

Case Study

ICTS

Travel security without adding delay – how Access IS and ICTS partnered to deliver a fast, rugged and reliable APIS solution

The Challenge

APIS (Advance Passenger Information System) defines the requirements for aircraft carriers to transmit passenger and flight information in advance of passengers arriving at their destination. The relevant authorities then check the information against a number of watch lists, allowing them to prepare and take action before passengers of interest arrive in their territory.

ICTS Europe Systems is a leading provider of security systems to the aviation industry and has 12,000 employees worldwide. The ICTS

Global APIS solution facilitates compliant APIS submissions to most APIS destinations. A few countries, notably the US, implement an interactive APIS system that enables them to instruct airlines not to board certain passengers. The US does this through a protocol known as APIS Quick Query or AQQ. ICTS implements AQQSent as part of its APIS solution in order to comply with AQQ. This provides online access to the US Department of Homeland Security (DHS) server for passenger vetting. Figure 1 shows a simplified system. AQQSent can be deployed in any airport or country without advance preparation or changes to the airport infrastructure. It's often used in conjunction with a desktop or laptop PC but there is increasing demand for more portable solutions to enable security checks to be carried out while passengers are queuing for check-in or baggage drops, so saving time at the check-in and security points.

ICTS recognises that security equipment is only as good as the people who operate it and therefore places great emphasis on the user interface. The performance of optical character reading devices (OCRs) used to read the

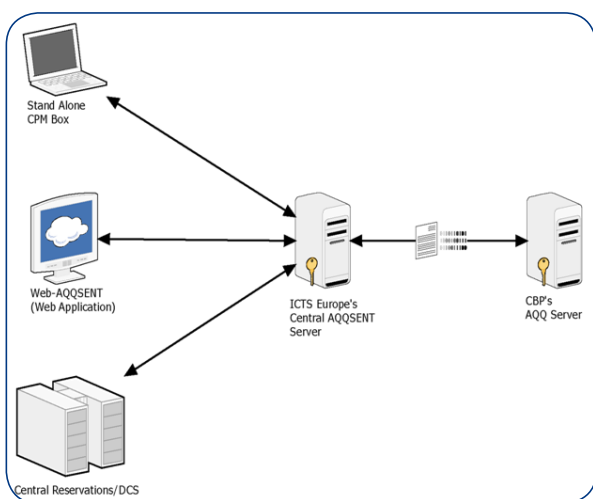


Figure 1: ICTS's central AQQSENT server is securely hosted on dual, mirrored sites to ensure maximum redundancy and uptime.

Access IS
18 Suttons Business Park
Reading, Berkshire
RG6 1AZ, United Kingdom
Tel: +44 (0) 118 966 3333
Fax: +44 (0) 118 926 7281

Access (North America) inc
PO Box 2569, Peachtree City
Georgia 30269-2569
USA
Tel: +1-770-631-8425
Fax: +1-678-364-8856

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machine readable zone (MRZ) on passports in early APIS systems was patchy at best with up to 60% misreads in some instances. Operator error sometimes added to the problem because early OCRs would only read if the card was swiped in a specific direction.

ICTS product manager, Jason Spencer, explains: "Speed and accuracy of swipe are what make our business competitive. Airlines and airport operators are conscious that passengers always have a choice and it's essential to minimise the impact of security checks on the travel experience of passengers. There are already some 25 different APIS programmes - each country has their own - and each varies a little with respect to data formats and transmission systems. Our equipment needs to stay up-to-date with all developments in this area."

Improving the data capture interface became an important priority for ICTS, together with improving system portability. They reviewed many potential data input options looking for ways to dramatically improve the first-time read accuracy of documents.

An Evolving Solution

The answer was at first found in an optical character recognition swipe reader (OCR) developed and manufactured by Access. The OCR323 is a small low-power desktop swipe reader for passports, national ID cards,

machine-readable visas and travel documents complying with ICAO recommendation 9303. The OCR323 can be configured for either serial or keyboard output modes, and features a powerful parsing language which allows it to be integrated with ease into virtually any application. With its compact format it was easy to incorporate the OCR323 into the briefcase-style portable unit, which ICTS calls the CPM Box. The reader is USB-powered there is no need for a cumbersome external power supply.

With some 2,000 ICTS units now in use, ICTS' field experience of Access OCR reading had shown first-time read errors of less than 0.5%, or one in two hundred, with most read errors due to damaged or dirty documents, or documents with poor print quality.

The next challenge was to take the ICTS APIS solution fully mobile using hand-held and ultra-mobile PC platforms. This was

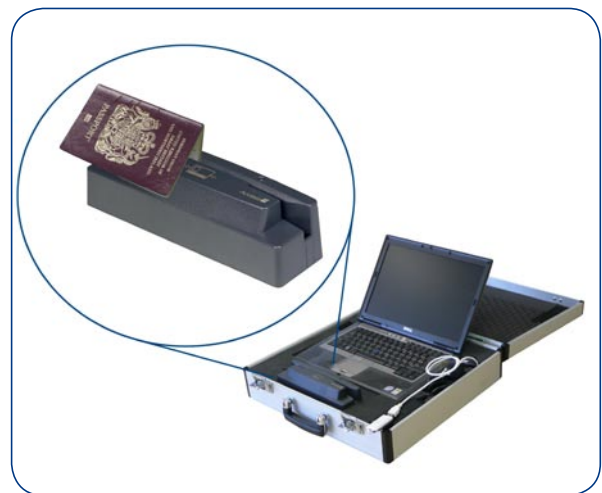


Figure 2: ICTS's CPM Box using the Access OCR323 reader.

Access IS
18 Suttons Business Park
Reading, Berkshire
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PO Box 2569, Peachtree City
Georgia 30269-2569
USA
Tel: +1-770-631-8425
Fax: +1-678-364-8856

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Interfacing Solutions

made possible by using the world's smallest OCR module developed and manufactured by Access. The OCR310 module is capable of reading the same suite of documents as the OCR323 but measures just 36.3 x 22.7 x 18.5mm. Additionally, unlike most other power-hungry readers, it runs from a 3V power supply with an operating current of 130mA, which falls substantially when the reader is in rest mode, an important factor in extending battery life in portable equipment. In an airport environment the charging of mobile equipment must take place 'back at base', so this dramatically improves the convenience of the ICTS product, which is known as Mobile APIS.

Ron Golan, ICTS commercial director, explains that it wasn't just the suitability of hardware that led to the decision to work with Access: "Certainly, the reader is compact, accurate and very robust. However, it is Access' technical support and willingness to work openly with us that really makes this a successful partnership. In early system trials we had problems because some of the documents presented by passengers did not fully conform to the defined specifications. Access sent engineers into the field with our own team

and was then able to modify the software within 48 hours to resolve the problem. We've also worked with them on hardware improvements during the last couple of years. They are open-minded and do everything they can to help us improve our products."

In Summary

Access' support for ICTS went far beyond simply supplying the most suitable hardware. It included technical support, research in the field so that the end equipment's operating environment was fully understood, and rapid software customisation to meet evolving requirements. As a result, one of the most critical parts of any IT system, the user interface, is contributing to the market-leading success of ICTS' APIS offerings.



Figure 3: Access hand-held and ultra-mobile PC accessories for OCR reading.

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Access IS
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Georgia 30269-2569
USA
Tel: +1-770-631-8425
Fax: +1-678-364-8856

Access 
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