MobilePass

A secure, modular and distributed mobile border control solution for European land border crossing points.

MobilePass will focus on research and development towards technologically advanced mobile equipment at land border crossing points. The aim of the project is to provide new technologies for practical mobile devices which allow border control authorities to check European, visa-holding and frequent third country travellers in a comfortable, fast and secure way. The mobile solution incorporates new technologies needed in mobile scenarios and embeds them in the actual border crossing workflow to speed up control procedures.

Promoting both security *and* mobility within the EU Border control is a major challenge for member states border control authorities. Travellers request a minimum delay and a convenient, non-intrusive border crossing, while border guards must fulfil their obligation to secure the EUs borders against illegal immigration, terrorisms, crime and other threats.

The MobilePass development process addresses both requirements with equal emphasis, keep security at the highest level while increasing the speed and the comfort for all legitimate travellers at land border crossing points. Aspects of a fast border crossing by legitimate travellers are

- a reliable and convenient capture of biometric and passport data
- dependable, secure wireless data transfer,
- and a modular mobile equipment optimized to the border control workflow.

Improved traveller identification technologies, such as contactless fingerprint capture and advanced mobile facial capture will increase the security, minimise spoofing and evasion, while making the control less cumbersome for passengers.

A system evaluation and demonstration will be done in two different member states. Compliance with European societal values and citizens' rights is central to the acceptance of the developed technologies, and will accompany the development throughout the project.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement No 608016.

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Technical Objectives

MobilePass will develop technological advanced mobile equipment for border control authorities. The MobilePass approach will be advanced in technology beyond state-of-the-art in:

- Contactless multiple fingerprint verification
- Cooperative and fast face capturing and verification
- Full-page e-Passport scanning
- Communication reliability, security and speed
- Respect legal, ethical and social factors

Symbolic image

The consortium will carry out research and prototype development of electronics and algorithms embedded in a trusted platform module with secure boot mechanisms and remote attestation capabilities.

Technological advances will bring a benefit for all general identity checks with legal ID Documents which can be read by a machine. This can be future Schengen Visa systems or personal ID cards combined with biometric features. Maximum attention is paid to the security features of these technologies. Research will also include the development of a trusted platform computing module which will not allow re-engineering or compromising the build-in software in case of a stolen device. Remote attestation techniques will ensure that the person handling the device is authorised to handle it.

The usage of novel development techniques, like HLS (High Level Synthesis) for battery powered FPGA´s and the usage of powerful heterogeneous multicore chipsets will enable implementation of CPU-demanding algorithms for biometrics and image processing.

The MobilePass consortium is fully aware that border management as such, as well as the specific research and technologies proposed within the MobilePass project are ethically sensitive. The consortium therefore wishes to clearly state that it fully accepts and respects the ethical rules and standards of FP7, as well as those stated in the Charter of Fundamental Rights of the European Union incorporating experiences from border guards as well as feedback from passengers during the design phase.

To ensure this, the project output is screened by an additional ethics and and security committee.

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Impact

MobilePass research and development will focus on next generation mobile equipment for biometric passport. Hereby, the project outcomes will follow five main categories of impact:

- Impact on border control from a member country perspective
- Raising awareness for mobile identity control & Standardization

Impact on border control from a member country perspective

Forecasts and studies indicate a strong increase of traffic across borders during the next decades. One of the factors affecting this trend is the increasing trade of goods, also with in visa free border zones along the EU border.

This leads to a strong need for fast, efficient, secure, and easy to deploy mobile devices and technologies for passport verification in particular based on biometrics.

Expected impacts listed in the work programme

- fast processing is required for passengers within vehicles
- enhancing the security and efficiency and land border crossing-points through the application of biometric technology for identity checks
- efficient management of the increasing passenger flows.

Raising awareness for mobile identity control

The MobilePass project aims to address issues relating to the optimization of the border control process at both the practical and security level. The practical experience and guidance to emerge from the project work will be of relevance to an array of stakeholders within EC and beyond, and will be of value across different sectors and internationally.

To fulfil these aims, the MobilePass project will work through various carefully selected groups and committees (e.g. such as standardization organization like ICAO, CEN, ISO) through formal and informal mechanisms.

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Project Facts

MobilePass brings together system- and component producers, research institutions and governmental authorities. The entire innovation process, from components development to the integration into an efficient workflow will continuously be evaluated by border guard authorities.

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Giesecke & Devrient GmbH, Government Solutions – Division Government
Spanish National Police Corps (MIR-DGP, Ministry of Interior - Police General Directorate)
Rumanian Border Police, Control and Complex Informatic Systems Service Project Management Unit
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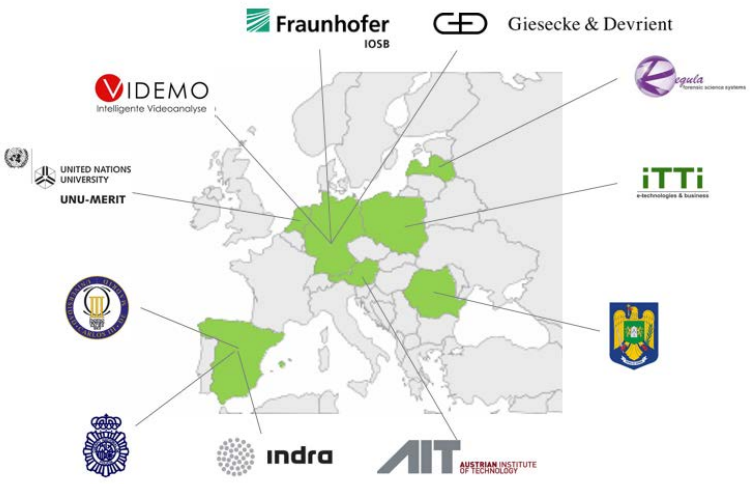

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