

AirCore NEWS

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Editor's Note



Dear Colleagues,

It is timely that our lead article in this edition of *AirCoreNEWS* concerns some of the capabilities AirCore has to assist airlines to get their flights out on time. This is critical to the

airlines and any disruptions at this point can be very costly. Timely departures are pretty important to the passengers, too! Travelling in the U.S. in recent weeks provided first-hand experience of how airlines react to the inevitable service disruptions brought on by terrible weather conditions. I appreciate how snow storms bring stressful times for airline staff and passengers alike, but I was disappointed to see how some passengers were being handled ... or mis-handled. One common theme was the lack of information available to the staff. No one seemed to be able to help as we moved from one line to another. Even the airport monitors were just vehicles of mis-information. There seems to be little to no help from the million-dollar systems behind the scenes to help staff identify, notify and rectify the plight of even the top-tier flyers. A frustrating time for all. Very little in the airline business is really "weather proof" but we believe much more of the reaccommodation process can be automated. Agents should be receiving details of passengers' rebooking – not having to create them. Systems should position the agent to help stranded passengers – not delay them even further. If you want to know how AirCore REACT automates processes when the weather turns bad, just drop us a line – rain or shine!

Cordially,

Mike McNamara

VP and Partner

Unisys Passenger Services Solutions

Get Out of the Gate

Streamlining and automating last-minute tasks leads to faster departures

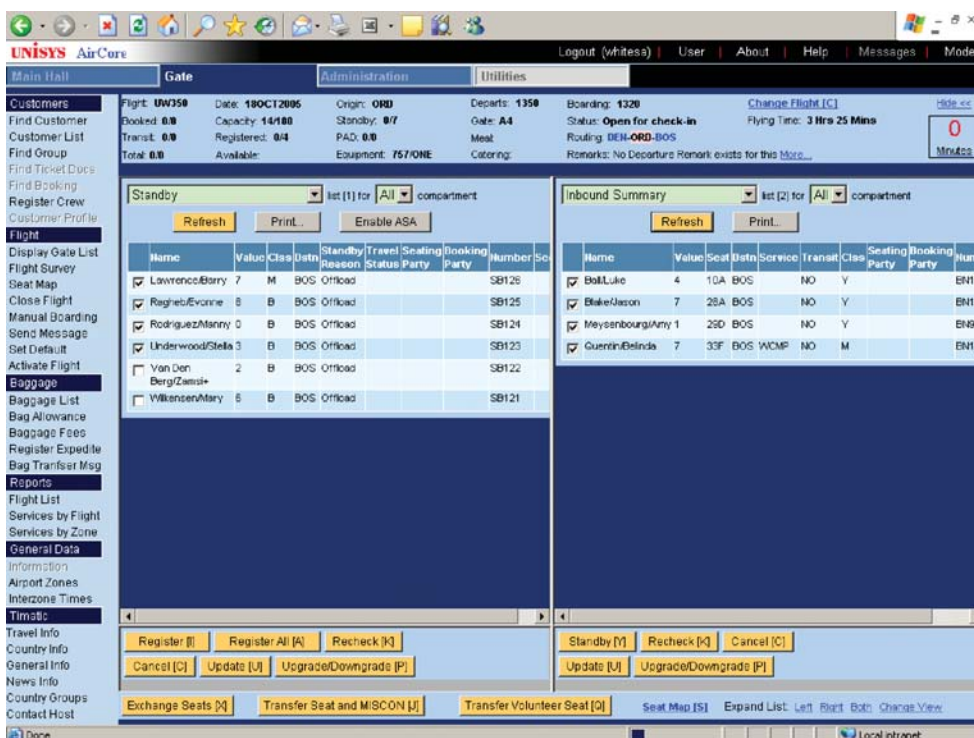
The last few minutes before flight departure are typically the most hectic for front-line agents. They must juggle multiple tasks, while passengers mill about the gate demanding assistance or preferred treatment. For oversold flights, the activity and stress levels increase considerably; agents must accommodate passengers on the standby list, fill all the seats in an equitable way and act quickly so flights depart on time.

As flight delays are costly and poor service detracts from customer loyalty, these last few minutes can represent the "moment of truth" for airlines. That's why it's critical that front-line airport agents have the tools they need and automated processes to streamline the last-minute workload.

In AirCore's DEPART module, the Automated Standby Acceptance process uses configurable business rules based on customer value to automatically check-in the highest priority standby passengers as soon as seats are released. These passengers appear on a list for the agent, who then simply hands out the boarding passes. In the future, when e-boarding passes can be directly transmitted to passengers' cell phones or mobile devices, the entire task will be removed from the agent's workload. AirCore also helps with other common last-minute tasks, like managing oversold flights, inbound passengers who are late or will misconnect, and passengers who volunteer to give up their seats.

(continued on page 2)

Figure 1. AirCore's DEPART module gives agents simultaneous views of both standby and inbound passenger lists – making it faster and easier to switch them during the last-minute rush.



Built for Speed: AirCore's Mouseless User Interface

Even with check-in, seat changes and other routine processes increasingly handled by kiosks, airport agents remain an important – even vital – part of airline customer service. That's especially true now, since agents spend more time addressing unusual and complex customer issues. The AirCore user interface (UI) has been designed specifically to help agents work quickly and effectively, even when they face difficult problems.

One of the most common task patterns facing airport agents is to request a list of passengers, select a subset of the list, and apply an action to that subset. While object grouping and multiple-object actions aren't new features in UI design, accommodating them in Web environments without a mouse has proven to be more difficult. The "point and click" mentality relied on by standard HTML UIs and most Web browsers is greatly impaired when no mouse or pointing device is available. If basic tasks can be completed, they require many more keystrokes and time.

Nevertheless, graphical UIs do offer advantages over command-line interfaces, which rely too much on user memory and may lead to more errors since it's difficult to double-check selections before taking action. The Unisys solution for AirCore was to design a hybrid UI that would present information and feedback like standard HTML UIs, but allow users to take actions as if they were working in command-line UIs.

Within AirCore, lists of passengers are presented with checkboxes and row numbers on each line. The agent can select rows in the table by holding down the control key and entering row numbers, a customized control built using JavaScript. See Figure 2. Once the numbers have been entered, appropriate boxes are checked, allowing agents to easily review and confirm that selections are correct. Further, AirCore uses accelerator keys on buttons (e.g., *alt+r* to register a customer), allowing agents to select actions without having to tab over to individual buttons. Pop-up menus provide this functionality without consuming valuable screen space.

Figure 2. The AirCore UI is designed for efficiency, simplicity and clarity.

The screenshot displays the AirCore UI for flight management. At the top, there are tabs for '1. Select & Process', '2. Baggage', '3. Services', '4. Itinerary', '5. Documents', and '6. Messages'. Below these, flight details are shown: Flight: UW301, Date: 18MAR2003, Status: Open, Routing: MSP-DEN-LAX, Marketing: Equip: 757, Gate: G7, In-Flt Lunch, Svc: Movie. There are also departure and arrival schedules for DEN and LAX. The main part of the screen is a table with columns: Surname, First Name, Value, Grp, FQTV, Status, Seat, Class, Dest, Flt, Final, Bags, and Svc. A list of passengers is shown with checkboxes in the first column. A control panel is overlaid on the table, containing buttons for 'U Clear Notification', 'D Exchange Seats', 'P Recheck', 'J Register', 'L Seat Map', 'N Update', 'M Upgrade/Downgrade', and 'Other Options'. At the bottom, there are input fields for 'Checked Bag Pieces' and 'handcarry Bag Pieces' with 'weight' and 'Unit: lb' labels.

These controls, as well as the overall AirCore UI design, allow agents to perform both routine and unusual tasks quickly and simply and without sacrificing clear feedback.

And they allow agents to return to tasks quickly after interruptions. The bottom line? Agents can focus more of their attention on customer interactions, which is exactly where it belongs.

Get Out of the Gate *(continued from page 1)*

AirCore has tools and features designed specifically to help agents get flights out on time. For example, DEPART has an innovative and interactive dual list Gate Agent Display that streamlines and simplifies previously inefficient processes. Agents can view standby and inbound passenger lists side-by-side on the same screen. If inbound passengers are late and will misconnect, agents can select them and then an equal number of passengers on the standby list and switch them with just one click. So, standby passengers are moved into the seats of the late, misconnected passengers. The one-step process works similarly if there are volunteers willing to give up their seats on an oversold flight. See Figure 1.

When a flight is full and not all standby passengers can be accommodated, AirCore's automated re-accommodation module, REACT, finds alternate flights and re-books passengers through to their final destinations. Business rules prioritize re-accommodation based on customer value, seat preferences and carry-over special service requests. Of course, since AirCore shares data seamlessly, baggage handling systems are automatically notified of flight changes.

The bottom line? AirCore DEPART and REACT help flights depart on time by streamlining key "last-minute" tasks and activities.

Airport Innovation

In this series of articles, Unisys examines how new technologies and future innovations will enhance the airport experience for customers.

Mobile Check-In: Coming Soon to an Airport Near You?

Aviation has been an innovative industry from its inception – and remains so today. In fact, innovation is necessary to balance the often competing goals involved in airport operations. For instance, extraordinarily high safety and security requirements are often at odds with efforts to increase profitability, optimize costs and streamline processes at airports. But, having evolved to become complex and burgeoning commercial enterprises, airports face a critical need for greater efficiency. That's where innovation comes in. It offers potentially significant cost and revenue benefits, without compromising on security. Take remote check-in processes as an example. Online self-service tool for checking in and printing boarding passes from offsite locations have already proven very popular with passengers. But market research shows that receiving boarding passes via mobile devices (such as cell phones or PDAs) would be even more attractive to travelers. Such a capability would enable passengers to generate valid boarding passes anywhere, any time, even if no printer were available.

Mobile check-in services, like the Unisys Mobile Boarding Pass System, promises to be both simple and fast, largely because it's based on proven technology that's already in place. Further, it's an innovation that would improve customer service and reduce capital investment needs. How? Consider that the check-in procedure and subsequent printing or electronic generation of boarding passes require almost no time at the airport. And because a large portion of the infrastructure (GSM networks and personal phones) is already paid for by passengers, airports and airlines would not have to make major up-front investments.

Other potential innovations and features offered by the Unisys Mobile Boarding Pass System include:

- **Mobile Coupons:** During the generation of mobile boarding passes, systems could use passenger information (like class of service and destination, although not their names or personal details) to offer sales promotion coupons for use in the

retail area of the airport. Or, cashless payments could be made for services and goods to be offered enroute.

- **Mobile Access:** Mobile boarding pass systems can also serve as the core of an airport CRM or loyalty system. Today, airports have little or no knowledge of the passengers moving through their facilities. With a mobile platform in place, airports could introduce loyalty systems with enrolled users subscribing to a range of services. As with other loyalty programs, new or additional services would be offered based on the frequency of airport visits or use of mobile check-in and boarding pass systems.

Unisys developed the Unisys Mobile Boarding Pass System based on our extensive experience with and deep analysis of the complete passenger handling process. By combining new and existing technologies and enhancing the passenger experience, this unique concept will lead to better utilization of airport resources and increased retail sales per passenger, as well as contributing to better security through positive identification. In other words, it's an innovation that delivers a win-win-win for passengers, airports and airlines.



Unisys Mobile Boarding Pass System – based on proven technology – improves customer service and reduces capital investment.

Passing the Test: AirCore Achieves Top Performance

Unisys conducts regular testing of the AirCore solution to ensure it delivers the performance users expect. Most recently, we conducted an extended duration performance test, which simulated a live operational environment over a five-day period by:

- Characterizing AirCore performance with varying loads, representative of an airline that boards 24 million passengers per year
- Collecting a variety of application and system performance measurements, including response time, throughput, CPU and network utilization

The test was successful, validating the stability of the AirCore system and clearly confirming that performance does not degrade over time.

Performance Test Server Environment

The extended performance test was conducted on a dedicated server environment in the AirCore Development Center. The environment includes a Unisys ES7000/one database server and Unisys ES3105 blade application servers supported by Unisys ES3105 blade servers for the remaining server types. An EMC CLARiiON CX300 storage array provides the database disk storage. *See Figure 3.*

Performance Test Methodology

The performance test workload included a combination of booking scenarios via automated scripts, EDIFACT PAOREQ specific flight availability requests via a custom test driver, and standard system maintenance activities, including nightly file maintenance, flight schedule change and database maintenance processes.

These workload elements were executed in varying combinations and load factors to simulate a live operational environment, with both peak and “normal” workloads and system maintenance activities for the duration of the five-day test.

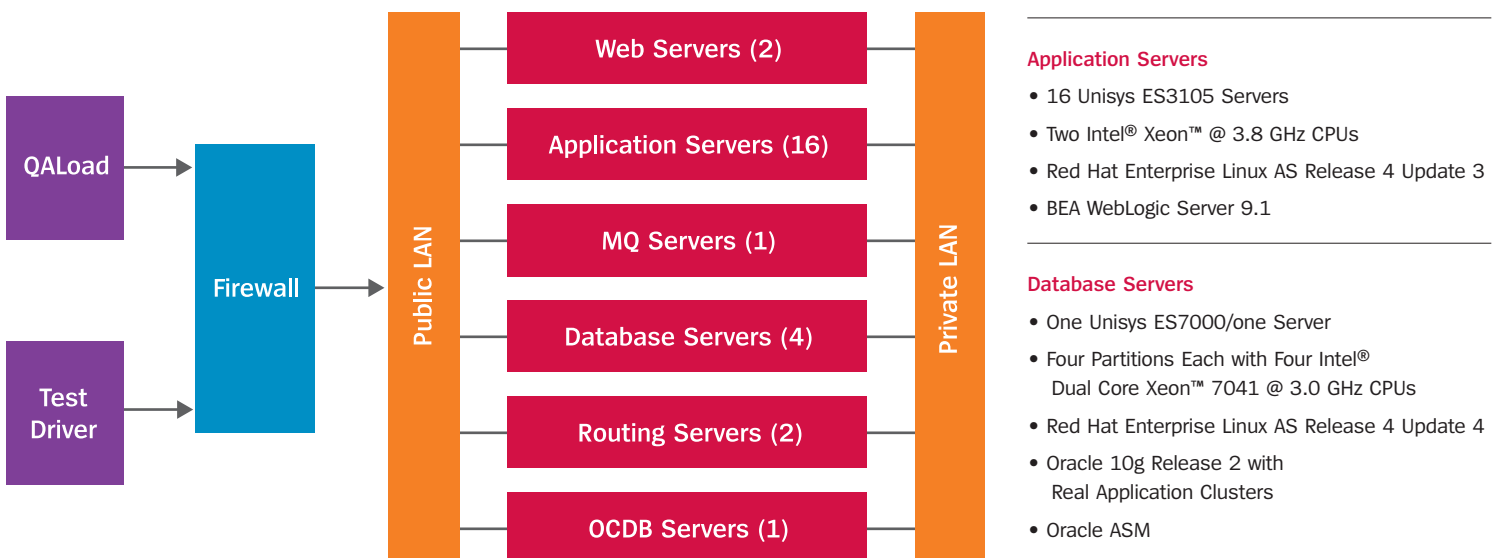
The booking scenarios were executed using the Compuware QALoad script tool which enables capture of a script via manual user interaction with the AirCore user interface. These captured scripts are then turned into a driver script that is replayed repeatedly as desired.

Booking test scenarios consisted of:

- Request round trip availability
- Request first availability, select departure, return flights, select seats, add passenger names and contacts, conclude (EOT) booking
- Retrieve existing booking, update remark, conclude (EOT) booking

(continued on page 5)

Figure 3. Performance Test Server Environment.



Performance Test Results

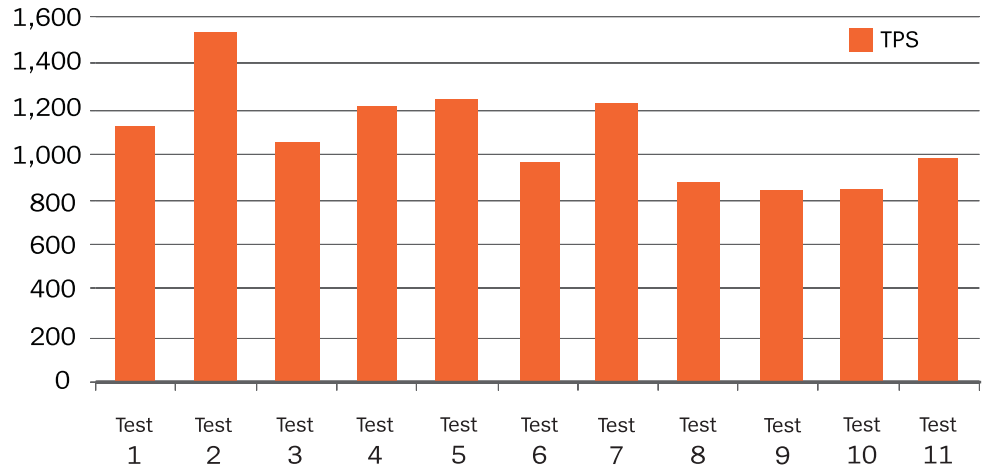
Overall Results

The extended performance test was successful in confirming the stability of the AirCore system as it ran continuously for five days, with no application outages or degradation in performance or response times. These results validate the effectiveness of AirCore's architecture in terms of system stability and bode well for future tests.

PAOREQ Results

An average throughput of 1,094 transactions per second (TPS) for PAOREQ requests was achieved for the test period. The throughput differences were expected, due to the varying planned workloads. See Figure 4.

Figure 4. PAOREQ Throughput.



Booking Scenario Results

The booking scenarios consist of a series of sequential user entries that are collectively referred to as a business process. Throughput measurements for these scenarios are expressed as business processes per second (BPPS). Average BPPS and equivalent annual passengers boarded achieved for the five-day test period are presented in Figure 5.

Figure 5: Booking Scenario Throughput

Booking Scenario	BPPS	Equivalent Passengers Boarded
Round Trip Availability	39	14m ¹
First Available Round Trip EOT	2	45m ²
Update Booking – Add Remark	6	27m ³

¹ Based on peak 65 BPPS required for 24m passengers boarded per year.

² Based on peak 1.05 BPPS required for 24m passengers boarded per year.

³ Based on a ratio of 1 : 5 for Create: Update bookings.

Further Tests Underway

Unisys remains committed to continuous testing and improvement of AirCore. In fact, a repeat of this initial extended test, with substantially higher volumes and additional business processes, is already underway. Initial results have been impressive. Look for full results in a future issue of AirCoreNEWS.

Munich Welcomes Unisys Transportation Conference



The 33rd annual [Unisys Travel and Transportation Conference](#) will convene May 7-9 at the Munich Park Hotel in Munich. This year's co-host is Lufthansa Systems, a leading IT service provider for the airline and aviation industries worldwide. Complementing the theme "Vision to Reality: Act Today – Impact Tomorrow," panel discussions cover Value Creation for Airlines and Airports, IT as an Enabler and Business Continuity. In addition, workshops will focus on Next-Generation Passenger Services, Security, Lowering Distribution Costs, Progressive Sourcing and AirCore. Conference information and complimentary registration is available on the conference website. See page 7 for more information about the AirCore workshop.

IATA's E-ticketing Deadline Nears

On the [IATA website](#) within the "Priorities: Simplifying the Business" section, there is a prominent clock counting down the number of days, hours, minutes and seconds until IATA's 100% Electronic Ticketing (ET) mandate goes into effect for all tickets sold through IATA-accredited travel agencies. The deadline is January 1, 2008. There's no stopping the clock, and IATA has announced there is no "Plan B."

ET certainly makes good business sense. IATA estimates that each e-ticket cost US \$9 less than a paper ticket – that's an overall industry savings of US \$3 billion per year. Plus, the industry gains much better insight and analysis of ticketing data. Benefits for travelers are just as important and significant: no more lost tickets, and far more efficient passenger management and baggage handling in the event of flight irregularities.

The entire industry – including airlines, GDSs and service providers – must take this edict seriously. Most stakeholders are working diligently to meet the deadline. Based on the volume of tickets issued, the global e-ticketing production rate is approaching 80%. Here's a regional view of e-ticketing rates, as of the end of February 2007:

- U.S. and Northern Asia: more than 90%
- Europe, Canada and Australia: more than 80%
- Southern Asia: more than 60%
- Africa: more than 50%
- Middle East: 30%
- CIS (Commonwealth of Independent States): 10%

See Figure 6.

Internal Options

Beginning January 2008, carriers may still issue paper tickets from their own sales channels, but these would in most cases be for online travel. Carriers that still wish to issue paper tickets through travel agencies must find a new source of paper ticket stock, as IATA will no longer distribute it through the BSP to its accredited travel agencies.

IATA Offers Help

IATA has established the "ET Buddy" system where airlines that are in a good position to reach the deadline are paired with those airlines that have the farthest to go. The program is working wonders. ET specialists from airlines and IATA are spending a great deal of time on-site at the airlines that need the most help, providing technical advice and business counseling, as well as working with local airports and setting guidelines in public acceptance. There is a real spirit of "community" where carriers are willing to share implementation experiences and problem-solving with other members as they progress toward 100% adoption. In certain regions, the progression entails not only system and communications efforts, but also plans for local airport logistics and gaining public trust and acceptance.

IATA ET working groups are conducting final design on some of the more complicated conditions:

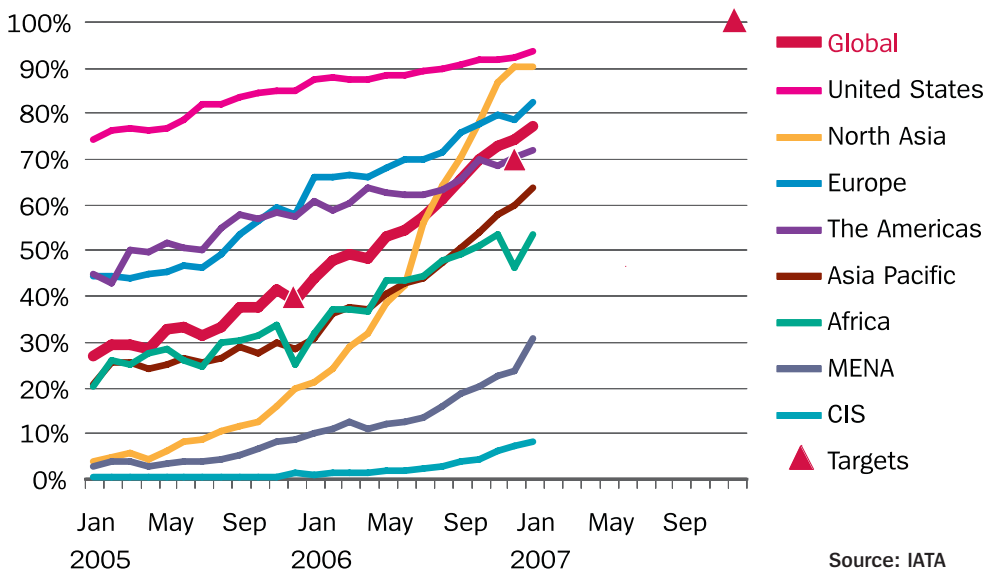
- Irregular operations – last-minute airport changes, considering flight protection:
 - with whom there are no bilateral ET agreements
 - onto other carriers that have no ET capabilities

- Staff travel: company employees accustomed to ticketing without bookings (listing), or having one ticket for listings on several flights
- Group ticketing: producing a large volume of e-tickets in one transaction that may overflow data buffers or have a communications timeout
- Electronic miscellaneous documents (EMD) for non-airfare fees, such as excess baggage, optional services (entertainment, wheelchairs, meals, etc.) and the electronic records that have to be associated to e-tickets
- Inter-modal ET: allowing a passenger to be ticketed for air connecting to surface travel

The IATA ticketing working groups will meet several more times this year to fine-tune the remaining details, including ensuring that EDIFACT messages are in place for each carrier to implement.

So, as IATA's ET clock winds down, there is still some work to do, but great progress has been made toward realizing e-ticketing, the benefits of which are impressive and certainly worth the effort.

Figure 6. ET% of BSP Tickets by Airline Region.



Source: IATA

Welcome to Debbie McBride

When Unisys Transportation solutions leader Mike McNamara called me last October to see if I'd be interested in joining the Unisys team, I thought of two things:

- Moving to Minneapolis
- The strength of the Unisys AirCore solution



New Unisys Transportation team member Debbie McBride.

I was living in Atlanta at the time, with five golf courses within five miles of my home, working for WorldSpan, and preparing to get married. Moving to Minneapolis, where the Unisys transportation solutions team is headquartered, would mean much less golf and much colder weather.

In my three years at WorldSpan, I met with the Unisys team a few times and was very impressed with the concept of the AirCore solution, as well as the specific modules and underlying technology. Everyone in the airline industry has been looking for a new approach based on the passenger database, not the PNR, and AirCore fits the bill.

I bring to Unisys an extensive airline IT background. Before serving as WorldSpan's Manager of Airline Hosting, I worked for EDS for one year and Sabre for 23 years. At Sabre, I held many different positions and responsibilities:

- Program director during the integration of American Airlines and TWA, leading the migration and conversion of PNR and e-ticketing
- Director of the merger of Canadian Airlines and Air Canada for reservations, ticketing and departure control, and providing migration consulting to Canadian Airlines and IBM Canada
- Leading the project office and a large development team in Sabre's air pricing product development organization, with a staff of 40 people in multiple cities working across different technical platforms, including TPF and MVS

- Managing a team of developers implementing new ticketing functionality in Sabre for Canadian Airlines
- Managing projects in the multihost implementations organization, creating functional specifications and supervising the implementation of new products for hosted airlines
- Supporting and coordinating the implementation and cutover of six multi-hosted airlines to the Sabre reservation system for ticketing, PNRs, and airport check-in systems

And in my early years in the industry, I worked at Toronto and Calgary airports in passenger services for several different airlines.

Since joining Unisys in January as Product Director, my new husband and I have adjusted quite nicely to life in the Twin Cities, despite this being the coldest and snowiest winter in years! I look forward to a long and successful future with Unisys and as part of the AirCore team.

AirCore in Action Workshop

Unisys Travel and Transportation Conference

Join the AirCore in Action Workshop as we present the new world of airline reservations and departure control. Register via the conference registration system www.unisys.com/go/uaua. Or, if you've already registered respond by email Maria.waclawski@unisys.com if you'd like to attend.

Wednesday 9 May

14.00 - 16.30

Differentiating the Airline: from order-taking to value-based selling; from long lines to exemplary service.

The New World of Reservations: customer-centric, flexible and totally modern

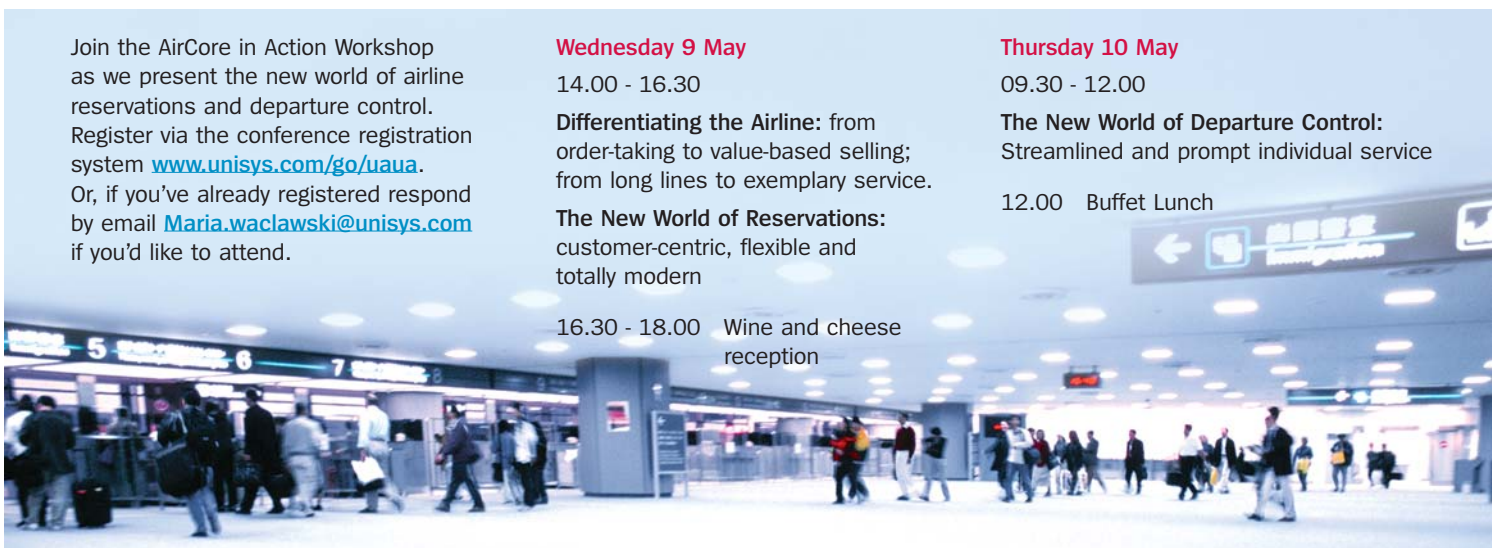
16.30 - 18.00 Wine and cheese reception

Thursday 10 May

09.30 - 12.00

The New World of Departure Control: Streamlined and prompt individual service

12.00 Buffet Lunch





DISCOVER HOW TO MAKE YOUR CUSTOMERS FEEL SPECIAL.

In today's world how do you keep your customers for life? Unisys has the answer. AirCore is a suite of innovative marketing, sales and service solutions that tackles reservations and departure control and sets new standards for the industry. AirCore gives you visibility into the unique wants and needs of your customers. From booking to baggage reclaim and back. The foundation of AirCore is secure and visible business operations.

AirCore greets returning customers to the web with fields already filled out. Helps booking agents tune and steer trip planning decisions. Check-in staff can see and respond to passenger preferences. So passengers feel not that they're counted but that they count.

With AirCore you can offer superior customer service through your channels of choice at a dramatically reduced cost. And improve flexibility and time to market at the same time. Learn more at www.unisys.com/transportation or email: transportationsolutions@unisys.com

AirCore from Unisys. Making even the little things matter.

Security unleashed.

UNISYS

Secure Business Operations. imagine it. done.

About Customer Loyalty Solution

The most widely used loyalty program in the world today, the Unisys Customer Loyalty Solution (CLS) transforms standard frequent-flyer, lounge, specialty and staff programs into proactive, high-impact customer retention vehicles. Your top customers can reserve preferred seats automatically, obtain real-time flight information and enjoy streamlined check-in. They get the services they expect and your airline becomes a carrier of choice, not a commodity. The open-system design allows you to build on existing systems without getting tied to a specific vendor or architecture. And by centralizing on one database, you get accurate, current data every time, as well as advanced promotion communications capabilities. Benefits include:

- Enhanced customer loyalty
- Optimized revenue
- Enhanced personalization and more accurate segmentation
- Reduced program management and communications costs
- Increased alignment of CRM strategy and operations

About Unisys AirCore

The next-generation replacement for conventional airline reservations, inventory and departure control systems, AirCore supports many key processes through a single, integrated repository of current, accurate and complete customer data. Customer-centric and proactive, AirCore reveals who your best customers are, what they want and the best way to deliver it. Because of its flexible design and platform, airlines can implement only the features they require, and modifications and upgrades can be made quickly and easily – usually in hours, not months. For legacy airlines and low-cost carriers, AirCore delivers:

- Streamlined operations and reduced costs
- Better decision making based on improved information flow
- Enhanced customer service and loyalty
- Increased business and technical flexibility
- Improved technology ROI and reduced implementation risk

Why Unisys?

Why do leading transportation organizations around the world choose Unisys? Because we deliver:

- **Visibility:** clear understanding of the connections between strategy, process, applications and infrastructure
- **Insight:** better, faster decision making based on integrated data and systems
- **Agility:** the ability to move nimbly and take advantage of rapid market shifts
- **Security:** risk mitigation, predictability and stability in key operations
- **Focus:** solutions that address core operations – passenger processing, loyalty programs, cargo handling, maintenance and engineering, and regulatory compliance
- **Experience:** 50+ years experience and consultants from the executive ranks of the industry
- **Leadership:** “must-read” publications like *Unisys R2A Scorecard* and *FastForward*, regularly quoted experts
- **Results:** systems that process 29% of world’s airline passengers and 31% of the world’s air cargo
- **Relationships:** 200+ airlines – including 19 of the world’s top 25 – 600+ airports and top industry groups
- **Scope:** solution design and delivery all over the world – the Americas, Europe and Asia/Pacific

Solutions for Secure Business Operations

Unisys provides solutions for secure business operations through its 3D Visible Enterprise methodology and market-driven technologies:

- Enterprise Security
- Outsourcing
- Real-time Infrastructure
- Open Source Solutions and Support
- Microsoft Solutions

Harness the Power of Unisys:

Combining 3D Visible Enterprise capabilities with our trusted core competencies of Consulting, Systems Integration, Outsourcing, Infrastructure and Server Technology. This is the power that Unisys brings to your enterprise.

Are your business operations secure?

For more information about Unisys Transportation Solutions, visit our website at www.unisys.com/transportation or email transportationsolutions@unisys.com

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