

The express freight market has reached maturity in the US and Europe, and now faces declining yields and traffic volumes. Several other regions of the world are experiencing high growth rates and have huge potential for development, and are open to established and new airlines.

# The evolution of express package operations beyond the US & Europe

**T**he express package business has been a lucrative area for most freight companies. Time-sensitive documents produce higher yields than other types of freight.

Operators have limited expansion opportunities in markets they are established in, however. Most integrators, including FedEx, UPS, DHL and TNT, operate a single bank freight structure. That is, one return flight per night into and out of a hub from each outstation. Since this provides adequately for delivering time-definite and time-critical packages, any traffic growth is catered for by increasing aircraft size rather than adding flights or frequencies on existing routes. Integrators use other air services to transport packages on routes which do not have enough daily volume to operate a dedicated service of their own. Flights can start to be operated when volumes have reached a critical mass that is large enough to fill a smaller aircraft type at an economic level.

As growth continues across the network, freight carriers place larger aircraft on each route as freight volume increases, with a trickle-down effect taking place so that the smallest types are deployed on new routes or ones with the lowest volumes. Integrators have gained from high traffic growth rates and yields in their established markets. As traffic growth continued, the airlines have benefited from the economies of scale larger aircraft offer. The profits of some of some integrators have been the highest of all airlines.

The problems that the integrators have experienced in recent years relate to market maturity, development of the alternative methods of sending time-sensitive documents and general

recession. The effects have been for users of express services to send materials via the Internet or use two-day or three-day delivery services, rather than 24-hour services. Although these two- and three-day services still guarantee a time-definite delivery, they are lower yield than time-sensitive ones. The effect of electronic delivery has forced integrators to use general freight, at lower yields, to fill remaining aircraft volume. Integrators are also using their own trucking systems to deliver time-definite packages, with two- or three-day delivery times.

Integrators are looking beyond established markets to develop new business opportunities elsewhere. Where the growth will occur, and the type of aircraft required, will drive fleet requirements for these freight operators. The most obvious markets to exploit are in the Asia Pacific and China, but India, the Middle East and Latin America also offer potential. Australasia has a large enough economy to support express package freight operations, but populations are small and the market is mature.

## Market development

Development of express package carrier operations outside the US and Europe could be by established integrators or new airlines.

Established operators have the advantage of large infrastructure of road networks, processing departments, freight sorting terminals and established links with other airlines to ensure they can deliver packages between most city pairs in the world. UPS, for example, uses its own air route network across the US and Europe, but sometimes uses capacity on

other airlines and charters other freight carriers to service other parts of the globe. UPS also, however, has air networks in the Asia Pacific and into Latin America. Where it does not have its own air routes it uses belly space on passenger airlines or other freight carriers operating scheduled or charter services to fly to regions such as Africa and the Indian sub-continent. UPS will start its own air service if freight volume is high enough to fill the an appropriate aircraft type, since it prefers to control its own network. UPS already serves more than 220 countries. Its main hubs outside the US and Europe include two in the Philippines and Taipei, and also at Miami to serve Latin America.

UPS has worked with foreign governments to give it scheduled route rights to serve various points in the Asia Pacific, with the benefit that UPS's established system will provide jobs for Taiwanese citizens.

The alternative is for completely new integrators to start operations in underdeveloped regions, but these would start from scratch, and be at a disadvantage to global operations and infrastructure established over several decades by UPS and other integrators.

Even when established integrators do not operate their own air routes to a specific region, they serve it using other airlines. Their processing systems and associated ground infrastructure allows them to take full advantage of the high growth rates in areas like the Asia Pacific. The established infrastructure of companies like UPS, FedEx and DHL presents a high barrier to entry for any potential all-new integrator.

There are still parts of the world where integrators are not established, and

*UPS has a large global air network, including hub operations in the Asia Pacific and Latin America. It will gradually open new air routes as traffic volumes increase with growth.*

this may appear to make it difficult for them to penetrate these markets. They can still open up markets like China and India, however, by putting in delivery staff and infrastructure on the ground, employing nationals, and utilise the large amounts of unused belly capacity on passenger aircraft for a long time before their own actual air services would be required.

China has a large and educated population with a fast growing economy which will generate a high level of demand in the future. Several carriers in China, for example Hainan, already operate Quick Change (QC) 737s, which are converted from passenger to freighter mode and operate some express package freight services.

UPS and FedEx already have experience and market power, and so several Chinese carriers may link with them to provide a full integrator service in China, the Chinese airlines providing air freight capacity.

One interesting case is how DHL has developed. DHL has small air route networks in Latin America and the Middle East, besides its operations in the US and Europe.

Unlike UPS, DHL does not necessarily feel the need to operate its own air routes where the freight volume is enough to fill one of its smaller aircraft, and uses the capacity of other carriers on many of its routes. Most of its own routes are in the Central American region, and there is plenty of capacity on other airlines to carry its packages to Latin American cities that it does not fly to itself. UPS and FedEx also serve some Latin American cities with their own aircraft. All three have the ground infrastructure to offer a complete service.

DHL has an air service operation in the Middle East. "DHL's operations in each region of the globe are operated independently," explains Ali Sarrafzadeh, commercial director Middle East at DHL. "Bahrain is our hub in the Middle East, and we fly to several cities on a hub and spoke type network. The Bahrain hub then has links to operations in Europe and the US. The operation in the Asia Pacific is managed at Singapore and Hong Kong.



"We serve 13 countries from Bahrain, including Iran, Iraq, Kuwait, Afghanistan, Saudi Arabia, United Arab Emirates, Oman, Qatar, Syria and Jordan," continues Sarrafzadeh. "We serve the Gulf countries with a mixed fleet of 727-200s, A300s, An-13s, Metros and Convairs and operate about 200 flights per week. We also use belly space on passenger airlines' flights to fly to the other countries, but are witnessing a massive growth rate which is double digit. By weight, our traffic has increased by 45-60% per year in the past two years. The traffic is mainly inbound traffic from the US, Europe and Asia being redistributed over our network. Our air operation started in the early 1980s, but has doubled in the past two years and the fleet has doubled as a consequence."

Sarrafzadeh explains that if volume continues to grow DHL will increase its capacity in parallel. "Traffic growth rates will probably not continue to be so high in the long-run. Growth rates are high now because the price of oil is high and this encourages local governments to spend more money on business and the economy, and this stimulates traffic. We want to develop a strong road network in the region, and if traffic growth continues at the same pace we will use a road network for redistribution. This could be done more easily if there were a unified custom tariff in the region, which would lower cost of road transport and so we would only need to fly longer distance routes on overnight services. Aircraft could also be deployed elsewhere on

overnight services. We will start flying our own air services to Iran, Yemen and Syria if volumes on these routes get high enough. We prefer to have control over our own services because of the time factor. Also, freight is mainly carried at night while passenger services operate during the day. We may also eventually fly between the Middle East and Asia, whereas we currently use passenger airlines to ship traffic between the two regions. This all means we would have to add aircraft capacity, but we are also looking at new gateways to speed up our delivery process."

Besides the Middle East, DHL has also been active in expanding its Asia Pacific network. Cathay Pacific has operated a widebody fleet from its Hong Kong hub for many years, and had expertise in carrying freight between Hong Kong and other major airports in the region. "We work with freight forwarders when shipping freight beyond airports," explains Kenny Tang, general manager cargo at Cathay Pacific. "Our freight network, supplied by the belly capacity of our passenger aircraft, is an important element in the supply chain. The bulk of our business is general freight. Express package freight is growing fast, however, at twice the annual rate of general cargo. Express packages also have the advantage of being higher yield business."

Cathay Pacific has been working with DHL for the past four to five years. DHL had an established expertise and ground operation, but did not have an air network in the Asia Pacific region. The



two companies agreed to cooperate, using Hong Kong as an air hub and to carry packages across Asia. "We have an arrangement with DHL to fly to several cities, including Singapore, Taipei, Seoul and Osaka using the belly space on empty passenger aircraft flown at night. Flights leave these cities at about 10:30pm and return from Hong Kong at about 3:30pm. We thus have a small hub and spoke system," explains Tang. "We have since expanded this network using freight carrier Air Hong Kong to operate services to Bangkok and Tokyo using A300B4Fs and 727Fs. We have also switched some of our services from belly space on Cathay Pacific passenger aircraft to a Air Hong A300-600RF. The system has now evolved so that DHL now owns 40% of Air Hong Kong and Cathay Pacific owns the other 60%. Air Hong Kong now has more A300-600Fs being delivered to operate pure freighter services because some routes have outgrown the belly space of Cathay's A330-300s and 777s. The typical route lengths are three to five hours, and we operate one return flight per night, five nights per week. This has had the added advantage of increasing our aircraft utilisation by about seven to eight hours per night. The A300-600RFs generate about 35 hours per week, but we may get additional utilisation during the day because of possible extra demand

in some markets."

Overall, Cathay Pacific is experiencing express freight traffic growth rates of 12-13% per year, and on some intra-Asian routes the growth rate is 20-30% per annum, which is why we started cooperating with DHL. We expect to add more dedicated freight services in the future and in the short-term will expand beyond the six routes we currently operate. One way to start new services is to use belly capacity of passenger aircraft, or use smaller freighters. We are confident growth rates will remain higher than 10%, but it will take some time before the A300-600RF becomes too small on current routes. We only have a short ground time at Hong Kong, however, and so may have to increase flight frequencies. We also have to consider container interchangeability with other aircraft types in the future. At the end of 2003 we will resume flights to China, serving Beijing and Shanghai with three daily flights. We also have rights to fly to China with our freighters, although there are some political issues to resolve."

### New operators

One new operation that has been successful in recent years has been the development of Mexican carrier Estafeta Carga Area, a subsidiary of Mexican

*DHL has a growing air operation in the Middle East, using Bahrain as a hub to serve Gulf states. It has also been able to form an alliance with Cathay Pacific and both have a shareholding in freight operator Air Hong Kong. DHL and Cathay Pacific have taken advantage of the high growth rates of express package traffic in the Asia Pacific region.*

express freight company Estafeta. Estafeta Carga Aerea has a small hub and spoke operation based at San Luis Potosi to support its parent company. The airline operates four 737-200Fs to various cities in Mexico and the US where route lengths are too long to be viable with ground transport. Growth rates have been 15-20% per annum, and the airline will add two more 737-200Fs. The growth rates will lead to a requirement for more capacity, and the airline may acquire 737-300s and then go to larger types like the 757-200SE, which would be used to serve the US. More routes to the US are also planned.

India is one region with an expected high potential for express freight operations. Blue Dart Aviation is the only express cargo airline in India, and focuses on domestic and regional air express operations, which has both air and ground infrastructure. Blue Dart also serves Bangladesh, Nepal and Bhutan, serves Sri Lanka through a sales alliance. Blue Dart has more than 25,000 customers, and entered into a sales alliance with DHL in October 2002. It currently serves more than 13,700 locations in South Asia.

The airline currently operates three 737-200Fs to Calcutta, Delhi, Mumbai, Bangalore and Chennai, and a fourth will be added in late 2003. Flights operate at night, while aircraft are also used for freight charters during the day. The airline operates 10 routes between 45 minutes and three hours. Operations started in 1996 to support parent company Blue Dart Express, a ground freight operator. The air network is a point-to-point operation, rather than hub-and-spoke, to connect all of India's major cities.

Blue Dart Aviation is experiencing high growth rates, and load factors on the aircraft are 93%. Blue Dart is having to use domestic capacity to uplift its loads, since annual growth rates for small package traffic have been about 30% in recent years. It currently plans to add another aircraft in 2004, but will respond to the market to later determine if it should add flight frequencies, more routes and expand its fleet. **AC**