

Chip card simulation replaces test cards for digital tachograph and the German eHealth market

Virtual Card Kit from achelos with new contactless function (NFC)

Paderborn, September 23, 2020 – achelos GmbH offers with the new Virtual Card Kit (VCK), a high-performance development and test product for the mobility and eHealth market. The VCK consists of both hardware and software components and the new edition is equipped with an NFC interface (NFC - Near Field Communication) for contactless communication. Suppliers of components and applications in different sectors need test cards to verify correct functions and behaviour as well as the quality and security of their products in their respective infrastructure environment. These test cards are often available late and are also not suitable for a range of test procedures. This is where the Virtual Card Kit from achelos comes in. This smart card simulation can be directly connected to the test system via an Ethernet interface. This is a unique feature of the new VCK and meets all requirements of the technical guidelines for 1st and 2nd generation tachograph cards as well as the German healthcare market.



Holger Volke, Technical Director at achelos presents the new Virtual Card Kit. The solution is a proprietary development from achelos and simulates tachograph cards and the German eHealth cards. The new product version is equipped with an NFC interface and supports contactless and contact-based communication. (Photo: achelos GmbH)

The Virtual Card Kit simulates chip cards and replaces test cards of all card types

The VCK can be used as a stand-alone smart card simulation or in combination with simulations and test suites from Qumate by achelos. The product is a powerful solution for high quality assurance. The Virtual Card Kit provides reference applications for the mobility sector as well as the German healthcare market.

The Virtual Card Kit allows Plug & Play connectivity

The Virtual Card Kit is conveniently accessed via an Ethernet interface and requires no special drivers. The PC-based simulation is directly connected to the Hardware Box. The virtual card simulation runs in a Java Runtime Environment and uses the box for communication with the outside world.

"The Virtual Card Kit is already firmly established in the German healthcare market as a chip card simulation. With this product extension, achelos provides a convenient solution that meets current market requirements. Consulting, development and testing are among the core competencies of achelos. With the further development of the Virtual Card Kit, we have once again demonstrated our technological leadership in comprehensive simulations and test environments for tachograph cards and all aspects of telematics infrastructure in the German healthcare sector," says Kathrin Asmuth, Managing Partner at achelos.

Compliance with IT security and industry standards requires a high level of expertise and technical support. Therefore the use of a simulation plays a central role before the real availability of test cards. With simulation, all functions and reactions, even those of a defective card, can be tested in a fully automated manner. Thus, development teams receive important information directly and in advance for the actual implementation and save time through the automated execution.

The Virtual Card Kit and its main features:

- supports contactless and contact-based communication to meet the latest requirements of the digital tachograph and the German health care market
- supports contactless/contact-based communication to meet the latest requirements of digital tachograph/German ehealth market
- flexible changes of the different applications (e.g. eGK, HBA, SMC) is possible at any time
- included certificates are based on the gematik RU/TU trust space
- simulates physical and logical smart card processes (operating system and card application)



- provides interfaces for reading, storing and changing the internal states of the simulated card operating system
- logs the card activity and supports the manipulation of the card behaviour during runtime
- supports smart card simulations via Ethernet connection for various industries, e.g. tachograph, health

In addition to smart card simulation, achelos also offers a variety of test suites for the various components of the telematics infrastructure in the German healthcare system. Since the introduction of electronic health cards in Germany, the achelos team of experts has been involved in comprehensive consulting, testing and development services and has unique knowledge of the applications and components of the telematics infrastructure.

About achelos

achelos is a manufacturer-independent software development and consulting company based in Paderborn. Founded in 2008, the technology expert develops and operates highly specialized products, solutions and services that meet international security standards. In addition to general security-related topics, achelos focuses on global industry solutions in the Health, Mobility, Public and IoT segments. Customers and partners include government institutions, private companies and organizations. The company offers an extensive portfolio and expert knowledge in the areas of test tools and Testing as a Service (TaaS), certification and eIDAS-compliant public key infrastructures. achelos is certified according to ISO 9001 and ISO 27001.

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