cabin safety update

ISSN: 1369-510X
Vol. 9. no. 4. 2003

Safety Training Focus

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Security Issues

The Self-Service Check-In: Compromising Security?

Self-Service check-in is becoming increasingly available to passengers when they travel. However, by allowing passengers to 'check themselves in', airport authorities and indeed, airlines, are losing some control over those passengers. Philip Baum looks at the security implications of such systems.

Whilst the aviation industry may have been hit by low passenger loads caused by conflict in Iraq and the SARS virus, all the indications are that the downturn is a temporary one.

Passengers will return to the skies in ever increasing numbers causing existing airports, with already limited space, the challenge of processing passengers in an increasingly more efficient manner. All this whilst the security procedures that passengers are subjected to are becoming more onerous thereby adding to the amount of time they need to be in the terminal buildings. Technology is, however, at hand in the shape of the self-service check-in.

The concept of e-ticketing is not new. Passengers have for many years now been able to obtain their tickets from kiosks at airports and even check themselves in for a flight providing they had no baggage. In the same way that one can pre-book cinema tickets and collect them before the programme commences by presenting a credit card, so too, can airline tickets be issued in this way.

All well and good from a financial transaction perspective, but what about security? Considering that a check-in agent traditionally asks to see the passenger's passport in order to verify that the person to whom the ticket is issued is the same as the person standing in front of them, surely the self-service solution offers a reduced level of security?

A fair argument, but one should also remember that passports are checked at the boarding gate and it is at that point in the process where the cross-checking of documents does have some security value. After all, as frequently occurs, the ticketed passenger may check-in but pass their boarding pass to somebody else thereafter.

Furthermore many of the automated check-in systems do have additional security technologies integrated into their structure – most use some form of biometric identification,

At many airports around the world, passengers can use self check-in facilities in which they can choose themselves a seat on the aircraft and check in their luggage without once talking to a check-in agent.

whereby the passenger can be identified by their biological characteristics.

Biometrics solutions are varied. Most people are familiar with fingerprint identification, still used as a signature in many parts of the world. Some feel uncomfortable with its application in the airport environment as it is also the identification application used by the police and prison service, thereby potentially leaving airline passengers with a bad taste in their mouths.

Iris recognition is widely regarded as being one of the most accurate forms of biometric identification. However, it does require the passenger to place their eye in reasonably close contact with the scanner.

The technology has gone through extensive trials in both the United Kingdom and the United States, primarily by the immigration services, and the results are encouraging.

SITA has added iris recognition to its AirportConnect kiosks, used by frequent fliers to speed up their handling time at the check-in. Their self-service kiosks are deployed in both Sydney and Melbourne's domestic airports.

Facial scanning has been hit by a few negative reports, yet the technology is being continually improved and, after all, there is more than one provider. Its application, however, is more suited to surveillance than one-to-one identification of known ticketed passengers.

Hand geometry is being used as the means of identifying known passengers by the Israeli authorities at Ben Gurion Airport. It is extremely user-friendly and arguably the most reliable biometric identification technology other than iris recognition.

The author, however, is very impressed by vein recognition (or rather Hand Vascular Pattern Person Identification Technology!). Using an infrared camera, the back of a passenger's hand is scanned. Heat is detected in the veins, due to the flow of blood, and highlighted – the pattern formed being unique to every individual – and compared with a database of persons registered on the system.

Whatever the identification technology used, the self check-in system is no longer only for passengers who have no baggage to check. Fabricom Airport Systems, one of the world's leading baggage handling specialists, has developed and launched what it believes to be the world's first available and truly automated airline passenger check-in desk.

The new style, high security check-in booths – part of the PasSecS (Passenger Security) system - have been designed to provide the same type of airport service, namely the issuing of boarding cards and the checking of baggage, as standard, attendant-based check-in desks.

Logan Fabricom Ltd. – a member of Fabricom Airport Systems - customised the baggage conveyor and weigh scales specifically for the new system, which is fully equipped with an eye-level touch screen for passengers to interact with

The automated check-in systems can prevent the authorities and carriers from identifying passengers whose behaviour might indicate that they pose a threat to the flight.

check-in instructions; built-in baggage conveyor/weigh scales, passport reader, and a printer facility for issuing boarding cards and bag tags.

The system allows for the authentication of passengers boarding by integrating non-invasive facial recognition technology into the whole system. At the check-in stage, a high-resolution digital colour image is taken of every passenger; the image is then stored in the system's central database and printed onto, or attached to, their boarding card with a positive and unique identifier.

Airport security is improved by confirming that the person who boards an aircraft, or passes through security into the Departure Lounge, is the same person who checked-in.

All this is very encouraging for airports, passengers, airlines and the manufacturers of these ever-improving technologies, yet the author is a profiler at heart and wishes to add a note of caution.

The more the industry automates and the less it has contact with passengers during the check-in process, the less likely it is to be able to identify passengers whose behaviour might indicate that they pose a threat to the flight.

Passengers spend very little time at screening checkpoints where the screeners are more concerned with viewing X-ray monitors and listening out for alarms from archway metal detectors. It must be remembered that a passenger does not have to have a bomb or large metallic item to be a threat!

It is only at the check-in and gate where there is real interaction between passengers and airline staff and it is at these times when we might identify a potentially disruptive passenger or, worse still, a hijacker. That requires the use of the human brain, not an automated system.

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