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A Conversation With...

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Revvling up Cargo

For years, U.S.-based airlines have used revenue management techniques to maximize income from passengers. Now, more airlines are discovering that similar methods can be as equally effective on the cargo side of the business.

■ By Bill Rathert | *Ascend* Contributor

During the 1980s, a slew of upstart airlines turned the U.S. domestic market on its head. Airline deregulation, which was given life in 1978, created the opportunity for all manner of new airlines to spring up and challenge the older, established carriers. The survivors, collectively known as the legacy carriers, responded by developing a new practice — revenue management — that enabled them to match the low fares of new rivals while still maximizing revenue from each passenger segment.

Airlines began to adopt systems that could accurately forecast demand for seats on a given flight. Through the use of highly sophisticated computer modeling, analysts could determine the demand for each price bucket on a particular flight and adjust them as a flight filled up approaching the departure date. Adjustments could be made for seasonality, time of day, competitive situation, historical patterns and many other variables. Perhaps the most potent weapon was the fact that the rules on advertising allowed airlines to promote their lowest fares to the public,

regardless of how many seats might be available at that price.

Although most U.S.-based airlines quickly realized the benefits of revenue management for passenger operations, the story in the cargo area has been quite different. While revenue management became standard practice for passenger revenue, cargo operations continued to be handled in the same manner they had prior to deregulation.

Cargo is Different

Traditional wisdom tells us that cargo is a different animal — “Boxes don’t complain; they never need an in-flight meal.” The fact of the matter is that cargo has always been the misunderstood and unglamorous step-child of the airline industry. Change comes slow to the cargo industry, and the up-and-comers in airline management may not always be well-versed in cargo operations.

According to conventional wisdom, demand for cargo is inelastic. In fact, cargo demand is merely different from passenger demand in some significant ways. Cargo travels either by air or ground. It may be flown on either a freighter or passenger aircraft with different flight numbers and different capacity configurations. The many choices of modes and routes present different flight and truck capacities, different loading requirements and multiple handling costs at each connection. Finally, air cargo shipments are one way only, unlike the usual round trips for passengers. This contributes to uneven distribution of cargo demand.

The traditional network of cargo sales people and freight forwarders didn’t lend itself to revenue management. If you weren’t the lowest priced provider, many sales people feared that agents could always ship with another airline. For the better part of 20 years,



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Cargo operations are becoming a more important source of revenue for many airlines, which are beginning to employ revenue management techniques first employed to manage passenger operations to maximize cargo income.



many U.S. airlines failed to see the potential in incorporating revenue management techniques into their cargo operations, even those combined carriers with a healthy investment in air freight.

The downturn in airline profitability that began in 2001, and which continues in the U.S. market, has caused airlines to seek every

flight taking into account historical booking patterns, load factors, seasonality and other variables. The result is an incremental gain in available capacity. Assuming that demand exists for cargo on the flight, the airline can sell the resulting additional capacity, thereby increasing revenues.

After taking into account the true avail-

able capacity, the next technique used in revenue management is overbooking. As a general rule, flights rarely go out with everything that was booked on the plane. Most times, there is no penalty for the shipper that fails to show up with some or all of the booked cargo. Once again, powerful algorithms are used to predict just how much the airline should overbook each flight.

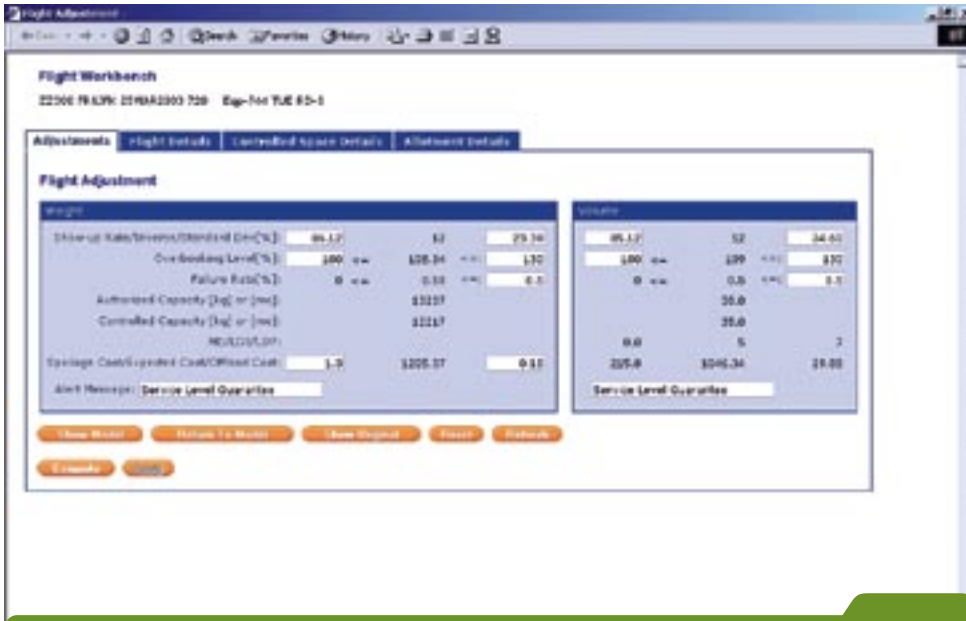
If the system stops booking at the physical capacity of the plane, then the resulting drop off of actual tendered cargo shown would result in the plane going out with available space. To counteract this tendency, most carriers tend to overbook by some factor. If the overbooking factor used is too low, the result may be that there is still available space at departure. If the factor were set too high, some of the cargo would have to be offloaded, potentially incurring penalties, and certainly adding costs for additional handling and storage. Using highly specialized programs that optimize overbooking based on show-up rates and historical patterns, the overbooking factors can be optimized, again creating additional capacity without adding to the fleet size.

Another way to add to revenues is to better manage the allotments made to regular cargo customers. Some carriers dedicate large percentages of their available capacity to allotments to certain customers, yet there may be no penalties in place if these customers fail to deliver the expected amounts on a given flight. Depending on the arrangement and the market, this may preclude the carrier from selling additional, or higher yielding, cargo on a given flight. Over time, this can be extremely costly. A strong method of monitoring the allotted space, its usage and yields is clearly an advantage. Regular management of the allotment process enables the carrier to reward customers who generate the highest returns and prove the most reliable in meeting their allotments.

Finally, there is the issue of bid price management, or revenue management, which requires a good deal more finesse than the other techniques for raising cargo revenues. Through sophisticated modeling of demand, and the analysis of rate/density mix, revenue management programs can accurately predict the demand for various prices and products on a given flight or route. Price segmentation is simple to understand when the reason is tied to the perception of a premium service. For example, when there is a guarantee to place the cargo on the next flight out, there is a natural understanding of the need for premium pricing. However, cargo has been slow to adopt the concept that there are different levels of demand for a specific flight and that different prices may be applied to the same flight as they are for seats in the passenger cabin. This is also tricky for the sales person who fears the loss of market share if his or her price isn't the lowest level possible. They must be taught to trust the revenue management system so they learn to sell to the level of true demand and not always to the lowest possible hurdle price.

Cargo is 20 years behind the passenger side of the business in adopting revenue management. Many carriers are only now beginning to embrace some of the available techniques in cargo revenue management. However, with fuel prices unlikely to return to historic levels, pressure for non-passenger revenue will continue to lead airlines to seek optimization tools that can generate greater cargo revenues and yields. Tools, such as the Sabre® CargoMax™ Revenue and Pricing Suite give airlines the capability to perform cargo revenue management and maximize income from this segment of the business. In many ways, this is the dawn of an era. Cargo has earned its seat at the table, and will play an increasingly important role in feeding the bottom line of the combined carriers. ■

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By viewing the Flight Workbench, a feature of the Sabre® CargoMax™ Revenue Manager, analysts can manage future capacity by monitoring booking activity and changing recommended overbooking levels, allotments and flight profiles in real time.

opportunity to trim costs and create additional revenue. In the cargo world, this pressure is especially noticeable for the combined carriers, that are now under pressure to produce increased revenues and yield from cargo.

Revenue Management for Cargo

There are a handful of revenue management techniques that may be employed individually, in groups or as a suite to increase revenues and yields from cargo. First, and perhaps easiest to grasp, is optimization of available capacity. Each flight has a variable amount of capacity available to accommodate freight. It is variable in the sense that factors such as fuel loads, passenger and bag counts, company material and weather can influence the precise amount of payload that is available to carry cargo. Cargo capacity is three dimensional, viewed in terms of weight, volume and number of fixed container positions (for wide-body aircraft). Depending on the density of the freight, stacking efficiency and aircraft restrictions, either the weight or the volume capacity can present a booking limit, making the flight volume or weight critical. To take advantage of every last bit of available remaining space (either by volume or weight), sophisticated programs forecast the available capacity for each

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