multos international

Banamex Single Platform Migration Project
Using MULTOS step/one for Multi-Scheme Issuers

Introduction

Founded in 1884, the Banamex Financial Group, a member of Citigroup Inc., is a leading Mexican financial institution. Through its subsidiaries, the group provides a wide range of financial services, including deposits, consumer financing, fund management, insurance, banking, pensions and stock brokerage. The Banamex Financial Group is the owner of Mexico's second largest Bank, Banco Nacional de Mexico (Banamex). Today, Banamex operates the country's largest network of branches and ATMs.

Who We Are

Multos International is a leading implementer of MULTOS technology. We offer a complete range of contact, contactless and dual interface products, on many EEPROM sizes. Applications spanning the Banking, Govt/ID and Transit market sectors have been introduced on our products. Furthermore, any application, be it existing or proposed, can be developed for the MULTOS or MULTOS step/one platforms.

Our products have been used in numerous security sensitive projects, in a broad mix of issuing environments and supply chain configurations. With Operations personnel and Technical Support staff located around the world, we are fully capable of providing MULTOS products and ancillary services that form the basis of a successful smartcard-based solution. Contact us at info@multosinternational.com to see how MULTOS or MULTOS step/one fits your needs.

The need

As a dual issuer of both MasterCard®- and Visa®-branded cards, Banamex was intent on streamlining their personalization processes while maintaining an flexible supply chain. To this end, they identified the need for a platform that would support their current business requirements as well as provide the flexibility necessary for future product and service offerings.

In particular, Banamex were looking for:

- The ability to have multiple sources of card supply, including local suppliers.

- The availability of M/Chip 4: utilizing additional value-added services that M/Chip 4 supports.

- A wide variety of available applications—especially VSDC.

- A seamless migration path to contactless and DDA-capable products.

- Utilization of current personalization equipment. Banamex runs a personalization facility with Datacard and Thales equipment. It was important that the selected platform could be supported by these products.

- Easy and fast personalization throughput: Banamex personalize more than 300K chip cards through their bureau each month and needed to have fast personalization for the migration to the new platform to be successful.

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Implementation

Banamex adopted MULTOS step/one for all MasterCard and Visa products. The migration process started with an upgrade to their personalization centre. Essential to the success of this undertaking was the close working relationship between Banamex, Multos International and Datacard, the suppliers of the personalization equipment. According to Bob Beer, Director of Software at Datacard, one of the biggest challenges facing EMV issuers is supporting a multiple native card environment with its ever-changing chip personalities. Said Bob, "When Datacard was given the opportunity to work with a progressive customer like Banamex to consolidate its native card environment to a single platform, we welcomed the opportunity to combine our … technology with [the] MULTOS step/one platform and provide an operationally elegant, fast, extensible and cost effective issuing solution."

Drawing on the experience gained from numerous MULTOS projects around the globe, Multos International and Datacard were able to provide close support to the bank's personalization teams. This support included training and support in the use of the EMV parameter management tools for M/Chip 4 and VSDC.

After the success of the initial EMV migration, Banamex expanded their smartcard strategy to include dual-interface products. Again, MULTOS products were utilized, making the implementation simple and efficient across all business units. Said Luis Cirerol, New Technologies Manager at Banamex, "We have implemented MULTOS in our personalization centre to issue both Visa and MasterCard using the same smart card platform. The flexibility of the MULTOS system also means an open card supply chain, improved issuance times, cost reduction and opportunities to increase our value-add with additional applications."

The MULTOS Solution

A truly open platform, MULTOS provides the benefits of working with multiple vendors across the entire supply chain. Furthermore, our MULTOS step/one solution supports both MasterCard's M/Chip 4 and Visa's VSDC EMV payment applications, pre-loaded in ROM. By pre-loading applications, the amount of EEPROM required is minimized, allowing for the use of less expensive chips, while reducing the time required for card personalization.

The level of compatibility between MULTOS step/one and MULTOS (our DDA-capable smartcard operating system) is such that any applications not requiring RSA functionality will run on either platform. This means that when an issuer decides to migrate from SDA to DDA, the same applications may be used. As well as application compatibility, MULTOS and MULTOS step/one use a common set of personalization commands, minimizing the impact on the personalization process during migration. Testing at Banamex's personalization facility showed that MULTOS step/one cards were personalized, on average, in approximately 3 seconds. Whereas nearly 10 seconds was required for cards with a native operating system.

Our current range of products reflects the broad spectrum of requirements that today's smartcard issuers demand. With EEPROM sizes spanning 4K through 80K, our MULTOS and MULTOS step/one products are capable of delivering a wide spectrum of solutions to our issuing partners in any market. The variety of available products allows the tailoring of a solution to best fit the customers requirements— there is no need to pay for unused EEPROM.

Additionally, contactless as well as dual-interface capabilities are dispersed throughout our product range providing further options to issuers. Many of the most popular applications, such as EMV payment, PKI and loyalty, are pre-loaded into ROM, thereby saving valuable EEPROM space.

MULTOS step/one Features

- **Entry-level EMV card.** MULTOS step/one provides an open platform, multi-application SDA card at a price in line with native solutions.

- **Family compatible with MULTOS.** MULTOS step/one provides compatibility with MULTOS applications (without RSA cryptographic functions) and MULTOS personalization commands, allowing for a straight forward migration to full DDA.

- **True multi-application smartcard platform.** Low OS overheads and compact applications maximise space available for multiple applications.

- **Issuer-centric model** for controlling the card enablement and applications on the card.

- **Full smartcard lifecycle management.** The MULTOS step/one specification covers a complete smartcard platform, not just the OS or the APIs, but extending to card and application management.

- **Open and interoperable platform.** The MULTOS step/one specification is controlled by a consortium of the industry's leaders, and that consortium is open to anyone. Independent Type Approval ensures inter-operability and compatibility to specifications.