
US explores catalytic potential of biometrics

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Federal agencies and aviation partners are pushing the adoption of biometrics at airports, for faster passenger processing and more accurate data collection. *Ramon Lopez reports*

Getting from check-in to gate faster, at a time of ever-tightening security, is a nagging problem for travellers at US airports. However, biometric technology is gaining traction, as it has the potential to reshape the travel experience and enhance border protection.

The emergence of a single biometric-enabled travel token over the next few years is the latest development for passengers hoping for a faster, smoother airport experience.

The single token would be used across the entire journey from check-in to boarding. By capturing passenger biometrics and travel information into a single digital record, it could eventually replace physical boarding passes and identification documents. Travellers could one day use a single token to verify identity at any stage of their journey.

Meanwhile, it has become clear that 2017 is a year of change for the United States in terms of immigration and national security. The Trump Administration is pushing enhanced border protection and aggressive vetting of travellers. Biometrics could be an essential part of the beefed-up security programme, in order to screen individuals quickly and accurately.

In a pilot programme, the US Transportation Security Administration (TSA) assessed single-token biometrics at Hartsfield-Jackson Atlanta and Denver international airports. The test involved volunteer PreCheck members who had already provided fingerprints as part of their application for the expedited screening lanes. Each airport employed one TSA PreCheck security lane with a biometric fingerprint screener.

Data collection and proof-of-concept demonstrations at the two airports should enable the TSA to evaluate the operational and security impact of using fingerprint biometrics to verify the identity of a passenger, without the need to show a boarding pass or other documentation.

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CBP sees if the face fits

JetBlue Airways worked with US Customs and Border Protection (CBP) on a separate pilot scheme to see if facial recognition can identify travellers at the boarding gate. Tests involved flights from Boston Logan International Airport to Queen Beatrix International Airport on the Dutch Caribbean island of Aruba.

Passengers who volunteered were photographed at the gate instead of presenting their boarding passes. Images were checked against photos on file with CBP. SITA provided the technology and connectivity to perform facial capture and integration with the CBP database, as well as integration with the JetBlue departure control system.

Delta Air Lines passengers who use automated gates to catch flights from Atlanta and New York JFK participated in another test of facial recognition equipment, as part of the CBP Biometric Exit Program. The test used equipment from NEC at Atlanta and Vision-Box at Kennedy International, for simultaneous capture of boarding pass and biometric identity data. CBP also trialled facial biometrics in Washington Dulles International Airport at an Emirates gate, using the NeoFace Express solution and cloud-based NeoFace matching software from NEC.



NeoFace Express has been trialled by US Customs and Border Protection at Washington Dulles International Airport. (NEC)

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Today, CBP takes photographs and fingerprints from every visa holder entering the United States, but there are no similar measures to verify whether someone has left the country before their visa expires. Congress mandates that the US Department of Homeland Security records passenger departures, but a Biometric Exit system has proved difficult to implement because US international airports are not configured for efficient exit processing.



Delta introduced a biometric boarding pass at Reagan Washington National Airport. (Delta Air Lines)

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Testifying in May 2017 before the House Committee on Homeland Security, Subcommittee on Border and Maritime Security, CBP Deputy Executive Assistant Commissioner John Wagner said that facial recognition has emerged as the method of choice for Biometric Exit.

Facial pilot programmes have allowed CBP to develop “a realistic and achievable biometric exit plan”, he said. “CBP will use a traveler’s face as the primary way of identifying the traveler to facilitate entry and exit from the United States.... While implementation of a robust and efficient biometric exit solution will take time, and significant challenges remain, the Department of Homeland Security is aggressively moving forward in development of a comprehensive Biometric Exit system.”

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CLEAR choice

Delta tested biometric boarding at Ronald Reagan Washington National Airport, where members of its frequent flyer programme scanned their fingerprints as proof of identity instead of displaying a boarding pass and hardcopy ID. The test applied to volunteers who enrolled with biometric identification technology firm CLEAR.

The pilot tested how Delta and CLEAR systems can work together, while also laying the foundation for Delta to deliver an improved passenger experience in future. Delta said it will study findings from the test to determine next steps.

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Broader possibilities

Biometric solutions to simplify and speed up ID checks are likely to crop up at other stages in the airport journey. At Minneapolis-St Paul International Airport, for instance, Delta is conducting the first trials of biometric-based self-bag drop technology in the United States. Facial-recognition technology was installed on four bag-drop stations, to match customers with their passports. Customers scan their passport at the machine to confirm that the person checking the bag matched the information on the passport. All four machines work with self-service check-in kiosks. Delta passengers attach a bag tag to their luggage that is printed out from the kiosk and then take the tagged luggage to the bag-drop station.



*Self-service bag drop with biometrics at Minneapolis-St Paul International Airport. (Delta Air Lines)
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Dell and iOmniscient have jointly developed a facial recognition and behavioural analytics solution for crowded environments, such as a busy airport terminal and airline caterer Gate Gourmet is using iCAM iris readers from Iris ID to monitor employees coming in and out of work at its Washington Dulles location. The firm previously employed hand-geometry scanning to keep track of its workers.



This fingerprint sensor from NEXT Biometrics can be installed on a suitcase for secure locking and unlocking. (SML)

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