

# Flexibility in Shared Use

Virtualization technology allows carriers to reduce costs, airports to optimize resources

By Brad McAllister, Associate/Technology Editor

**a**s co-founder of Air-Transport IT Services Inc. (tradenname AirIT) in 1999 and now serving as CEO, Betros Wakim has more than 15 years of automation and information technology (IT) experience in the air transport, manufacturing, and communication industries. Wakim began working on IT at the airport setting some eleven years ago, first with project management and then ultimately directing total operations.

Relates Wakim, the concept for utilizing common use technology for passenger processing really began with the 1984 Olympics in Los Angeles. "If you have capacity constraints during certain seasons or get a lot of people coming in for a particular event, you cannot just go ahead and build gates and build resources ... you need to find a way to really optimize the space you have," he says. "You start thinking about going away from the exclusive relationship between an airline and the airport.

"That's really where common-use terminal equipment (CUTE) came to be effective; the idea being to use existing resources and share them between multiple airlines."

Europe has been implementing this type of airline facility utilization for some time, and the U.S. has been behind when it comes to optimization, adds Wakim. Over the last ten years however, the U.S. market has started to recognize and adopt the international business model of common use.

Examples include the Fresno Yosemite, Sacramento, and San Jose International Airports to name a few. Explains assistant director of aviation at Fresno Brendan Carmody regarding a recent terminal renovation project, "Apart from having the flexibility to renovate a space and use the existing facilities to the best possible extent, the airport is also breaking down some of the barriers to start-up entrants by making it easier for carriers to come jump right in and start operating."

Betros Wakim, CEO, AirIT



San Jose's communications director David Vossbrink echoes that sentiment, stating, "The basic premise is that an airline can use any counter or gate at anytime, although we as the operator make that determination; this allows us to grow with carriers quite readily, and we can accommodate alternative operations much more flexibly."

## A shifting business model

"About eight years ago we started looking at the technology being used for facility use optimization; CUTE

"Airlines invest more in their own applications than in any common use application," remarks Wakim. "Even though carriers have been using exist-

*At Fresno Yosemite International, shared use allowed the airport to double up carriers at the ticket counters and operate completely out of half of the terminal during a recent renovation. Inset: AirIT's EASE (Extended Airline System Environment) gives airlines the capability to key into any shared use gate or ticket counter.*



was purely an emulation model, or a very simple technology system," says Wakim. "Over the years, the philosophy of common use and sharing equipment became more successful while the technology was standing still. During the last eight years we've been examining this technology; network-wise, common technologies have progressed greatly.

"Now, many things are being converted into a very narrow yet flexible IT environment where I can run whatever I want to run. This can be described as virtualization," he explains.

Virtualization means that a single server can be utilized to run multiple servers, adds Wakim. Virtualization is essentially a PC within a PC, but without the hardware.

ing legacy reservation systems, they've really improved the application level for the agents who deal with the customers. These applications do not run on a common use system, so airlines have to build a separate application.

"What we did at San Jose, for example ... we put in the network, we put in the PCs, we put in all the peripherals such as the printers and gate readers ... and

## IATA'S CUPPS STANDARD: A CRITICAL ANALYSIS

Boyd Group International, an aviation consulting and forecasting firm, has released a report indicating that the IATA-recommended Common Use Passenger Processing System (CUPPS) has been eclipsed by more efficient and advanced approaches.

According to Boyd, material changes in airline strategies and in available technologies have rendered IATA's recommended practice for CUPPS to be expensive and less effective than new technology approaches, such as flexible alternative virtualization technologies.

The report states, "There is no doubt that early common use systems needed to be replaced, and IATA embarked on this process with the best intentions ... but in the past 20 years, technological advances have eliminated the need for CUPPS. The interest of airports and passengers are not served by a rigid and complex standard based on obsolete approaches, but instead ones that allow stakeholders to take advantage of advances in technology that CUPPS cannot encompass."

Additionally, the report says the use of virtualization technology for passenger processing is spreading rapidly and successfully at airports across the globe. The report can be viewed and downloaded at the Boyd Group website, [www.aviationplanning.com](http://www.aviationplanning.com).

then we put in one virtual machine for United, one virtual machine for Delta, one virtual machine for US Airways, etc. The United operation at San Jose is run exactly the same as it is run in Chicago."

Anything that can be thought of for an office environment has been duplicated in a wide-area network environment, comments Wakim. "So suddenly the carriers are given the flexibility to control their own applications," he adds. "In addition, it empowers the airport to provide airlines with a network, the PCs, the printers, the gate readers ... and the carrier just has to bring in its software.

"That is a huge shift from the previous model."

Comments Chris Keller, AirIT president and COO, "Simply put, shared use and virtualization allow for a convergence between the airport and the airline. Airlines have always been against common use traditionally because of the technical limitations, along with some other issues such as cost. Shared use eliminates those barriers; the airport provides the capability for the airline to operate in its own environment on a common infrastructure platform.

"The airport then has the ability to own its resources and be in more control of its own destiny. It's a shift from the traditional landlord relationship type of airport operational model."

### Operational Flexibility

Vossbrink relates that San Jose is wrapping up a \$1.3 billion modernization program that features a new Terminal B and the complete renovation of Terminal A. "What shared use allowed us to do here is build less infrastructure as a part of the program," he says.

Through shared use, the airport was able to put more than one carrier on any single gate or any single counter, which

meant that it could modernize the airport and keep the same capacity that it started with, all with only 28 gates – four fewer gates than it had before the program began.

"All of our aircraft gates are on common use, and all of our ticket counters are on common use," remarks Vossbrink.

"We don't change positions on the gates and counters frequently; most airlines will stay where they usually are. If a carrier were to add a significant number of flights or frequencies, then we would look to see how we could rearrange the gate assignments so that we could accommodate them.

"This would not have been possible under the old business model. That's an important point to make ... a shared use system comes with a shared use business model, which is in contrast to our

says Vossbrink. "It's a good thing because [airlines] have a choice of going with a common use gate, which works for them if they only have a few flights per day ... or they can choose to go for what we call a preferential gate, where the airline has the principle rights to that gate but we still retain the right to move them if we need to."

Another advantage of shared use, relates Vossbrink, is in situations where flights are delayed due to weather or mechanical issues. With exclusive use, passengers on a delayed flight couldn't be deplaned until one of the carrier's gates opened up. With shared use, the carrier can key into a common gate.

"We've not run into that situation, but that is one of our aces in the hole if we have to play it ... for customer service and for airline efficiency," says Vossbrink.

Regarding a terminal renovation at Fresno, Carmody thought having common use at the ticket counters would be very helpful to the process, and adaptable to air service changes.

"What happened was we closed down half of the check-in lobby to gut it, so all of the carriers had to operate out of half of the ticket counter lobby," explains Carmody. "We doubled up; we were able to operate completely out of half of the terminal, and after we had the first half complete, everybody moved over to that."

According to Carmody, the airlines have appreciated the shared use technology because the airport is now getting inquiries about putting the same equipment at the gates.

“Simply put, shared use and virtualization allow for a convergence between the airport and the airline.”

— Chris Keller, AirIT president and COO



At San Jose International Airport, all aircraft gates and ticket counters are common use; carriers can utilize any gate or counter at any time, yet the airport makes that determination.

previous business model — traditionally you lease it, you own it, you keep it, regardless of how many flights you have, and regardless of the airport's or other airline needs."

The airport entered into a new airline lease agreement in 2007 that is based on common use for the carriers,

The airport did institute an additional charge [charges that apply to airlines operating at the airport are established in a master fee schedule annually adopted by the city council of the City of Fresno] of thirty cents per enplaned passenger to help cover its investment and continuing cost of the shared use system. **ab**