Orient aviation

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A STEADY HAND

Astute CEO Ken Choi keeps Jeju Air top of the LCC league despite North Asia's politics

Orient aviation 23 YEARS

Qantas Group CEO, Alan Joyce, receives the Orient Aviation 2016 Person of the Year award

Sleeping LCC giant awakens in Japan

Is tracking on track as ICAO deadline draws closer?

INDUSTRY INSIGHT: Wifi onboard determines the airline choice of passengers

Orient aviation 23 YEARS

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IT REINVENTS FLEET PLANS
AND TRANSFORMS BUSINESS PLANS.
787 DREAMLINER. A BETTER WAY TO FLY. The industry-leading technology of the 787 Dreamliner is creating remarkable opportunities for airlines around the world. We call it the Dreamliner effect. Its unparalleled fuel efficiency and range flexibility enable carriers to profitably open new routes as well as optimize fleet and network performance. And for their passengers, an experience like none other in the air. Put the Dreamliner effect to work for you. That's a better way to fly.
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Asia is early adopter of tracking rules

Global aviation learnt harsh lessons from the tragic loss of Malaysia Airlines flight MH370 three years ago. The still unsolved disappearance of the aircraft and its 239 passengers and crew is a stark reminder that airlines and the systems that allow them to fly across the world needed an regulatory overhaul.

As a direct result of the MH370 loss, the industry looked again at its rules for monitoring airlines as they flew. With the support of the International Air Transport Association, airlines and manufacturers, the International Civil Aviation Organization (ICAO) has set new rules for the tracking of the world's airline fleet.

From November next year, all aircraft, wherever they are flying, must be tracked every 15 minutes.

In addition, from January 2021, all commercial airlines must have systems on their fleets that will autonomously transmit an aircraft's position at least once a minute if it is in distress.

Asia-Pacific's major airlines already have, or will easily beat, that deadline. Some smaller airlines have yet to install the upgraded tracking equipment, but there is no reason for alarm. They are not operating long-haul routes over remote oceanic spaces.

Service providers also have acted quickly. Dozens of satellites, launched by giant satellite conglomerates such as Iridium, are circling the planet and offer upgraded tracking systems to airlines that need improved monitoring equipment.

Tracking systems from companies such as Aireon, Rockwell Collins, Arinc and SITA, to name a few, recognize that some airlines will struggle to meet the costs of adhering to the new ICAO regulations and are putting together cost effective packages.

A study released at the CANSO ATM conference in Madrid last month revealed more precise airline tracking, coupled with improved satellite communication (satcom), has benefitted the global airline bottom line to the tune of US$3 billion in the last 15 years.

So, better tracking will not only mean safer flying for all, but cheaper flying for airlines. ■

TOM BALLANTYNE
Chief Correspondent
Orient Aviation Media Group

Back to the drawing board at THAI

Thai Airways International's (THAI) continues to flounder. The flag carrier's board was scheduled to debate the structure of the new THAI Group – THAI itself and part-owned subsidiaries, **Nok Air** and **THAI Smile** - at its March board meeting, but the plan fell of the agenda because "several parties" did not fully understand the issue, the airline said.

Instead, **THAI chairman, Areepong Bhoocha-Oom**, instructed THAI's acting president, **Usanee Sangsingkeo**, to write a detailed plan of the proposal for THAI board directors, a task that is expected to take at least a month.

THAI must act swiftly to avoid returning to the red. It reported a $375 million net loss in 2015 but scraped home last year with a profit of $431,000, largely achieved by a 28% cut in fuel costs. THAI carried 4.8% more passengers in 2016, but operating revenue fell 4.3% and passenger yields declined by 4.5%.

THAI sees a strategic overhaul of its operations, including its two affiliates, as critical to strengthening its position. Areepong said the THAI Group was a concept that would allow the three airlines to compete more efficiently by working closer together.

THAI and THAI Smile have improved synchronization of their operations. THAI Smile has relocated to Suvarnabhumi airport from Don Mueang which has improved connections between the two carriers.

But Nok Air, 39%-owned by THAI, is proving to be a problem child. It was the only airline in Thailand to lose money last year. It reported a record deficit of $94.6 million, up from $47.9 million 12 months earlier. Nevertheless, the THAI board has approved the purchase of more equity in listed Nok, although the sale cannot proceed until the budget carrier's shareholders have been consulted.

Media reports constantly speculate that when THAI increases its holding in Nok it will replace its boss, the well-connected **Patee Sarasin**. Areepong has declined to comment either way on the subject, while Patee has told the **Bangkok Post** that rather than worrying about rumours of his imminent demise he was preoccupied with turning around the airline.

"I can't just jump ship, I'm responsible for getting Nok Air back in the black by ensuring the recovery plan is properly executed," said the 55-year-old, who has led the airline since its founding 13 years ago. "I will stay on as long as needed, though I've never thought I was indispensable at Nok Air," he said.

The cost-cutting program would improve yields and revenue and take Nok to break even by year end and to profit for fiscal 2018, Sarasin said. The turnaround will be supported by a $43.3 million capital injection in the airline in the next few months, he said.

Nok, with a fleet of 22 B737-800s, eight Bombardier Q400s turboprops and two ATR 72-500 turboprops, is shedding capacity. It took delivery of five new aircraft last year, three B737-800s and two Q400s, which resulted in too many seats in a highly competitive market. The airline has sold some of its B737-800s to Indian LCC, **SpiceJet**.

The Don Mueag-based carrier will launch Bangkok-Phnom Penh in October and debut regular services to several Indian cities in the next 12 months. Patee said the Chinese market will be critical to improving yields. It will launch six China destinations in 2017: Phuket-Chengdu, Chiang Mai-Nanjing, Phuket-Nanjing, Bangkok-Nanning, Bangkok-Linyi and Phuket-Wuhan.

Sarasin and three top Nok executives have cut their salaries by 25% to demonstrate they embraced the restructuring program. "That does not really mean much in terms of reducing cost, but we wanted to send out a clear message that we're responsible for past financial performance," he said. ***By Tom Ballantyne*** ■

Qatar to change tactics in India?

India's crowded skies could become more crowded if **Qatar Airways** genuinely intends to establish a domestic carrier on the subcontinent.

The big three Gulf carriers have thrown a lot of capacity on to Indian routes, but Qatar Airways said in March it planned to go one better by setting up a Qatari-controlled domestic airline in India.

Qatar Airways boss, Akbar al Baker, whose airline is a member of the **oneworld** alliance, said in Berlin last month that the alliance's partners would soon be making an application to that effect.

"And from there we will proceed. Yes, we will have a 100%-owned domestic carrier in India that will belong to both Qatar Airways and our state investment arm as India now allows foreign direct investment in domestic carriers within India." He said the proposed carrier eventually would have a fleet of 100 aircraft.

If the Indian government approves the application, the new carrier would be the first 100% foreign owned airline to fly India's skies. **Prime Minister Narendra Modi's** government opened the sector to 100% foreign direct ownership (FDI) last June, although a foreign airline is limited to a 49% holding. It is expected Qatar Airways will hold 49% and the investment company 51%.

Al Baker's announcement is the latest strike from Gulf carriers looking for market share in the world's fastest growing domestic airline market. Dubai's **Emirates Airline** has the largest number of bilateral

Tarnished Thailand spends big on aviation revamp

Thailand's military junta has announced a multi-billion dollar aviation reform program that includes massive investment in airports, maintenance, repair and overhaul (MRO) facilities and the development of a reputable air safety regulatory regime.

Top of the junta's list is a $11.59 billion investment in airport development that is intended to increase annual passenger air traffic in Thailand from 130 million travelers now to 277 million by 2027.

If successful, the reforms would increase passengers processed at Bangkok's main international airport, **Suvarnabhumi**, from 45 million a year to 90 million annually in the next decade.

Under the revitalization plan, the city's second airport, **Don Mueang** would increase passenger throughput to 40 million passengers a year from 30 million and U-Tapao airport would expand capacity from three million annually to 30 million a year.

The investment program also would spend $2.5 billion to upgrade 10 regional and 26 secondary city airports across Thailand.

Intended to restore Thailand to its former status as a regional aviation hub, the project is vital to the country's economic growth, said **Kobsak Pootrakul**, vice minister in the office of Thailand's prime minister.

Several factors have slowed aviation expansion in Thailand, but chief among them was the downgrading of the country's air safety regulatory standing by the **International Civil Aviation Organisation** almost two years ago.

The ICAO red flagging of Thai aviation safety oversight damaged the country's standing worldwide, a blow that was exacerbated by a crackdown on scams committed on Chinese tourist groups, one of Thailand's primary passenger markets. Tourism receipts account for about 10% of GDP.

Despite the damaging reputational issues, Thailand attracted 32.6 million foreign tourists last year with the numbers forecast to increase to 34-35 million this year. It intends to reach a target of 53 million visitors a year by 2032.

The government funding package, approved last month, included a public-private partnership (PPP) program for 11 airports: Phrae, Mae Hong Son, Mae Sariang in Mae Hong Son, Tak, Phetchabun, Hua Hin, Nakhon Ratchasima, Pattani, Betong, Chumphon and U-tapao.

Caps on foreign direct investment into Thailand have been lifted to allow non-Thai companies to run the nation's airports and hold equity of more than 51% in new MRO facilities. **Thai Airways International (THAI)** is scheduled to sign a Memorandum of Understanding with **Airbus** in August to establish a commercial MRO centre at U-tapao airport, which is planned to be operating within three years.

Kobsak also said the government wanted annual freight business to achieve a target of 3 million tonnes a year from 1.3 million tonnes at present. ***By Tom Ballantyne*** ■

traffic rights to India and Abu Dhabi-based **Etihad Airways** and its strategic Indian partner, **Jet Airways**, carries the largest

number of international passengers out of the country. Etihad owns 24% of Jet, a relationship that facilitates significant access to Indian domestic passengers transiting to international routes.

By starting its own domestic airline, Qatar would challenge that network strength. Al Baker has never made a secret of his carrier's ambitions in India. He has talked about acquiring equity in LCC, **IndiGo**, but apparently this came to nothing.

He also has aggressively argued there should be Open Skies or unlimited flying rights between India and the Gulf, where vast numbers of Indians are employed. Qatar and India operate under a traditional bilateral air service agreement where airlines from both countries can operate a stipulated, equal number of flights.

It is too early to predict if Qatar will succeed in setting up a subsidiary carrier in India. While regulations to allow 100% FDI in the country's airlines haves been approved, rules still exist that state substantial ownership and effective control (SOEC) needs to rest with an Indian entity in the country's aviation industry.

Modi's government has not announced any modifications to that rule, even after it approved 100% FDI in airlines. So, before Qatar receives the go-ahead for its venture the new regulatory framework must be clarified – and in India things seldom move fast. ***By Tom Ballantyne*** ■

Cathay Pacific and China Southern choose new bedfellows

Hong Kong's **Cathay Pacific Airways** and the Mainland's **China Southern Airlines** signed up to relationships with Lufthansa and American Airlines, respectively, in March. At the end of the month, **Cathay Pacific chief executive, Ivan Chu**, announced the oneworld carrier would code share on flights operated by Star lead member, **Lufthansa German Airlines**, **Swiss** and **Austrian Airlines**.

In return, Lufthansa and its affliates will code share with Cathay from Hong Kong to New Zealand, Cairns, Melbourne and Sydney. The code share agreement will give Cathay Pacific passengers 14 new destinations in Germany, Belgium, Hungary, Norway, Italy and Switzerland.

The agreement extends to the frequent flyer programs of both airlines, including the ability of Cathay's Marco Polo club members to earn club points on Lufthansa code share flights. **Cathay Pacific Cargo** and **Lufthansa Cargo** jointly market their capacity on flights between Hong Kong and Europe with joint shipments from Europe to Hong Kong planned for 2018.

Across the border in Guangzhou, government controlled **China Southern Airlines** has welcomed privately owned **American Airlines** into its fold as a minority shareholder. The Texas-headquartered carrier will acquire 8.83%, for US$200 million, of the largest airline in Asia. In the process, China Southern will become the last of the Big Three Mainland airlines to welcome a foreign owner to the share register. Cathay Pacific owns 18% of **Air China**, and Air China owns almost 30% of Cathay Pacific. **Delta Airlines** completed its purchase of a minority holding in **China Eastern** almost two years ago.

In a joint statement, American and China Southern said they expect to begin code share and interline agreements later this year, giving American customers access to 40 destinations beyond Beijing and more than 30 beyond Shanghai. More than 80 destinations beyond San Francisco, Los Angeles and New York will become available to China Southern in the deal. ■

Mueller to succeed Hogan at Etihad Aviation Group?

The Gulf airline rumour mill has been set spinning by "insider" reports that **Christoph Mueller**, the **Emirates boss of Innovation** and a recent **CEO of Malaysia Airlines**, is on his way to **Etihad Airways** as James Hogan's successor. The **Etihad Aviation Group president and CEO** announced in January that he would retire from the Abu Dhabi headquartered group in the second half of the year, along with **CFO, James Rigney**. At the time, Hogan said he planned to shift his career gears to finance.

In the announcement issued on January 24, the **Etihad Aviation Group chairman, H.E. Mohamed Mubarak Fadhel Al Mazrouei**, said he "looked forward to James' continued association with Abu Dhabi in new ways".

The chairman also said: "We must ensure the airline is in the right size and shape. We must continue to improve cost efficiency, productivity and revenue. We must progress and adjust our airline equity partnerships even as we remain committed to the strategy." Its the perfect job for airline corporate doctor Mueller. ■

Australian and New Zealand airlines form lobby group

A new airline association, Airlines for Australia and New Zealand (A4ANZ), was established last month to advocate public policies for the aviation sector. Areas of focus include taxes, fees and improved infrastructure.

A short time before the association was launched, the Australian Competition and Consumer Commission (ACCC) announced its finding that passengers and airlines have paid in excess of A$1.6 billion (US$1.22 billion) for access to Australian airports in the last ten years.

Former ACCC chairman, Professor Graeme Samuel, will chair the group which is being funded by members Air New Zealand, Jetstar, Regional Express (REX), Qantas, Tigerair Australia and Virgin Australia. The board will be made up of a representative from each member airline. A chief executive will be appointed in coming months.

The Australian and New Zealand governments do not have the jurisdiction to regulate fees and charges as major airports are privately owned. ■

Alan Joyce honored as Orient Aviation's 2016 Person of the Year

More than 120 guests from the aviation industry, media and tourism gathered at Hong Kong's China Club on March 16 to honor Qantas Group CEO, Alan Joyce, as Orient Aviation's 2016 Person of the Year.

Airbus' John Leahy and Boeing's Dr. Dinesh Keskar paid tribute to Alan's vision and steadfastness in his 11 years of leading the airline, often through very difficult times. Orient Aviation's 2015 Orient Person of the Year, Tony Tyler, told guests how much he appreciated Alan's support on issues both small and overwhelming when he served as an IATA board member and then board chairman. Accepting his award from Tony, Alan said it was the 30,000 Qantas staff that made the airline what it is today. ■

Photos: Graham Uden

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1. Alan Joyce
2. John Leahy
3. Dinesh Keskar
4. Tony Tyler
5. Christine McGee and Alan Joyce

6. Alan Joyce with tourism colleagues
7. Ben Wong, Andrew Cowen, Philip Herbert
8. Mark Sutch, Idalina Silva, Angus Barclay
9. Allen Chan, Maureen Dougherty, George Liu

10. Dennis Choo, Koay Peng Yen, Xu Hai-Bing
11. Ricky Chong, Kinto Chan, Yvonne Ho
12. Paul Tuck, Tom Ballantyne, Iain Grant
13. Andrew Herdman, Rupert Hogg

14. Gavin Haslemore and Tarynn Haslemore
15. Thusitha Wickramasinghe, Howard West
16. Tim Wilson, John Bloemen
17. Mark Watson, Sophie Watson

Sleeping LCC giant awakens

It has taken time, but Japan's low-cost carriers are catching up with the Asia-Pacific budget airline boom as they make serious inroads into the domestic and international traffic of full service airlines.

By Tom Ballantyne

Japan has been a sleeping giant when it comes to no-frills air travel. Conservative Japanese airline passengers would never take up budget travel, said any number of analysts. But they are being proven wrong. In the last three years, Japan's low-cost carrier (LCC) market has been catching up with its regional rivals and also winning market share from full service carriers.

As 2017 got underway, LCCs were operating 16% of all scheduled capacity in Japan. On current growth trajectories, they may end the year with a 20% share of the nation's airline market, reported scheduling consultancy, OAG.

Last year, LCC capacity in Japan was split almost evenly between domestic and international routes, a consequence of strong LCC growth between Japan and its major international markets and a plateauing at domestic LCCs, OAG said.

By year end, LCCs had around 18% of international scheduled seats - up from 9% two years ago - and 15% of domestic seats. At press time, 22 LCCs were flying into and out of Japan offering annual capacity of around 18.5 million seats. Seven domestic LCCs share capacity of 22 million seats.

"There's been an LCC presence in Japan for many years but for much of that time, they failed to create the market disruption that took place in Malaysia, Brazil and the UK. At last, LCCs in Japan are tracking the same growth in market share that has occurred elsewhere, albeit ten years earlier," said OAG.

The report was released as ANA HOLDINGS, the parent of All Nippon Airways, announced it would spend US$270 million to increase its shareholding in LCC, Peach Aviation, from 38.7% to 67%. The share transfer from other joint venture partners in the six-year-old LCC is a sure sign Japan's biggest full-service airline group wants to strengthen its position in the budget sector.

At Jetstar Japan, jointly owned by Japan Airlines (JAL) and the Qantas Group, the LCC is upping the competitive ante. Qantas Group CEO, Alan Joyce, said recently he was very focused on new means for Qantas to extract profit from the business. "We think Japan is one that is the case. We are adding a significant amount of capacity in the Japanese market," he said.

Profitable Jetstar holds 53% of the domestic LCC market in Japan. "It has the best brand in Japan for low-cost carriers and the best customer service. There are so many opportunities for us up there," he said.

ANA HOLDINGS chief executive, Shinya Katanozaka, said Peach's shareholders decided on consolidation as the best way to accelerate the growth of Osaka-based LCC.

"Since Peach launched in 2011, it has become a driving force in Japan's LCC market. We are proud to support the acceleration of its growth across Asia. Peach is a key component of ANA HOLDINGS's strategy. It provides customers with greater travel choices, expands our network and enables us to better serve the increasing numbers of tourists visiting Japan,'' he said.

Nevertheless, Peach and Jetstar Japan won't have it all their own way. Five other LCCs - Solaseed, Vanilla Air, Spring Airlines Japan, Skymark and SkyFlyer - operate in the market.

Jetstar dominates Tokyo's Narita airport and Peach leads at Osaka/Kansai. Apart from increasing its holding in Peach, ANA HOLDINGS has equity in Solaseed and Skymark, although some industry analysts don't regard Skymark as an LCC, and ANAH fully controls Vanilla Air.

In an investor guidance note, SMBC Nikko Securities analyst, Hiroshi Hasegawa, said: "We take the move by ANA management as a positive step to bring a second major LLC under its wing, which would give it more leverage and flexibility, including a possible Peach merger with Vanilla."

While growth is forecast for the sector, OAG said there also are reservations about forecast market expansion. Overall capacity growth in Japan moderated last year and OAG questioned the ability of LCCs to stimulate travel in the mature Japanese market.

"LCCs are either 100% owned by ANA or JAL or these two carriers have a equity stakes in them. This acts to effectively put a brake on aggressive LCC expansion, given the downward pressure on fares that LCC growth causes and the potential impact of their presence on the dominant full service carriers in the domestic market. In the last year, growth has stagnated and this may continue."

> **Unlike the domestic market, characterized by Japan's dominant carriers which, in one guise or another, have a strong grip on capacity growth, Japan's international capacity seems set to continue to grow apace, driven by competing foreign carriers**
>
> OAG report on Japanese low-cost carrier growth

The only LCC operating in Japan that is not linked to ANA or JAL is Spring Airlines Japan, a subsidiary of Chinese budget carrier group, Spring Airlines. Spring Airlines Japan has a relatively small domestic market share, but its Mainland parent's goal is to double passengers carried between Japan and China by 2022, at a rate of 1.25 million passengers a year.

Peach, the third largest LCC in Japan, has committed to purchase 10 A320neo and three A320ceo to add to its fleet of A320s. By doubling its fleet, Peach may have international routes in mind for the new aircraft, rather than servicing domestic destinations.

OAG said international capacity would continue to strengthen, especially among LCCs, given average annual growth of LCC capacity has been 55% since 2010. Last year, International LCC capacity expanded by 51% and four LCCs entered the market. However, less than a quarter of low-cost capacity - just 22% - is operated by Japanese airlines. Peach is the largest LCC flying international routes to and from Japan, with a 12% share of low cost seats and capacity expansion of 44% in 2016.

The next largest international LCC in Japan is South Korea's Jeju Airlines. Along with other South Korean airlines - Air Busan, Jin Air, T'way Air and Air Seoul - they operate 29% of LCC seats to and from Japan. Jeju Airlines achieved bigger growth than Peach, with 45% more seats in 2016 than it flew in 2015. ■

NEWS

Sydney Airport CEO quits ahead of second airport decision

Sydney Airport has set about finding a replacement for long-serving CEO, Kerrie Mather, after she put in her resignation to airport owner, Macquarie, on March 27. Mather, who has had a long and successful career at Macquarie took on the Sydney Airport job in 2002. Her decision to depart was made at a crucial time for the investment and finance group.

On May 8, or earlier, Macquarie must inform the government if it will, or will not, take up its option to build Sydney's second airport at Badgerys Creek in the western heartlands of the city. Influential investors have said it would be uneconomic to build the A$5 billion airport without government assistance.

Mather has been quoted as saying that private development of the second airport without government assistance was "a deeply uneconomic investment proposition". "It would be decades before you would see reasonable cash flows on a very significant outlay," she said in a report in the Australian Financial Review. Mather will remain as the airport's CEO until a replacement has been found. ■

Trump's domino effect in Gulf

The U.S. and British ruling that banned passengers from several Gulf and North African countries from carrying portable electronic devices, except for smart phones, on flights to the U.S. and the U.K. is feeding unease at airlines that fly to North America and the U.K. from the effected countries.

Dominic Lalk reports

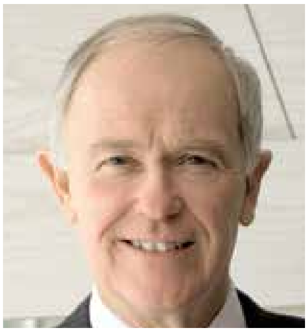
The British and U.S. governments astonished the world in late March when they declared passengers departing or transiting through Abu Dhabi, Doha, Dubai, Kuwait City, Casablanca, Cairo, Amman, Istanbul, Riyadh and Jeddah would be forbidden from carrying electronic devices larger than smartphones on flights to the U.S. and the UK until October 14.

The decision, attributed to fears terrorists could plant explosives in larger devices, left airlines scrambling to implement the ruling and travellers wondering what to do with their laptops, tablets and cameras.

One unanswered question is why the U.S. ban covers several countries that the U.K. ban does not. Four countries included in the U.S. list – the United Arab Emirates, Qatar, Kuwait and Morocco – are absent from the U.K. restrictions.

The difference is "a mystery", Emirates president, Sir Tim Clark, said. "It seems the British government regards our secondary screening methodologies as best in class, particularly as they have audited our procedures and security training on an on-going basis," he told CNN.

"To suggest that Dubai does not have equal capabilities or better than the Europeans, the Americans and the Asians in terms of search, interdiction



and surveillance, I find amazing. The Department of Homeland Security (DHS) and TSA also regard our procedures as excellent. We have coordinated and worked with them since we began flying to the U.S. in 2004."

"Our decision to implement additional security procedures at selected airports was based on our assessment of the threat environment and our mission to protect air travellers from the threat of terrorism," said acting deputy assistant secretary for the DHS, David Lapan.

The three gulf majors have found themselves in an increasingly tight spot since President Trump announced his first travel ban in January. "The first U.S. travel order saw the booking velocity fall by 35% overnight. The effect was instantaneous," Clark told Orient Aviation in Berlin last month.

"I am concerned. It's the tone of it. We have brought millions of Muslims to the United States, but now they may not feel welcome. They may look at going on holiday elsewhere. When we will recapture the original booking curve is anyone's guess."

Emirates is expected to present a sobering balance sheet to investors this year after it made a record profit of $1.9 billion 12 months earlier. Its revenue is said to have tumbled by more than 75% or worse, as nobody can predict the impact the U.S. electronics ban will have on the gulf carriers' premium passengers.

"We used to have one of these business-damaging events once a year, but now we have them more than once a month," Clark said after Trump announced the electronics ban.

Emirates can take comfort from the fact that its super-connector rivals in the Gulf also are hurting. Turkish Airlines has suspended flights on 22 routes, mothballed 30 planes and deferred deliveries. Industry analysts have predicted the carrier will report its first annual loss for a decade. Qatar and Etihad also may end up in the red.

In a March 25 statement, Etihad Airways sought to reassure passengers after the electronics ban was announced. "All Etihad Airways U.S. flights have mobile and WiFi connectivity, together with power and USB points at every seat, enabling guests to remain connected throughout their journey with mobiles and smart phones," it said. A comprehensive IFE suite of movies, live TV and Sports and well as games and music in every seat means "guests are able to keep themselves busy throughout their journey without the need of a laptop or tablet", the airline said.

Travel data consultancy, ForwardKeys data, said demand for travel to the U.S. had flattened, with flights to and from the Middle East the hardest hit. International net bookings immediately dropped 4% after Trump's initial travel ban, while forward bookings from the Middle East to the U.S. declined by 10% year-on-year.

Also, bookings from the U.S. to the Middle East and South Asia have plummeted by 25% since the travel ban was first announced and have stayed that way even though the U.S. courts have declared both the first and the revised travel bans to be illegal.

Emirates' Clark said: "There might be a contagion effect. Other European countries may take a view, as may the Asian countries," he said.

Trump also is calling for radical change in the funding of U.S. aviation security. Under the administration's plan, the overwhelming majority of the funding burden for security at U.S. airports would be shifted from the federal government to airline passengers and state and local governments, which would make flying more expensive and most likely, riskier. ■

IS TRACKING ON TRACK?

On March 8, 2014, the world was shocked to learn that Malaysia Airlines flight MH370, a sophisticated jet aircraft with 239 crew and passengers on board, had disappeared into thin air. To ensure such a tragic accident would never be repeated, new aircraft tracking rules will come into effect in November next year.

Tom Ballantyne reports

Asia-Pacific airlines and air navigation service providers are among the earliest adopters of the technology necessary to conform to the International Civil Aviation Organisation's (ICAO) upgraded aircraft tracking regulations.

The latest Asia-Pacific airlines to lock in a deal that will track their fleets anywhere and at any time in the world are South Korea's Asiana Airlines and its budget subsidiary, Air Busan.

In February, they signed up to install Rockwell Collins' Arinc MultiLink aircraft tracking service, which brings together multiple data sources to report the location of a commercial aircraft anywhere in the world, particularly over remote land and oceanic spaces.

"Proactively tracking our aircraft ensures we have the most up-to-date information to manage our complex flight operations," said IT service manager of Operations Control at Asiana, Kyungsuk Jun.

"We are anticipating the seamless integration of Rockwell Collins' Arinc MultiLink data feeds into our situational display system will enable us to track our aircraft anywhere in the world."

Asiana and Air Busan are the latest of the region's carriers to ensure they will meet ICAO's November 2018 deadline for more frequent monitoring of the global airline fleet. Since the 2014 disappearance of MH370, carriers worldwide have been moving towards meeting new ICAO rules on tracking.

From that date, all aircraft must be tracked every 15 minutes. In addition, from January 2021, they must have systems that will autonomously transmit an aircraft's position at least once every minute when it is in distress.

Nearly all the region's major legacy carriers either have met the upgraded tracking standards or have ordered systems to conform to the ICAO deadline. Many airports and Air

Navigation Service Providers (ANSP) across the region also are well ahead of schedule in upgrading their tracking capabilities.

Hundreds of the latest generation of jets scheduled for delivery - from the A350 and the A320neo to the B787, B777 and B737 MAX families- are being assembled with the required equipment on board, although some tracking systems will require additional hardware to be installed in time for the implementation of the ICAO standard.

> Airlines choose their providers. Finding a cost effective system that meets the new ICAO regulations and also accommodates rapid developments in tracking technology is a challenge

The Civil Aviation Authority of Singapore, in partnership with Aireon, announced as far back as 2015 that it would commence operation of an automatic dependent surveillance-broadcast (ADS-B) system that uses satellites to monitor all flights in real time.

The Indian government instructed its airlines to track planes in real time in 2014, soon after MH370 disappeared. Inmarsat has been working with Airservices Australia and Qantas and Virgin Australia to develop an operational concept for the use of Automatic Dependent Surveillance – Contract (ADS-C) satellite technology over Australia's oceanic regions. Airservices Australia was the first ANSP to trial the ICAO standard, using Inmarsat's global flight tracking service.

Airlines choose their providers. Finding a cost effective system that meets the new ICAO regulations and also accommodates rapid developments in tracking technology is a challenge. Also, the tracking market is highly competitive as existing and entry companies strive to lock in customers for their systems.

What is available now or soon will be?

Aireon, a subsidiary of satellite operator Iridium, announced last month that Thales has officially begun the testing and validation of its space-based ADS-B data. The start of data validation marks a major milestone for the efforts of Aireon and Thales to successfully integrate space-based ADS-B into the TopSky–ATC automation platform.

The Aireon service will be operational in 2018, shortly after the completion of the Iridium NEXT satellite constellation. In January, the first ten Iridium NEXT satellites carrying the Aireon ADS-B hosted pay load were successfully launched from Vandenberg Air Force Base in California on a SpaceX Falcon 9 rocket.

The constellation will consist of 66 operational low-Earth-orbit satellites that will provide global coverage. The service also will deliver to ANSPs global aircraft surveillance capability. The system will reduce aircraft operating costs by determining the most efficient flight paths for airlines en route to their destinations.

"We have been working strategically with Thales for over two years to implement a robust third party data validation set of processes and procedures," said Aireon chief executive, Don Thoma.

"Thales is a leading air traffic management automation platform provider and we want to ensure that space-based ADS-B will be incorporated seamlessly into the system. Thales will have a direct connection to our service delivery point and will be ready to go live with the Aireon data when we are operational in 2018."

Asiana's newly ordered system, in addition to utilizing Rockwell Collins' proprietary high-frequency data link (HFDL) performance data, merges ACARS position reports, ADS-C, ADS-B, ASDI radar data and EuroControl position information.

Arinc MultiLink is designed to receive notifications when an aircraft has unexpectedly stopped reporting positional data or when it has deviated from its expected flight path.

"As a carrier that focuses on providing our passengers with the lowest airfares possible, we find Arinc MultiLink to be a highly economical solution for global aircraft tracking because it did not require us to add on board hardware on our aircraft," Air Busan Operations Control Center leader, Hyeonmin Lee, said.

Another flight tracking company, Texas-based FlightAware, has partnered with Aireon. It has announced its GlobalBeacon tracking system, using 81 ADS-B receivers aboard a constellation of satellites last year.

"This is the most significant advance in flight tracking since radar was invented in World War II and will soon provide the first and only truly global flight tracking system, including coverage over the North and South poles as well as every ocean and every desert in the world," declared FlightAware chief executive Daniel Baker.

> For airlines, whatever the initial cost, there will be a silver lining. A study released at the World ATM Congress in Madrid in March said satellite cockpit communications (satcom) had saved airlines more than $3 billion in the last 15 years

He said the system meets the long standing challenge of "getting various pieces of technology together" to meet the needs of a wide range of aircraft operator customers, who will be able to incorporate the new "near real-time" tracking capability into their operations without any equipment upgrades.

Airline-owned communications and IT provider, SITAONAIR, has been in the aircraft tracking sector since 2014 with its AIRCOM Server Flight Tracker solution. The system allows airlines to track aircraft

movements by merging SITAONAIR's airline dispatcher centre system and airline operations centre system (AIRCOM) Server, with its Future Air Navigation System (FANS) ground application, which is available to ANSPs.

The advantage of the FANS system is it has been installed on large numbers of airliners, which makes it less expensive than other offerings.

In 2016, Panasonic Avionics announced it would offer global tracking to all its Satcom customers that would "seamlessly enable flight tracking on more than 1,500 aircraft. We expect to extend this capability to above 3,500 aircraft in the short term," it said.

Last December, the U.S.'s Spire Global announced its entry into the aircraft tracking market because of technology available from its constellation of satellites monitoring maritime traffic and weather patterns.

Spire Global said it could add aircraft on its tracking capability by installing additional sensors on its future satellites. Spire expected to launch 25 satellites carrying ADS-B payloads by year end with 50 to follow in 2018. It now operates 16 satellites. Although it did not disclose pricing for its ADS-B service, it indicated it would be less expensive than some competitors.

Innovative New Zealand satellite and cellular communication company, Flightcell International, unveiled its next-generation tracking technology at a helicopter-focused Expo in Dallas, Texas last month.

Described as high-frequency low-cost tracking using Internet Protocol (IP) over cellular broadband, the company said it offers more precise tracking than satellite rivals by dramatically increasing the number of GPS positions sent from an aircraft.

This is achieved at a significantly lower cost than traditional tracking. Cellular IP Tracking uses cellular broadband data services and IP routing instead of cellular SMS or satellite data services.

When out of cellular range tracking automatically switches to an Iridium satellite and the reverse applies when a cellular network is available. When tracking via satellite the frequency of the position points automatically decreases to keep costs down.

Other participants in the global flight tracking system market are SkyTrac Systems, FlightStats, Spidertracks, Blue Sky Network and FLYHT.

Industry experts caution that upgrading in tune with technological advances is challenging.

Putting a new tracking device on an aircraft, if that is necessary, does not happen quickly because additional equipment must go through procedural and regulatory processes before it is validated for installation.

Another issue to note is that new tracking equipment will need battery back-up because the tracking technology already on aircraft operates from the airliner's main power source.

There are no specific figures for the value of the aircraft tracking business, but the global flight tracking system market is expected to increase in value by up to 10% annually over the next decade.

For airlines, whatever the initial cost, there will be a silver lining. A study released at the World ATM Congress in Madrid last month said that satellite cockpit communications (satcom) had saved airlines more than $3 billion in the last 15 years.

Conducted by aviation consultancy, Helios, on behalf of satcom service provider, Inmarsat, the study said satcoms improved safety and airline operating efficiency and that these benefits applied particularly to carriers flying over vast oceanic air spaces.

A single air traffic control (ATC) benefit mechanism - reducing longitudinal separation minima from 100 nautical miles to 30 nautical miles - saved US$890 million between 2001 and 2016, said Helios. More reliable communications and tracking produced the savings. ■

ICAO's date line for upgraded aircraft tracking

International Air Transport Association (IATA) director flight operations, Atholl Buchan, said many airlines already track their aircraft through a variety of means.

"IATA, airlines and other stakeholders have worked with ICAO to develop a tracking standard and accompanying performance-based Standards and Recommended Practices," he said.

"These become effective in July 2017 and will be applicable from November 2018, at which point airlines will be required to track their aircraft in oceanic airspace (and recommended elsewhere) at a time interval of every 15 minutes.

"In a few years, new systems and technology, if adopted universally by ANSPs, will allow for global surveillance coverage. The adopted standard takes this into account."

Unfair and unreasonable?

Britain's aviation regulator and five global airlines are in dispute over compensation payments for passengers who missed connecting flights because of delays.

By Tom Ballantyne

Five airlines, including Singapore Airlines (SIA), have been accused by the UK Civil Aviation Authority (CAA) of failing to pay compensation to passengers who missed their connecting services because of flight delays.

The CAA said compensation must be paid to passengers if they arrive at their final destination more than three hours later than scheduled.

CAA director of consumers and markets, Richard Moriarty, said he was disappointed with the stance of SIA as well as that of American Airlines, Emirates Airline, Etihad Airways and Turkish Airlines.

"Airlines' first responsibility should be to look after their passengers and not to find ways to prevent passengers from upholding their rights," said Moriarty. "It's disappointing to see a small group of airlines continuing to let down passengers by refusing to pay them the compensation to which they are entitled."

Airlines have been protesting about passenger compensation rules since they were introduced by the European Union (EU) in 2004. European Commission Regulation 261 determined compensation must be paid for certain types of passenger delay.

The regulation was tested and upheld in passengers' favour

in decisions by the European Parliament, the European Courts of Justice and in 2014, at the UK Appeal Court. However, every year, thousands of disgruntled passengers sue airlines, or threaten to sue, because they have not been compensated for delayed journeys.

The European law specifies that passengers on long-haul flights are to receive $316 if their flights are delayed for three to four hours and $632 if their journeys result in delays of more than four hours.

For long-haul Asia-Pacific carriers, operating wide-body jets with hundreds of passengers on each service, this is big money. Delays caused by bad weather or strikes do not attract compensation claims.

Emirates Airline is involved in a case that is proceeding all the way to the UK Court of Appeal after it refused to pay flight delay compensation to some of its passengers. And the CAA has alleged SIA's policy is to put compensation claims "on hold" if they involve connecting flights. If the Appeals Court finds in favour of the CAA, carriers face fines that will be greater than the disputed compensation claims.

"Singapore Airlines has been in contact with the UK CAA on this issue for some time. There is a lack of clarity in the law, which is the subject of ongoing litigation before the Court of Appeal. We will continue to work with the CAA to resolve our differences with respect to the application of EC Regulation 261/2004 to missed connections," an SIA spokesman told Orient Aviation.

Emirates strongly denied the CAA claims, but the UK body said its complaint data showed the most criticized airline for non-payment of compensation for connecting flights was the Dubai-headquartered carrier.

"We will rigorously defend our position, and challenge the blanket application of EC 261 to every situation, without consideration of context or the safety of our passengers. Many flight delays are caused by factors that are not the airline's responsibility, such as inclement weather, bird strikes and airport closures," it said.

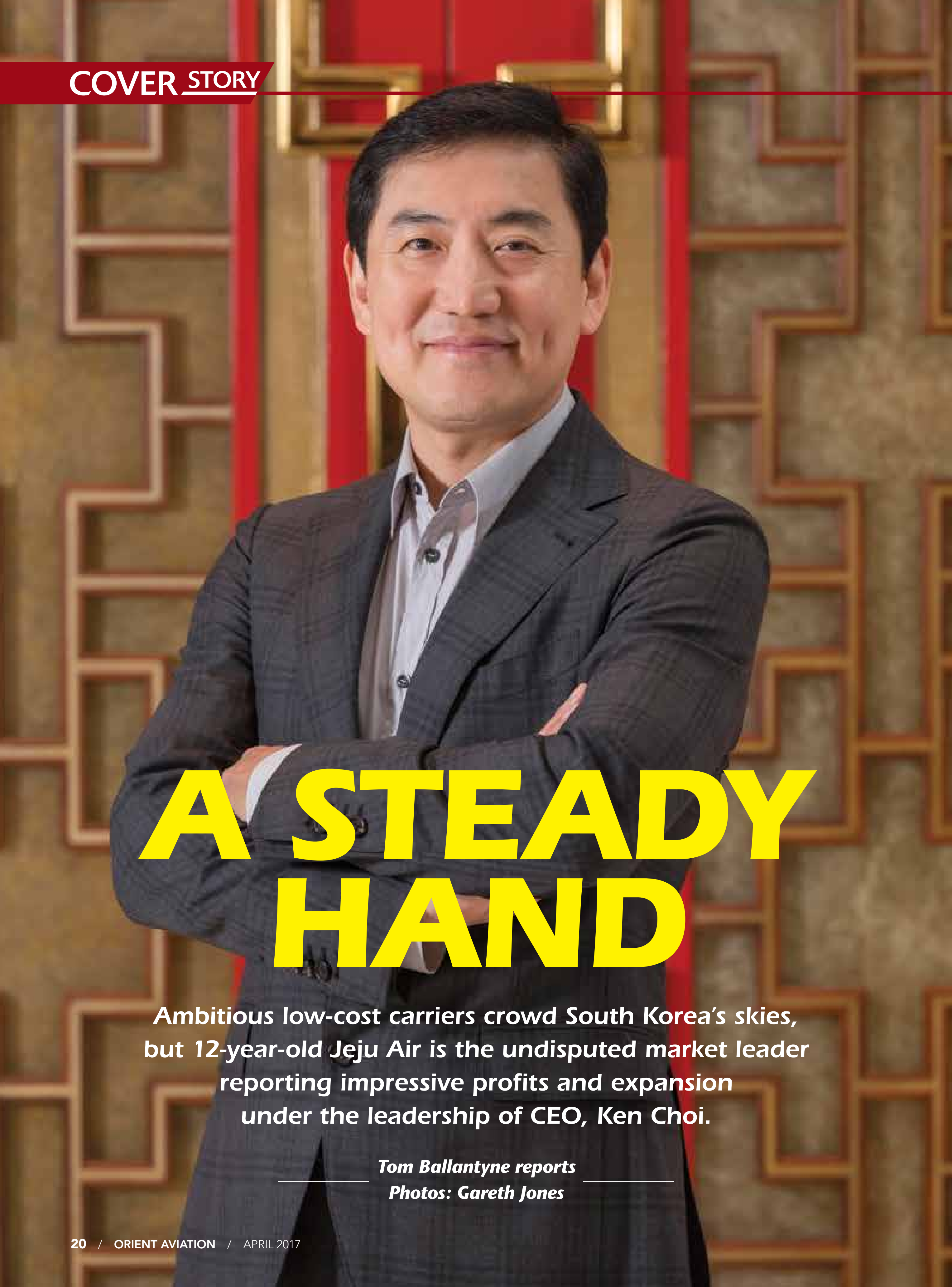
Gulf neighbor, Etihad Airways, said: "Before even completing the dialogue, we find the CAA's approach wholly unprofessional and unacceptable to publicly blame Etihad Airways for infringements to passengers' rights we unreservedly deny. Etihad Airways will, of course, abide by any decision of the Court of Appeal."

The CAA conducted a "comprehensive review" of the flight policies of the 31 top carriers flying into the UK. "The airlines confirmed to the CAA they do not pay compensation to passengers who experienced a delay on the first leg of a flight that caused them to miss a connecting flight and, as a result, to arrive at their final destination more than three hours late. The airlines' refusal to pay compensation in these instances fails to meet the legal passenger rights requirements for flight disruption," it said.

It focused on airlines' care and assistance during disruption, compensation for missed connections, denied boarding (when passengers are bumped from their original flights) and downgrading (when passengers are downgraded to a lower seat class).

"Where we see evidence of passengers systematically being denied their rights, we will not hesitate to take the necessary action to ensure airlines change their policies and their customers get the assistance they are entitled to," Moriarty said.

In 2015, the CAA took similar action against Aer Lingus, Jet2 and Wizz Air. ■



A STEADY HAND

Ambitious low-cost carriers crowd South Korea's skies, but 12-year-old Jeju Air is the undisputed market leader reporting impressive profits and expansion under the leadership of CEO, Ken Choi.

Tom Ballantyne reports
Photos: Gareth Jones

When the U.S. government last month reacted to recent missile tests in North Korea by preparing for deployment of a Terminal High-Altitude Area Defense (THAAD) battery in South Korea, it was a body blow to the north Asian nation's travel industry.

Within days of the North Korean tests, the Chinese National Tourism Administration imposed a ban on "zero dollar" shopping tours to South Korea and Mainland Chinese travel agents reported thousands of cancellations as tourists re-booked their trips to Japan or Southeast Asia. South Korea's southern resort island of Jeju, which draws some three million Chinese tourists annually, is bearing much of the brunt.

"That's a temporary setback," the CEO of Jeju Air, Ken Choi, told Orient Aviation in an exclusive interview in Hong Kong last month. "The Chinese market has always been challenging. At the same time as it has been an opportunity for us.

"Fortunately, or unfortunately, we will see. For now, Chinese business accounts for only 5% of our schedule. We were thinking to run more charter business this year, but that plan might have to be set aside for a while until things settle down."

The unflappable 51-year-old's response to the sudden fall off in his carrier's bookings reflects the carrier's steady approach to barriers thrown up on its path to expansion. And there are always some. In late March, China denied Jeju Air's application to add flights from Seoul's Incheon airport to Jinan and Yantai from this month to October, although Mainland regulators did re-approve existing services to Weihai, Jinan and Yantai.

"We are focusing more on Japan," he said. The challenge is to adjust ourselves quickly." Jeju Air, majority owned by household products conglomerate, Aekyung Industrial Company, already is the leading LCC among Japanese and Korean budget airlines operating between the two countries.

"We are running to six major cities and are adding some secondary cities this year. Most importantly, we are trying to build frequencies and capacity into our major markets where we think we have a leadership, such as Kansai, Narita and Nagoya. The market is very naturally suited to LCCs and also is ideally distributed between inbound and outbound carriers. Depending on the currencies, they fill each other's seats. So that works pretty well for us for now," Choi said.

Founded in 2005 and launched in 2006, Jeju Air was Korea's first LCC. Banker Choi was appointed as CEO in 2012 and led the airline's successful stock market debut in November 2015. It has been a perennial profit-maker.

"It was tough for the airline in the beginning, but I have been serving the carrier for almost five years and it has been a very lucky ride," he said. "My previous jobs were mainly in financial services, venture capital and fund management. I had not worked in an airline. I started off with financial engineering and distribution, but at the end of the day the airline business is very much focused on operations.

"The flight office still accounts for 70% of the business. Making the product stable and uniform across the board to meet customer expectations is very important and hard to deliver. We were lucky enough to have financial resources to invest at least 2% every year in IT technology. That put us in a relative position of leadership in IT. So we just keep executing and we have been doing better."

Jeju Air flies 28 B737-800s. Passengers carried have increased from 5.55 million in 2014 to 7.19 million in 2015. Last year, the numbers grew to 8.6 million with around 10 million expected this year. It has carried more than 40 million passengers in its lifetime and expanded to 150 flights a day to 40 domestic and international destinations.

> **Where we can compete, we compete. Where we can't, we don't. We try to move quickly and that formula has been working well for us. We always try something different and disruptive so that Korean Air or Asiana cannot fly as a monopoly. We have a winning formula not only from our pricing but from other different products. So the customers like us**
>
> **Ken Choi**
> Jeju Air CEO

Choi said the carrier had forecast a fleet of 40 aircraft by 2020, but that has been revised to 50 airplanes and 65 routes in the next three years. "That [forecast] gives us the economies of scale to provide a very stable cash flow. So I think it will be very difficult for our competitors to come in," he said.

Until now, the carrier's fleet was fully leased, but this strategy has changed. In January, the airline ordered three next generation B737-800s.

Choi told Orient Aviation: "This acquisition is a major step in our strategy. We fully understand the benefits of owning and operating airplanes. It drove our decision to purchase these airplanes. We are confident this order will allow Jeju Air to strengthen its position as a leading low-cost carrier in Northeast Asia."

In 2015, Jeju's net profit jumped 47.3% year-on-year, to $38.8 million, driven in part by historically low oil prices and supported by increased inflight sales and network expansion. The airline's profit margin hit an all-time high of 8.5%, well ahead of the industry's global average.

Last year also produced positive results, when revenue rose to $669.3 million and the airline's reported profit was $47.94 million. Its financial position is extremely healthy, with equity rising from $32.2 million in 2012 to $239.3 million in 2016. Analysts forecast revenue of around $814.5 million this year, increasing to $945 million in 2018, with profits in 2017 of $51.3 million and nearly $59 million in 2018.

Regardless, Jeju will take an LCC leadership position and we hope to remain the cost leader. Our objective is to dictate that market as an LCC leader. I always see challenges as an opportunity. Market limitations and macro situations are challenging, but we can deal with it

Ken Choi
Jeju Air CEO

Jeju Air's results are being achieved in a very competitive sector of the market, including several LCCs with powerful backing. South Korea is served by six budget airlines. Jin Air is owned by Korean Airlines and Air Seoul and Air Busan are controlled by Asiana Airlines. Lesser players are Eastar Jet and T'Way Air, Planned LCC, KAIR Airlines, recently ordered eight A320ceo and has said it intended to launch services next year.

Another hopeful, Fly Yangyang, has been refused an air operators certificate, but it intends to reapply for permission to fly as soon as allowed. Nambu Air also has been set up, but no launch date has been announced.

"I understand new entrants might eventually have AOCs and enter the market but good luck with it," said Choi.

Existing LCCs have 60% of South Korea's domestic market and Jeju has 15% of the budget sector. Of that market share, 22% is international traffic with analysts forecasting that foreign routes will soon make up 30% of Jeju's traffic. For January this year, international passengers carried by South Korean LCCs soared 48.3% year-on-year.

Choi said Korean Air and Asiana have tried to protect their international businesses by placing their subsidiary LCCs on some routes, which Choi said had been an effective strategy. "Some of the routes where we thought we had leadership became kind of shaky," he said.

"But it's in transition. It's very important for us to keep our market and leadership on certain routes and we have to be more aggressive in developing new routes that are profitable to us."

Apart from China and Japan, Jeju flies to Hong Kong, Macau, Kota Kinabalu, Cebu and Manila in the Philippines, Taipei, Bangkok and Phuket in Thailand, Hanoi and Danang in Vietnam and Guam and Saipan.

The domestic market is so crowded and finite - only six of Jeju Air's 40 routes are domestic – that international expansion is essential. It is why Choi and his team are considering long-haul low-cost operations.

Market limitations, particularly the country's relatively small domestic market, meant Jeju Air had to look to "expand beyond a 4,000km radius unless there is some kind of a big break like open skies with China or North Korea unification", Choi said.

"It would be an opportunity, but we can never rely on that. In a three-year timeline we have to ask ourselves what will be the next phase of our growth engine?"

It is why Jeju is thinking about a long-haul strategy, he said. "What kind of fleet? What kind of training systems? If we address this what would be the most risk-managed way to deploy? We have just started addressing these questions with our top team," he said.

But he stressed the airline wanted to be cautious about going long-haul. "There is no proven success formula in the long-haul LCC business. We have to address the cabin product very smartly. We have to structure the cost smartly to ensure it can be a profitable business," he said.

Choi saw Southeast Asia as important market, but he conceded that on routes longer than four hours it was very difficult to compete with budget carriers such as AirAsia and Cebu Pacific.

"They are very respectful cost leaders so we have to prepare ourselves. Scale and partnership are the answers. Instead of fighting each other we would rather work with them."

This approach is the reason that Jeju was a founding member of the groundbreaking LCC Value Alliance, along with Cebu Pacific, Nok Air, NokScoot, Scoot, Tigerair, Tigerair Australia and Vanilla Air.

Set up last year, it is part of the world's first dedicated multi-carrier booking system created by Air Black Box (ABB). The booking system allows LCCs, for the first time, to interline and promote each other's brands.

Eventually, it is expected to bring significant passenger gains for each of the carriers, although it was not happening overnight. The technology is still being integrated into the system. Choi said this year's traffic gained through Value would not exceed 1% of total sales.

"We should be realistic in our expectations. Hopefully next year, once we promote the Value alliance, that will rise to 3% and then 5%. It will gradually expand. This is very much an investment in the future," he said.

He is interested in other partnerships that will bring in feeder traffic to Jeju, even with full service carriers and particularly airlines that fly trans-Pacific routes. South Korea and the U.S. have an open skies agreement and Choi believed his country is ideally situated geographically to feed traffic from North America through to Southeast Asia.

His problem, at the moment, appears to be size. Jeju Air approached oneworld alliance member, American Airlines, about a partnership but it came to nothing. "We are still a small carrier so the feedback we receive is they are not ready to pay attention to us. We are not a priority to them. We recognize that. We need some time to prepare ourselves. But we clearly see there might be another market that effectively competes with the legacy airlines enjoying the cross trans-Pacific market. If there is an opportunity (to partner with a legacy carrier) we will certainly take it."

Choi said Jeju Air has been very fortunate to have exceeded its business plan every year by a certain percentage so it meets shareholder and employee expectations. "That's a very strong signal to the market and very strong confirmation to the people who invested in us. We feel very fortunate," he said.

"On the other hand, the world is changing very quickly. We have to be nimble. Our size has doubled in terms of employees and turnover, which adds more complexities in distribution and operations. So execution and nimbleness is critical if we are to maintain our competitiveness against the market players." ■

Honed by finance

Jeju Air chief executive, Ken Choi, has broad international business experience and perspective from his cross-border investment and consulting career. Before he moved to Jeju Air, he had a successful career at global financial institutions and venture capital companies including Citigroup, Sit/Kim International, Bokwang Venture Capital and East Gate Capital Management.

He is no stranger to government, as he served as president of the Korea Game Industry Agency (KOGIA), the authority that governs and promotes the digital media industry in South Korea. Running KOGIA ranks at vice minister level in the nation's Ministry of Culture, Sports and Tourism (MCST). A U.S. certified financial analyst, Choi holds a Master's degree in Engineering Management from Stanford University and a Bachelor's degree in engineering from Seoul National University.

North Asia conflicts hurt region's carriers

By Dominic Lalk

Escalating tensions between China and South Korea over the deployment of a U.S. Terminal High Altitude Area Defense (THAAD) missile defence system in South Korea are taking their toll on the region's airlines.

Travel curbs imposed by a disgruntled Beijing on Mainlanders booked to visit South Korea are likely to result in more than US$5 billion in immediate revenue losses at South Korea's airlines and travel firms, Goldman Sachs has forecast.

The China National Tourism Administration ordered Mainland tour operators to stop selling tours to South Korea from March 15 or face "severe punishment". China is South Korea's most important inbound tourism market. More than eight million Chinese travellers visited the country in 2016. Mainland Chinese travellers account for more than 85% of tourists on the island resort of Jeju.

When tensions first flared in the final months of 2016, international passenger arrivals on Jeju declined from 1,661,777 in October to 1,376,446 in November, reported Sabre's Airline Solutions practice. Carriers in China and South Korea immediately adjusted capacity from 2,622,012 available seats in October to 2,249,575 in November.

Since then the situation has worsened. From March 15, many online travel agents such as China's Ctrip have pulled South Korean offerings from their sites and both Mainland and South Korean carriers have been forced to reduce their networks.

South Korea's budget carriers have long reaped the benefits of undiminished Mainland tour operator demand, both through aggregate bookings on their scheduled flights or chartered services. These golden years have evaporated, at least for now.

South Korean LCC, Eaststar, said it would temporarily halt flights from Cheongju to Harbin, Ningbo and Jinjiang from March 15 to October 28 because of "worsening relations". T'Way Airlines said it would "significantly" curtail its network to the Mainland and Jin Air, a Korean Air subsidiary, has cancelled services from Jeju to Shanghai and Xian. Jeju Air said its request for charter flights to Ordos in Inner Mongolia in March was rejected by China.

Spring Airlines, the Mainland's largest LCC, cancelled flights from Ningbo to Jeju due to "changing market conditions". A Spring spokesman said the tourism and airline industries would be "markedly affected" by the on-going situation between China and South Korea and added more adjustments to its schedule remained likely.

China Eastern Airlines has terminated services from Ningbo to Jeju and Cheongju from March 15 and is considering more cutbacks. Okay Airways has cancelled its Nanjing-Jeju route.

At press time, 22 carriers operated Sino-South Korea flights. The biggest players in the market are Asiana Airlines (22%), Korean Air (20%), China Eastern Airlines (15%), and China Southern Airlines (12%).

As a result of these "sensitive issues burdening the aviation industry in Korea", Asiana told Orient Aviation it would pull "most" of its wide body capacity that was scheduled for flights between China and South Korea and would redeploy to Japan and Southeast Asia.

Under its initial contingency plan, the Star Alliance member said it would cancel 90 flights on 12 routes from March 15 to April 30, including 21 frequencies on the leisure-heavy Incheon-Guilin route, 16 flights between Incheon and Dalian, ten on the Incheon-Jinan route and eight services from Muan and Beijing and Jeju and Beijing, respectively.

South Korea's largest carrier, Korean Air, will eliminate 79 flights on twelve routes to China during the period, which is 6.5% of its Mainland capacity.

As political conflict escalated between China and South Korea, South Korean companies based in China have reported cyber-attacks, store closures and fines. State-controlled media in China has called for a boycott of South Korean goods and services. South Koreans have retaliated with their own boycott of popular Chinese products such as Xiaomi smartphones and Tsingtao Beer.

"Some people are automatically thinking, the current situation is not good, there is discrimination against us, so we shouldn't go. The recent actions of [the South Korean government] have hurt many Chinese citizens," said Che Shanglun, chairman of Xiamen Airlines. The airline boss said the carrier had 10%-20% fewer bookings on its flights to Seoul and Jeju since the crisis became more aggravated. ■

United's premium class rollout curtailed by troubled Zodiac

By Dominic Lalk in San Francisco

United Airlines' (UA) entry-into-service of its Polaris business class cabin proved more challenging than the Chicago-headquartered airline thought, said the airline's CEO, Oscar Munoz.

The airline is "not happy" about production delays at Zodiac Aerospace's UK facility, where its Polaris business seats are manufactured. The spat hit a new low when UA had to ground its two just-delivered -300ERs because it did not have seats for them. As it stands, the aircraft that operated the Hong Kong inaugural Polaris flight is only one of two airliners in United's fleet equipped with the new seat.

United Airlines debutted its B777-300ER on the Hong Kong-San Francisco route on March 27. The airline has 14 -300ERs on order and hoped to receive all of them by July this year.

Zodiac also was at the forefront of A350 delivery delays, which prompted a spat between Airbus and its A350 launch customer, Qatar Airways.

UA managing-director for Greater China and South Korea, Walter Dias, told Orient Aviation the decision to launch the B777-300ER and Polaris on the Hong Kong route was to up its ante against airlines serving the route. Cathay Pacific flies from Hong Kong to San Francisco up to three times a day.

United Polaris has 1-2-1 all-aisle access, a lie-flat bed configuration; an improvement

on the 2-4-2, B747-400 BusinessFirst product it is replacing.

Following the -300ER rollout, UA will equip its incoming A350-1000 and B787-10 fleets with the new premium class offering. The carrier's B767-300ERs and B777-200ERs will be retrofitted with Polaris by 2022.

Mystery still surrounds UA's A350 and B787 orders. Munoz has said the carrier should reconsider these commitments and perhaps opt for smaller aircraft because of overcapacity in the market. At the Polaris launch, UA declined to comment to Orient Aviation on the subject.

UA has lost its place as the largest carrier flying between Greater China and the U.S. Its Star Alliance fellow, Air China, overtook it this year. But the airline still offers more trans-Pacific services from Greater China to the U.S. than any U.S. carrier. It flies 100 flights a week between Asia and North America, excluding Canada.

The airline has added nine routes between the U.S. and the Asia-Pacific since 2012, which expanded its regional network by 19%. In China, it serves Beijing and Shanghai and has monopolistic routes to Chengdu, Xian and Hangzhou.

Western China was "one of the fastest-growing markets not only in China, but in the world", UA said, so attention must be paid to this market. Its B787s enabled it to serve "slimmer long-haul markets, making the development of interior China markets possible".

UA said its growth in China is strictly curtailed by the Chinese government. It codeshares with Air China on its Chengdu and Xian flights, but said additional partnership opportunities hinged on "regulatory approval".

Chinese bureaucracy also stands in the way of a fully-fledged United-Air China joint venture, the U.S. carrier said. "The current regulatory environment does not allow an immunized joint venture partnership, but UA continues to build on a "strengthened partnership" with the Mainland flag carrier.

Last year, it entered into a multi-year extension of its codeshare agreement with state-controlled Air China and created an executive board structure to enhance commercial cooperation, laying "the groundwork for a possible joint venture between our two carriers when these partnerships become legally permissible," UA said. ■

Inviting the digital shopper into the airline cabin

By Dominic Lalk in Berlin

Two Asia-Pacific airlines are among the four launch carriers for a new merchandising content platform that was unveiled at ITB Berlin in March.

Airbus and Routehappy announced at the travel fair that they had teamed up to launch a visual flight shopping tool to encourage travellers to make flight bookings based on the quality of an airline's cabin products rather than fares.

Other launch airline customers for Routehappy are Emirates Airline and the Lufthansa Group. The tool will be available through all sales channels, from direct to indirect and from online to offline, to showcase seat width, personal space, in-flight entertainment, connectivity, menus and jetlag-friendly ambient lighting.

The Routehappy rich data visual tool can accommodate a large amount of promotional content, including videos and images. An example is its ability to focus on a passengers' geographical location and feature limited-time promotions, such as lounge access for premium economy class passengers.

Cathay Pacific Airways general manager Europe, Neil Glenn, said: "with a very small amount of technological integration the Routehappy hub was able to leverage our media content library and share this content across multiple channels. We can show our customers what to expect when flying with Cathay Pacific and tailor that content to very specific flight criteria. Routehappy lets us differentiate our premium products. Without access to that rich content we could be in a very commoditised sales environment."

Atmosphere Research Group president and travel industry analyst, Henry Harteveldt, said: "Airlines that make this available stand to benefit by showcasing their differentiated products." Atmosphere data shows that 61% of business travellers and 53% of leisure travellers pay attention to the aircraft type when they fly and make their decisions accordingly.

Speaking to Orient Aviation in Berlin, Airbus head of market and product strategy, Bob Lange, said the latest generation aircraft stood out with passengers because of their quiet and more spacious cabins.

"But what's the point of putting these key attributes into a cabin if nobody knows they are there? It's not through the legacy GDS systems. They are coming from a time when all that mattered was journey time and price. This does not keep pace with the way we live our lives. We've become far more sensitive to what we are buying, particularly when we are more aware of it."

"From now on, passengers will be able to visualise, choose and reap the benefits of these new generations of aircraft and cabins whenever they fly," Lange said.

"At Routehappy, we have been thinking for many years that there is the problem of commoditisation in flight shopping. The hotel industry has done an extraordinarily good job at differentiating. They get consumers excited to buy their product. So should we in the airline industry," Routehappy CEO, Robert Albert, said at the Berlin launch.

"Our alliance with Airbus gives airlines an incentive to create and distribute rich content that is becoming a key feature in how we shop for flights."

The project looks and sounds like the International Air Transport Association's (IATA's) New Distribution Capability (NDC). Routehappy is full compatible with NDC.

SIA told Orient Aviation that the "Airbus-Routehappy initiative is about enriching the air travel shopping experience, empowering our customers with relevant product knowledge to help them make more informed decisions. This is very much at the heart of IATA's NDC project too, which is seeking to modernise airline distribution."

SIA senior vice-president for sales and marketing, Campbell Wilson, said "this important initiative" allows SIA to highlight its unique cabin products, including its customised full-flat bed seats in business class".

Lufthansa Group head of distribution, Xavier Lagardere said: "Routehappy supports the much-needed transformation of air travel retailing from commodity to feature-based shopping, by providing passengers with additional rich content." ■

Embraer lands in Silicon Valley

Brazilian-headquartered commercial and business aviation manufacturer, **Embraer**, is to establish innovation teams in Silicon Valley and Boston to explore opportunities in air transportation. The group, which began operations last month, plans to collaborate with startups, investors, academics and corporations and seek partnerships that enable new technologies and business models.

The innovations teams will be led by a **Global Business Centre** based in Melbourne Florida, where Embraer has an industrial, engineering and services facility, and will work with Embraer's engineers at the company's home base in Sao Jose dos Campos.

"A major transformation is unfolding worldwide and it has been accelerated by the evolution of artificial intelligence, robotics, virtual reality and autonomous vehicles. This is another step that Embraer takes as a key player in transforming global air transportation," said the **leader of the innovation program, Antonio Campello**.

"We want to integrate with the Silicon Valley and Boston communities and create value for transporting people and cargo through the world's largest innovation ecosystems," said **Embraer president and CEO, Paulo Cesar Silva**. Embraer invests 10% of revenue in R&D and improved industrial operations each year. Almost half of the company's income comes from innovation and improvements implemented in the last five years. ■

Boeing shakes up industry with car interiors partnership

Detroit's Adient, a global leader in automative seating, is to collaborate with **Boeing** in the design of more functional and comfortable aircraft seating. The 75,000 employee company will offer Boeing its expertise in design, craftsmanship, operational excellence and supply chain management.

"In our discussions with Boeing, we believe there is an opportunity for Adient to raise the bar on the aviation passenger experience, building on our leadership in the automobile seat market," **Adient chairman and CEO, Bruce MacDonald** said.

"Boeing is building commercial airplanes at record rates to deliver on an order backlog of more than US$400 billion," said **Boeing vice president and general manager, supplier management, Kent Fisher**. "We continually look for opportunities to offer more value to our customers and believe they would benefit from a wider range of options with more reliable, on-time performance in the airplane interiors and seating category."

The aircraft interiors market has an estimated value of US$21.7 billion by 2025. It is forecast to grow at a compounded annual growth rate of 4.3% for the same period. Adient outfits the interiors of 25 million cars a year. ■

Accelya and Mercator complete merger

Airline financial solutions provider, **Accelya**, and air transport software company, **Mercator**, last month completed their merger into a single entity and announced its new majority shareholder, private equity firm **Warburg Pincus**.

The combined group, which has 250 airline customers, offers complementary products and analysis to all sectors of the travel and transport industries. Its portfolio of products includes revenue accounting, management and assurance, cargo and shipping management, payment solutions, data analytics, commercial solutions and cost management.

John Johnston, the CEO of Accelya, is the **CEO of the new company. Jose Maria Hurtado is the combined group's Chief Financial Officer**. Warburg Pincus held majority control of Mercator before the merger. ■

China recycler buys aged B737-700s

Aircraft Recyling Internatonal Ltd (ARI), majority owned (48%) by **China Aircraft Leasing Group Holdings (CALC)**, received six aged B737-700s from **Xiamen Airlines** last month; the company's first old aircraft acquisitions. The Boeing airliners, which are between 16 and 18 years old, will be disassembled by the two-year-old company at a new build plant in northern China.

ARI, which was established by CALC along with linked companies **China Everbright Ltd** (14%), **Friedmann Pacific Asset Management** (18%) and **Sky Cheer International** (20%), has commenced construction of an aircraft disassembly centre recycling plant in northern China's Harbin, with part one of the facility to begin operating this year. It will have a hangar that can accommodate a B747 and the capacity to disassemble up to 20 aircraft a year.

ARI's old aircraft solutions include leasing, sale and leaseback, trading of aircraft components, teardown and disassembly MRO and aircraft conversions. ■

All Nippon Airways Trading partners with CPaT

All Nippon Airways (ANA) Trading has established a marketing partnership in the Asia-Pacific with U.S. training academy, **CPaT Global**. ANA Trading will market CPaT's distance learning solutions to airlines, flight training centres, universities and governments across the region. ANA Trading, set up in 1970, operates flight training and flight crew products, including simulator training academies, in Asia.

CPaT Global president, Brian Bergeron, said the Asia-Pacific is the fastest growing and least served market in the world. The combination of its products and ANA Trading's experience, relationships and distribution would introduce customers to improved training and safety and cost savings. ■

GE Aviation buys cloud based digital records company

GE Aviation has bought cloud-based digital records management company, **AirVault**, an acquisition that will provide web-based fleet maintenance records management in conjunction with GE's Configuration Data Exchange. The expanded capability will allow the collection of records and data across aviation companies and the IT systems they use to manage their fleets. AirVault has more than 40 major airline customers with data centre operations in Dallas and Oklahoma City.

It manages the maintenance records of 50% of the North American airline fleet and 20% of the global aircraft fleet. GE is organized around a global knowledge exchange, the **GE Store**, where each business shares and accesses the same technology, knowledge, market, structure and intellect. ■

Cebu Pacific signs on AFI/KLM E&M for A320 support

Cebu Pacific, the largest carrier in the Philippines, has contracted **Air France Industries/KLM E&M**, to provide component support for its A320 family fleet of 40 airplanes. Cebu expects to take delivery of 45 new aircraft from this year to 2021, which will increase the LCC's fleet to 85. The contract covers full component support and solutions and includes repairs and local pool access to maximize aircraft utilization for the carrier's A320ceos and future A320neos.

"We are extremely proud to number Cebu Pacific among our clients, and support the development of one of the most successful low-cost carriers in this fast growing market," said AFI KLM E&M. "This is our first agreement with Cebu Pacific and also our first component support contract in the strategic Phillipines market", said **executive vice president, Air France Industries, Gery Mortreux**.

Also in March, the European joint venture company signed a long-term support agreement with Vietnamese LCC, **Jetstar Pacific**, for its fleet of 14 A320s and secured a contract with **Cambodia's Angkor Air** for component support, MRO and pool access. The 10 airliner carrier, a Vietnam Airlines and Cambodian government joint venture, flies seven ATRs and three A320s. ■

Briefly ….

- *Beijing-based MRO, **Ameco**, has completed cabin modifications on 10 of **Air China's** A330-200s, as part of C-Check layovers for the airlines. The Air China (75%)-**Lufthansa German Airlines** (25%) joint venture achieved a turnaround average of seven days per aircraft for the modifications.*
- ***Hong Kong Aircraft Engineering Company (HAECO)** reported a net profit jump of 110%, or HK$975 million (US$125.65 million), for the 2016 year, largely on the back of the sale last June of its holding in Singapore Aero Engines Services Ltd (SAESL).*
- ***HNA Group**, the parent company of **Hong Kong Airlines**, intends to acquire a 25% equity in London-based **Old Mutual's US asset management unit** for US$446 million. Earlier in the month, it reached an agreement to buy 83% of white elephant facility, **Hahn airport** in Germany*
- ***Hong Kong Airlines**, through its wholly-owned subsidiaries, has purchased 51% of **SATS HK Ltd** and 35% of the **Asia Airfreight Terminal Company**. Both enterprises are based in Hong Kong.*
- ***GE's TRUEngine** program hit 25,000 enrollments last month from 200 airlines and lessors, a 25% increase over March 2016. The TRUEngine qualification process, launched in 2008, ensures that engine configuration and overhaul practices are consistent with **GE** and **CFM** engine manuals and other recommendations.*
- ***Lufthansa Technik's** induction cooking platform, which will allow fresh food to be prepared onboard quickly, has been cleared for take-off. Rice cookers and toaster modules are available for integration into the platform. The breakthrough design was developed with Germany's **hs2 Engineering**.* ■

Onboard WiFi determines airline customer loyalty

Onboard WiFi has been a promise rather than a reality for many airline passengers. Poor reception, slow transmission speeds and unreliability are common complaints. But as WiFi becomes a given in an airline's offerings, carriers are being forced to invest in entertainment systems that match passenger experiences on the ground.

Tom Ballantyne reports

The global inflight WiFi market is becoming crowded with new players and the reason is easy to explain. According to one research firm, Global Industry Analysts (GIA), the business is worth US$$1.85 billion. To prove how quickly it is growing, another consultancy, Persistence Market Research, said the sector could approach $5.5 billion in value by 2021.

Factors driving growth are increasing demand for connectivity on aircraft, rapid penetration of smartphones and other communication gadgets across all population demographics, the robust economies and new aviation sectors in developing regions, increasing Internet accessibility and inflight WiFi technological advances.

Also passenger mobility, more personalization of services offered and increasing interest in WiFi services as a revenue stream for airlines are fueling growth in the market, GIA said.

Until 2014, North America accounted for more than 60% of the market, but the Asia-Pacific is catching up. By 2021, Inflight WiFi penetration in the region is forecast to expand by 26% per year to 2021 compared with the rest of the world, at 14.9%.

Onboard WiFi can now deliver the same service in the air that users experience on the ground. Major provider, Gogo, has taken the performance of its 2Ku in-flight broadband service to very high speeds.

Utilization of a "next-generation" modem and new Inmarsat satellites was trialled last year onboard a Gogo test aircraft. It allows passengers to stream video via the internet and also access live TV on Gogo TV.

"Our 2Ku technology is delivering industry leading performance. With the new modem and satellites, we are setting a very high bar for the industry," said Gogo president and chief executive, Michael Smith.

"We will deliver this technology upgrade to our airline partners without taking aircraft out of service; a development that is incredibly important for their operations," he said.

The new modem will begin installation onboard from July this year and eventually will be available on more than 1,500 2Ku aircraft at 13 airlines. Gogo works with several major carriers, including Asian carriers, Japan Airlines, Vietnam Airlines and Hainan Airlines.

The service is being rolled out on nine B787s and 18 A350s as they enter service at Vietnam Airlines.

But Gogo and Inmarsat don't have the business to themselves. Major competitors are OnAir, Panasonic Avionics, Rockwell Collins, EMS Aviation, SITA, AeroMobile Communication, Row44 Inc.,Thales Group and Honeywell International

Most Asia-Pacific airlines either offer some form of onboard WiFi or are in the process of introducing the service on their aircraft.

Singapore Airlines (SIA), which is widely respected for its leadership in inflight service innovation, launched a $50 million inflight connectivity program in 2012 to bring Internet and mobile data services to passengers, when flying at 35,000ft.

Its low-cost, long-haul subsidiary, Scoot, makes onboard WiFi available across its entire fleet of B787s. It launched a low-cost inflight WiFi plan, "Social-Lite", last May, which allows guests to stay connected with friends, families and co-workers as they travel.

Optimized for messaging and chat services as well as light surfing, "Social-Lite" costs US$5

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WIFI ONBOARD CRITICAL FOR ASIA-PACIFIC AIRLINES

for 20MB of data at 64kbps surfing speed. It complements Scoot's existing inflight WiFi plan, which costs US$11.95 for 60 minutes, $16.95 for three hours and $21.95 for a one day and night cycle. There is no cap on data consumed.

Panasonic Avionics Corporation vice president Global Communications Services, David Bruner, the supplier of the Scoot service said: "Working with Scoot, we've changed the game in inflight connectivity to give guests more choices. They can opt for a broadband experience or pay less for quick texting or light email services to friends or loved ones on the ground."

Philippine Airlines offers its passengers GSM and WiFi Internet supplied by OnAir. China's largest carriers, China Eastern Airlines, China Southern Airlines and Air China, received regulatory approval to install onboard WiFi on their fleets in 2015. The first of the "Big Three" to capitalize on the go ahead was China Eastern. Initially the Shanghai carrier was permitted to use the AsiaSat-6 satellite for WiFi services on 21 aircraft. This year, 70 of its aircraft are equipped with the IFE technology.

Given the controls imposed on the Internet by the Chinese government, WiFi was available as intranet rather than internet, which prevented passengers from emailing, web surfing or micro blogging to the ground. Passengers had to be content to connect to a local network to watch movies, listen to music or read information.

> At airlines there is a never ending debate about the charges they strike for WiFi - or if they should charge at all. Fees for inflight WiFi range from $5-$15 per day or $30-50 per month on appropriately equipped aircraft

But this is changing. In March, Guangzhou-based China Southern completed tests of inflight WiFi onboard on flights between Guangzhou and Beijing, Sydney and Melbourne, and between Beijing and Amsterdam. China Southern Airlines will gradually expand this service to more routes.

Some airlines have been reluctant to roll out full onboard WiFi until they know what their customers want. Cathay Pacific Airways has installed WiFi on its new fleet of A350s but not on the rest of its fleet. "It is the company's intent to extend air-to-ground WiFi internet connections to other fleet types besides the A350. We are in the process of assessing various technological options and commercial viability," said a Cathay Pacific Airways spokesperson.

In February, Qantas announced that passengers on its WiFi enabled domestic flights would be able to watch their favourite shows, avoid missing live sport and listen to almost any song they like with Foxtel, Netflix and Spotify coming on board this year.

Qantas said the service is ten times faster than conventional inflight WiFi. Its domestic fleet of B737s and A330s will be progressively equipped with the expanded IFE options from mid year.

The airline said the faster connection speeds needed for streaming are being made possible by the National Broadcasting Network (NBN) Sky Muster™ satellite service. The service uses idle data capacity, with the signal reaching the aircraft as it flies through the satellite's 101 spot beams across Australia.

Qantas is in talks with suppliers to extend WiFi services to its international and regional (QantasLink) fleets, but the product must overcome technical, performance and coverage challenges, particularly delivery of WiFi over large stretches of water.

At airlines there is a never ending debate about the charges they strike for WiFi or if they should charge at all. Fees for inflight WiFi range from $5-$15 per day or $30-50 per month on appropriately equipped aircraft.

Gogo packages are available for direct purchase via gogoair.com at $12.70 for 24 hours of inflight internet access, $34.95 for monthly unlimited access on a single airline or $39.95 for monthly unlimited access on any Gogo partner airline.

OnAir offers Wi-Fi services on Emirates Airline's A380s and charges $7.50 for a mobile device and $15 for a laptop. Qatar Airways bills passengers at international mobile phone roaming rates when they are using the Mobile OnAir service. Some airlines equip their business class cabions with complimentary WiFi, a service not extended to the economy cabin.

There is a view that Wifi onboard will become a free service, matching the benefits customers receive on the ground at restaurants, shopping malls and airports. The determining factor, as always, will be competition.

When some airlines switch to free WiFi, other carriers will be forced to follow. It is expensive to set up the hardware needed to provide WiFi across a fleet, but there have been studies - mainly in the U.S. – that say travelers will not book on an airline if it does not have onboard WiFi and internet availability. That trend is bound to be the same in the tech savvy Asia-Pacific. So failing to install onboard WiFi, free or not, could be a false economy. Penny pinching on WiFi could damage an airline's brand. ■