

AIRPORT INFORMATION TECHNOLOGY NEWS

Mesa, AZ-headquartered Iveda Solutions has secured a USD 1.5 million contract from Taoyuan International Airport (TPE) in Taiwan to expand the airport's facilities management system and provide power monitoring for its 161kVA high-voltage transformer station. Under the project, which was scheduled to commence in May 2021, Iveda is planning to team up with Siemens for the development of a new SCADA (supervisory control and data acquisition) system. To build the system, the software company will use the airport's metasytem database. This is to enhance the alerting system for early awareness of glitches and lower functional limitations. For the international security regulations' compliance, the project will involve the adoption of Siemen's RTU-A8000 for initiating airport smart signal collection. By merging numerous energy sources, the deployment aims to facilitate utility, distribution, and power transmission.

The company is also working to develop a facility management system, which will leverage a virtual machine platform and a geographic information system (GIS). This system will feature functions such as database management, power monitoring, alarm processing, maintenance management, permission authentication and network management. The facility management system will combine the management of Taoyuan Airport's power and electrical-mechanical systems. The fire alarm and related systems will be examined via GIS. As part of the comprehensive solution, Iveda will also deploy the IvedaSPS (Smart Power Solution) and its smart utility cabinet. Furthermore, 3D Building Information Modelling (BIM) will be developed for ensuring the quality of construction services. #1145.AIT1

The Wireless Broadband Alliance (WBA) has announced that travellers, employees, and retailers at Brazil's São Paulo/Guarulhos International Airport (GRU) are now able to access what is claimed to be the world's first at-airport Wi-Fi 6 network using OpenRoaming.

Passengers and airport employees will no longer have to log in to public Wi-Fi networks repeatedly. Instead of re-registering or re-entering log-in credentials, GRU users will enjoy the convenience of instant network access matched with enterprise-grade security. When coupled with the Wi-Fi 6 infrastructure, OpenRoaming also helps provide a carrier-grade Wi-Fi experience.

Boingo designed, installed, and manages the GRU network, which was reportedly the world's first airport Wi-Fi 6 network when it launched in October 2020. Travellers have up to four hours of free access, including from their older-generation Wi-Fi devices, thanks to the system's backward compatibility. The network features a unified Wi-Fi 6 infrastructure based on Cisco Catalyst access points, controllers, and switches. Samsung provided GRU operations employees with ruggedized handsets and other devices enabled with Broadcom's W-Fi 6 chipset, enabling them to use Wi-Fi 6 to maximize productivity and responsiveness to passengers. Different OpenRoaming identities are used to separate automatic access for GRU employees versus guests. #1145.AIT2

Following the deployment of Internet of Things (IoT) sensor technology at Cincinnati International Airport (CVG), OH, security checkpoints to monitor wait times, the airport is looking to use the technology elsewhere in its terminal. Data that was drawn from the initial application allowed CVG and the Transportation Security Administration (TSA) to make data-driven decisions on staff scheduling, which improved wait times and passenger experience. To this end, CVG will adopt specialist Veovo's airport-wide flow management technology to obtain a greater understanding of passenger movement beyond the security checkpoint and into other areas of the terminal and concourses. Specifically, the airport will be able to see how travellers, processes and airlines interact and interconnect. Brian Cobb, chief innovation officer at CVG, commented: "Innovative solutions, like those

provided by Veovo, enable us to gather and analyse data in real time and proactively put it to work. We will be able to make better plans and improve productivity, respond to customer needs faster and tap into revenue growth opportunities.”

The rollout of the technology will be done in phases throughout the year. Once complete, historical, and live data will enable CVG to make daily operational decisions as well as long-term facility improvement plans. For example, by understanding gate arrival patterns by flight, CVG hopes it can adjust call-to-gate times or airline gate assignments to minimize crowding. The airport can evaluate how disruptions affect passenger behaviour to prevent issues and/or mitigate their impact. Dwell and flow data can be used to drive strategic plans for layout configuration, signage, food and beverage placements and gate assignments.

The Veovo platform bundles AI-powered analytics, data from movement sensors and rich visualizations to provide live and historic insights into passenger occupancy, dwell times and movement patterns by flight. This data can be viewed for specific areas, grouped areas, and eventually the entire facility including the terminal and both concourses. #1145.AIT3

The US Department of Homeland Security (DHS) Science and Technology Directorate (S&T) has signed an agreement with the Ministry of Land, Infrastructure and Transport of the Republic of Korea (MOLIT), which authorises the two countries to conduct a field demonstration of S&T-funded technology in civil aviation security.

This joint field demonstration will pilot the Common Viewer Air System, a cloud-based baggage pre-screening software system that will support the missions of US Customs and Border Protection (CBP) and the Transportation Security Administration (TSA). The signed letter of intent results from ongoing collaboration among TSA, CBP, and their South Korean counterparts to share information, identify risks, and enhance safeguards to improve international aviation security. “With this pilot, security officers will be able to remotely screen checked baggage before arriving in the US and landing at ATL. The goal is to maintain strong security while enhancing the passenger experience and providing another means of contactless screening,” explained David Taylor, S&T’s CBP Portfolio Manager.

The field demonstration - or pilot programme - facilitates alternative methods of TSA screening to be implemented at Hartsfield–Jackson Atlanta International Airport (ATL), GA, and Incheon International Airport (ICN) Seoul, South Korea. Delta Air Lines is participating in the programme. “Our objective is to continue to work toward recognizing each other’s countermeasures to improve efficiency and decrease redundancy. A mutual goal for TSA and MOLIT is to achieve our security missions while streamlining the passenger experience as much as possible,” said Jin-hwan Yoon, Acting Deputy Minister for Civil Aviation Office, MOLIT. The joint pilot programme will run during summer 2021. #1145.AIT4

As airports prepare to welcome back holiday passengers following the Covid-19 pandemic, an AI expert from De Montfort University Leicester (DMU) in the UK is using his research to help the industry recover.

Dr Mario Gongora is the creator of VenueSim, a company which provides an AI services to airports, helping staff to manage the sometimes chaotic passenger flow and even make predictions on future patterns. However, the data gathered over the years was based on pre-pandemic patterns. Global passenger numbers at the world’s airports fell by 64.6% in 2020, according to a survey released last month. That means that huge amounts of data collected and used to ‘train’ artificial intelligence will not be helpful to airports trying to plan for the ‘new normal’. Dr Gongora said the challenge was to use what learnings they could derive from the AI to support airports looking for low-cost alternatives. He said: “Many AI based industry solutions are based on Machine Learning which depend on large amounts of relevant historical data; the pandemic has made all historical trends obsolete, so there will be many years before we have enough data again to depend on ML alone. We now need to use

solutions which we can feed from explicit knowledge and assumptions from human experts; and AI tools that allow the same for the near future.”

Dr Gongora’s guidance has contributed significantly to a handbook that has been published for thousands of airport staff around the world by the ACI (Airports Council International). It aims to support airport operations during recovery and help advise on providing a safe, secure experience for passengers, staff, and the public amid the COVID-19 pandemic. It updates and brings together the best elements of managing security from the current experience of airports around the world. The handbook also provides many examples and options for different operating environments. In collaboration with Smart Security Management Group, this handbook identifies solutions and wider applications of simpler and more affordable security initiatives. DMU is the only university in the world to contribute its research to it. #1145.AIT5

Apps & Websites

British Airways is trialling a new virtual queuing system to prevent travellers from gathering at check-in desks as the airline looks to revolutionise the post-pandemic flying experience.

The carrier is testing intelligent queuing technology from Qmatic that allows passengers to pre-book a check-in slot through a mobile app, which then notifies them when it is their turn. BA is the first airline to use Qmatic, with the three-month trial on selected flights departing from Heathrow’s Terminal 5 (T5) optional for passengers. Declan Pollard, British Airways’ head of Heathrow customer experience, said with many customers either travelling less frequently in the Covid era or not at all, the airline wants to explore new technology to simplify the experience for them. “This technology means that our customers can plan their departure knowing that they have a personalised check-in time,” Pollard said, adding: “We think this technology, coupled with digital travel apps, will help efficiently manage the flow of customers in the airport at any one time and give our customers reassurance.”

Under the BA trial, customers will receive an email before they fly inviting them to book their personal check-in time. When they later receive their alert to check-in, they can go to the dedicated desk and proceed as normal. Customers that do not use the app can either queue as normal or join a virtual queue when they arrive at the airport by scanning a QR code. Mark Brackley, managing director of Jade Solutions, the supplier of Qmatic in the UK, said the system will allow BA customers “to add themselves to a virtual queue and see their position change in real-time, all from their phone”. BA is considering a number of technologies to streamline the passenger experience, with customers flying to Cyprus, Germany, Greece, Italy, Spain and Portugal being able to upload their negative Covi-19 test results on to ba.com for verification before travel. #1145.AIT6

Orlando International Airport (MCO), FL, is looking for a tech firm to create a mobile ordering and delivery app to make it easier for hungry passengers to get food, drinks and more while they wait for the flights in the North Terminal.

The airport will issue a request for proposals in June 2021 for a firm to “develop, install and maintain operation of a mobile order and delivery platform for retail and food and beverage concessionaires” in the North Terminal. The five-year contract is slated to be awarded in October 2021, and the firm that is awarded the deal will share a minimum of 10% of gross receipts from its operations with the airport.

The move would follow that of other airports now offering food delivery service. For example, Philadelphia International Airport has a robot called Gita that can deliver food to passengers waiting at their gates. “Standing 26 inches tall and able to carry up to 18 kg for four hours - which is the equivalent of 20 miles of walking - on one single charge, Gita navigates busy, pedestrian-filled locations with human-like etiquette. Gita has been tasked with delivering food orders to airport passengers while they wait in lounges for their flights,” said a report from Airport Technology. In addition, Los Angeles



International Airport passengers in the Tom Bradley International terminal section began ordering food to their gates in early May 2021. #1145.AIT7

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