starry "sky" night ceiling, which was lit from behind to resemble the stars at night. The custom-designed ceiling will be offered to airlines as an option, and the "stars" can be configured to correspond with the way the night sky looks in an airline's home country.

Seats 301 passengers
Range

9,420nm, 17,446km

Wing span

64.8m

Length 63.7m

Cruise speed

Mach 0.84 (about 484 miles per hour)

Cruise altitude

35,000 feet

Certification

Expected December, 2005

Typical routes

New York-Singapore, Los Angeles-Dubai

Flight testing

500 flight hours and 300 ground test hours

Engines

GE Aircraft Engines

In the first class lounge area, the mood lighting and absence of overhead bins made passengers feel even more comfortable. Business class featured seats that can lie almost flat and have lumbar adjustments and settings for extending the seat bottom and foot rests when the passenger is sitting up. They also had large 15-inch screens set into the seat backs, where passengers used remote controls to choose from a variety of movies and other entertainment.

John comments: "Boeing has made intelligent improvements to the interior to complement the impressive performance of the 777-200LR. The new business class seats and the light-

by the 777-200ER (Extended Range).

As for our "World Tour" experience, we had great fun on our segment going to Bermuda for golf, dinner and collegiality. During the entire 61-day journey, the 777-200LR flew to 24 cities across the globe and visited 17 countries throughout the Middle East, Asia, Europe, Australia and North America. Besides our Newark to Bermuda experience, Boeing Capital also hosted key financiers and appraisers on short trips in Asia and Europe.

According to BCC's Zolotusky, "All participants had an opportunity to personally explore the merits and capabilities of the airplane and to spend quality time together debating the future of aircraft finance, the current market environment and the future of the 777-200LR." An important debate point was contrasting the 777-200LR ultra-long range versus the 777-200ER long range with more cargo capabilities. Many participants shared Boeing's view that more than half of 777-200LR orders will be made by operators of 777-200ER routes that need more payload capability.

John noted: "...the market tends to favor flexibility. Therefore, the increased payload /range capability of this aircraft ought to result in excellent performance in the marketplace."

Here are just a few samples of impressions from our fellow "World Tour" participants:

"WOW! FANTASTIC! WONDERFUL! MEMORABLE! Can't say enough about this wonderful event ...incredibly good crowd (Boeing and guests) and an incredible plane." Doug Runte, Executive Director, Morgan Stanley

"A BIG thank-you for such a wonderful experience...it truly is the way to travel and the new 777 cabin so quiet and comfortable I could imagine myself enjoying a 19-hour flight!!" Paul Newrick, Guggenheim Aviation Partners

"It was a special event to suit a special aircraft, and I'm sure the programme will be a big success." Brian Jeffery, Managing Director, Aircraft Finance, HSBC

"I very much enjoyed the opportunity to see what a fantastic aircraft the 777-200 LR is and also appreciated the time spent with you." Peter Davis, SVP, DBS Corporate & Investment Banking

Alan Mulally left Boeing Commercial Airplanes president and CEO, checked out a display aboard the Worldliner while the airplane was on static display at the Paris Air Show in June. Also pictured is Lars Andersen, vice president and program manager, 777 program.

ing make a world of difference from the passenger perspective."

Additionally, a very interesting feature is the spacious flight attendant and pilot crew rests that Boeing engineered into the airplane's ceiling (formerly "dead space" full of wiring, etc.), which frees up valuable revenue-generating main floor or cargo hold areas. Advances in safety, efficiency and security, such as the Boeing Electronic Flight Bag (EFB), were also incorporated into the airplane.

The 777-200LR will continue its flight testing as Boeing prepares the airplane for certification later this year. The first 777-200LR will be delivered to Pakistan International Airlines in early 2006. Other airlines that have ordered or announced commitments for the 777-200LR include Air India, Jet Airways (India), EVA Airways (Taiwan) and Qatar Airways. Boeing hopes to sell 200 of these new jets over the next 20 years. The list price is US \$200 million.

Later this year, the Worldliner will also attempt a new record for nonstop distance traveled by a commercial airplane. The current record – 10,823 nautical miles (20,044 kilometers) – was set in 1997





First Class Seating



"The highlight of the trip was our departure from Newark, being invited to sit in the cockpit as the pilots used the GE-90 engines to their fullest extent allowed by Newark Air Traffic Control."

This was the closest I will come to experiencing a shuttle launch. We seemed to rocket out of Newark on our way to cruising at 43,000 feet."

John Vitale



Business Class

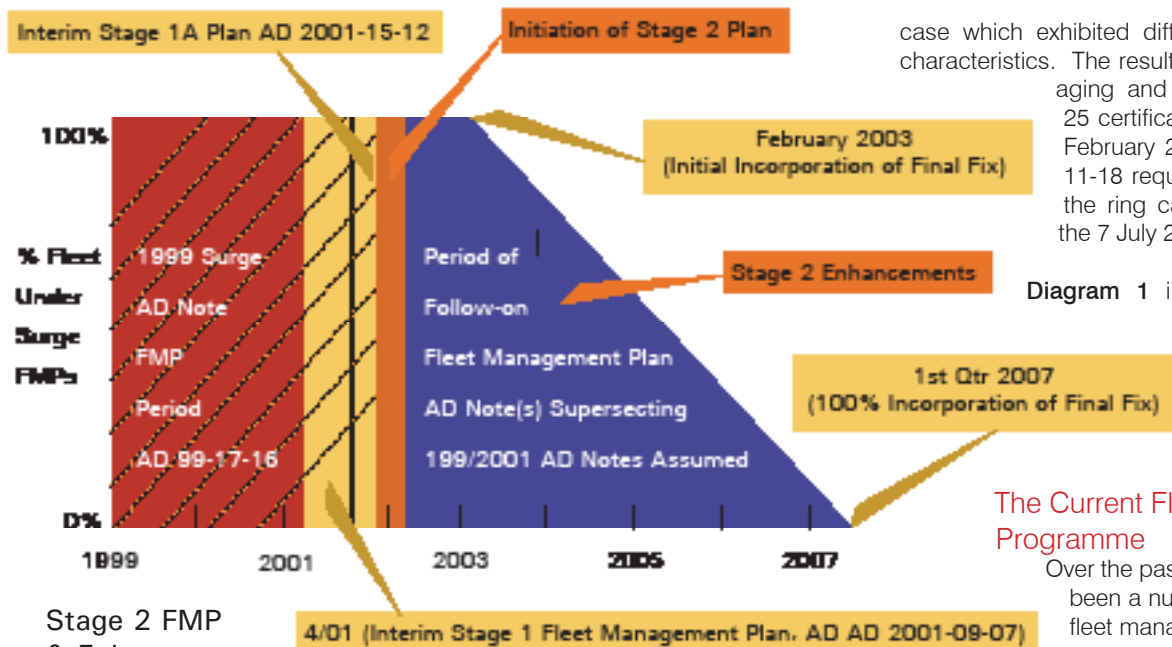
"The B777-200LR tour was awesome! Very impressive airplane and a wonderful all-around trip." Ron Wainshal, President, Air Castle.

Thank you very much, Boeing and BCC for this great experience! And good luck with the B777-200LR program -- It is a fabulous airplane!

Connie Laudenschlager, SVP, DVB Bank AG & ISTAT Board Member and
John Vitale, President & CEO, Avitas & ISTAT Board Member & VP-Secretary



In Beijing, the Worldliner team was presented with models of ships used by Admiral Zheng He to sail the world in the 1400s.



case which exhibited different thermal expansion characteristics. The results were extremely encouraging and the FAA bestowed FAR 25 certification on the installation in February 2003. The first AD 2003-11-18 requiring the incorporation of the ring case became effective on the 7 July 2003.

Diagram 1 illustrates the forecasted FMP and final fix schedule.
Source: PW AOW 18 Oct 01

The Current Fleet Management Programme

Over the past 6 years or so there have been a number of Ads affecting the fleet management programme. The most recent AD 2003-19-15, dated 9 October 2003 covers installation, operational and termination requirements of the PW4000-94 engine on Boeing, Airbus and McDonnell Douglas MD11 series aircraft. It is vital that asset

Stage 2 FMP & Enhancements will be in effect until final fix is fully incorporated

In conjunction with the introduction of an engine management plan PW set about devising a modification that would resolve the issue of the surges permanently. During 2001 and 2002 the OEM developed and flight tested a new compressor ring

P+W continued page 18

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ISTAT Foundation Raffle

The annual ISTAT Foundation raffle raises funds to provide scholarships and grants to further aviation education. In the past, we have raffled off hard assets such as cars and motorcycles. In the past, ISTAT board members organized the raffles and purchased about 1/3 of the tickets. To them we owe our deep gratitude.

The raffle we are planning for this year will be quite different in many ways. In order to make this a success, we are asking for input and support from the ISTAT membership.

First, we hope to raffle a

customized vacation

instead of a car or motorcycle. The winner will choose from multiple options, and we would also like to offer the choice of a cash alternative. The vacations will be spectacular, and will be designed to accommodate up to 15 people – perfect for a family and friends trip or for a client/business purpose. Secondly, we will try to sell the tickets to a wider distribution of ISTAT Members. Also, we plan to hire out the process of actually conducting the raffle.

In order to make this a success, we will need substantially more involvement from the ISTAT general membership. We welcome input as to what type of vacations should be offered, and we are asking the membership's help in selling and buying tickets. We plan to sell a maximum of 1,500 tickets at \$100 each. Please help us by agreeing to sell and/or buy tickets!

Your **input** at this stage is important to us. Please email Nick Popovich at nick@sage-popovich.com and/or Bob Brown at bob.brown@vxcapital.com and let us know what you think of this concept and what other thoughts you might have for us.

The ISTAT Foundation provides funds for scholarships, educational programs and grants to qualified individuals and institutions that promote the advancement of commercial aviation.

P+W *continued*

managers, owners and lessors associated with the engine have a good understanding of the requirements of this directive, as failure to ensure compliance can only lead to additional cost, illiquidity, and potential loss of revenue. The 20 page AD, which is essentially divided into on-going operational and termination requirements, needs to be reviewed with care.

For the sake of this article it has only been possible to provide an overview of the most prominent requirements:

Main Operational Restrictions

- 1** Applicable to all engine series – If a Group 3 (take off) surge is experienced, and trouble-shooting does not reveal any anomalies, then the engine must be removed prior to the next flight and the modified compressor ring case incorporated. There is no exception to this rule.
- 2** All engines that incorporate HPC cutback staters must be withdrawn from service before accumulating 1,300 cycles since new (CSN) or cycles since modification. Prior to this only one engine of this configuration may be installed per aircraft.
- 3** There are various limitations relating to the Compressor CSN or cycles since overhaul (CSO) imposed on each series engine. The limitations are dependent upon which airframe they are installed upon and the modification status of the engine.
- 4** If an engine for a Boeing product is inducted into a maintenance shop after the 7 July 2003, or for an

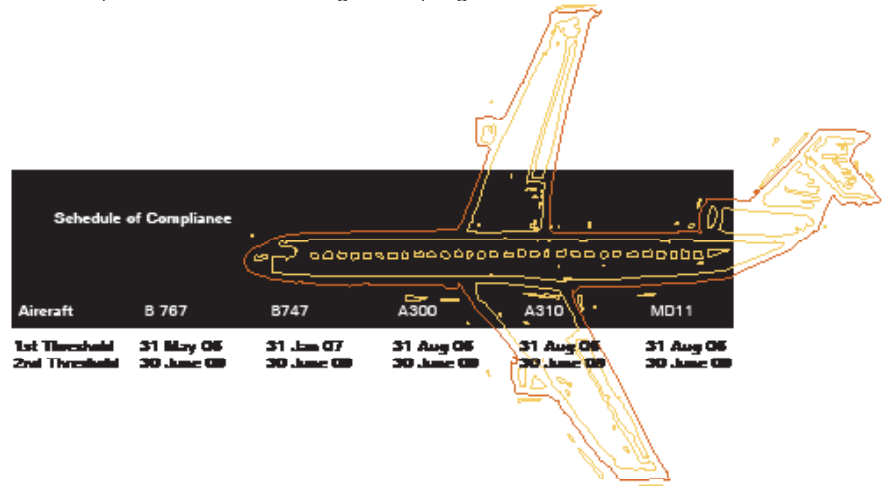
Airbus product after the 9th October 2003 or for a MD11 the 8th November 2003 then

a If the HPC rear module is disassembled, then the RCC rear HPC must be incorporated.

b If the HPC and HPT modules are split, then a HPC module with a CSO of 1,500 cycles or more than the CSN or CSO of the HPT may not be installed.

Compliance Requirements

The FAA has deemed that the incorporation of the RCC is a mandatory requirement. Repeat inspections are not an option. The incorporation of the RCC will negate the requirement to comply with the operational requirements of the management programme.



1 | 1 v v continued page 20

'The MD11 incident was the first dual engine surge event to occur and signaled to the FAA that a proactive management plan was required'

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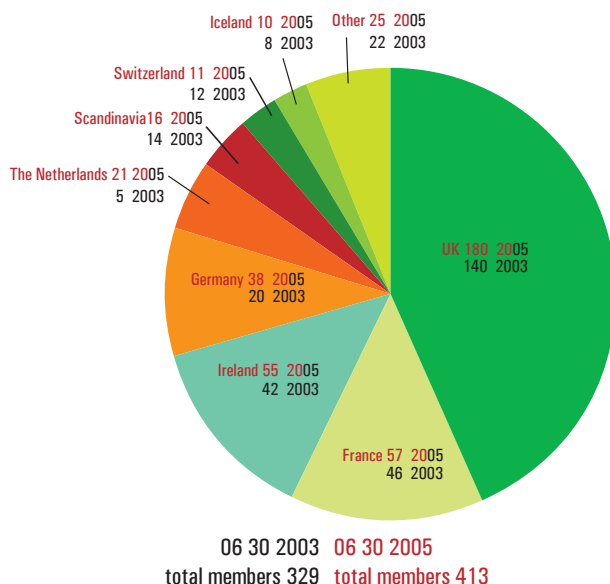
ISTAT Membership

by Connie Laudenschlager
ISTAT Board Member and Outgoing Membership
Chairman

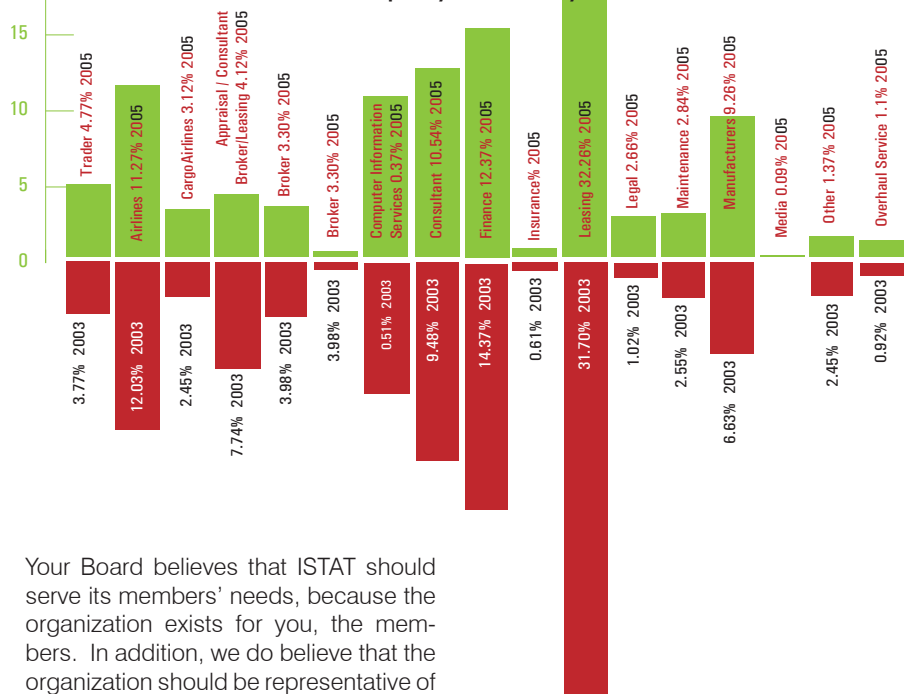
I hope many of you noticed the outstanding OpEd piece by my colleague, Bert van Leeuwen in the last issue of the Jetrader. In his column, Bert correctly pointed out that, in many ways, given our membership representation, ISTAT is not a truly international organization, as its name -- in contrast -- would imply. This, however, has not gone unnoticed by your Board. In fact, during my tenure as Membership Chairman (since 2002), we have spent considerable Board time talking about how we could improve the geographic scope of our membership. One of our resulting efforts was a focused campaign to attract airline members from around the world, with the thinking that if the prominent airlines in various jurisdictions joined, then the related aviation partners in those regions would follow suit. Another effort, with the help of a number of individual Board Members, was a "letter writing campaign", in which each of us targeted senior contacts at aviation-related firms around the world and urged them to become involved in ISTAT.

We have had some successes, notably in increasing the total membership of ISTAT, and also the number of airline members, by about 31% and 11% respectively, over the past two years. However, the relative geographic distribution of our membership has remained about the same during this period, both globally and within our second biggest region, Europe, as illustrated by the charts below. While the number of our European members has grown by over 25%, European representation has declined slightly in relative terms, and none of the emerging European markets to the East are yet to be represented in ISTAT.

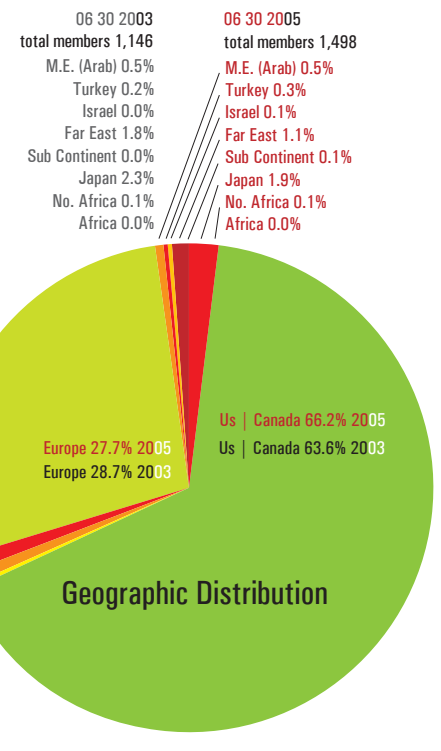
European Geographic Distribution



Membership by Industry Sector*



Your Board believes that ISTAT should serve its members' needs, because the organization exists for you, the members. In addition, we do believe that the organization should be representative of the global aviation industry, in which we all participate (with joy and perhaps, occasionally, some pain). As the industry is becoming much more international, so too should our membership, so that all the "networking" advantages and industry knowledge we have enjoyed as part of this organization can extend to the many new players in this exciting business. However, as indicated by the numbers above, we have much to do to expand ISTAT's representation across the globe. I hope that we can count on each of you to invite your industry partners and contacts to share in the ISTAT experience by joining our membership very soon.



*NOTE :: It may also be interesting for our readers to see the distribution of ISTAT's membership base by industry segment. Similar to geographic distribution, our membership composition by industry sector has remained fairly constant over the past few years. As the total membership has grown, the only sector seeing a relative increase of any size is that of the manufacturers, and even then, by only a few percentage points.

P+W_{continued}

Generally for twin engine aircraft, the 1st threshold requires the incorporation of the RCC into at least one engine, whilst applying specific requirements to the other non-RCC engine. For the B747 and MD11 these requirements are more arduous, in that only one non-RCC engine is permitted to be on wing after this date.

The common 2nd threshold date requires all installed engines to have an RCC installed.

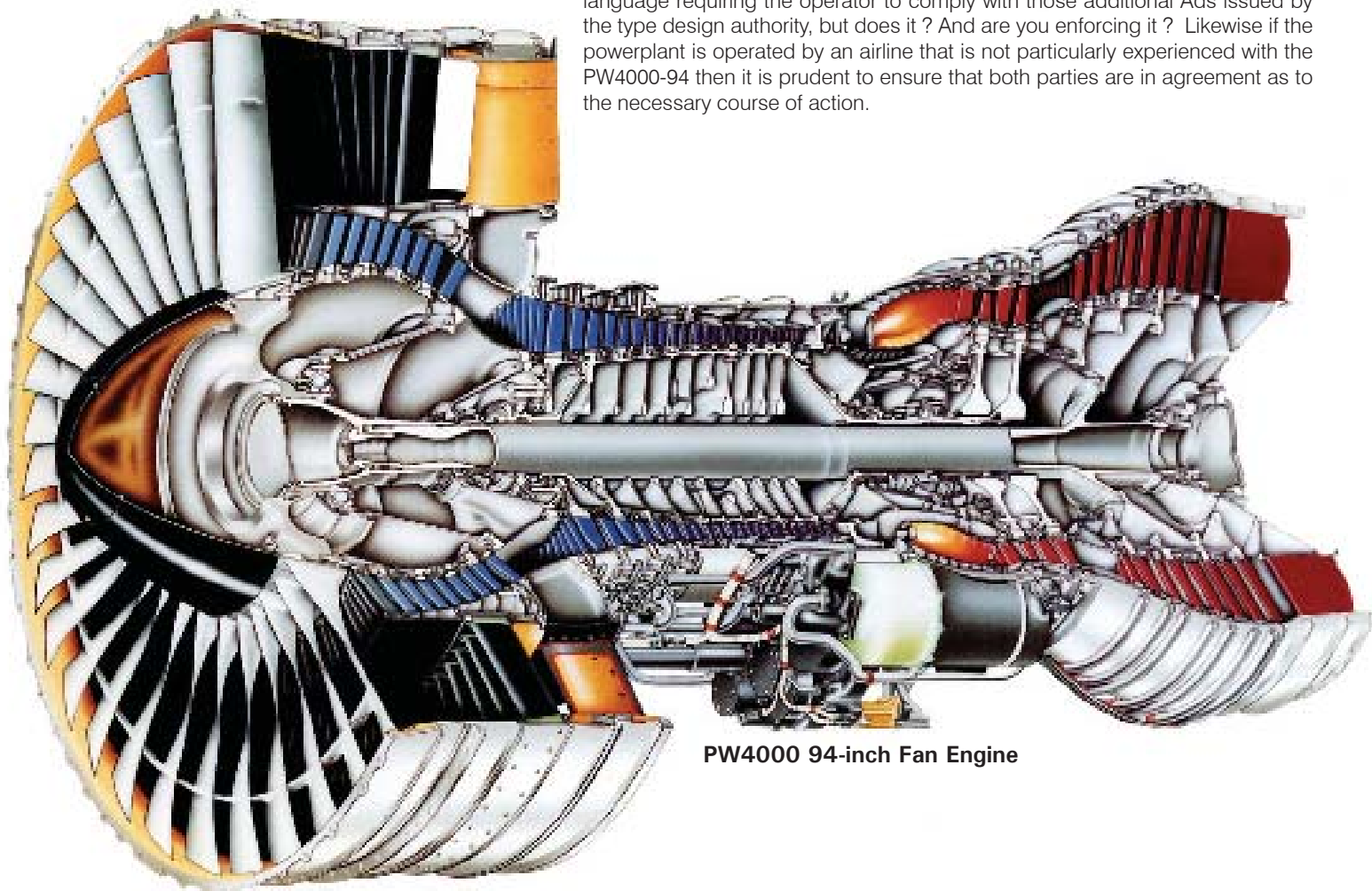
Who Needs to Comply with the AD ?

It is a myth to assume that just because a FAA AD has been issued, then all operators world wide of affected equipment will comply with the requirements. Specific legislation concerning the requirements for the incorporation of an Airworthiness Directive are dictated by the National Aviation Authority (NAA) of the state of registry, and no one else. Most, but not all NAAs require an operator to comply with the requirements of the state of type design. However in doing so, the NAA may also issue their own version of the AD, which may contain subtle differences, such as those relating to compliance or dates of effectivity. If your company has exposure to the PW4000-94 in jurisdictions which are not affiliated to the FAA legislative system then verify the proposed action to be taken by the operator. Of course the associated operating or finance lease should contain language requiring the operator to comply with those additional Ads issued by the type design authority, but does it ? And are you enforcing it ? Likewise if the powerplant is operated by an airline that is not particularly experienced with the PW4000-94 then it is prudent to ensure that both parties are in agreement as to the necessary course of action.

'The FAA has deemed that the incorporation of the RCC is a mandatory requirement.

Repeat inspections are not an option.

It is a myth to assume that just because a FAA AD has been issued, then all operators world wide of affected equipment will comply with the requirements.'



PW4000 94-inch Fan Engine



This year, Pratt & Whitney celebrates its 80th anniversary, powering change since Frederick Rentschler founded the company in 1925.



Pan Am's Juan Trippe and the B707

Aviation History

Charles Lindbergh, Pan Am's technical consultant, had gone to England to study the de-Havilland Comet: in his report to Juan Trippe he concluded that the aircraft was too small and too short-ranged to be economical.

In July 1952, Pan Am engineer, John Borger, visited Boeing, Douglas and Lockheed to see what they were doing to meet this new challenge. At Douglas Borger found that they had run into structural and aerodynamic problems with the DC-8 project; moreover the fuselage would only seat five abreast, and Pan Am wanted an airplane with six abreast seating for 65 passengers. Neither Borger, nor the American and United engineers, who had visited the factory a week earlier were happy at what they saw.

It was the same story at Lockheed, except the aircraft could carry 70 passengers at a speed of 530 mph. However, the fuselage diameter was only 130 inches, and Pan Am had to have 144 inches in diameter.

The final stop was Boeing, where a prototype, designated 367-80, was being built, but its fuselage was only the same width as the Boeing B377 Stratocruiser, 132 inches; and although it would be able to make London non-stop with a good tail-wind, a refueling stop would be necessary westbound.

The British were preparing to put their Comets on the North Atlantic with one stop eastbound and two westbound: this would give a total flight time between 3 and 5 hours faster than Pan Am's Stratocruisers. On October 20, 1952, Trippe ordered three Comets.

Boeing's president, Bill Allen, was betting the company with the Dash 80, as it was generally called. However, the military needed a jet in-flight refueling tanker to replace the slow piston engine KC-97. Five years of research in the Boeing high-speed wind tunnel had produced the B-47 and B-52: this wealth of knowledge showed the business potential of the Dash-80 prototype as a civilian airliner, provided a military version was ordered to partially cover the \$16 million development costs. The government research and development allowance was proportional to a firm's military business under contract, and given that the Dash-80 prototype development was to demonstrate its suitability as a re-fueling tanker, as well as an airliner, the cost for building it to Boeing was only around \$3 million dollars; a saving to the company of \$13 million.

The first flight of the Dash-80 was on July 15, 1954: the Comets had entered passenger service in May 1952, but on January 10 and April 8, 1954, two Comets had disintegrated at cruising altitude and the fleet was grounded; it was not until October 4, 1958 that the Comet IV started trans-Atlantic jet service.

Comet 1A
Bill Bath took this photo
at Farnborough in 1953



Meantime having received a large order from the Air Force for the KC/C 135 tanker/transport/cargo derivatives of the Dash-80, a civil version was now practical, as its development costs would be partially offset by the military model, of which 820 were eventually produced.

Pan Am had to have six across seating and trans-Atlantic capability; Trippe would not order until he got it and started to play off Douglas with its re-designed DC-8 project against Boeing. Except for Trippe, all of Pan Am's senior vice presidents were engineers; everyone knew that he was the best financial man in the company, but no technical problem, however complex, had to be explained to him, he grasped its significance immediately; as a result he was also considered one of the airline's best engineers.

Both of the manufacturers' proposals did not meet Pan Am's requirements. For six months Trippe, in that quiet voice of his, would smile and say, "that's fine, but I would like you to find your way clear to build it wider and longer; even if we have to fly it light for a couple of years, bigger engines will come; if we build it too small it will be obsolete in a few years".

Both Boeing and Douglas announced they had frozen their design, Trippe smiled and refused to budge; by going to water injection on take-off, more power could be squeezed out of the Pratt and Whitney J-57 engines. Boeing had spent millions on its production line for the KC-135; Douglas only had blue prints, but it was the world's principal supplier of civil transports and was confident they would get the nod: having had only 56 orders for the Stratocruiser from five airlines since the end of the war, Boeing relented. The Dash 80 fuselage could be widened and lengthened to increase capacity from 100 passengers to 147. Trippe was pleased but still not satisfied; he told Boeing to

Juan Trippe Continued page 22

Boeing initially used the Dash 80 to demonstrate the performance advantages jet engines offered over the propeller-driven engines that were standard at the time. It's considered one of history's most important airplanes, and is displayed at the Smithsonian National Air and Space Museum outside Washington, D.C.

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Multiple web sites



press

DVB Bank AG

reports that on Friday, 29 July 2005, Standard & Poor's Ratings Services (S&P) raised its long-term counterparty credit and certificate of deposit ratings on the Bank from 'BBB+' to 'A-'. S&P also affirmed the 'A-2' short-term ratings and, in line with last year's improved rating, again described the outlook as "stable". DVB's rating from Moody's has remained unchanged at 'A3' since 2000.

DVB perceives S&P's conclusions as an acknowledgement of the Bank's strategic focus on transport finance and its position in the global market place. During recent years, DVB's growth has found reflection in increased profits and strengthened capital reserves. DZ BANK remains fully supportive of DVB's strategy and has consistently emphasised its long-term commitment to the Bank.

Cabot Aviation,

is pleased to announce the sale and delivery of the former Alaskan Airlines McDonnell Douglas MD82 aircraft, msn 49387 (N954AS), on behalf of DaimlerChrysler Services North America LLC to 1Time Airlines in South Africa. The aircraft has Pratt & Whitney JT8D-217A engines and after delivery in Tucson, Arizona, was ferried to 1Time's maintenance facility at Johannesburg International Airport, South Africa. The aircraft is currently undergoing a heavy check including reconfiguration before entering service on 1Time's scheduled network.

Cabot Aviation acted as exclusive agent for DaimlerChrysler Capital Services and this sale followed the successful sale of the sister ship, msn 49386, to AAR earlier in the year.



switch from the J-57 engine to the P&W J-75, to give a still longer fuselage and longer range. The engine was still on the Air Force secret list, but John Borger found out about it two years earlier and Trippe then sprung it on the Boeing negotiators. The engine was still in the experimental stage and nowhere near ready for commercial use. It also meant a complete re-design of the Boeing airplane, including a new wing. No way would Boeing risk designing a new trans-Atlantic airplane for an engine of unknown reliability.

Trippe then went through the same routine with Douglas, with the same result. So he hounded Pratt and Whitney's chief, Fred Rentschler, who also said no. Trippe refused to accept the response and suggested they spend two weeks thinking about it; according to Lindbergh it was a typical Trippe technique, deadlock a situation then throw it back into flux. He then contacted Rolls-Royce, who was developing an engine with trans-Atlantic capability; of course this contact was allowed to filter back to Hartford.

Meeting with Rentschler for lunch at the Cloud Club on the top floor of the Chrysler building, Trippe offered to buy J-75 engines for \$225,000 each if they were ready by the summer of 1959, with a bonus for an earlier delivery. Pratt would be required to give the usual reliability guarantees. With spare parts, Pan Am was committed to a 40 million dollar engine deal and no airplanes on which to hang them, but now Trippe was master of the situation: he flew to Boeing,

where Bill Allen figured Trippe was still bluffing and again said no; so it was back to Douglas, who folded and agreed to design a bigger DC-8 around the J-75 which was given the civil designation of JT-4A, (the J-57 became the JT-3C). Trippe then secretly ordered twenty-four before going to Boeing and ordering twenty-one of the smaller B707 with JT-3C engines. The total of the two orders was \$269 million, and Pan Am's net income in 1954 was only \$10.4 million.

Believing it had cornered all of Pan Am's business, Boeing was shocked to read in the paper of the Douglas order, and realized that their smaller B707 was doomed as an international airliner. They immediately re-negotiated the contract for 17 bigger, longer-range B707-320s with JT-4A engines, and quick delivery of six of the small B707-120s. Trippe gave an inducement of \$250,000 for every month each plane was delivered ahead of the contract date. The result was Pan Am had B707-120s on the trans-Atlantic routes months before any of its competitors.

Regular passenger service started between New York and Paris on October 26, 1958 with a nine hour flight, including a fuel stop. With delivery of the JT-4A powered -320 model in June, 1962, Pan Am could usually fly the Atlantic both ways without a fuel stop, and the -120 airplanes were then shifted to the Latin America routes.

Connie Laudenschlager, Board Member and Membership Chairman at LeBourget with one of her other favorite airplanes, the "Connie."

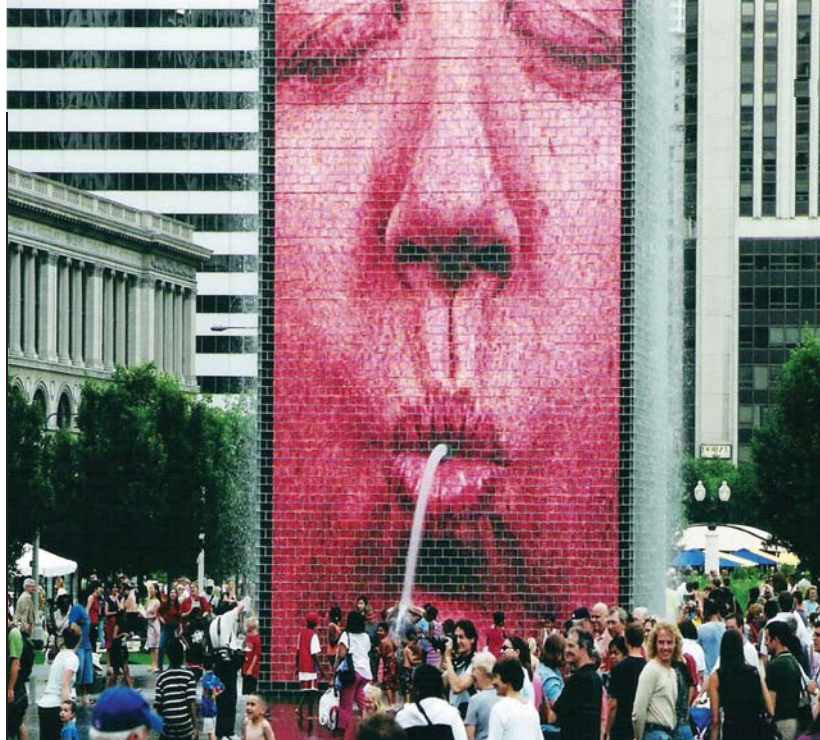


Nearly 3 million people make up what is colloquially known as the “Windy City”, and over the past 150 years as immigrants migrated West looking for better futures, they brought to Chicago elements of their own cultures, making it one of America’s greatest multi-cultural metropolitan areas. The city has long been known as a financial, industrial, and transportation center and for its ethnic diversity. Immigrants from Poland, Russia, Mexico, Germany and India have transformed many of Chicago’s neighborhoods into microcosms of specific cultures. Ethnic neighborhoods like Ukrainian Village, Bridgeport, Old Town, Lincoln Square, boast the best of the communities that reside and form them – all of which are centered around ‘The Loop’, Chicago’s resplendent lake-side downtown that offers some of the best cuisine, art and shopping America has to offer.

Most visitors to the “Second City” stay downtown during their visit, spending most of their time shopping the ‘Magnificent Mile’, or taking in some of Chicago’s renowned architecture by such famous designers as Frank Lloyd Wright, Louis Sullivan and Ludwig Mies van der Rohe, creator of the International style of design. Forget the taxi – the best way to enjoy the history and the feel of Chicago is to hit the streets via foot, and don’t forget to grab a Chicago hog dog along the way – no ketchup please! – as you meander through the Loop’s busy downtown streets.

What to See: A trip to Chicago is not complete without a self-guided tour of the city’s newest and most modern downtown attraction, Millennium Park. Located in downtown Chicago on Michigan Avenue between Randolph and Monroe Streets, the 24.5-acre Millennium Park is an unprecedented center for world-class art, music, architecture and landscape design. Among the park’s prominent features are the Frank Gehry-designed Jay Pritzker Pavilion, the most sophisticated outdoor concert venue of its kind in the United States; the interactive Crown Fountain by Jaume Plensa; the contemporary Lurie Garden designed by the team of Kathryn Gustafson, Piet Oudolf and Robert Israel; and Anish Kapoor’s hugely popular Cloud Gate sculpture. www.millenniumpark.org.

Where to Stay: Nestled in the energy and excitement of downtown Chicago, Hotel Monaco Chicago, a four-star hotel, is located one block west of Michigan Avenue and is only minutes away via taxi to such Chicago hot spots as the Merchandise Mart, Chicago Board of Trade and is within walking distance of the Wrigley Building. A former hat factory on the banks of the Chicago River, the transformed Hotel Monaco draws guests in and surrounds them with a retro 1920s decor complete with all the necessities for a productive meeting away from the office. Undeniably compelling, the Hotel Monaco Chicago offers a sense that, even for a day, guests are transported to an inspirational sanctuary of style and comfort. www.monaco-chicago.com.



Chicago

People going Places

by Kasia McDermott, Ajax Newservice

Where to Eat: Minimalist but comfortable, with bare white walls and a single banquette that spans the length of the room, Blackbird, the French slang term for a Merlot grape, delivers a smart and peerless approach to dining for patrons from all over the world and has earned its place as one of Chicago’s premiere dining destinations.

Acclaimed Chef Paul Kahan’s background is rooted in both French and American classics. His culinary entree-fusions offer a fresh take on such traditional French fare such as creamy foie gras, peppery-sweet venison salad, and a delightful tender short rib of beef with chive spaetzle – and the Blackbird bouillabaisse served in a fennel broth is to die for. Located in Chicago’s West Loop neighborhood, Blackbird is a wonderful and intimate way to get to know your new (Sweet Home) Chicago. www.blackbirdrestaurant.com.

Among Millennium Park’s prominent features are the Frank Gehry-designed Jay Pritzker Pavilion, the most sophisticated outdoor concert venue of its kind in the United States; the interactive Crown Fountain by Jaume Plensa and Cloud Gate, pictured below. Also known as the Electric Kidney Bean, the Bean, designed by Anish Kapoor measures 33 feet tall, 42 feet wide, and 66 feet long. Come see yourself in the city!



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