

Dubai, UAE: Fast Immigration Clearance with Fingerprints

Fast and convenient airport check-in and immigration processing using smart cards with biometrics is now ready to take off - implemented by one of the most cosmopolitan cities in the world and one of the richest in the Middle East.

In 2002, the Dubai Naturalisation and Residency Department (DNRD) and the Department of Civil Aviation launched a high-tech border crossing project to allow frequent flyers fast access through immigration via electronically controlled gates at Dubai International Airport.

The Challenge:

Dubai International Airport is one of the world's largest airports and the gateway to the important Middle East market with global corporations establishing their regional operations in the emirate. In 2010, passenger numbers almost reached 43 million and are expected to grow in 2011 by 13.1 percent, with numbers breaching 50 million for the first time. And there are big plans ahead: passenger figures at Dubai International Airport are expected to hit 90 million by the end of this decade, making the facility the world's busiest in terms of international passenger traffic.

In line with the accelerating growth rate of passenger traffic, Dubai's civil aviation agency is undertaking various initiatives to accommodate future traffic and make the traveler's arrival and departure most convenient.

One of these projects is an entry-exit system for frequent flyers via electronic gates. The Dubai Airport border crossing project is a strategic initiative to process immigration clearance at the airport from the usual 10 minutes to seconds.

The Solution:

Dubai Civil Aviation and DNRD officials wanted to install a fast track traveler facility that would allow frequent flyers to enroll into the system to become approved and trusted travelers and be able to enter and leave the UAE in a secure and convenient manner through automated barriers. The facility aims to replace the existing manual immigration check for these trusted travelers.

The Dubai Electronic Immigration Clearance System uses smart contactless cards with L-1's biometric fingerprint authentication technology to prove identity in conjunction with integrated databases, access control barriers, and other proprietary technology for checks and security.



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The project, which was started in 2001, was integrated by Datel Systems and Software FC LLC using resources from Target Automation FCZ.

The system is designed to automatically check the nationality and residency status of travelers entering and leaving Dubai as well as to match fingerprints in quick succession with the passport/visa holder to clear immigration at Dubai airport quickly.

The Result:

In the early stage of the project, the traveler clearance process took less than a minute. Soon after the initial phase, process times shortened and enabled a performance in less than 5 seconds.

“L-1 has proven products that have shown their worth in time of high traffic and usage. In the last three years of operation, the products have withstood air passenger traffic at the Dubai International Airport, one of the fastest growing in the world in terms of volume of passengers, and the normal wear and tear that would have meant complete overhaul with other systems. However, in the case of the DFR® 2080 single finger reader and BioEngine® technology, we are still going strong. The system today has over 60,000 users, and is under expansion to match the demands of the increasing border crossing users and air passenger traffic at the airport,” said Prakash Ivaturi, speaking on behalf of Datel.

“We have been getting very positive feedback from UAE citizens, residents and visitors from other countries. We have significantly reduced entry/exit procedure times; before the system was implemented it took several minutes. Now it takes seconds. As a result, the Dubai border crossing project is recognized worldwide as a viable and efficient system to improve passenger services. Because of the success of our project, the International Air Transport Association (IATA) has made DNRD an advisory member of its Simplifying Passenger Travel (SPT) group,” says Lt. Col. Khalid Lootah, DNRD assistant director of IT & Quality.

The IATA is the official airline trade association that controls approximately 280 airlines globally, while SPT is IATA’s initiative to bring together key parties involved in the passenger’s journey and make travel secure and hassle-free. SPT members include frequent flyers, airlines, airports, immigration control authorities and technology suppliers.

The Dubai Simplified Border Crossing Solution

Enrollment:

The traveler applies for an E-Card and provides passport, photo, personal information, and payment. Applicants are also asked to enroll two fingers into the system. At this stage, immigration officers perform a one-to-many search against watchlists and other databases for matches against the applicant's fingerprint images.

Verification:

While passing through the border crossing, the system verifies the cardholder's identity by reading personal and fingerprint data from the card. The system then verifies the information with the central database. This check ensures that the visitor/ cardholder is not on a watchlist and at the same time avoids any fraud or identity theft.

Border Crossing/Barriers:

The retractable panel pedestrian barrier is a user-friendly access solution developed for the fast traveler processing. Once the verification process is completed, the barriers allow the passenger's enter/exit.

Operations & Monitoring Center:

To ensure a smooth operation, the system is monitored from a control room located in the airport. In addition, travelers can seek assistance from a monitoring desk set up by the Immigration Department adjacent to the gates at all times.

In the future, the system can be upgraded to integrate additional biometric components, e.g. face recognition, etc.

About BioEngine® Technology

BioEngine technology is a minutiae-based algorithm that analyzes the fingerprint image for endings, splits and bifurcations in the ridge patterns. The strength of the BioEngine® algorithm comes from its ability to discern fingerprint images over an extended period of time. BioEngine® SDKs allow developers to create custom one-to-one verification and one-to-many identification applications, such as time and attendance, transaction verification, physical access, information security and ID programs. L-1 technology has issued more than 100 million BioEngine fingerprint templates around the world for various large-scale identification programs.

About the DFR® 2080 Single Finger Reader

Used for large scale enrollment and verification applications, the DFR® 2080 is a high quality, next generation 500 dpi single fingerprint reader that delivers unparalleled imaging at a competitive price.



CASE STUDY

About L-1 Identity Solutions

L-1 Identity Solutions, Inc. (NYSE: ID), together with its portfolio of companies, offers a comprehensive set of products and solutions for protecting and securing personal identities and assets. Leveraging the industry's most advanced multi-modal biometric platform for finger, face and iris recognition, our solutions provide a circle of trust around all aspects of an identity and the credentials assigned to it -- including proofing, enrollment, issuance and usage. With the trust and confidence in individual identities provided by L-1 Identity Solutions, government entities, law enforcement and border management agencies, and commercial enterprises can better guard the public against global terrorism, crime and identity theft fostered by fraudulent identity. L-1 Identity Solutions is headquartered in Stamford, CT. For more information, visit www.l1id.com.