

Chip Card Projects

Expert knowledge for your business

High-security operating systems for chip cards

The basis of our work is the development of high-security operating systems for chip cards. For many years, our team has been making a substantial contribution to the development of various products and solutions that are available on the international market. achelos has a profound knowledge of chip card and PKI technology and supplies the entire value-added chain in order to provide consistent support to projects. From specification via planning, development services, project management and implementation through to comprehensive security technology, we are the technology expert that is independent of manufacturers.

achelos has expert knowledge including development of the following operating systems based on chip cards:

- MasterCard, Visa (EMV)
- Mobile Payment: Mobile MasterCard PayPass,
- Visa Mobile Contactless
- Secure Chip Card Operating System (SECCOS)
- Digital tachograph
- Electronic health card (German eGK)
- New personal ID card in Germany (nPA)
- GSM, 3GPP, SIM and UICC
- JavaCard

We have advanced development skills in handling various systems architectures, semiconductors and cryptographic libraries and realise contact-based as well as contactless products.

Extract from the achelos team references:

- **German health card:**
Development of operating system, end-to-end testing, value-added applications
- **Digital tachograph:**
System architecture, integration service, project management and operating systems
- **National ID systems:**
Systems concepts and architectures (PKI, chip card, biometry)
- **eID operating systems:**
Specification and implementation (electronic driving licenses, electronic ID cards, qualified signature cards ...)
- **Common Criteria:**
Certifications for eID systems
- **Europay/MasterCard:**
Definition of EMV test and type approval schemes
- **Mobile Payment:**
Mobile MasterCard PayPass, Visa Mobile Contactless

Our services for you:

- Consulting throughout all phases of the project
- Implementation
- QAn
- Common Criteria security certification

Applications for securely-programmed chip cards and security tokens

Implementation of the operating system constitutes the basis for a variety of applications and application development for chip cards is the core business at achelos.

As mentors, we are delighted to advise you about all aspects of the technical feasibility of additional and value-added applications.

We support our customers intensively through all project phases from requirements analysis through implementation and certification to updates of the application in the required chip card portfolio.

Extract from the achelos team references:

- Payment function
- Emergency data
- Java Card applets
- Access authorisation
- Mobile payment applications
- Bonus points and ticketing applications
- Passport/ID applications

