

Volante ISO 8583 Solutions

Enabling business agility through effective ISO 8583 messaging

Volante solutions for ISO 8583 enable financial services, card processors and retail firms to benefit from an architecture platform that radically enhances their ability to adapt to the constantly evolving landscape of message exchange. Whether driven by scheme changes or commercial pressure to rapidly on-board merchants or card issuers, Volante provides a cost-effective, scalable and market-leading framework. With companies being tied to the maintenance cycles of existing application vendors, Volante helps with the challenges of complying with industry standards through a model-driven philosophy and provides a seamless approach to integration with a wide range of international and domestic financial message standards.



Applicability

Cards

- » Merchants
- » Issuers
- » Acquirers
- » Processors
- » Banks
- » Loyalty schemes
- » POS
- » ATM
- » Application vendors

Payments

- » Immediate payments
- » ACH
- » RTGS

Integration

- » Services Oriented Architecture (SOA)
- » Cloud
- » Host to Host
- » Message queuing
- » Real Time
- » Batch

Conversion

- » ISO 20022
- » SWIFT
- » Proprietary

Overview

ISO 8583 is the globally dominant format used in the communication of credit and debit card transaction data whether originated from ATM, Point of Sales terminals or increasingly, retail web sites. In recent years, the standard has been increasingly used in other areas related to cards processing such as loyalty schemes and additionally, due to its inherently non-verbose structure, in non-cards related payments transactions such as domestic ACH payments and immediate payments infrastructures.

ISO 8583 differs from most financial message standards in three primary respects.

Firstly, although strictly speaking, the 1983 and 1993 versions have been deprecated in favor of the published 2003 specification, the former remain the most widely used. This often results in different versions being used for different channels within an organization.

Secondly, the ISO 8583 standard is best thought of as a data dictionary rather than a catalog of absolute fixed message formats. Bitmaps are extensively used to define the presence or absence of elements or sub-elements. Therefore even though two card processors or issuers may be using the same underlying version, for example 1993, the underlying messages and their constituent elements will invariably be different.

Thirdly, the organization responsible for the actual implementation of a specific message standard based on ISO 8583 can define, for example, that the base character set will be EBCDIC in a mainframe environment and for other platforms ASCII. Additionally, binary format fields can be used within the message and for multi-lingual support, different code pages implemented to facilitate non-English characters such as Greek or Polish.

New card schemes such as SEPA are being created that make use of the ISO 20022 standard for cards, and while much work has been done in cross-referencing the two standards in book 3 of the SEPA cards standardization volume, it is clear that firms must increasingly deal with existing ISO 8583 data formats and the XML formats in which ISO 20022 messages are invariably formatted.

The use of ISO 8583 within payments infrastructures such as ACHs and immediate payments services such as the UK's Faster Payments, has also introduced potential interfaces to the wholesale banking market that in turn, will often use SWIFT MT or SEPA ISO 20022 payments.

ISO 8583 challenges

Organizations must not only be able to send and/or receive ISO 8583 messages but also be able to integrate messages with their own processing applications that may not understand the native format. They will often have to manage scenarios where different channels such as ATMs and credit cards employ entirely different message formats and character encoding, and these may well differ across the world for larger global companies.

The transactions have to be structurally correct and also semantically valid to avoid exceptions which can be costly in failed transaction fees as well as causing significant customer satisfaction issues in the retail world.

For banks and payments utilities that have to process other types of financial payments such as SWIFT, SEPA, ISO 20022, EDIFACT and ACH transactions such as NACHA, those processing systems will often not be compliant with ISO 8583.

All of these challenges must be addressed in an increasingly cost-conscious economic environment while not impacting the inherently time-sensitive processing requirements of the cards-based transaction lifecycle.

The Volante solution

Volante Designer is a suite of modular tools for integration and management of financial data. Volante enables users to rapidly build data integration solutions that handle card and payment message data. With virtually no footprint in terms of infrastructure or processing overhead, the solution gets single projects to market fast and can be the key to enterprise integration.

Volante Composer is the central component of Designer. With its collaborative interface, business analysts and developers easily specify and define ISO 8583 message transformations from source to destination, with freedom to customize standard message formats to real-world requirements. Rules-based data management functions can be incorporated from formulas available on the interface. When completed, these elements of message processing are represented as a model, or 'Cartridge', which is converted to code via code generation – typically Java (POJO and EJB).

Key to the solution is the data models that Volante builds and on-going maintenance of industry message standards. The Volante ISO 8583 plug-in defines the base data dictionaries of all versions of the standard, facilitating rapid construction of

Versions

- » Full data dictionary
- » 1987
- » 1993
- » 2003

Formats

- » ASCII
- » EBCDIC
- » Binary
- » Code pages

Constructs

- » Bitmaps
- » Tag Length Value (TLV)
- » Data sets
- » Primitive elements
- » Constructed elements
- » Composite elements
- » Code lists

Dashboards

- » Monitoring, entry, view and repair
- » Exception handling

Other plug-ins

- » SWIFT, ISO 20022, SEPA, EDIFACT, domestic ACHs and many more
- » Fixed width, ASCII delimited, XML, Cobol Copybook, SAP IDoc and many more

Benefits

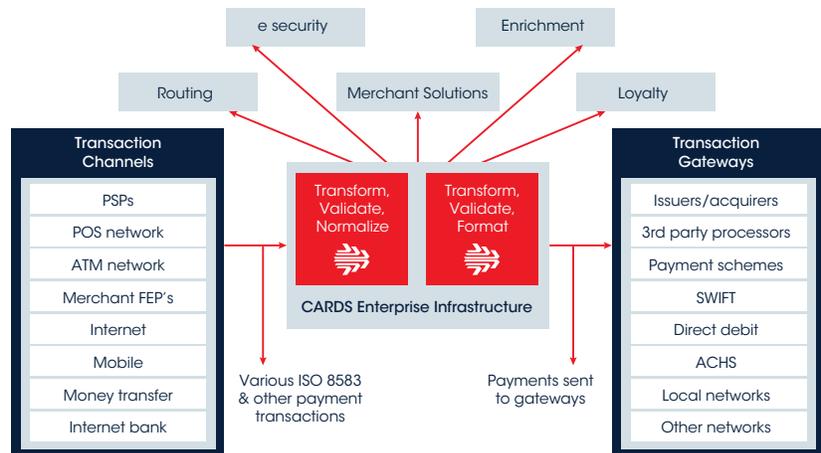
- » Predefined libraries for all versions of ISO 8583
- » ISO 8583 models can be used as the basis for any real world implementation
- » Repository of all end-point specific message definitions
- » Auto-upgrading when underlying models change
- » Self-documentation of message layouts and transformation accelerates client on-boarding
- » Facilitates extensive design time testing
- » GUI design environment for configuring messages, transformations, rules, routing and enrichment
- » Faster time-to-market
- » Improved compliance for standards interoperability, coexistence and migration
- » Improved STP with interface consolidation, standardized security, complex routing, validation and transformation
- » Reduced operational risk and improved governance
- » Lower ROI and TCO through intuitive, collaborative design and self-documentation

end-point specific implementations. Specific validations can be defined dependent on any criteria either within the data or externally sourced – all within a controlled environment. The environment includes specific automatic upgrading features when the underlying standards change and automatic generation of HTML documentation of implementations that is invaluable for ongoing support and sharing with customers that need to be on-boarded.

Transformation to and from other standards and proprietary data formats can be achieved through an extensive library of plug-ins.

All validation, enrichment, routing and transformation processes produce in-depth exception information and exception processing steps can also be defined to automatically handle the exception at runtime.

The small footprint of the generated code means that the solutions can be deployed in very high volume scenarios and have been benchmarked on a 24 processor Linux server in excess of 700,000 messages/sec.



Why Volante?

Volante has a long track record in supporting the complex messaging requirements of some of the world’s largest financial organizations and corporates around the world.

For a demonstration of how Volante can accelerate your ISO 8583 solutions and infrastructure, please contact us at info@volantetech.com or contact one of our regional offices below.