



# Aeronautical satcoms – a case for industry unsustainability and disruption

Once upon a time, airline brands were the be all and end all of air travel. Which brand you flew with said as much about you as a consumer as whether you shop in Waitrose or Asda in the UK, or Whole Foods or Walmart in the USA. But times have changed, and now, in an era of ever-more choice, most airline passengers make their decision based on routes and prices instead of brand loyalty, transforming air travel into a commodity. This leaves airlines in a tough position; when you're operating in a commodity market, the only way to get ahead of the competition is to find a differentiator. Today, in an always-connected world, in-flight connectivity (IFC) can make all the difference. Hans Karlsen of Karlsen Associates explains the current trends and challenges faced by airline operators, and how IFC can be a key market differentiator.

**As Boeing, Airbus and Bombardier are enjoying** buoyant high growth for new airliners that will keep aircraft production lines full over the long term, airline operators are seeking to differentiate their services. Flying passengers from one point to another has become a commodity, with the decision to fly with one airline as opposed to another influenced more by routes, schedules, and price, as opposed to a particular airline brand.

Fueled by the current low oil price, improved profit margins, and improvements in both cabin furnishings and communications technology, airlines have started to seek ways to differentiate themselves by focusing on new cabin interiors, passenger services and inflight connectivity (IFC) to gain market share and attract passengers from other airlines. IFC is still perceived as a novelty, and is likely to remain so until the reliability and data rates per passenger become similar to their domestic or office broadband speeds. Passengers can then rely or depend on it being available in advance of a particular flight and plan to make productive use of it during their journey.

## The draw of in-flight connectivity (IFC)

According to Euroconsult's newly released report, 'Prospects for In-Flight Entertainment and Connectivity,' total revenues from passenger connectivity services are expected to grow



from US\$700 million in 2015 to nearly US\$5.4 billion by 2025, with a 23 percent CAGR over the 10-year period. This has created intense pressure amongst satcom operators to capture market share and install systems on a limited global airline population of 28,000 aircraft. The prohibitive cost and complexity of switching operators and aircraft satcom systems means that there is a desire amongst satcom vendors to 'get in first' and lock an airline into their service offering for the medium to long term, which in turn will exclude the competition.

The market appeal to capture airline IFC commitments is evident from the intense marketing activities from the eight key players; Inmarsat, GoGo, Thales, Panasonic, SITAONAIR, Zodiac Inflight Innovations, GEE and Viasat. The satcom vendors are trying to outdo each other with promises about adequate satellite coverage, better reliability and better performance over their competitors. Added to that, the future launch of both Ku and Ka-band HTS satellites will offer a three to five-fold increase in bandwidth and puts pressure on airlines to wait for something better. Consequently, airlines face total confusion and uncertainty and face the dilemma of investing in IFC now with the hope it remains useable for the next five years, or waiting for the new satellite services.

Airlines make money on attracting additional passengers and other ancillary services, not on the IFC service alone. It costs around US\$1 million to install a satcom system on an airliner.

The cost of the cabin interior systems and seats can easily exceed US\$10 million per aircraft. The cost of switching from one satellite system to another is very expensive in terms of satcom system cost and aircraft downtime. Consequently, airlines expect to depreciate their satcom investment over



five or more years, thereby making them commit to a particular service provider for the same time period. Additionally, airlines cannot rely on satcoms alone to generate sufficient airtime or IFC revenues to justify any satcom investment. They have to rely on the intangible benefit of using IFC to attract more passengers. A recent study carried out by Karlsen Associates for a major airline revealed that an airline operating a Boeing 777 aircraft would recover the cost of that investment within two years if it attracted an average of two additional full fare business class passengers on each flight, based on the provision of a free IFC Wi-Fi service in First and Business Class.

### The response from satellite operators

Satellite operator business models are facing intense competition with one another for higher bandwidth and lower data costs and the need to be profitable. The cost of terrestrial users switching service providers is low, which creates a highly competitive environment to increase bandwidth and lower prices. They make money off satellite services, and aviation offers an attractive additional market.

Historically, during the early days of Inmarsat's aeronautical service, the manufacturers of aircraft satcom user terminals were the most profitable part of the IFC supply chain, with satcom avionics and antenna manufacturers achieving gross margins on hardware sales exceeding 25 to 50 percent. These margins have driven satellite operators to include aircraft equipment in their service offering. Operators like Inmarsat team up with Honeywell to provide the Global Xpress Ka-band service. GoGo and Viasat also supply their own aircraft satcom systems. Panasonic and Thales provide cabin entertainment systems and have added IFC as an added product and service to facilitate their core business of providing total cabin entertainment systems. Zodiac Aerospace has added IFC to enhance the sales of

their core systems that includes aircraft seats and other cabin systems. Airlines in turn benefit from a single source for product support. Additionally, IFC solution providers benefit from being able to manage their whole supply chain and from the ability to earn product support revenues throughout the product life cycle, just like Rolls Royce aircraft engines, who make more revenues from after-market support than from the pure sales of aircraft engines.

Satellite operators and aircraft satcom system manufacturers also face the difficulties of becoming approved suppliers of connectivity systems for Boeing and Airbus for new aircraft. Boeing will be increasing its Boeing 737 production rate to 57 aircraft per month by 2019. Airbus aims to increase its production rate to sixty A320 aircraft per month by mid-2019. This places enormous pressures on the supply chain to be able to deliver satcom systems on time. Satcom system operators are also competing heavily amongst each other to become approved suppliers of SFE (Supplier Furnished Equipment), which enables them to be listed as approved aircraft manufacturer options, that would enable them to be installed on a large proportion of aircraft leaving the factory.

### Where to next?

At this stage of the industry development, with service providers all trying to capture sales in a limited market and the potential for over-supply of IFC offerings, the question remains as to which service provider will be profitable in this sector and whether there will be some consolidation, mergers, acquisitions, or will some operators go out of business. Airlines are facing the dilemma of trying to digest all the information to minimize risk and are having to make serious decisions of making long-term investment decisions, to offset IFC services offered by competing airlines and capture market share, or wait for a better and more stable solution. ■



Photo courtesy of Emirates