

Case Study

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Banka Koper

A MULTOS Solution for Value-added EMV



Banka Koper is one of the most dynamic banks in Slovenia, with over 50 years of experience in the industry and a strong regional presence. The bank headquarters are located in the port city of Koper, on the country's south-west coast, amidst a vibrant internationally-oriented economy.

Slovenia is situated in central Europe, bordered by Italy, Austria, Hungary, Croatia and the Adriatic Sea. In 2004, it acceded to both NATO and the European Union. Slovenia's stable democracy and strong economy have provided an environment that has encouraged strong investment in infrastructure and technology. Its projects in these areas are held up as regional examples for Central and Eastern Europe.

state agency to a commercial bank and planning a revitalisation of its retail banking approach. Banka Koper was looking for a single technology platform that could meet all needs in all banking channels in all business areas.

The MULTOS EMV card became the central piece of technology that would provide a secure, reliable and consistent interface to their customers across all communication channels.

The Solution

After significant investigation, MULTOS was chosen because of its open standard architecture and inter-operability

- MULTOS is a true multi-application smartcard platform. Low Operating System (OS) overheads and compact applications maximise the space available for multiple applications
- Highest levels of security guaranteed. Our MULTOS platform has achieved ITSEC E6 (high) security evaluation. This covers application and data firewalls and the loading and deleting of applications—thus allowing multiple applications to reside on a single card
- One of the key features of MULTOS is the issuer-centric model for controlling the card enablement and applications on the card.
- Full smartcard lifecycle management. The MULTOS specification covers a complete smartcard platform, not just the OS or the Application Programming Interfaces (API), but extending to card and application management. This means the system offers the most flexibility in the supply chain, in the applications and for any future requirements.
- Open and interoperable platform. The MULTOS specification is open to any party and is controlled by a consortium of the industry's leading players. Importantly, each MULTOS



In 1992, Banka Koper introduced Slovenia's first domestic payment card: the Activa Card for local debit and credit transactions. Today, the Activa Card system has eleven participating banks, with more than 1 million issued cards, making it the strongest card system in Slovenia. Banka Koper is also an issuer for other MasterCard and Visa products.

In 1999 a number of major initiatives were taking place within the bank. The bank was in the preliminary stages of its EMV migration programme, transitioning the corporate payment system from a

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implementation undergoes an independent Type Approval to ensure inter-operability between implementations and compatibility to specifications.

- A proven solution with low risks. The MULTOS platform is well-suited to applications requiring high levels of security (such as EMV banking and Identity). Many millions of MULTOS smartcards have been deployed in projects with similarly tough requirements—especially those looking to bring additional value to EMV programmes.

Combining EMV and Internet Security

Banka Koper's Maestral Card programme is based around four functional pillars: payments, authentication, data, and digital signing. The programme provides everything necessary for conducting secure transactions via their i-Net Banka e-banking service, phone banking and electronic commerce for MasterCard SecureCode and Verified by Visa brands. Using the new Activa-Maestro EMV payment card and a portable (not connected) smart card reader the cardholder is able to generate a One-Time Password to authenticate themselves to the i-Net Banka service, giving true 2-factor authentication. MasterCard's CAP (Chip Authentication Program—see inset) technology provides the mechanism for this authentication.

In 2007, Banka Koper introduced "Chip-to-Speech" technology on its Maestral Card, providing access to One-Time Password technology for the visually impaired through the use of an audible password.

The Burja card programme combines Banka Koper's new Activa-Maestro multi-application EMV payment card, with a PCSC reader to enable secure internet communications using PKI technology. As well as being used for authentication with i-Net Banka the Activa-Maestro card can be used with other web services using the same technology, such as: e-tax, e-administration, e-register and other e-services.

Implementation

Banka Koper's EMV solutions have been a collaborative effort based upon MULTOS smartcard technology. These include:

- Multos International's M/Chip4 payment application for MULTOS
- Infineon's 36K crypto-controller solution
- Banka Koper's PKI solution

- MasterCard's on-card applications: MODS (MasterCard Open Data Storage) and CAP (Chip Authentication Program)
- TranSend's PocketServer
- Personalisation & card supply from multiple card manufacturers.
- Thales' Data Preparation hardware & software security systems
- One-Time Password readers from Vasco, Xiring and Todos.
- nCipher's PayShield secure hardware security platform for CAP authentication

Activa Card System has already issued more than 650,000 MULTOS cards for their EMV programmes. It is expected that EMV migration for the complete Activa card's portfolio will be finished in 2008. The introduction of the Maestral and Burja card programmes now brings several value-added applications to the cardholders for internet security and personal data storage.

In late 2007, Banka Koper will be introducing OneSMART Web functionality, which will increase portability of personal information by enabling customers to easily and securely store it on their cards. This will provide the cardholder with additional tools to enhance web-browsing and e-commerce, such as: URL and password storage, automatic form filling of address and account details, and storage of general personal information.

In April 2007, Banka Koper rolled out their first Visa solution on the 32K MULTOS platform, making them the world's first Visa card issuer to deploy credit, debit and prepaid smartcards using MULTOS smartcard technology.

Gojmir Nabergoj, senior consultant at Banka Koper, said "Banka Koper is a firm believer in MULTOS technology. We have now completed our deployment of chip cards across both payment brands, meaning we no longer need to support two different hardware platforms and associated personalisation systems. The Visa MULTOS card now contains both VSDC and the Visa Dynamic Passcode Authentication. The new Visa Electron Prepaid card now also contains our own PKI application, allowing users to load and benefit from the use of their digital certificates in e-related services."

With an eye firmly on the future, Gojmir adds, "These are very early steps in our multi-application cards. We are now focussing on Post Issuance, Near Field Communication and Contactless cards".

To date, over 100,000 VSDC MULTOS cards have been issued.

About MasterCard's Chip Authentication Program

Chip Authentication Program (CAP) is a packaged smart card solution from MasterCard® that enables secure payments in both the physical and virtual worlds using MasterCard and Maestro® cards. A simple card reader forms an integral part of the package. CAP can be used with the card reader to generate one-time passwords for highly secure shopping over the Internet. The same approach can be used to secure MO/TO (Mail Order/Telephone Order) payments and remote banking transactions. CAP provides a single, common, cost-effective method for securing the delivery of all payment and banking services.

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