



Processor Gets EMV Compliant Across All Channels Using Semi-Integrated Strategy

Semi-Integrated Approach to EMV Saves Time

Forbes estimates that the total cost of fraud could top \$10 billion unless the U.S. payments industry can more rapidly progress its efforts to support EMV-based chip cards by the end of the year. Even with the liability shift at the point-of-sale in October 2015 and the pending liability shift at ATMs in October 2016, many U.S. firms have been very slow to embrace chip card technology.

Data gathered recently indicates that larger merchants have made the shift to accommodate chip at the POS with many large ATM networks already chip-enabled. However, many of the small to mid-sized merchants and ATM network providers have not taken the measures necessary to protect their bottom lines from being damaged by fraud.

Organizations needing to accelerate their EMV migration are turning to RS Software to help them meet the challenges they face. RS Software can help payment providers take advantage of semi-integrated solutions in the marketplace. This scaled-down solution provides a faster path to EMV compliance by allowing organizations to certify with POS devices to accept EMV transactions within their POS software. It is a very scaled-down solution as a certification process.

A full EMV certification can take months to complete while the semi-integrated approach takes that overall timeframe down from months to weeks. RS Software's EMV compliance toolset and testing workbench automates the entire testing process allowing for this important function to be completed faster. Read more below on how we helped one client get prepared for EMV and chip-based cards across all their business channels.

Innovative Payments Company Faces EMV Challenges

Our client is a US-based, innovative payment technology company that enables merchants to accept any payment type, anytime, anywhere through point-of-sale, ecommerce and mobile devices. The client processes around \$20 billion in annual transaction volume and enables universal commerce for over 17,000 merchants including some of the world's best known brands.

To avoid further exposure to fraud, our client wanted to EMV-enable its payment gateway and various acquiring channels in a short time frame. In addition, the client's existing virtual terminal architecture for processing transactions needed to be compliant to process EMV transactions.

To help their merchants adhere to the chip technology faster, our client wanted to develop a scalable semi-integrated EMV solution for all of their supported devices/terminal. The fundamental business objective was to help their merchants get on the right side of EMV liability shift more quickly with less extensive effort. The proposed solution needed to deliver the following business benefits:

- It should be independent of the Payment Processor concerned
- It should reduce certification needs of the EMV card reader or PINPAD device
- It should be capable of reducing cost by sharing PINPAD among multiple terminals

Our Solution

After a comprehensive evaluation of the systems needing to be in compliance, our team developed an implementation road map. Once the roadmap was mutually agreed upon with the client, RS Software delivered an end to end design, build, test and implementation plan for these critical systems.

Comparative analysis of these critical systems identified different acquiring channels, the messaging formats across different systems and the current backend processor connections. Using the results of this analysis, we applied our proprietary EMV compliance framework to create the solution roadmap necessary to optimize time to market.

In addition, our team enhanced the virtual terminal, processor and gateway applications to handle EIS1080 EMV messages and send ISO8583 messages to the card networks. We also developed a Windows-based middleware to handle EMV POS XPI formats, pass EMV transactions to the virtual terminal and its appliances and receive responses from the processor to display in the POS device and virtual terminals.

EMV implementation of the gateway involved processing EMV transactions for the proprietary switch as well as third party processors like TSYS, Paymentech and First Data. In addition to this, Java, .Net and PHP SDKs were made EMV compliant for consumption by third party integrators. The final stage of implementation included integration with EMV-enabled devices. To complete the work, our team utilized our best-of-breed EMV testing framework and predefined test scenarios to accelerate the end-to-end test execution process across the testing landscape.

Accelerated EMV Compliance Lowers Effort, Disruption and Fraud

The RS semi-integrated EMV solution enabled our client's merchants to address the liability shift by accelerating their EMV deployment lifecycle using a suite of tools to integrate their point-of-sale solution at reduced time and effort. Merchants also were provided with the ability to interface to the semi-integrated solution to quickly implement EMV while minimizing the typical implementation issues associated with user authentication or device registration. This approach was the least invasive for merchants and worked for all supported devices and terminals requiring less certification testing and effort at merchant end.

The client's enterprise-wide IT objective of achieving EMV compatibility was met and the client was able to avoid losses from fraud. RS Software has used its deep subject matter expertise in similar exercises to help clients identify gaps during the design stage to optimize delivery times using its Known Error Databases and Reusable Assets (such as checklists, EMV focused test scenarios, and the SOAP UI Testing Framework).

Equipped with niche knowledge of the payments domain and vast experience in EMV implementation, the team also brainstormed developing quick Proof of Concepts (PoC) to illustrate end-products to the client's key stakeholders for faster turnaround. In addition, our team's reusable EMV-focused test scenarios and test suites imitated card network responses to expedite processor testing. All these assets were delivered with our Global Execution Methodology (RS-GEM) serving as a key component in reducing time to market and limiting project costs.

These added values not only enabled the client to meet their deadlines but also to maintain a competitive edge with the implementation of industry best practices and common issues gained from our experience in a variety of EMV implementations.

About RS Software

Since its inception in 1991, RS Software has been focused on the e-payments industry. Our knowledge sourcing model has provided leading payments brands with a third choice for approaching their needs for a software partner. We have become the partner of choice for organizations that want to remain competitive in an industry that is experiencing rapid change and growth. RS Software's EMV offerings have been used by merchants, payment networks, acquirers, issuers, ATM processors and other organizations that need to modify their operations to accommodate EMV.