MOBILE PHONE AUTHENTICATION

FINGERPRINT RECOGNITION AND MRZ SCANNER SDK

Large corporations, governments and private citizens benefits from the myriad of developments of cyber technologies - whether it is the access-control to high rise buildings of multinational businesses, identification solutions that governments offer for smart administrative services, or people like you and me easily getting access to their online bank accounts at home. All these terrains require easy to handle and highly secure identification and verification solutions.

Today, fingerprint scanning has become a very common and reliable form of biometric authentication for the mentioned fields which is more dominant in security applications but is rapidly penetrating other fields. AIT's fingerprint recognition SDK enables the development of new biometric identification and verification apps on unmodified cell phones.
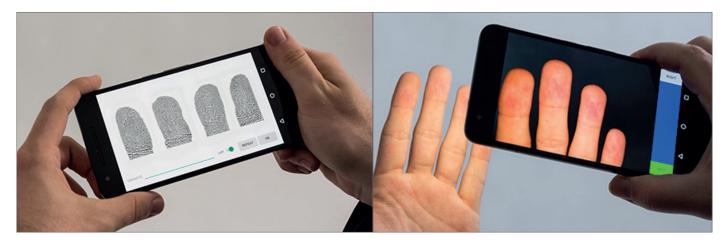
HIGHLIGHTS

- Simultaneous acquisition of 4 fingerprints in real-time
- Contactless: High user convenience
- Mitigates hygiene concerns
- NFIQ1 (NIST) quality assessment
- Copes with wet and dry fingers
- Interoperability with arbitrary fingerprint recognition software
- Fully compatible with contact-based fingerprints
- Robust against external illumination
- High accuracy
    - 0.1% FRR at 1/10.000 FAR
    - EER @ ~0.1%
- MRZ scanner fulfills ICAO recommendation

TECHNOLOGY

First, the fingerprint application captures four high-quality fingerprints in real-time and thereby the fingers do not need to touch the screen. Afterwards, the captured finger-photos are directly converted to fingerprints on the cell phone and the authentication procedure is carried out by comparing the generated data with existing data at back-end servers.

AIT has developed a mobile security app which scans the machine-readable zone (MRZ type 1,2 and 3) of a passport with the built-in camera and uses optical character recognition to transform the text into digital form for passport chip access.

TECHNICAL SPECIFICATION FINGERPRINT

Capturing	4 fingerprints simultaneously
Capture time	~5 seconds
Output	ISO/IEC 19794-4 Fingerprint Image Data Standard
Operating system	Android 4.1 or later
Camera	LED flash, ≥ 5MP
Resolution	500 DPI
Quality Assessment	NFIQ1
Operating range	10-15cm