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Taking your airline to new heights

**IN THE BLACK**  
*A conversation with ...*

**Joe Leonard, CEO  
and Chairman,  
AirTran Airways**

page 59

INSIDE

22

Lufthansa benefits from  
close-in re-fleeting

45

Cathay's cargo business  
drives revenue

76

Frontier Airlines enlists  
strategic partners

# Bringing up the Top Line

*By utilizing integrated inventory control and revenue management solutions, airlines stand to boost annual revenues up to 8 percent.*

■ By Ben Vinod | *Ascend* Contributor

Seat inventory is the treasured asset of an airline that, if managed effectively, can generate significant incremental revenues and make the difference between profit and loss. In a price-competitive environment, airlines are investing in improving their revenue management capabilities, which, depending on the carrier, could help increase annual revenues by 2 percent to 8 percent, and in some cases, even more.

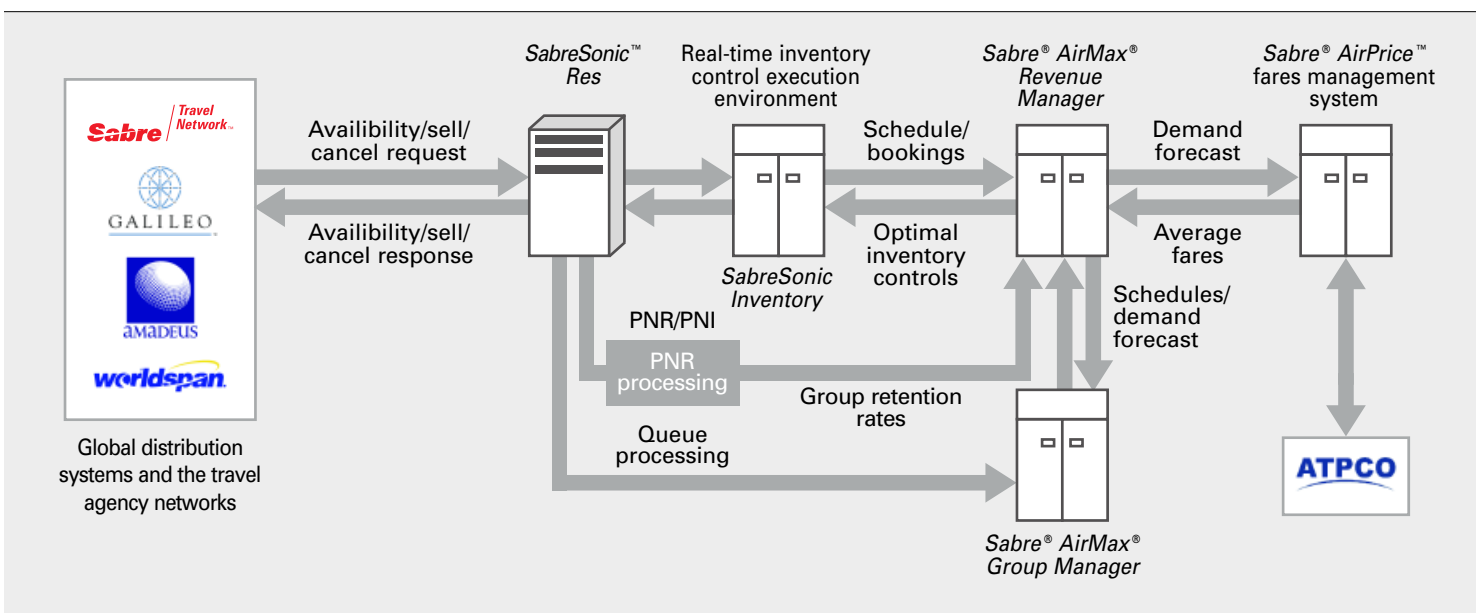
Revenue management determines the optimal mix of short-, medium- and long-haul passengers in an airline route network by selling the right seat to the right customer at the

right price at the right time to maximize system-wide revenues and profitability.

The service requested by a passenger determines reservation availability. The level of detail reservations requests can be controlled on a reservations system enhances the value of revenue management. Traditional revenue management techniques have relied on nested inventory controls by leg or segment on an airline's host reservations system. By adding sophistication in how inventory is controlled, some airlines have since migrated to more advanced inventory control techniques such as virtual nesting and continuous nesting controls.

The ability to customize real-time inventory control requirements quickly based on the business requirements of an airline is paramount to the success of revenue management. Current legacy mainframe systems and even open-systems solutions provided by several vendors do not offer the flexibility to efficiently modify the inventory control structure as an airline transforms its business model to adjust to competitive landscape changes. The ability to adopt alternate inventory control techniques as the business model changes has become a requirement for an airline to remain competitive and is considered a necessity rather than a luxury.

## Integrated Planning and Execution Environment



The advanced planning environment consists of the Sabre® AirMax® Revenue Manager, the Sabre® AirMax® Group Manager and the Sabre® AirPrice™ fares management system. These advanced planning systems process a large amount of data and Revenue Manager sends the optimal inventory controls to the Inventory component for real-time processing of availability and sell transactions from travel agencies and other booking sources such as airport and city ticket offices.

During the current online era, airline distribution faces an availability crisis. Price-conscious consumers shop for travel, which has resulted in an exponential growth in availability requests relative to bookings. Trends indicate that online bookings will exceed 20 percent of total bookings this year. The growth in availability transactions has resulted in online look-to-book ratios in the 100 to 1,200 range. With the exponential growth in consumer shopping, some legacy host reservations systems cannot cost-effectively scale to meet future shopping needs. For example, a seamless availability transaction that originates in a global distribution system must query the reservations system's inventory for true last-seat availability, implying that the reservations system should support a growing transaction volume, which may not be feasible.

*SabreSonic™ Inventory*, a key component of the *SabreSonic™ Passenger Solutions*, addresses an airline's need for sophisticated inventory controls influenced by revenue management and also solves a distribution problem with real-time last-seat availability in a high look-to-book ratio from online channels. The *Inventory* component was developed as part of Sabre Airline Solutions' overarching strategy to migrate reservations processing from the legacy transaction processing facility, or TPF, environment to an open-systems technology platform. With open-systems architecture that scales linearly with the transaction volume to be processed on commodity hardware, the *Inventory* component guarantees that the cost of processing availability transactions for airlines that may or may not be hosted in *SabreSonic™ Res* will be significantly lower than current costs. The *Inventory* component, a satellite processor for availability and sell/cancel processing, serves as the system of record for an airline's inventory. For availability processing, it serves as a front end to an airline's reservations system and takes over the shopping load. For sell/cancel processing, the component serves as a satellite processor attached to an airlines reservations system to enhance its network revenues by providing the most flexible and sophisticated inventory control options in the industry.

Schedule change and passenger name record processing remain in an airline's reservations system. Ad hoc and standard schedule change messages generated by a reservations system are processed by the *Inventory* component to keep the two systems in sync at all times. The *Inventory* component offers several major differentiators and benefits for an airline.

## Flexibility

It gives an airline the flexibility to adopt the pertinent inventory control structure based on business requirements to manage seat inventory with the most comprehensive library of inventory controls ranging from traditional leg- and segment-based nested controls to the more sophisticated controls required for origin-and-destination inventory controls.

The objective of a nested inventory control structure is to ensure that a lower-valued class in the nested hierarchy is not available for sale when a higher-valued class is closed for sale. Nested inventory controls can be applied at a flight-leg or flight-segment level of detail. The *Inventory* component supports 26 booking class codes and cabin designators established by the International Air Transport Association for dissemination to global distribution systems. All variations of nested controls by booking class such as serial, parallel and mixed nesting controls are supported by the compo. In addition, segment limits, segment close indicators and minimum/maximum controls are also supported.

The component provides several options for O&D control such as static virtual nesting, dynamic virtual nesting and continuous nesting controls with the bid price curve. Based on an airline's business need, different types of inventory controls can be used across the network. For example, a network carrier may decide to adopt multiple serial nesting controls on its feeder short-haul segments and bid price controls on long-haul segments. Flexibility in adopting alternate inventory controls as the business model evolves is a key element that is not available with traditional inventory control systems. The component also supports the generation of availability status, or AVS/AVN, messages for distribution to GDSs.

## Adaptability

The *Inventory* component's open-systems architecture ensures that the time to market for new inventory control strategies requested by an airline can be accomplished in a fraction of the time required for development and testing on traditional mainframe environments. Several network airlines, for example, have a need to modify their existing inventory control structure to support a coexistence strategy in markets where they compete with low-cost carriers. The modifications required to support restriction-free pricing controls can be provided quickly to acclimate to current market conditions.

## Point-of-Sale Controls

Advanced point-of-sale controls support the effective control of published tariffs and off-tariff fares at multiple levels from region and country to an individual travel agency. For published tariffs, point-of-sale control provides preferential availability based on fare differences by point of origin. For off-tariff fares, point-of-sale controls ensure that preferential availability is provided based on the negotiated fare value, which addresses the wide dispersion of fare values negotiated with individual travel agencies for the same market.

## Interline Proration

Dynamic interline proration based on an airline's revenue share of the total interline itinerary to determine availability adds to the bottom line in incremental revenues. Two types of proration are supported — standard IATA cost-weighted mileage-based proration and advanced proration based on special prorate (bilateral) agreements.

## Customer-Centric Availability

Airlines have a deep desire to get closer to their customers, understand their traits and preferences, and retain existing customers. Current availability processing can provide a customer-centric availability response based on corporate identification or frequent flyer ID. Customer-centric segmentation of customers based on a value score can be accomplished across multiple dimensions such as an airline value tier, alliance value tier or simply a promotion tier for customers who have not traveled on an airline for a specific period of time.

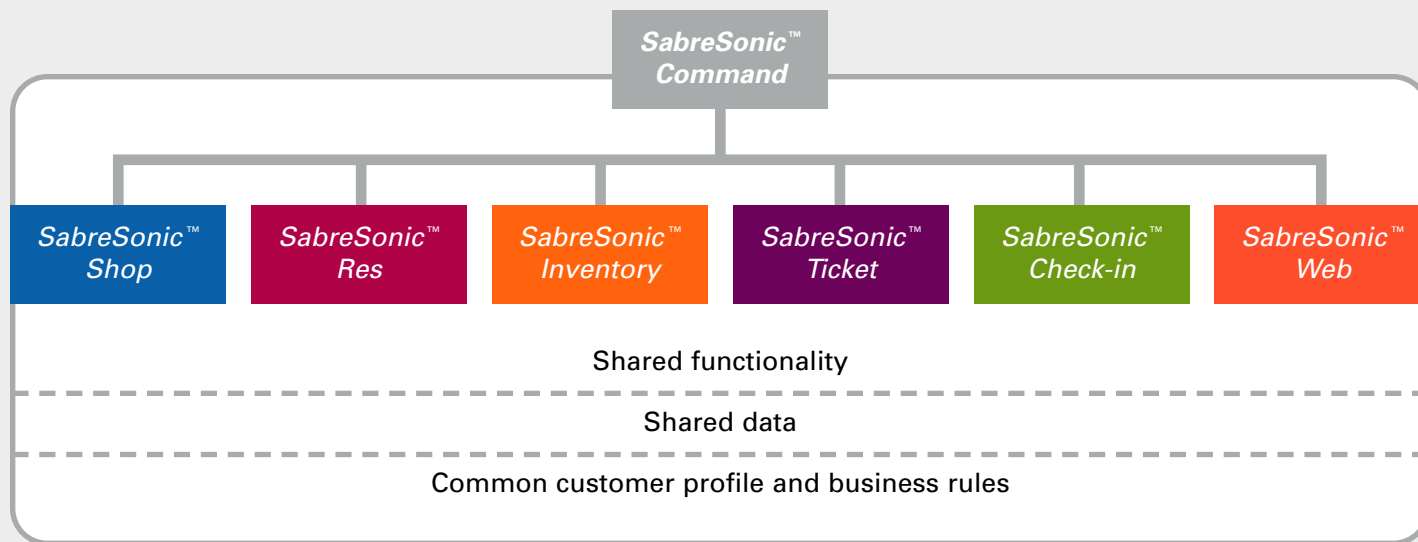
## Availability Proxy

For airlines not utilizing the *Res* component, the *Inventory* component eliminates the load off their reservations system in a high look-to-book ratio environment from online channels by serving as an availability proxy, a front end to respond to all availability transactions. It provides accurate real-time seat availability and offers a significant benefit over cached availability. With customer demands for calendar and destination shopping, the component provides a linearly scalable architecture with the number of processors as the volume of availability transactions that an airline must respond to increases over time.

Benefits from deploying this real-time solution generate total-cost-of-ownership savings as well as incremental revenues. The *Inventory* component guarantees a return on investment in a matter of months if not weeks. The mon-



## SabreSonic Passenger Solutions



**SabreSonic™ Inventory is a key component of the SabreSonic™ Passenger Solutions that provides a cost-effective tool with a compelling return on investment. Central to the strategy of these solutions is the access to a common end-to-end passenger profile to ensure a single image of the customer exists across all customer touch points.**

etary benefits for majors in the United States, by virtue of their size based on annual passenger revenues and passengers boarded per year, can be conservatively estimated to be between US\$75 million and US\$200 million. Large European flag carriers can conservatively expect benefits to range from €60 million (US\$78 million) to €125 million (US\$159 million) annually. And, a globally branded carrier in the Asia/Pacific region with significant off-tariff traffic can conservatively realize annual benefits of US\$50 million to US\$75 million.

Sabre Airline Solutions' investment in future enhancements is dictated to a large extent on the priorities established from the voting process by the user community. Key areas of focus are driven by customer-centric requirements such as integration with customer relationship management to manage availability and sell based on the value of the customer; the next generation of restriction-free pricing controls, a pricing philosophy initiated by low-cost carriers and adopted to some degree by network carriers; channel revenue management based on competitor schedules and prices; and the ability to sense and respond based on current market conditions to enable zero latency in decision making for an airline.

The *Inventory* component integrates with the *Sabre® AirMax® Revenue Manager*, utilized by more than 40 airlines around the world. *Revenue Manager* supports sophisticated demand forecasting, overbooking, revenue mix optimization, performance measurement, group control, low-fare (restriction-free) pricing and monitoring functions to effectively manage airline seat inventory. *Revenue Manager* can increase revenues up to 8 percent or more depending on the sophistication of the carrier. At the heart of *Revenue Manager* is the network optimization model that can support a range of options for inventory controls based on the requirements for an airline, which takes into account its level of sophistication ranging from traditional nested to O&D controls with virtual- or continuous-nesting controls. A mirror image of the inventory control logic processed by *Revenue Manager* is also available in the *Inventory* component for real-time inventory control.

In addition to the integrated planning and execution solutions the *Inventory* component and *Revenue Manager* provide, future fares data augmented with historical traffic and fares information from revenue accounting is provided to the *Inventory* component by the *Sabre® AirPrice™* fares management sys-

tem. The *AirPrice* system responds to competitive fare changes and publishes an airline's fare responses to ATPCO and SITA. It is the single most powerful application in the airline industry that demonstrates the power of an advanced revenue management planning application driving an execution system — intelligent content derived from *Revenue Manager* being used for real-time control of reservations based on the value of the reservations request. The integrated solution also has the unique capability of real-time messaging between *Revenue Manager* and the *Inventory* component for booking activity triggered re-optimizations of the flight or network to ensure that inventory controls always reflect the current state of the real-time environment.

The benefits of deploying the *Inventory* component and *Revenue Manager* for an airline are significant. Sabre Airline Solutions will continue integrating advanced planning systems with execution systems to maximum revenue-generating possibilities for the airline industry. **E**

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