

Cyprus National Police

Advanced Biometrics System Deployed for Identity Management and Criminal Applications



“The system provides more hits, is faster, and enables us to capture better quality data.”

Christos Drakos, IT Manager at the National Police



Nicosia, Cyprus

With a total area of 9,250 km² and the European Union's (EU's) eastern-most member (in 2004), Cyprus experienced a substantial influx of immigrants, requiring the country to obtain new and powerful identification tools to protect their borders and identify individuals. Motorola was selected to provide the Cyprus National Police Force with a reliable and trusted biometric solution capable of handling the Force's fight against illegal immigration and crime.

Motorola's solution for Cyprus included the Motorola Printrak Biometrics Identification System (BIS) for large identity management applications with advanced matching and storage capabilities, palmprint identification, mobile biometrics and automated matching capabilities. Also deployed were 14 LiveScan (in desktop and ruggedized form factors) electronic fingerprinting systems at asylum centres and police stations throughout Cyprus. The solution provided Cyprus with an electronic interface connecting its AFIS to that of EURODAC – the EU's database of fingerprints for identifying asylum-seekers (a requirement of EU membership).

These systems allow Cyprus to capture the fingerprints and facial images of individuals that have been stopped and found to be without valid visas/identification documents, or those that are claiming asylum. This information is transmitted to Cyprus's central server at its National Law Enforcement headquarters in Nicosia and searched against its database. Fingerprints of asylum seekers are also forwarded to EURODAC's central database in Luxembourg to verify whether they have already claimed asylum in an EU member country.

Cyprus first installed an Automated Fingerprint Identification System (AFIS) in 2000 for criminal purposes. Supplied by Motorola and implemented by local partner, GCC Computers, the AFIS replaced the manual 'Henry' system used to classify, file and compare fingerprints during criminal investigations. AFIS automates the process of matching one, or many unknown fingerprints against an electronic database of known prints and results in faster and more efficient criminal investigations. In its first two years of operation, the National Police Force, which has 5000 staff and serves a population of 750,000, doubled the number of cases solved. Today, around 150 crimes are solved each year using the Motorola Printrak BIS.



“The LiveScans enable us to capture better quality fingerprints than using ink, while the electronic interface to EURODAC means that we get a much faster response than sending the prints manually. From the moment someone applies for asylum, we can have a response from EURODAC within hours.”

Christos Drakos, IT Manager at the National Police.

Seamless field identification

Cyprus deployed Motorola Mobile AFIS devices for seamless connectivity of mission critical information. Motorola’s mobile component is used for immigration and asylum purposes or during routine checks by officers in the field. Data captured by officers is transmitted via GPRS to the National Police Force’s high security, back-end system in Nicosia. Combining a smart card reader, a 500 dpi fingerprint sensor for the capture and instant matching of two-prints (i.e. both thumbs), these handheld biometric devices are a powerful tool for secure document verification at land and sea border crossings.

System and Project Highlights

The deployment of Motorola’s biometric solution by Cyprus has resulted in a number of immediate benefits:

- Improved accuracy & reporting: the ability to identify illegal immigrants and solve crimes has been augmented by new advanced search algorithms and automated functions, which have increased the number of hits; EU reporting requirements are supported by a built-in reporting tool
- Flexibility: to interface with EURODAC and other systems, Motorola’s BIS employs commercial-off-the-shelf (COTS) components, a flexible workflow engine, and an open architecture employing industry-standard protocols.
- Integrated approach: Motorola’s solution is designed to support multiple types of biometric data. According to Drakos, the National Police are beginning to utilise a number of the biometric options provided by BIS and plan to upgrade its existing LiveScan workstations with cameras, to enable the capture of facial images at remote sites.

KEEPING PACE WITH TECHNOLOGY

Motorola’s Biometric Solution provides full biometric integration of fingerprints, palmprints, facial images, descriptive data, signatures and documents. It also features other innovations that are driving further efficiencies for the National Police, including:

- Inbuilt barcode capability – users can scan barcodes on the tenprint and palmprint cards directly into BIS, eliminating manual entry of 12-15 digits
- Automatic production of ‘tenprint comparison table’ – print-outs of latents and fingerprints marked-up to prove a minutiae match. These are used as evidence in criminal trials. Previously, mark-ups were completed manually by expert technicians
- Better visibility of tenprints and palmprints – the ability to scan, search and match fingerprints and palmprints at 1,000 ppi resolution results in greater definition of smaller fingerprint features (such as pore structure). Traditional AFIS uses 500 ppi resolution scans



Shown to left: Motorola deployed its Mobile AFIS product integrated into the overall biometric solution. Motorola’s “commercial-off-the-shelf” strategy allows Motorola to deliver this solution in any form factor that best suits our customer requirements.



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