R/S Software

How Acquirer Upgraded Legacy Systems Before EMV Liability Shift

Industry Landscape

Across the payments industry, many organizations are focused on the liability shift related to the acceptance of EuroPay, MasterCard and Visa (EMV) chip cards coming on October 15th. MasterCard's description of the impact of the shift as concerns the responsibility of the parties involved for fraudulent transactions is sobering:

The party, either the issuer or merchant, who does not support EMV, assumes liability for counterfeit card transactions. Understand that by issuer, the card companies do not mean themselves; the term refers instead to banks, credit unions, and any other financial institution issuing credit or debit cards.

This liability shift could have a potentially huge and disturbing ramification to organizations across the payments industry. Issuers, acquirers, merchants, and others who have not yet started the process of planning their EMV transition should be engaging with experienced providers to start this work as soon as possible.

Business Objective

An acquirer in the United States wanted to upgrade its in-house developed applications and systems to handle EMV data ahead of the liability shift. In order to achieve this goal, they had to address a significant challenge involving changing the architecture supporting their virtual terminal for card present transactions so that EMV transactions could be routed through their middleware service layer.

Client Profile

The client offers a next generation API-driven payments platform that enables any company to accept payments easily. It provides technology that transcends traditional payments platforms by delivering features and functions that help keep fraud minimal and margins high.

The client provides a comprehensive set of services to its customers including:

- Robust mobile phone and tablet solutions
- ACH services
- Electronic Bill Presentment and Payment
- Internal payment gateway capability
- Integration points to hundreds of applications and POS systems
- Paperless, customizable, online, electronic application processing
- Full technical support for VARS and merchants
- Easy to use SDKs and widgets for easy integration
- Sales and marketing support

Solution Overview

The many interrelated areas involved in an EMV migration that must be evaluated make the project complicated and risky.

For this client, RS Software was asked to produce a requirement analysis and road map for system development and testing. To ensure that a payment system is in compliance requires a complete understanding of the EMV standard and experience in implementing it in a number of different instances.

RS Software used its subject matter expertise in EMV to analyze requirements related to the impact of EMV on the gateway, middleware SDK, ISO interfaces and reporting within the client's environment. An EMV roadmap created by RS Software was provided to the client that described specifically the necessary changes, the estimated cost for making those changes and the time required to make them.

THE TRANSFORMATIVE POWER OF ELECTRONIC PAYMENTS

With the client's approval, system development began and a testing plan was defined. This phase of the project involved the following:

- Development of an applet-based middleware that would act as intermediary between the processor's Web POS and gateway. This solution allows the system to receive non-sensitive data from web POS, read sensitive data from PIN pad and submit transactions to the gateway
- Modification of the gateway to accept EMV data and conditionally route the data to in-house and third party processors
- Development of an ISO 8583 message interface within the gateway so that Dejavoo devices could interact with it
- Upgrading internal procedures, the back office and staff operations to support chip related functions such as reporting, chargeback/disputes and fraud detection
- Upgrading the Java, .Net and PHP SDKs used third party integrator to insure EMV compliance
- Customization of transaction flows to meet the merchant or acquirer's requirements, e.g. EMV related display messages, prompts, receipts etc.
- Integration with EMV-enabled devices
- Performance of automated testing

Business Benefits

By applying it's more than 25 years of experience focusing on the payment industry and partnerships with some of the leading payment brands in the world, RS Software provided a number of benefits to the client such as:

- Analysis of heterogeneous components
- Identification of gaps during design and requirement identification stage including the need for a middleware and ISO interface
- Streamlining of requirements, design and development of middleware required based on previous expertise in device integration
- Acceleration of delivery timeline utilizing RS Software's known error databases and reusable assets
- Enhanced quality and reduced time to market by employment of proven execution methodologies
- Efficient, effective QA processes using EMV focused test scenarios and suites

Why RS Software

RS Software is the leading custom software development house for the payments industry. With more than 25 years in the payments industry, we have participated in and helped create the products and services that have transformed this marketplace.

Our proven RS GEM™ (Global Execution Methodology), comprehensive set of services and continuing innovation are focused specifically on the needs of the space we have served exclusively since we opened our doors in 1991.

No other provider in our space can deliver more industry knowledge and experience to merchants, payment networks, acquirers, issuers, ATM processors and other organizations that need to modify their operations to accommodate EMV.

RS Software's EMV Offerings	Merchants	Payment Networks	Acquirers	Issuers	ATM Processors
Compliance auditing and strategic planning	★	★	★	★	★
Solutions supporting multiple EMV payment types	★	★	★	★	★
Solutions addressing multiple channels, devices and networks		★	★	★	★
Updating of format adapter	★	★	★	★	★
Solutions for EMV card and cardholder management	★		★	★	
EMV data compliance for internal systems	★				
Acquirer message compliance			★		
Compliance for custom POS systems	★				
Enriched reporting and analytics	★	★	★		★
Added security layers for online transactions	★				
Reengineering of dispute management systems		★	★	★	
Modification of interchange management systems		★	★	★	
Updating of front end processors and ATM drivers			★	★	★

THE TRANSFORMATIVE POWER OF ELECTRONIC PAYMENTS