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June July 2004





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President's Letter



Michael A "Mike" Metcalf President . ISTAT

Bits (

Pieces Aircraft are graceful

and exciting monuments to the genius of the world's manufacturers and testimony to their engineering talents.Today's powerplants, when uncowled, offer an

amazingly complex dynamic of plumbing, electronics, and metallurgy, which when properly combined, move from whisper purr to significant release of thrust and measurable horsepower?

What would the old Scotsman James Watt have thought about his defined term and measurement of horsepower (the work of ponies lifting coal was thought to equal 33,000 lbs of work in one minute, thus one horsepower) if he could have foreseen today's mammoth high-bypass-engines and their appropriate thrust to horsepower ratings.

But at the end of the day it's the less imposing but intrinsically necessary "Bits & Pieces" of these magnificent airplanes and engines that keep the machinery of aviation commerce viable on a day-to-day basis.

More importantly, it's the "Maintenance-Repair Organizations" (MRO) who manage these bits and pieces making air transportation not only one of the world's safest modes of travel, but also offering our industry an enhanced opportunity for economic profit and viability, which must command our instant attention.

Therefore, we thematically dedicate this edition of the JETRADER to a look at the Maintenance and Repair Organization participants in the global aviation marketplace, and particularly to those ISTAT members who so successfully play in this complex but necessary arena of commercial endeavor.

At one time in my aviation career, I was privileged and honored to be a part of the AAR Corporation of Chicago, Illinois, one of the larger MRO, parts, engine, and aviation services companies. In those years that I was with AAR, I learned a great deal about the parts, overhaul, and MRO industry and had the utmost appreciation and admiration for those people who daily deal in the

see Metcalf page 4

September 12-14, 2004 11th European Conference

The Gleneagles Hotel, Auchterarder Perthshire, Scotland

The Road to Recovery

Sponsored by Boeing Capital Chateauroux Air Center - France CFM International . Embraer . Lufthansa/GOAL . Odgers Ray & Berndtson . Republic Financial Corporation . Rolls-Royce . Sage-Popovich .

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11th European Conference Information and Registration

Jetrader is a bi-monthly publication of ISTAT, the International

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.



Metcalf continued

minutiae of parts numbers, overhaul procedures and recordkeeping. Further, I learned to appreciate the fact that a simple omission of an esoteric act such as improper "non-destructive testing," or lack of a critical Minimum Equipment List (MEL) item can ground a flight, canceling flight revenue and/or even potentially forcing a fine from aviation regulatory authorities.

ISTAT'S-MRO members have long been supporters of the Society and the ISTAT Foundation, remember that it was Roy Rimmer of TIMCO who offered the winning bid for the Herb Kelleher autographed Southwest nose cone at last year's annual conference. So to our ISTAT-MRO members, "this JETRADER is for you."

Next on the calendar of ISTAT member events will be our always much anticipated cocktail reception at the Farnborough Air Show. This annual event has grown to become perhaps, the largest non-denominational reception and event at the Paris and Farnborough venues, attracting well over six hundred attendees last year in Paris. This year's event will be held at London's Science Museum on Monday, July 19, 2004. We will convene in the "Making the Modern World" Room at 6:30 P.M.

We greatly appreciate the continuing sponsorship of the Royal Bank of Scotland, which has so generously contributed to make this gathering the signature event it has become at the annual Air Shows. ISTAT would particularly thank Mr. Dick Forsberg and Ms. Nodlaigh Goss of Royal Bank of Scotland for their on-going help with the presentation of this meaningful event.

During the month of September, specifically September 12-14, 2004, ISTAT's 11th Annual European conference will be held at the fabulous and worldrenowned Gleneagles Hotel, Auchterarder, Perthshire, Scotland. The ambiance and pageantry of this Conference when held at this site, is rapidly becoming legend with its gracious hotel setting on the moors, and grand displays of falconry and the pipers and marching bands.

Further, the speaker line-up and informational content make this rapidly growing event a must attend session for those who truly want to see where aviation is going in the "European Union" and on the rest of the European continent.

For those who truly plan ahead, next year's ISTAT 22nd Annual Conference will be held in Phoenix/Scottsdale, Arizona at the Westin Kierland Resort & Hotel during the dates of March 6-8, 2005. Fred Klein, 22nd Annual Conference Chairman has promised to outdo his stellar performance of last year at this upcoming event. It will be ISTAT's great honor to award "The ISTAT Award" for 2005, to Mr. Fred Smith Chairman and Founder of Federal Express. The ISTAT Award will be formally presented to Mr. Smith as part of The President & Chairman's Gala Dinner & Awards program to be held on Tuesday evening March 8, 2005.

With the into service introduction of the Embraer 170, the nearing of the mammoth Airbus A380, and the formal introduction of the landmark Boeing 7E7, there will be much to discuss at the ISTAT Farnborough Air Show cocktail reception, I look forward to seeing all ISTAT members and their guests in London, and then reconvening to further the exchange of ideas at Gleneagles in September.

Chairman's Column

by John F Keitz

IRST, congratulations to our three new certified appraisers. Tom Burke of AVMARK, Martin O'Hanrahan of AVITAS and John Trevitt of IBA Group passed their exams at this year's conference and achieved ISTAT Certified Appraiser status. We now have 28 certified appraisers and fourteen Senior Appraisers or Fellows. We are down to only three candidates remaining who have not yet passed their exams. However, I have heard from several of our colleagues that some potential candidates are thinking of joining the ISTAT program. This should not be surprising. I would imagine that during the poor market of the last few years with few transactions, and fewer still that required appraisals, the last thing on the mind of a young aviation professional would be to consider a career as an aircraft appraiser. Now that things are looking up, it might appear to be more appealing.

Our working group that addressed the question of "Certified Engine Appraisers" has finished its work and has done an excellent job. Bill Bath, Fred Bearden, Phil Seymour, Mark Calver and Oliver Stuart-Menteth deliberated via e-mail to evaluate the proposal that we create a category of certified engine appraiser. Bill Bath dutifully kept copies of all the exchanges and the final report included 17 pages of e-mails. It is not surprising, in view of the overwhelming opposition, that the group recommended that we not establish a separate category for engine appraisers.

As you may recall, the main reason for the proposal was to recognize that some gualified engine experts did not meet the requirement of two years of full time aircraft appraisal experience to become candidates for certification. The working group now recommends that "the ISTAT Appraisers' International Board of Governors be permitted by majority vote to relax existing Appraiser Program enrollment criteria and gualification requirements for potential candidates with such exceptional qualifications. Such candidates would be required to take and pass the standard ISTAT Appraiser's technical and ethics examinations whereupon they would be become ISTAT certified appraisers without limitations." This recommendation will soon be put before the membership for any further comments and then before the IBG for formal approval and incorporation into the program.

The working group also recommended that we improve the appraisers' continuing education program by providing more effective and formal sessions on valuation techniques and technical issues. Further, they would like to see ISTAT expand upon the current appraiser program handbook and possibly produce other "textbooks" and provide training classes on topics that would enhance the knowledge of our appraisers and candidates, which in turn would be attractive to potential new candidates in the program. Bill Bath will pursue both of these suggestions with the intent of having a more intensive program at next year's continuing education session and, hopefully, some other training alternatives even before that.

Finally, the working group again suggested that, as we have been doing for some 12 years now, we seek to develop an ISTAT sponsored transaction database.

In the **Press** | June + July 2004

The Air Atlanta Aviation Group (AAAG) has unveiled their new aircraft maintenance facility, Air Atlanta Aero Engineering (AAAE) opened at Shannon Airport, Co. Clare, Ireland.The aircraft maintenance company performs heavy maintenance on B727 and 737 aircraft and will add B757, 767 and 747 capability over the coming months.

Air Atlanta Aero Engineering was formed with the purchase of Shannon MRO by the Air Atlanta Aviation Group from UPS in February 2004. Originally founded in 1962, the company employs 160 staff at its new state-ofthe-art facility at Shannon. Following the purchase, the company announced a major expansion plan. In addition to the new aircraft types, up to 30 new staff will be employed during 2004 and a similar number in 2005, with the potential for further jobs over the next several years.

The company will provide maintenance services to Air Atlanta Aviation Group companies and third party airlines. Group companies include: Air Atlanta Icelandic operating B747, 757 and 767s; Air Atlanta Europe (UK) operating B757, 767, 747; and Islandsflug (Iceland) operating B737s. Associate company Excel Airways (UK) operates a fleet B737 aircraft and a number of B757 and 767s from Air Atlanta. In addition, the company will continue to provide support to UPS on their B727 fleet for the next two years. Air Atlanta Aero Engineering is approved by the JAA and FAA to perform heavy maintenance on B727 and B737 aircraft. The company will add B757, 767 and 747 capability in the coming year. Based at Shannon Airport, the company currently employs 160 staff and plans to add up to 60 new staff over the next two years.

Air Exchange is pleased to announce delivery of an additional B737-200 aircraft [msn 20583] by TACA INTERNA-TIONAL AIRLINES, El Salvador, to SKY AIRLINE, Chile. The aircraft, which will be subleased to AERO CONDOR, Peru, is the last in a series of transactions arranged by AIR EXCHANGE. AIR EXCHANGE provides a full range of transport aircraft brokerage services to airlines and aircraft owners worldwide, including the remarketing of surplus aircraft. INFO@AIREXUSA.COM

Ansett Worldwide has delivered the final Boeing 737-300 aircraft (MSN 24025) of a four aircraft deal, to FlyMe of Sweden. Ansett Worldwide has supplied all four of FlyMe's B737-300 aircraft, which FlyMe operates on its value-based network across Sweden and into Finland. Mr Fredrik Skanselid, Managing Director of FlyMe noted: "FlyMe has enjoyed a very successful launch, with our customers appreciating the new low cost services that we are providing. Ansett Worldwide has proven to be a valued partner in building our network, and the delivery of this fourth aircraft will allow us to offer even more services to our passengers and the Baltic market"

AvAero is pleased to announce the successful completion and certification of its innovative fuel burn reduction modification on Boeing 737-200 and 737-300 aircraft. AvAero's



DATA / INFORMATION / CONSULTING / ASSET MANAGEMENT

First half 2004 is the first period since pre-911 to show decelerating growth rates for RJs and growth in narrowbody jets for domestic U.S. capacity



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Year-over-Year % Change by Equipment Group of U.S. Domestic Capacity (Available Seat Miles)

Intra-European YOY capacity growth has shown double-digit narrowbody growth since first half 2003 with RJs turning negative in first half 2004



Year-over-Year % Change by Equipment Group of Intra-European Capacity (Available Seat Miles)

Rotable Support Programs by The Memphis Group



If there has ever been a quantum leap in the aviation industry, the past three years have proven that traditional airline support infrastructures are undergoing radical change. Low cost startups are creating a new paradigm almost everyday. One of the new standards is the need not to own and manage inventory.

ARRYING INVENTORY was once considered the way to support flight operations and maintenance events. This is just not the practical approach anymore. Inventory means carrying costs, resources to manage, infrastructure to warehouse, systems to track, accountants to account, disposal costs, obsolescence costs, upgrade costs and on and on. Legacy operators are looking for alternatives to reduce costs and startup carriers to avoid costs, and inventory reduction is certainly on the radar screen.

Legacy operators have indicated for years that there is a cost equation both for maintenance and inventory ownership and that at a certain growth curve it is more economical to perform maintenance in house and own and control all inventory assets including components, spare engines, nacelles and even some insurance items. The problem with the cost analysis is that the infrastructure never goes away even after employee retirement and both maintenance and inventory organizations prove to be self-serving. Everyone hears about the airline that has billions in inventory, but we don't hear about the hundreds of employees required to manage and provide logistical support.

The startup carriers of today are guite different from existing carriers in that they appear to be focused on segments or specific lanes versus the traditional hub and spoke trunk carriers. Many of the startup carriers are also approaching the business as a low cost carrier. Their focus is on core business, filling the aircraft to capacity with pas-

sengers and flying aircraft.

The Memphis Group (TMG) and its joint venture with One Equity Partners (Rotable Asset Management) has witnessed first hand the dramatic shift in the approach start up carriers have taken in defining their requirements. TMG has long served the industry in providing re-certified parts to major airlines, both as provisioning and replacements.

John Temple, Executive Vice President stated, "Although we certainly continue to support major airlines by providing replacement components, we see startups asking for component programs that minimize their upfront investment."

Rotable Support Programs are not new to the industry as OEMs have provided rotable pools for quite some time. (Rotable Pools are established to replace a removal in return for the repair work). Although still utilized today, many other programs are being instituted with great success.

Base Kit and Line Station Provision 1 | A program designed to provide RSPL items that ensure dispatch certainty and both mainte-

nance and marketing provisions. An operator

would ask for either a financial lease or some form of access fees over an extended period. Deferred capital outlay and expense spread out over a finite period.

Rotable Replacement Pool

2 | A program established to replenish specific removal components. The operator sends the removal to a repair station and serviceable units are sent to them as an exchanged replacement. An operator would pay an access fee and in some cases an exchange fee. Deferred payments in lieu of provisioning for safety stock on the front end.

Power by the Hour Support

3 | A program designed to charge a fixed fee for component support based on flight hours and aggregate repair cost. Deferred Capital outlay and expense fixed and spread out over the period of the agreement.

Supply Chain Solutions

4 | A varied menu of options an airline can select from including purchasing, expendable parts management, repairs management, vendor managed programs, resource management, warehousing, logistics and transportation.

Each and every one of the above programs have been requested, proposed and are in use today. The materials industry outside of aviation has been very successful implementing supply chain solutions and pushing the ownership and management of inventory to the supply chain professionals. The airline industry has taken the first quantum leap and don't be surprised to see more responsibilities shift to the experts.

The experts in providing these supply chain solutions allow airlines to reduce capital investment and operating expenses while providing streamlined supply solutions for their fleet. Total Solution offerings to airlines is the future of aviation supply chain management, enabling airlines to have a comprehensive service program, that offers low predictable costs, high service levels and focus on their core business.

Interview with Wolfgang Driese, Chairman and CEO

Interview conducted by Connie Laudenschlager, ISTAT Board Member and SVP with DVB's New York office

Q : What is your current outlook on the industry?

The outlook for our activities in the commercial aviation market remains positive, despite the fact that only very few commercial airlines can be called financially sound. We expect that with currently high fuel prices and strong competition - from amongst others the low cost carriers - airline profitability will remain "modest". DVB typically pursues an anti-cyclical policy, heavily relying on the strength of the underlying asset. Because DVB has been very selective during the boom of the midnineties, our portfolio stood up very well to the challenges of the 2001-2003 crisis.

With improving industry performance and the return of a number of mainstream banks, the challenge will be to remain critical on the quality of new business, despite competitive pressure. As commercial aviation will remain a cyclical business, every new transaction has to be "stress-tested" for a potential new crisis by let's say 2010/11. As demonstrated in the past, even "darling" aircraft will drop significantly in value as a negative business cycle and availability of new technology coincide. Although the new A380 will have a significant impact on commercial aviation, we believe that the new technology incorporated in the 7E7 may have an even greater effect on values of current generation twin-aisle aircraft by the time the cycle turns down again. If successful, the 7E7 technology will find broader application in all market segments, accelerating the replacement cycle.

Another development we carefully follow is the further increase in the share of operating leasing as a finance instrument. Although DVB is unlikely to become a true operating lessor, we plan to take advantage of this development by closely cooperating with lessors and further developing structured operating lease products. As I said before, with an improving industry the challenge will be to continue building a solid portfolio whilst avoiding becoming too euphoric.

Q : What are the main challenges facing DVB?

I would like not to mention all the threats, which we constantly hear about possible external factors like terrorism. I think a well-balanced business model can sustain a number of these kinds of challenges. I am happy that we are so focused and have now realized a very successful business model. There is a challenge of mainstream banks returning to the market with lending margins not fully reflecting the liquidity of the industry. Our response is deep expertise and the enlargement of our offering around long-term asset investments. We are just starting a new activity in New York for Capital Market products, and we will in due course enter the aero engine finance market, which we feel is an interesting challenge to expand our services for the whole industry.

Q : Can you tell us about one high point or memorable event in your career?

•••••

The most important point was the acquisition of the aviation portfolio from the Long Term Credit Bank of Japan ("LTCB"). This was the first step to realize the vision, which I had about how the bank should look like in the future. Here it was not a matter of price that we were able to finally acquire the portfolio but a matter of a convincing business model, which we were able to present. Our business model not only convinced the seller but in particular the aviation team, which joined DVB and still feels DVB as their home, as a unique, transport finance organization.

Q : Can you share with us your thoughts on being part of the ISTAT Annual Conference? Did you enjoy yourself? Was it worthwhile?

It was my first visit and participation as a speaker of the conference. I was very much impressed not only by the record number of participants but of the high level and diversification of the members and the high level of the speakers being present on CEO level. What was the main feature for me were the opportunities which I took myself of meeting directly main participants out of the industry and discuss further projects which made it an good investment to be as a participant there.

"WITH IMPROVING INDUSTRY PERFORMANCE AND THE RETURN OF A NUMBER OF MAINSTREAM BANKS, THE CHALLENGE WILL BE TO REMAIN CRITICAL ON THE QUALITY OF NEW BUSINESS, DESPITE COMPETITIVE PRESSURE." - Wolfgang Driese

An Economist's View a.k.a. Gurudude Sayeth by Adam Pilarski, SVP AVITAS, ISTAT member Oil price future explained in simple and bold terms

HE MOST DIFFICULT PART of explaining long term predictions is the short term focus of the audience. When oil prices reach \$42 a barrel and readers (in the US) are paying over \$2 a gallon it is difficult to get people to adopt a longer term view and accept what I am about to say. It is my job, though, as a forecaster, to take a more balanced, dispassionate and analytical view to explain the future.

Current Realities

At present oil prices are the villain of the aviation industry. Most airlines purport the sudden hikes in fuel prices are the reason why they will not be profitable this year. Oil prices are becoming a convenient scapegoat for the industry and estimates range upwards of a \$5 billion delta in costs

because of their sudden increase. No doubt higher fuel prices are a serious handicap to the recovery in our industry.

Before we enter too deep a period of melancholy we should put things in proper perspective. 1 | High oil prices are not really that high in real terms. By real terms economists mean inflation

adjusted. Yes, gasoline prices were 16 cents a gallon the year I was born but at the same time average annual income was below \$3000 and an average house cost below \$8000. Even the record high price of \$42 a barrel of a few weeks ago is equal to the inflation adjusted levels in 1985 and is actually only two thirds of the (real) level of 1981. 2 | Short term oil prices were always very volatile. In the beginning of 2000 they were \$25 a barrel, towards the end of same year they increased 50% to over \$37, in a little over one year (end of 2001) fell to half the previous level (circa \$18), a

little than a year later around April of 2003 they doubled again, then fell in about 2 months from \$38 to \$25 and then rose again. Such movements are a historical reality and can be documented over many years. 3 | Political elements are critically important in short term price volatility. Since most of the world reserves of oil are found in the Middle East, a region prone to political uncertainty, huge price fluctuations existed for a long time. As a matter of fact, right now the political uncertainty is estimated to contribute a circa \$10 premium to the price of oil. 4 | To determine the long term future of oil prices we must look at economic realities. The fact is that there are no real economic reasons for high prices. Current high prices are the result of speculation and political factors, not a scarcity of oil.

price of circa \$66 in today's terms, some believed the price would continue rising forever. The arguments were as they are now, limited supply of an exhaustible resource and soaring demand. I was at that time involved in a new jet project called the UHB and argued strenuously that economic reality will eventually prevail and prices will fall. High oil prices curtailed demand by greater stress for efficiencies while at the same time stimulated exploration. It took some time but in 1986 prices fell from a nominal \$24 to \$12 and stayed below \$20 until 2000.

What gave me the confidence to argue that prices will eventually fall? The reason is the same as it has been for centuries. The Krugman type analysis is incorrect and static. Malthus followed similar logic claiming more people and limited resources must



Is Oil Really An Exhaustible Resource?

Paul Krugman, an eminent economist, and many others are predicting a long term continuation of oil price increases. They argue that no more new big oil fields will be found and that demand for oil, especially in China (a billion Chinese will all move from bicycles to cars) is soaring. Since oil is an exhaustible resource we will eventually run out of it and oil prices will skyrocket. This is a story we have heard before. In 1981, when real oil prices were at record levels equivalent to a lead to disaster. What he forgot to account for was the change in human behavior and technological improvements. Stanley Jevons made similar arguments in the late nineteenth century in his famous book "The Coal Question" in which he argued that demand for coal is continuously rising but is confronted with a limited supply; hence an impending disaster that cannot be avoided.

Last time I checked we were not running out of coal. As a matter of fact, not many people look for coal. What Jevons failed to account for were The latest proposal includes several provisions which should make it more workable and desirable than previous proposals. One suggestion is that access would be restricted to ISTAT certified appraisers. This would be a further incentive for candidates to join our program. Also, several steps were suggested that would insure the anonymity of the organizations that provide the data. As in the past, information such as serial numbers, model designation, operator, date of transaction, etc. would all be redacted so that confidential information could not be deduced from the database.

It was further suggested now that a time delay of three to six months be built into the system and that the transaction would only be identified as having occurred sometime in that six month period. Maybe with these protections we can convince some of the entities that have the data share it with the rest of us so that we can serve them better.

Now on a completely different subject, I wish on behalf of all appraisers to thank the Boeing Company for their recent Appraiser's Forum that was held in Seattle. (Certainly, I do not mean to slight Airbus, Embraer, Bombardier and Pratt and Whitney who have each held similar presentations within the past year and continue to support our appraisal efforts with timely updates on their product lines.)

However, I sense the Boeing presentation was somewhat special, even though I was unable to attend myself. Obviously, there was some degree of concentration on the 7E7. From what I have heard from those who attended and seen on the CD of the presentations, I'm convinced that this is truly a "Dreamliner" that may change our industry forever. Sure, every manufacturer is developing something new and exciting but this is special.

Airbus has their A380 which is exciting and they are rightfully proud of it. However, it is a big, but conventional, aircraft. It appears the 7E7 is most unconventional. It will have many revolutionary interior passenger appeal features and technical innovations. The most exciting of which is the extensive use of composite construction. Boeing believes that the aircraft, partly due to the composite construction will have a useful life of 50 years.

A client recently requested that we give our preliminary forecast of delivery date value and future values for the 7E7 aircraft. It reminds me of when I was a young weather officer in the U.S.A.F. (about the time we put our first American human being into orbit.) The commander of the Air Weather Service was giving a speech. He said, "If someone comes into your weather station and asks for a forecast of the solar wind between Mercury and Venus, you give it to him. Let's see him get there to prove you were wrong."

I don't expect to get there to see my 7E7 residual value forecast. In fact, its not likely my client will see it, either. There is a statistically reasonable probability that my sons will not see it. You will have to complain to my grandsons if my forecast is wrong. It really boggles one's mind to consider where our industry will be in 50 years.

With modest inflation for 50 years the residual value of the dreamliner may be as high as the original price. That should make the investors happy, although, they also will not likely be around to collect the residual value.



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Oil continued

changes, in part induced by prices. As coal became scarcer, we found an alternative (oil). The arguments by those who love to panic are always of the sort: tell me where the next big oil find will be or tell me what the new source of energy will be? Such questions of course cannot be answered. They are the same as the ones that say tell me what new inventions will occur and led to a famous statement by the US commissioner of patents in 1899 who said "Everything that can be invented has been invented". Price increases in the early 1980s led to

CURRENT REALITIES

At present oil prices are the villain of the aviation industry. Most airlines purport the sudden hikes in fuel prices are the reason why they will not be profitable this year. *Oil prices are* becoming a convenient scapegoat for the industry and estimates range upwards of a \$5 billion delta in costs because of their sudden increase. No doubt higher fuel prices are a serious handicap to the recovery in our industry.

reduced demand and increased supply. A more dramatic price increase may lead to a more revolutionary change a la cold fusion.

Future

In the short term political events in the Middle East can cause oil prices to rise substantially. In the longer term economic realities will prevail. We actually have plenty of oil. In 1954 geologists estimated we had enough proven reserves to last us 32 years. Thirty two years later the supposedly exhaustible resources increased to 37 years of production available. Current estimates are that the world holds enough reserves to last us 48 years. Short term oil price disruption may prove fatal to some players in aviation. In the long term we will have plenty of oil available at reasonable prices. If I were a betting man I would bet prices in a few years will be much lower than they are today. All this has profound implications on aircraft values and for the value of fuel efficiency of new aircraft.

June July 04 11





Rolls-Royce is setting new standards in the provision of customer services, exemplified by our industryleading 'TotalCare' engine management service. We provide airlines with the most economical and reliable way to manage and maximise the value of their engine assets at every stage of the lifecycle. We deliver optimised services based on an understanding of customers' needs, unmatched technical knowledge and exclusive fleetwide data for each engine type. Services that deliver total financial predictability, enabling airlines to plan and run their businesses at their level best. **Trusted to deliver excellence**





Rolls-Royce Trent 900 112″ swept fan

ETRADER

TotalCare from Rolls-Royce

TotalCare from Rolls-Royce – an introduction

TotalCare is the brand name used by Rolls-Royce to describe its aftermarket services for civil aero-engines. There have been similar brands developed to cover corporate and military aero-engines, called CorporateCare and Mission Ready Management System (MRMS) respectively, and each of these follow similar principles.

With TotalCare Rolls-Royce has found a way of aligning its business objectives with those of its customers - zero operational surprises and an increase in the time engines are on wing through a controlled and planned programme generating maximum return on investment.

simple terms, TotalCare provides

customers with a suite of services to select from, covering many aspects of maintaining aero-engines in an airlines operation. The customers pay for the services by an agreed \$/Engine Flying Hour (\$/EFH). Typical activities/items fall into four categories:

In-Service Support

→ Technical Assistance
→ Spare Engines
→ Spare Parts
→ Tools
Inventory Management
→ Logistics
→ Engine Transportation
Off-Wing Support
→ Repair & Overhaul
→ Vendor Management
Information & Management
→ Technical Records Management
→ Engine Health Monitoring (EHM)
→ Engine Management Plan (EMP)
→ TotalCare Programme Management

You will see from the services provided that TotalCare is more than "just an engine maintenance payment plan". In fact, the maintenance activity is only a small element of the scope of TotalCare.

The key deliverables to a customer of TotalCare are reliability of product, predictability of operation, and risk management at the right point in the supply chain. Rolls-Royce, as the OEM, can address all these issues and has invested in the infrastructure required to deliver these services, and created a powerful data collection, processing and dissemination resource (which safeguards TotalCare customers 24 hours a day, seven days a week through the Operations Room) backed up by its unique product knowledge, and world-wide repair and overhaul facilities.

Since introducing TotalCare to customers in the late 90s, Rolls-Royce has seen a rapid uptake in the marketplace, particularly in its latest large engine family, the Trent. More and more customers are changing their philosophy regarding engine maintenance activity, and seeing the benefits of not only purchasing a world leading product from Rolls-Royce, but also buying a world leading service. What does TotalCare cover? The range of services provided by TotalCare is comprehensive, and can be tailored to suit a particular airlines operation.

Typical services covered are:

- →Incorporating all Airworthiness Directives (ADs), and Mandatory, Reliability and Durability Service Bulletins (SBs) into the engines
- →The scope of hardware covered can include Life Limited Parts, as well as major refurbish ments, check and repair activity, unscheduled maintenance
- →Foreign Object Damage replacement/repair
- →State-of-the-art predictive maintenance using EHM outputs, assisting in planning engine maintenance activity and avoiding unscheduled events
- ightarrow24/7 reports and alerts
- →Engine performance trends and operating margins
- \rightarrow On-line technical records
- \rightarrow Access to EMPs and maintenance workscopes
- →Management of Line Replacement Units (LRUs) through repair/overhaul cycles
- \rightarrow Management of LRU stock levels and availability
- →Transportation of engines to and from the overhaul facilities
- →Provision of spare engines and a "remote site rescue" service
- →Access to data on-line through the Rolls-Royce infor mation portal "aeromanager"

The list of services provided by TotalCare is constantly being evolved, driven primarily by discussions with our customers. Rolls-Royce is currently trialing services in addition to those listed previously, thus keeping its service provision up to date and in line with our customers needs. An example of these additional services is setting up a localised fully comprehensive on-wing support activity, designed to bridge the gap between flight line maintenance and the overhaul shop. This service will keep engines on the wing longer by finding and repairing faults at the flight line that would normally cause the engine to be removed and sent to the overhaul shop. If the repair cannot be carried out on the flight line, the workscope and turn-round-time will be carefully controlled and expedited through the overhaul shop. IN JETRADER Rolls-Royce TotalCare continued



photo source: Rolls-Royce

How does TotalCare fit into leasing activities?

The operating model between an aircraft lessor and a lessee contains specific nuances that TotalCare can simplify.

An airframe, its systems and powerplants are required to be maintained to regulatory authority airworthiness standards by the operator (lessee). However, the owner of the aircraft (lessor) will often need to be satisfied that all relevant maintenance, checks and airline operations are being carried out to the required standard. The payment of maintenance reserves (coincidentally also usually based on a \$/EFH calculation) from the lessee to the lessor acts as a balance, or provides a degree of risk mitigation, against the product being used inappropriately by the lessee. However the process of drawing down against maintenance reserves, or the undercalling/overcalling of the size of the reserve can act as a source of conflict between the lessor and the lessee. In reality, what the lessor and lessee are more likely to be seeking is a qualified, independent third party that is incentivized to actively manage the asset with least disruption and at an agreed rate. This is what TotalCare can achieve for both lessor and lessee on the aircraft engines.

The engines will be maintained and overhauled by the OEM, TotalCare will have effectively monitored the usage and condition of an engine through the EHM data gathered. The components replaced or repaired in overhaul shop visits, or on the flight line, will be certified by Rolls-Royce. The latest ADs/SBs will be included, making sure the engines are maintained to a modern and healthy standard. The technical records for the engine can be presented as a continuous and complete history. The lessor can have confidence in the condition of the engine that it is passing on to the next lessee, even if the engine is returned under default conditions. And this can be achieved without having to spend any effort within its own organisation. The next lessee can have similar confidence that it is getting an asset that has been "looked after".

An additional benefit being realised in the marketplace is an improvement in residual value and an increase in the saleability of assets maintained under TotalCare-style agreements. Already, aircraft in the Corporate sector which have engines covered by CorporateCare agreements are attracting premiums of around +\$0.5m over conventionally managed assets, and are considered as the preferred option to purchase given a choice.

Wouldn't you rather buy a second-hand car that has been maintained from new by the OEMs shop, and comes with a full service history and a certificate of roadworthiness? As the market coverage and familiarity with TotalCare grows, Rolls-Royce anticipates assets under TotalCare will deliver similar benefits.

by Mark Kerr

Total Solutions Manager, Civil Aerospace Rolls-Royce plc



2004 Commercial Aircraft Trading Market Recovery - What went wrong by Ventura Aviation Group LLC

2004 Commercial Aircraft Trading Market - Is this the Recovery?

This year was expected by many in the commercial aircraft trading market to be the long awaited year of recovery. Not unlike the US economy, many aircraft traders are scratching their heads and asking -Is this recovery we have all been waiting for? Historically, the market has operated in an eight-year cycle of activity with the last "market bottom" occurring in 1994-1995 with an expected market bottom and subsequent recovery forecast for 2002 -2004. Unlike the market recovery in 1995, the current period trading activity has been guite different and certainly not what would be defined as a normal market recovery.

What's different this time?

The old adage in the forecasting business is that extrapolating past trends to predict future events is like driving a car by looking in the rear view mirror - you have great view of the road behind you, but you miss the curve that sends you over the cliff. Despite this caution, it can be useful to analyze past market behavior to determine what underlying factors are different during this market cycle that is creating such an anemic recovery. Clearly major differences exist in the global economic and political environment today versus the mid-1990s. In 1995 no one knew or was fully aware of Osama Bin Laden and the massive damage that terrorism can inflict on the world economy. The scope of analysis required to understand the impact of such "big picture" events is not under consideration here. Instead, a review of some underlying differences specific to the aircraft trading market as it existed in the mid-90s and today is useful in understanding why the current recovery is less robust.

The first underlying differ-

ence is the productivity of the active fleet. One measure of productivity is the fleet wide utilization. As indicated in Figure (A), aircraft utilization, measured as annual fleet wide average block hours, is significantly lower in 2003 as compared with 1995. An element of this decrease, particularly in older aircraft types such as the DC8 and B727, is a result of the aging of the fleet. However, in the case of the B747-400, B737 (CFMI), which were extensively in operation in 1995 and remain active today, this decline in utilization represents available



unused capacity. It is natural to expect that as traffic grows operators will seek to increase the utilization of their existing assets before bringing aircraft out of storage or adding additional aircraft to their fleet. In contrast, during 1995, operators were already fully utilizing their existing assets and adding stored or used aircraft was the immediate solution to accommodate growth.

In addition to an underutilized fleet, the desert parking lots are overflowing with perfectly useable commercial aircraft. While an increase in the number of parked



aircraft is to be expected during a market downturn, the size of the parked fleet has remained stubbornly high as compared to a similar time period in the 1990s market cycle. Despite the fact that the fleet is one-third larger today than it was in 1995, the number of stored aircraft as a percentage of the total fleet is above 12% or more than double the similar point in the 1990s cycle (see Figure B). The number of Western built jet aircraft (100 seats or more) in storage as of January was almost two thousand aircraft.

June July 04 1

It would be easy to conclude that the reason these storage figures are so high is the large numbers of older technology (pre-1980) that are parked and unlikely to return to service. Unfortunately the facts do not support this conclusion. In 1995 only 13% of the fleet represented post 1980 technology aircraft, while in 2004 that figure is 58% or almost 1,200 aircraft. In the last few years the market has actually been quite efficient at permanently retiring older technology aircraft, leaving behind a parked fleet of aircraft fully capable of re-entering productive service.

As was the case in 1995, this large fleet of aircraft probably will eventually represent an attractive target of opportunity for speculative investors. Once again however, market characteristics have changed and made the speculator's challenge much greater during the current market recovery. For example, the number of leased aircraft as a percentage of the fleet has increased by forty percent. In the "good old days", the operator who had debt financed an aircraft and chosen to take it out of service probably had either paid off the debt and/or had a low book value thereby providing the operator with acceptable options in dealing with a significant reduction in the market value of its aircraft. In contrast, an operating lessor, who is continuing

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to receive rent from an operator, even though the asset may be idle, has little incentive to accept a bargain purchase from a speculative investor. Even if the lessor has been forced to take the aircraft back from the lessee and has been unable to find a new customer, the motivation to sell and recognize a loss would only occur if the lessor has concluded (or been forced to conclude by its auditors) that a market recovery is unlikely to occur. Given the young age of the parked fleet, many lessors have concluded that they are better off retaining their assets and waiting for a market recovery. The unwillingness of financial owners to sell in a down market is further compounded by the complex aircraft financings at carriers that have or are going through reorganization, such as US Airways and United Airlines.

Should a speculative investor be successful in obtaining good aircraft at a bargain price, where are the customers? In previous downturns good second hand aircraft were placed with start-up carriers hoping to capitalize on the market recovery. Fast-forward to 2004 and we find that these start up carriers are now called low cost carriers ("LCCs") who are ordering brand new equipment from the manufacturers. In fact, two thirds of all new orders for aircraft with 100 seats or more in the last two years have been placed by LCCs.



Today in the US commercial aircraft market, the legacy carriers struggle to survive and add capacity by returning aircraft (mostly likely leased) to service, while the traditional secondary market has shifted gears and is predominately ordering new equipment.

Finally, there is the last, best home of many used aircraft -

the freighter market. Market downturns have traditionally been an active buying period for speculators and operators interested in adding converted aircraft to their fleets. Several factors in this market cycle have limited the opportunities for these types of transactions. In addition to the reluctance or inability of the current financial owners to dispose of over valued assets and take a loss, the size of the stored freighter fleet is substantially greater during this market downturn.

As indicated in Figure C, both older narrowbodies as well as widebody freighters have storage rates that are more than double the corresponding market period in the 1990s. While it is reasonable to assume that many parked older narrowbodies will be scrapped, the surplus in widebody freighters remains an impediment to investment in additional passenger to freighter conversions.

Freighter demand in the US has fundamentally changed since the last downturn further dampen

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AVIATION HISTORY

by Bill Bath

Do you know . . .

of the simple but elegant way the Wright Brothers doubled the effective strength of the vertical struts between the upper and lower wings? The ingenuous solution to avoid making them broader and thus heavier was to stretch a thin wire from wing tip to wing tip, passing it through the center of each strut's chord and fastening it on each side of the strut.

In early 1903, the Wright brothers conducted wind tunnel tests on a variety of strut cross sections and found to their surprise that a rectangular strut with just the corners rounded off had noticeably less drag than a teardrop streamline form. Their whole approach in their endeavors to produce a successful flying machine was to carefully analyze each problem, then by experiment and precise measurements of their observations, engineer the solution. By using this approach there were usually few trial-anderror adjustments required after the part was installed. The major exception to the foregoing was in determining the correct curvature of the wing ribs on the early gliders.

To understand how they overcame a problem for which there was little information available at the time, we have to look briefly at the work of four early pioneers, Benjamin Robins (1707-1757); John Smeaton (1724-1792); George Cayley (1773-1857); and a German contemporary of the Wrights, Otto Lilienthal (1848-1896).

Benjamin Robins, a British military engineer, was the inventor of the whirling arm around 1746 to measure the aerodynamic force acting on a body moving through air. He also invented a device to determine the aerodynamic characteristics of a body at high speeds, establishing that drag increased rapidly at transonic speed and varied with the velocity cubed, whereas at lower subsonic speeds drag varies with the velocity squared. There will be more on this when we do a column on the Bell X-1 rocket plane, the first manned vehicle to officially fly faster than Mach 1, (October 14, 1947).

The Wrights of course were not interested in the latter invention of Robins, but they certainly were in the first one, as Robins found that different shapes with the same projected frontal area had different values of drag. He also found that the drag was quite different if a rectangular plate set at a 45 degree angle of attack and the long dimension facing the airflow had a lower drag than when the plate was rotated 90 degrees so that the short edge faced the airflow. In other words he discovered the effect of a wing's aspect ratio on drag. (The aspect



ratio is the wing span divided by its width).

The whirling arm was used for a hundred and fifty years until it was gradually replaced by the wind tunnel in the late nineteenth century. The problem was, as the decending weight P spun the arm R, the disturbed air would also start to rotate and make it difficult to determine the velocity of the test object relative to the air, rather like stirring a cup of coffee. Lilienthal built a 23 foot diameter one in his garden in 1888 and conducted thousands of tests with various cambered airfoils. Later the Wrights were to use data from some of these published tests for their glider wings, but the discrepancies between their calculations using these data and the poor performance of the gliders led them to build a wind tunnel and start afresh in determining the correct airfoil shape to give the required lift.

Eight years after Robins died, an English civil engineer, John Smeaton, used a whirling arm in experimenting with models of windmill blades, there being some 10,000 windmills in England at that time. From those experiments he arrived at the formula:

$$F = kSV^2$$

Where F is the force in pounds exerted on a plate perpendicular to the air flow, S is its surface area in square feet and V the velocity of the wind in miles per hour.



George Cayley's concept for a fixed-wing aircraft ca. 1799



Cayley's glider

History continued

From this he calculated the numerical value of the constant k as 0.005, which became known as Smeaton's coefficient. Unfortunately this turned out to be inaccurate and had a major adverse impact on the early Wright designs, although another Englishman, George Cayley, had already challenged the figure as early as 1809. Nowhere in the Wright brother's notes is there any mention of George Cayley, the experimenter whose model gliders had tails like those on all of our commercial aircraft today.

In the British Science Museum there is a silver disc the size of a quarter. In 1799 Cayley engraved on it his concept for a fixed-wing aircraft, the first in history. On the reverse is the first lift-drag diagram in the history of aeronautical engineering derived from using a whirling arm to measure the variation of lift with angles of attack from -3 degrees to +18 degrees. He also measured the aerodynamic drag on a flat plate oriented perpendicular to the airflow and used the results in 1849 to calculate that Smeaton's coefficient should be .0037, which is close to today's .003. Using a ten year old boy as

a pilot, he launched a tri-plane on a short down hill flight, and in 1853 his monoplane glider flew 500 yards across a small valley with his coachman as a very reluctant pilot.

In his spare time in 1825 he invented the caterpillar track vehicle, followed by the artificial hand to replace the hook.

References:

John D. Anderson Jr., *The Airplane, A History of its Technology,* American Institute of Aeronautics and Astronautics, 2002.

Peter L. Jakob, *Visions of a Flying Machine*, Smithsonian Institution, 1990.

American Society of Mechanical Engineers, October 14, 1981, *Rotating-Arm Test Facility.* U.S. Centennial of Flight Commission: *Smeaton's coefficient.*

 $F = kSV^2$

04 CAT Market continued

ing market activity. Since 1995, the major express carriers have greatly increased the size and efficiency of their trucking networks. Trucks have now supplanted aircraft in many express markets resulting in zero or negative growth rates for domestic US air express. Rather than replacing a retiring aircraft asset, an express carrier can shift the load to an efficient ground network, which carries the load at a fraction of the cost. In addition, FedEx was successful in winning the contract to carry a large portion of the US Mail, thereby supplanting several smaller carriers who would have been customers for converted freighters FedEx was largely able to absorb the additional business by increasing the utilization of their existing assets.

While nothing is constant except change, the basic laws of supply and demand will eventually prevail. The airline industry is clearly in a period of unprecedented turmoil and restructuring and, since aircraft are the principal revenue-earning asset in this industry, it is natural that the aircraft markets will be directly impacted. Given that passenger travel and airfreight will remain a critical element in the international and most domestic economies, the market will resolve itself and the cycle will continue. For the commercial aircraft trading market, patience and more importantly economic staying power remain the order of the day.

Ventura Aviation Group LLC is a unique aircraft investment firm offering financial investors and lessors the tools needed to achieve superior returns in the freighter and pax-to-freighter ("P2F") conversion market, while providing airline customers specialized market and technical skills in fleet optimization, modification and aircraft disposition VA offers vertically integrated, value added advisory and transaction execution services with a focus in the air freighter market.

The ISTAT Foundation Scholarships Available

Chris Partridge, Director of Deutsche rmoore

Bank and ISTAT Foundation Trustee, presents Scholarship Award to Captain Paul Mawangi, Fleet Manager of Kenya Airways. <u>rmoore@oasiscorp.com</u>, for additional information.

The Scholarship Program has been made specifically available to ISTAT members though non-ISTAT members



The ISTAT FOUNDATION SCHOLARSHIP PROGRAM announced at the ISTAT Annual Meeting is now in the process of soliciting applications, including applications from ISTAT members, employees, and families.

cholarships are available in amounts from \$1,000 to \$5 ,000 and can be used at any accredited aviation school, college or university. The criteria established for scholarship winners is that the applicant has a financial need and is entering a program that promotes the advancement of commercial aviation. This means that the scholarship applicant can be pursuing a pilot career, a flight attendant career, a commercial aircraft mechanic's career or studying in the field of aeronautics or airline management. Applicants should contact the Chairman of the Scholarship Committee, Mr. Roland Moore at

and individuals not associated with ISTAT may also apply.

First Scholarship Awarded

The ISTAT Foundation is pleased to announce the first scholarship award. The \$5,000 granted by the ISTAT Foundation to City University, London is being utilized as a scholarship for Captain Paul Mawangi, Fleet Manager of Kenya Airways. The scholarship award will be utilized by Captain Mawangi to assist in his completing a Master of Science Degree in Air Transport Management at City University.

His thesis for his Masters Degree is related to establishing an abinitio pilot training program for Kenya Airways, who is very short of pilots and face increasing competition for suitably qualified individuals both in-country and regionally. He is looking to establish a domestic training centre to generate 20 co-pilots per year for deployment into the junior ranks of Kenya Airways and other regional airlines. He plans to develop this program utilizing the natural cost and climate advantages of subsaharan Africa. The ISTAT Foundation is more than pleased to assist Captain Mawangi complete his education and we wish him great success in his career in the air transport community.

The Farnborough Raffle

The ISTAT Foundation is promoting a fundraiser at this year's Farnborough Reception, to be held July 19 at the Science Museum in London. Attendees will have the chance to purchase raffle tickets for the prize of a Segway Human Transporter. (For those of you unfamiliar with the Segway, please take a look at their website at www.segway.com.) The Segway to be awarded has a retail value of approximately \$4,500 and will be shipped directly from Segway to the winner. The prize also includes a 1/2 hour training session to be furnished by Segway at a location to be determined.

The Segway is one of the most exciting innovations introduced to the transportation world in the past several years. It has won awards and acclaims from inventors worldwide who have marveled at its technical capabilities. The Segway will be on demonstration at the Science Museum so that you can see this fascinating human transportation machine live. Raffle tickets will be available for \$50 USD, 3 for \$100 USD; 40 euros, 3 for 80 euros; and 25 pounds, 3 for 50 pounds. I am certain that some of you sharp-eyed money traders will be able to arbitrage the currencies to minimize your purchase price of the three tickets. If you are not attending ISTAT, raffle tickets can be purchased directly from Dawn Foster.

Evergreen Air Center

In all of the kudos given last month to those who helped make our fundraising at the annual meeting a success, I overlooked Evergreen Air Center who generously donated half of the cost of the Harley which was raffled and then auctioned.

Thanks Evergreen Air Center!

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In the **Press** | June + July 2004

R&D company, AeroTech Services, is currently amending the STC to add the Boeing 737-400 and 737-500 series aircraft.

Appropriately called "FuelMizer", AvAero engineering designed, developed, flight tested and manufactured a modification that will save operators tens of thousands of dollars a year. The FuelMizer's patented aerodynamic system is designed to assist our industry's financial recovery and operators can expect to save approximately 100,000 gallons of fuel per year per aircraft. The FuelMizer modification does not require structural alterations. There are no systems, maintenance, or operational changes; and is penalty free. By changing specific parts and repositioning certain wing flight controls, AvAero is able to offer a modification that can be installed in 200 – 250 man-hours. FAA approved flight tests have verified an average fuel savings of 4% plus. avaero@aol.com

Back Aviation Solutions announced that Mr. Gueric Dechavanne has joined the company as Manager, Valuation Services. He was previously with CIT Aerospace in New York.

Chautaugua Airlines a U.S. based regional airline has leased two Embraer ERJ 145 aircraft under a long term lease arranged by Skyways Aviation (UK). The airline has taken delivery of one of the ERJ 145 aircraft from Skyways Express AB of Sweden and the second is due to be delivered in late 2004. The aircraft (serial number 145185) (SE-DZD) was ferried on 15 April 2004 to the Embraer Aircraft Maintenance Facility in Nashville, Tennessee where the aircraft is currently undergoing a work package prior to entering scheduled service with Chautaugua Airlines. Chautaugua Airlines now operates a fleet of 84 Embraer Regional Jets offering over 525 flights daily to 66 cities across 27 states in the U.S. The Bahamas and Canada. All flights are operated under code share agreements with American Airlines, Delta Air Lines, United Airlines and US Airways and are operated

under the names AmericanConnection, Delta Connection, United Express or US Airways Express.

debis AirFinance delivered an Airbus A320-200 on a three-yearoperating lease to Wind Jet. The aircraft, equipped with CFM56-5A engines, has brought Wind Jet's fleet to a total of five A320s. Wind Jet began services in mid-2003 and operates scheduled flights from Catania and Palermo, Sicily/Italy, to domestic destinations such as Rome, Milan, Forlì (Bologna) and Venice, and charter flights. Klaus Heinemann, Chief Executive Officer of debis AirFinance, commented on the transaction: "The European low-cost market is one of the most promising growth sectors in the aviation industry and we are pleased that, with Wind Jet, we have won a new customer from this expanding market. We wish Wind Jet great success as they continue to expand their operations."

debis AirFinance Wizz Air celebrated delivery of its first Airbus A320 at the ILA air show in Berlin Aircraft provided by debis AirFinance, Maintenance by Lufthansa Technik. József Váradi, Chief Executive Officer of Wizz Air, the new European lowfare airline, today took official delivery of the company's first A320 aircraft at the ILA air show in Berlin at the Lufthansa Technik hangar. The official hand over of the brightly colored aircraft, which will make its maiden flight from Katowice to London on

19th of May, was made by Klaus Heinemann, Chief Executive Officer of debis AirFinance. Europe's largest aircraft leasing and asset management company. debis Air Finance provides the aircraft to Wizz Air on operating lease, with five more A320s to follow over the next two months. The ceremony took place in the presence of August Wilhelm Henningsen, Chairman of the Executive Board, Lufthansa Technik AG, which will manage the transition of six aircraft for debis AirFinance during the next weeks at its facilities in Berlin-Schönefeld, Budapest and Shannon (Ireland). The fleet will be expanded by about 10 new aircraft each year. With 20 aircraft and 10 million offered seats, Wizz Air will become the largest operator in the region by end of 2005.

debis AirFinance delivered the first of three Fokker 100 aircraft on an operating lease to Mandarin Airlines of Taiwan. The two remaining aircraft will be delivered in the next couple of months. Mandarin Airlines will wetlease two of the aircraft to its parent company, Taiwan's flag carrier China Airlines (CAL), for the Taipei-Kaohsiung domestic route as a connecting service to CAL's international flights. The third aircraft will operate on Mandarin Airlines' own domestic and international network in the region.

DVB Bank AG, the Frankfurt-based bank which specialises in transport

finance, today reported a significant increase of 40.3% in Operating profit before loan loss provisions to EUR11.84 million. Indications are that the level of improvement achieved in last year's operating profit (+ 44%) could be successfully maintained for the current year. The completion of DVB's restructuring process has transformed the Bank into a pure transport finance specialist: a unique business model with significant profit potential.

JetX, Reykjavik, Iceland

(http://www.jetx.it) took delivery of their second MD82 (S/n 49909) from Scandinavian Airlines System ("SAS"), the Scandinavian flag carrier. The lease from SAS to JetX was arranged by Sigma Aircraft Management, LLC ("SIGMA").

Sigma Aircraft Management, LLC ("SIGMA") Rico Linhas

Aereas (has taken delivery of a third B737-200A aircraft (S/n 21000) from PLM Worldwide Leasing. The aircraft, as well as the former two purchased, was formerly leased to Varig S.A., Brazil. The sale was arranged by Sigma Aircraft Management, LLC ("SIGMA").

SIGMA: JetX, Reykjavik,

Iceland (http://www.jetx.it) has today taken delivery of one MD82 (S/n 49555) from Scandinavian Airlines System ("SAS"), the Scandinavian flag carrier. The lease from SAS to JetX was arranged by SIGMA. This is the first of two aircraft SAS is delivering to JetX.

June July 04 21

AWAS helps Air Plus Comet gain altitude

AWAS has delivered a Boeing 737-300 aircraft to Spanish airline Air Plus Comet, reinforcing the commitment of AWAS to airlines in the Iberian Peninsula.

With the delivery of this aircraft (MSN 24027) to Air Plus Comet, AWAS now has aircraft on lease to six Spanish and Portuguese airlines.

Current AWAS customers in the region include;

Air Plus Comet (1 x B737-300) | Air Europa (1 x B767-300 and 1 x B737-400) | Air Luxor (2 x A320) | Hola Airlines (3 x B737-300) | Pullmantur Air (1 x 747-300) and EuroAtlantic (1 x B767-300)

Air Plus Comet will operate the B737-300 as part of its European network, which supports the airline's international network serving destinations in North and South America. AWAS Worldwide Regional Sales Director Tracy Taylor stated, "We are delighted to count Air Plus Comet among our customers, we view the Iberian Peninsula as a strategic market for AWAS, and look forward to a long and fruitful relationship with Air Plus Comet and Grupo Marsans."

debis AirFinance Has Closed Purchase and Leaseback for Two New Airbus A321s with Asiana Airlines

debis AirFinance, one of the world's largest aircraft leasing and asset management companies, announced today that it has signed an agreement with South-Korean Asiana Airlines to purchase two new Airbus A321-200 and lease them back to the airline on operating lease. Asiana Airlines, a member of the Star Alliance network of airlines, took delivery of the first aircraft on 25 June 2004. The second plane is scheduled for delivery in September 2004. Including the two aircraft now contracted with Asiana Airlines, debis AirFinance will have a total of three Airbus A321 aircraft on lease to Asiana.

Klaus Heinemann, Chief Executive Officer of debis AirFinance, said, "We have a long-standing relationship with Asiana Airlines dating back to the early 1990s through our servicer function for the aircraft securitisation vehicle AerCo. We are happy to have the opportunity to continue our support of Asiana Airlines and assist them in their fleet modernisation programme." Chan Bup Park, President of Asiana Airlines stated, "Since we made our first business transaction with debis AirFinance, through AerCo, in the early 1990s, debis AirFinance and Asiana have enjoyed a mutually beneficial business relationship, and it is my hope that we may con-

> tinue to expand this relationship in

the future."

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For information or to register, contact Aimee Shoemaker Tel. (206) 587-6537; Fax (206) 587-6540; email: ashoemaker@cargofacts.com



Calendar of Events

To get up-to-date event listings, the latest in ISTAT Conferences and links to relevant industry information visit www.istat.org

Reception in Conjunction with Farnborough Air Show

Monday, July 19, 2004 Science Museum, London, England By Invitation

11th European Conference

September 12-14, 2004 The Gleneagles Hotel Auchterarder, Perthshire, Scotland

The 10th Annual Aircraft Symposium

- Cargo Facts 2004 Loews Miami Beach, Florida, October 19-21, 2004 Details can be found at www.cargofacts.com

The 11th Annual Aircraft Symposium

- Cargo Facts 2005 Sheraton Seattle Hotel & Towers, Seattle, Washington, September 21-23, 2005

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September 12-14, 2004 **11th European Conference**

The Gleneagles Hotel, Auchterarder, Perthshire, Scotland

The Road to Recovery

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Sunday 12th September

11:00 - 17:00 Golf Tournament, Queen's Course . Tee times 1:20 until 13:40
Beating the Retreat by the 1st Battalion the Argyll and Sutherland Highlanders. To be confirmed.

- 18:00-20:00 Reception
- 20:00-23:30 Dinner

Monday 13th September

08:45-08:50 Welcome . Bill Cumberlidge, Conference Chairman

- 08:50-09:00 Welcome . Michael A. Metcalf, ISTAT President
- 09:00-09:30 Guest Speaker. Opening Address . *Maintaining equilibrium in a downturn, the successful Formula.* Keija Suila,
- President & CEO, Finnair
- 09:30-10:30 Analyst view of the market. Past, Present and Future: World Growth, Traffic Recovery, Airline Profitability, Airline consolidation, Future Trends, Low Cost carriers. *Peter Morris, Chief Economist, Airclaims Group, & Chris Tarry, CTAIRA*
- 10:30-11:00 Coffee Break in Sponsors Exhibit Room
- 11:00 -12:00 Manufacturers Market Forecast: Commercial Markets, Freight Markets, Passenger Growth, Future requirements. Airbus, Adam Brown, VP Forecasting & Strategic Planning . Boeing, Randy Basseller, VP Market Forecast & Planning
- 12:00-12:30 Freighter Conversions: Is the famine going to turn into the feast? Is it the right time to convert? Which aircraft models will be the candidates? Will the market turn against the conversion Programs as it did in 992-94? What are the future Markets? Who will finance the programs? Conversion Pricing. Stephen J. Fortune, President, Ventura Aviation Group, LLC
- 12:30-14:00 Lunch
- 14:00-14:30 A380 Update . Overview of the current status of the first produc tion aircraft. What problems if any has been uncovered. Current order book. Overview of the Aircraft. Aircraft support. *Colin Stuart, Vice President Marketing, Airbus*
- 14:30-15:00 B7E7 Update . Future customer base. Interchangeability of engines. No bleed air. Is this the real key to future travel? Generic Aircraft. Revolutionary concept. John Feren, Senior Vice President, Boeing Commercial Airplane Company
- 15:00-15:30 Powering the B7E7 . Will engine interchangeability work? Product support, will it be a common product. Who will carry the spare engines? Reliability will there be guarantees given? What will the projected on wing life be. *Ewen McDonald, Product Marketing Manager, Rolls-Royce Derby*
- 15:30-16:00 Coffee Break in Sponsors Exhibit Room
- 16:00-17:30 Aircraft Finance Panel: What issues face the banking community? Will confidence ever return. Will some banks exit the industry? How will they protect against other potential USAir / United/ Air Canada situations? Will the banks return to asset risks? Michael Davis, Senior Director Aircraft Finance, HSBC. Michael Kramer, Managing Dir., Head of Lease & Transportation Asia/Pacific, West LB, Jose Abramovici, Head of Transportation, Credit Lyonnais, Chris Partidge Director, Deutsche Bank, Siggi Kristinsson, Senior Vice President, Aircraft Finance. PK Airfinance.
- 18:30-20:00 Reception Falconry Demonstration
- 20:00-23:00 Gala Dinner

Tuesday 14th September

- 09:00-09:30 Keynote address: Jason Bitter, Vice President Commercial, VBird Airlines
- 09:30-09:50 Aircraft Operational Environment: How serious is it? How is legis lation policed? Will the industry respond quickly enough? Will good aircraft eventually be grounded? *Bergt Olof Nas, Director Aircraft Evaluation & Environment, S.A.S.*
- 09:50-10:20 Russian Civil Aviation: The Future. Will it modernize quickly enough? Legal acceptance. Finance required to fund growth. Where will it come from? How many additional aircraft will be required? Will there be a secondary home for fairly modern western jets? Will the regional jet market expand? Will the A380 / B.7E7 end up in Russia? *Dr. Svetlana Y. Issaeva, Executive Vice President, Sukhui Civil Aircraft*



10:20-10:40 Coffee Break in Sponsors Exhibit Room

- 10:40-12:00 Engine Leasing and Valuation Panel: Will there be consolida tion? Will the engine manufacturers dominate this market? Have val ues recovered and to which engines. Engine Values and lease rates. Robert James, Operations Director & OO, Total Engine Support, Ltd., Charles F. Willis, President & CEO, Willis Lease Financial Corp., ELF speaker TBA, Aeroturbine speaker TBA
- 12:00-12:30 How to protect assets in a downturn. Are we really prepared? Portfolio Management. Inspections. Records review. Repossessions. Remarketing.Aircraft ferry and positioning, Import / Export. Nick Popovich, Executive Vice President, Sage- Popovich
- 12:30-14:00 Lunch
- 14:00-14:30 Fleet planning for a major consolidated Carrier. Air France / KLM Fleet commonality. Aircraft Standardization. Purchasing power. Intermixability of Fleets. Future requirements. *Mark Verspyck, V.P. Fleet Planning and Treasury.*
- 14:30-15:40 Aircraft Valuation Panel: Market Values. Distressed Values. Future Values. Lease Rates. Projected Aircraft Usage. Les Weal, Chief Analyst, Airclaims, Richard Forsberg, Head of Strategy, Royal Bank of Scotland, Russ Hubbard, Head of Consulting, IBA, Bryson, P. Monteleone, VP-CFO Morten Beyer & Agnew, Stephen Jarvis, Managing Director, Avitas Europe
- 15:40-16:10 Third Party Maintenance and its Future. Jack Arehart, Senior Vice President/Business Development, TIMCO Aviation Services
- 16:10-17:00 Conclusion and refreshments on the lawn of Gleneagles.



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