

The Swiss National Police Deployment

Motorola biometrics technology strengthens security at Swiss borders



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Bern, Switzerland

With a population of 7.5 million and covering approximately 41,280 km², Switzerland is bordered by Austria, Liechtenstein, France, Germany and Italy. In recent years, some 250 million people have crossed its borders. In order to better identify exactly who was entering its territory and ensure the safety of the Border Guard personnel, the Swiss Government turned to Motorola’s latest biometric solution to increase the quality, speed and efficiency of its border control procedures.

The Swiss National Police – known locally as the Federal Office of Police (Fedpol) – was the first organization in Europe to implement a centralized, automated fingerprint identification system (AFIS) in 1984. A Motorola AFIS system was installed to great effect, resulting in a massive reduction in the time it took to search the fingerprint database manually during criminal investigations.

Today, Motorola’s latest AFIS technology has been deployed with the Swiss Border Guard and is in operation at 70 border control points. Proving essential in the identification and apprehension of wanted criminals attempting to cross the borders, Motorola’s two-fingerprint capture and search technology provides the final identification procedure the Border Guard will conduct when individuals are stopped. Their passports are examined first and if something is suspicious, the police cross-check the individual’s demographic data and search their vehicle.



Trusted: Fedpol has been a biometric customer of Motorola for over 20 years.

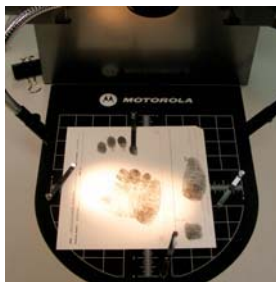
Secure: Motorola’s biometric solution provides Fedpol with uncompromising, seamless transfer of information between border guards out in the field, at border crossing stations spanning the nation’s borders, and at national agencies located through the country.

In one specific instance, an individual travelling on false documents was apprehended at the border and subsequently identified as a murder suspect using Motorola's biometrics technology.

Finally, if fingerprints are required, the individual must step out of his or her vehicle while a border guard uses two-finger fingerprint scanners to capture his or her thumbprints. These are then downloaded to a ruggedized laptop running the Motorola IdentiScan client and transmitted to the AFIS central database over dedicated networks. The prints are then searched and any matches – known as 'hits' – verified, with the individual's information posted back to a specific message web server, ready for download by a border guard. The entire process, from the point the prints are captured to the availability of the result message, takes approximately five minutes.

In 2005, border guards checked more than 18,000 prints against Fedpol's AFIS database and over 5000 positive identifications were made. It is important to stress that in most, but not all cases, positive identifications relate to criminal activities. In one specific instance, an individual travelling on false documents was apprehended at the border and subsequently identified as a murder suspect using Motorola's biometrics technology.

"Motorola's latest biometric system has proved a big step forward for us. The two-finger scanning capability for border control and Embassies was a new concept that has resulted in a completely paperless environment and enabled us to increase the quality, speed and efficiency of our security procedures – and the safety of our officers," states Mark Hess, manager forensic IT at Fedpol. "And Motorola's palmprint facility has opened a whole new area for us too – some 15% of all latent hits are now made via this method."





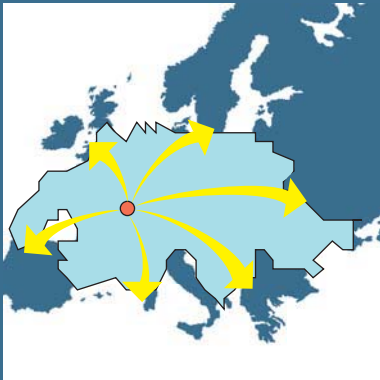
Meeting Government Goals

Fedpol's AFIS DNA Services Section is headquartered at its central offices in Bern and now maintains three national databases: Demographics, DNA Profiles and Fingerprints. These records can be cross-referenced to provide more information on an individual when a hit is made – whether during border guard checks or police investigations. Fedpol operates its AFIS network nationwide, with the AFIS DNA Services Section acting as a service provider for customers out in the field – including the Cantonal Police Forces (covering Switzerland's 26 cantons), Federal Office of Migration, Federal Office of Police and, more recently, the Border Guard and a number of Embassies.

It was in 2000 that the Department of Justice and Police took the decision to upgrade to Motorola's latest biometric system; the objectives being replacement of the old AFIS system, ensuring tighter security checks at its border control points, to improve the resiliency and accuracy of its AFIS network, and introduce palm-print identification facilities for the Cantonal Police – who believed they could produce between 10-25% more hits during criminal investigations using this technology. Under Switzerland's first open tender of its kind, Motorola and its local partner, Ascom, were selected ahead of a number of major suppliers. "The rules of the tender were very strict, so it was a very competitive process," Mark confirms. "However, Motorola's latest solution offered the best technical solution for our requirements."

Motorola's latest biometric solution is an integrated suite of applications that utilizes a web-based user interface and industry-standard software – such as XML, Java™ and Oracle – for the capture, input and search of fingerprint, palmprint and latent images. The latter are 'hidden' or relatively invisible prints left at the scene of a crime and must be 'developed' by special methods such as lasers, powders or alternate light sources.

In 2002, Fedpol became one of the first Motorola customers in Europe to implement this latest technology, which features a number of technical innovations for improved print capture, processing, matching, scoring and evaluation. As part of this project, 60 IdentiScan (two-fingerprint) terminals were implemented for the Police and 70 terminals provided for border control. A further 24 IdentiScans were deployed at various Embassies and five LiveScan (ten-fingerprint) terminals supplied to the Federal Office of Migration. The system communicates with the Swiss Interpol, whereby fingerprint images and demographic data can be exchanged between Interpol, the Swiss National Crime Bureau and the AFIS DNA Services Section's Motorola system, using industry-standard NIST files.



Motorola provides the tools for secure, trusted, and reliable identity management nationwide.

Fedpol operates its biometric network nationwide, connecting agencies such as the Office of Migration and the Border Guards to different agencies such as the 26 Cantonal police forces spanning across the country.

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System and project highlights

Vital to the deployment was Motorola’s redundant configuration at the AFIS division’s central office, which ensures a search response is provided to a border guard within five minutes. Two ‘half’ systems run in parallel, in case one were to fail, a fingerprint expert is still able to verify a hit using the second half of the system. “We simply cannot afford for the system to go down,” Mark stresses.

Motorola’s European identity has proved key to the successful relationship with its local integrator. “Ascom has been our general contractor since 1984 and they understand our processes – and languages – very well. In addition, Ascom has worked with Motorola’s biometric technology for a number of years. So partnerships have proved essential,” Mark concludes.



**Left: Federal Office of Police Headquarters
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