



EPASOrg

Innovation in card payment protocols

7 December 2010

Cartes & IDentification 2010 – Acquirer Protocol Workshop

William Vanobberghen, EPAS Acquirer Protocol WG Convener

What is EPASOrg?

- An international non-profit association founded by key industry players to foster interoperability in card payment protocols



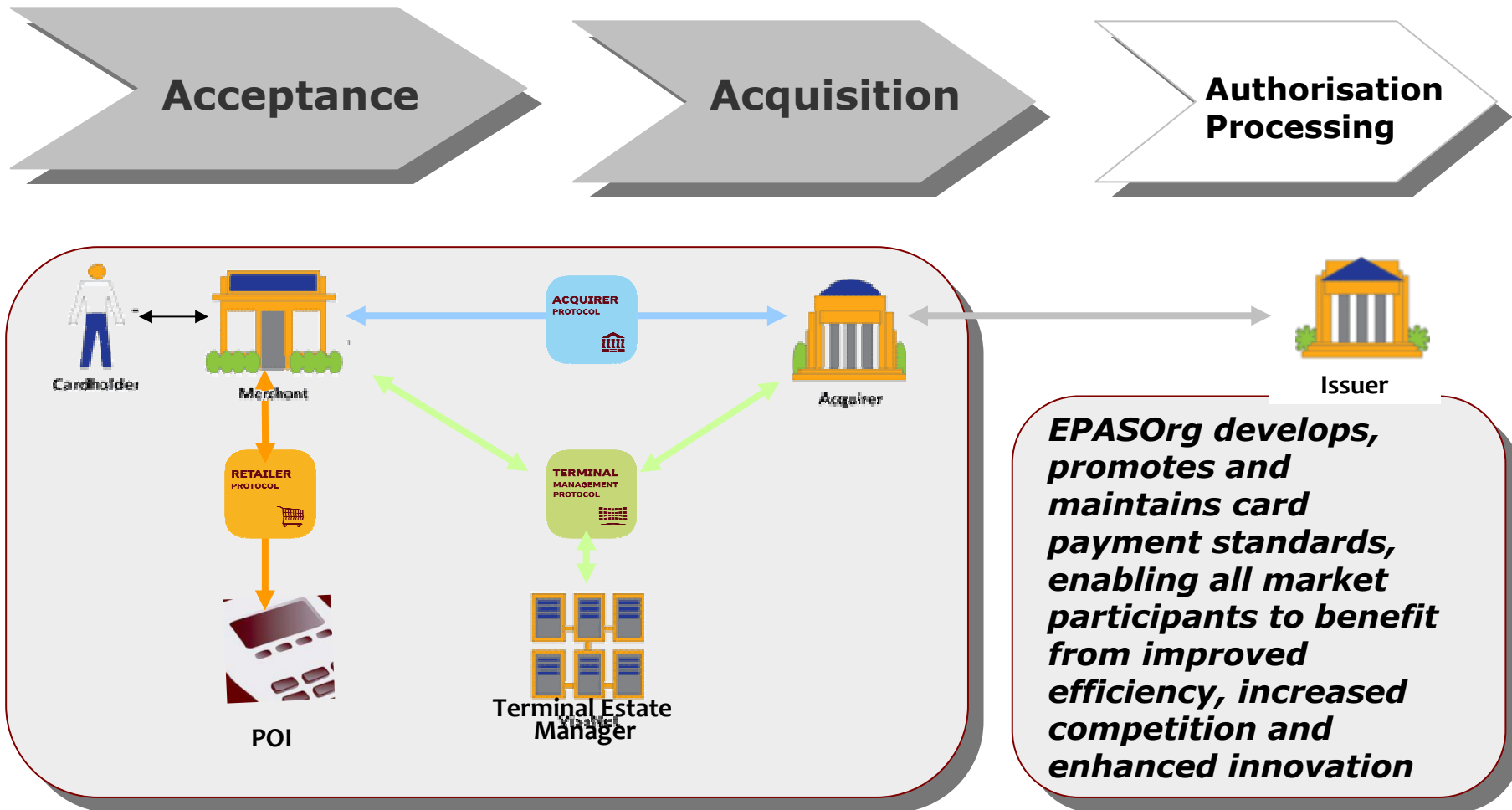
Our members



The EPASOrg market Challenges



The card payment value chain



The EPASOrg offer

The interface
between a card
payment terminal
and an acquirer



The interface
between a card
payment
application
and a retail
Point of Sale
system



The interface
between card
payment
terminals
and the systems
used to manage
them remotely





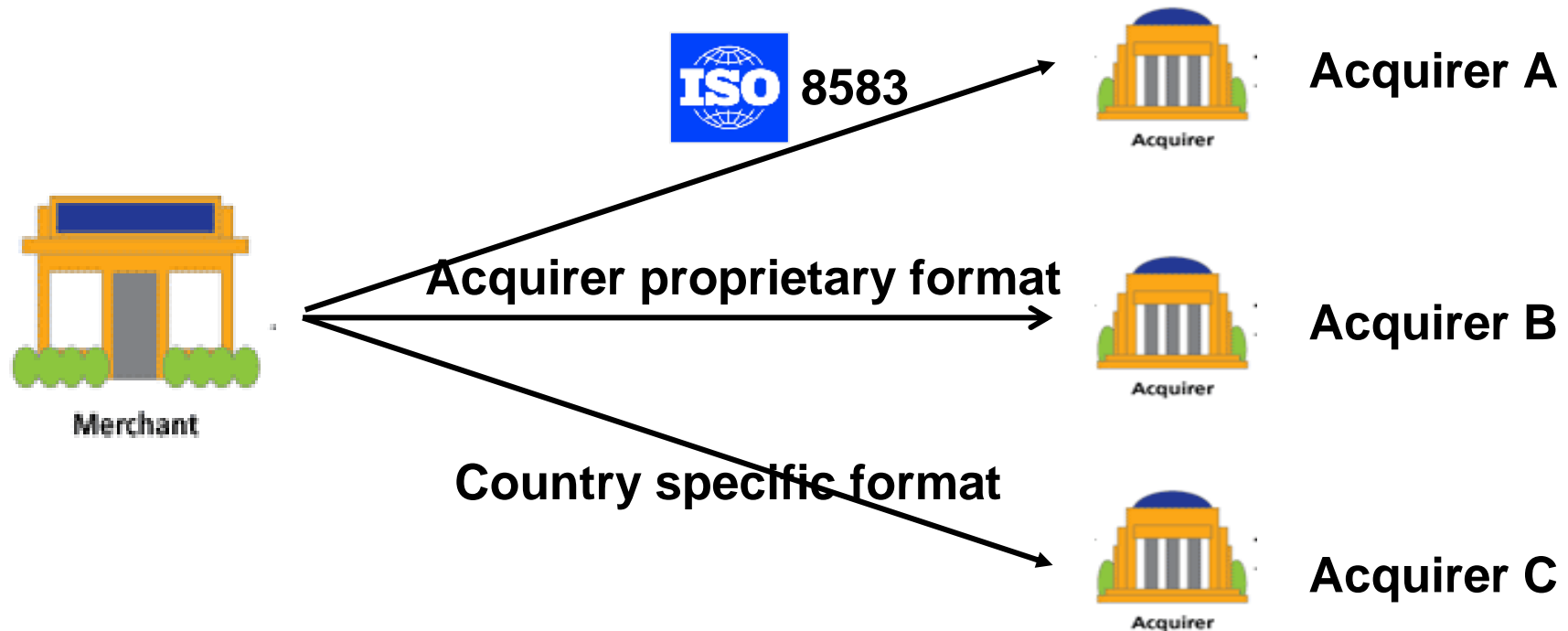
ISO 20022 EPAS Acquirer Protocol



At the cornerstone of the card payment value chain...

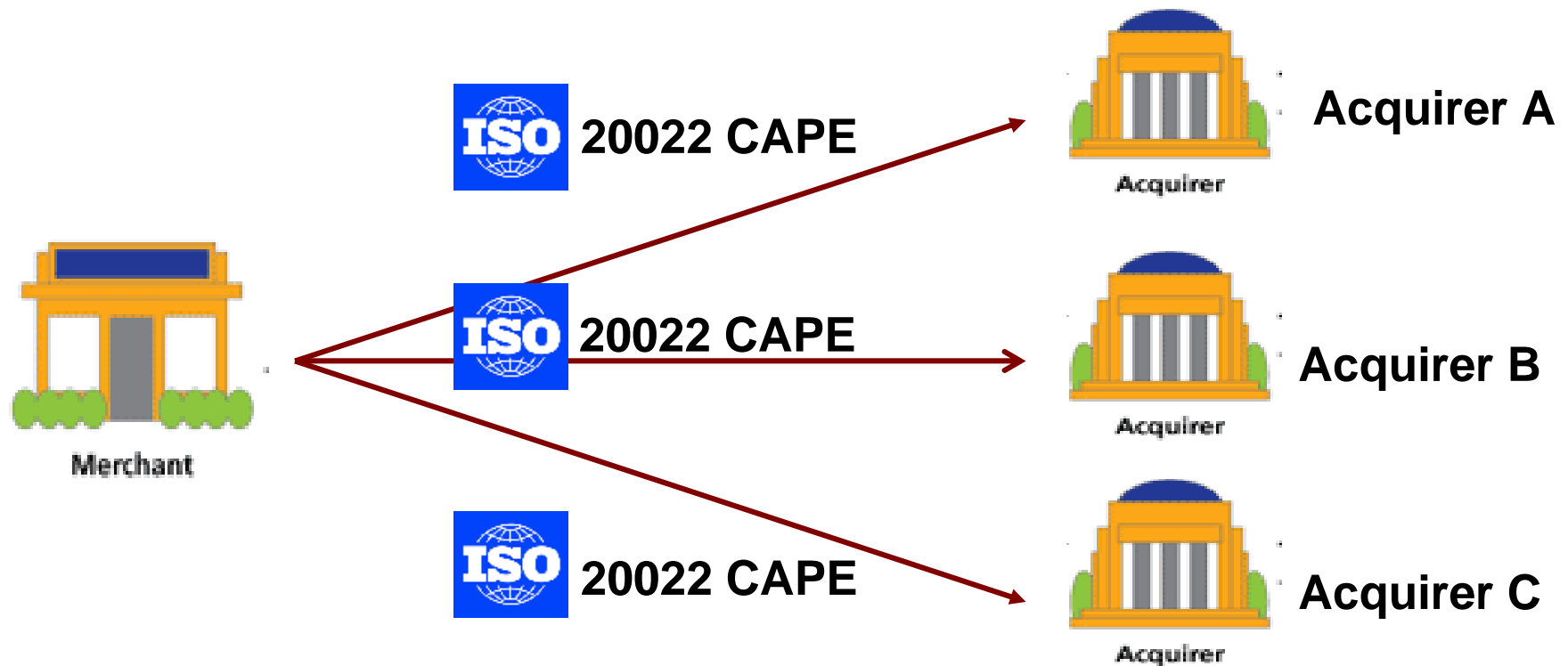
- **A common protocol for all merchants and acquirers**
- **Enabler of cross-border multi-acquiring**
- **Royalty-free universal implementation**
- **Convergence with other ISO 20022 payment standards (SCT, SDD)**
- **Compatible with existing ISO 8583 protocols**

Acquisition today ...



Today's situation: a merchant needs to adopt the format supported by a specific acquirer

Acquisition tomorrow ...



Tomorrow's situation: a merchant uses only one common universal syntax (ISO 20022 CAPE)

What is ISO 20022?



- **An ISO financial industry standard**
- **An independent modelling approach**
- **A common platform for the development of messages**
- **A central dictionary of business items**
- **A set of rules to convert messages in XML and other syntaxes (e.g. ASN.1/TLV)**

What is ISO 20022?



- A syntax neutral business modelling methodology
- Syntax specific design rules
- Industry led development / registration process
- Financial repository on www.iso20022.org
- Reverse engineering approach to ease coexistence

Why did EPASOrg rely on ISO 20022?

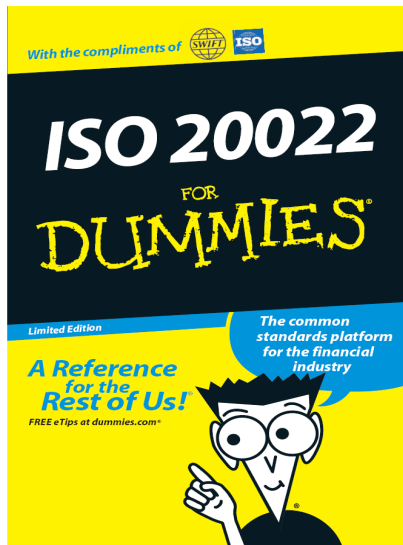


- **A universal and common platform for the development of messages**
- **A credible and long term alternative to ISO 8583**
- **A modelling methodology approach independent of the coding of the messages**
- **A choice in choosing the appropriate coding mechanism (XML, ASN.1/TLV, etc.)**

More info about ISO 20022

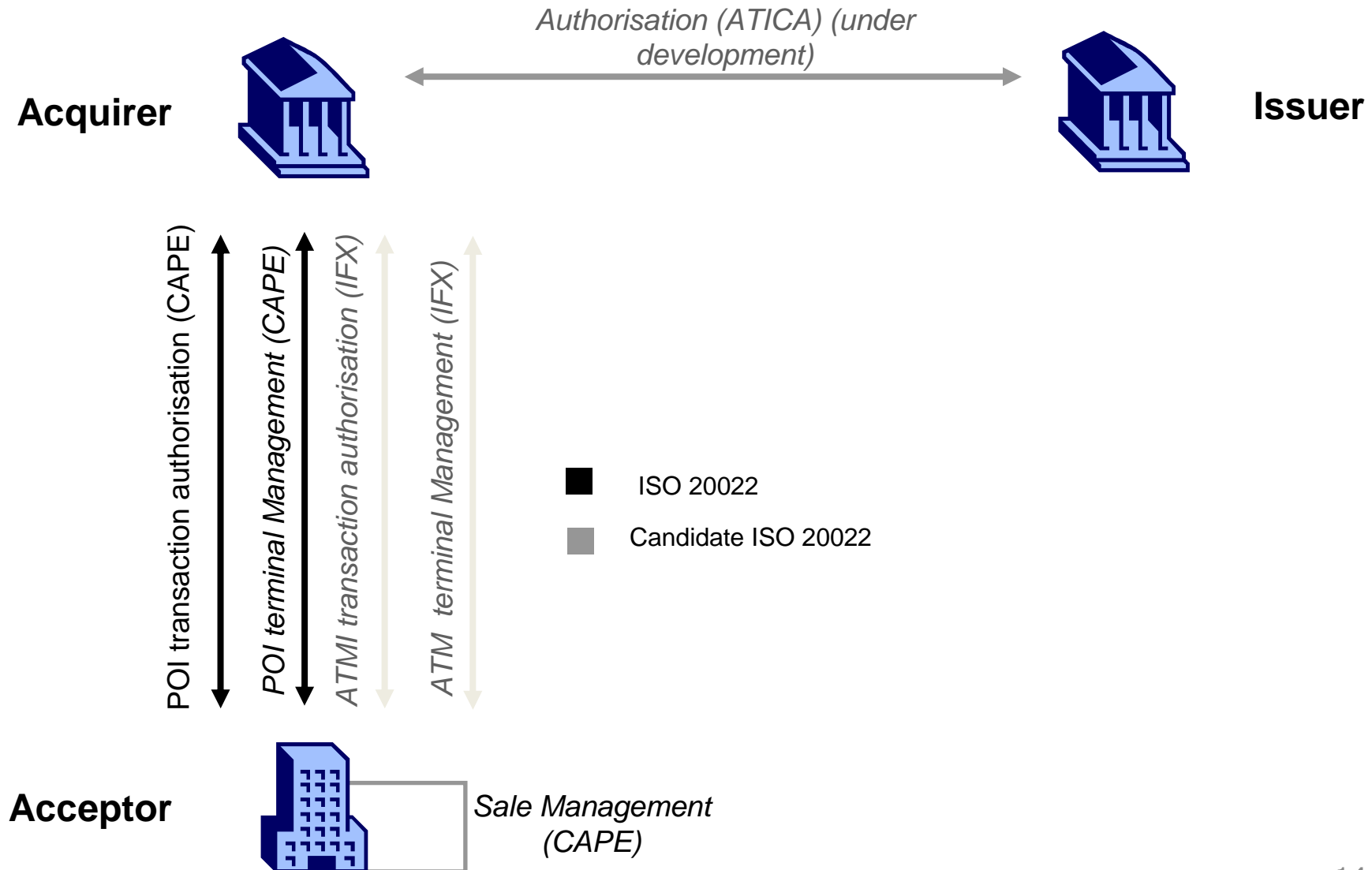


- ISO 20022 official web site
(<http://www.iso20022.org/>)

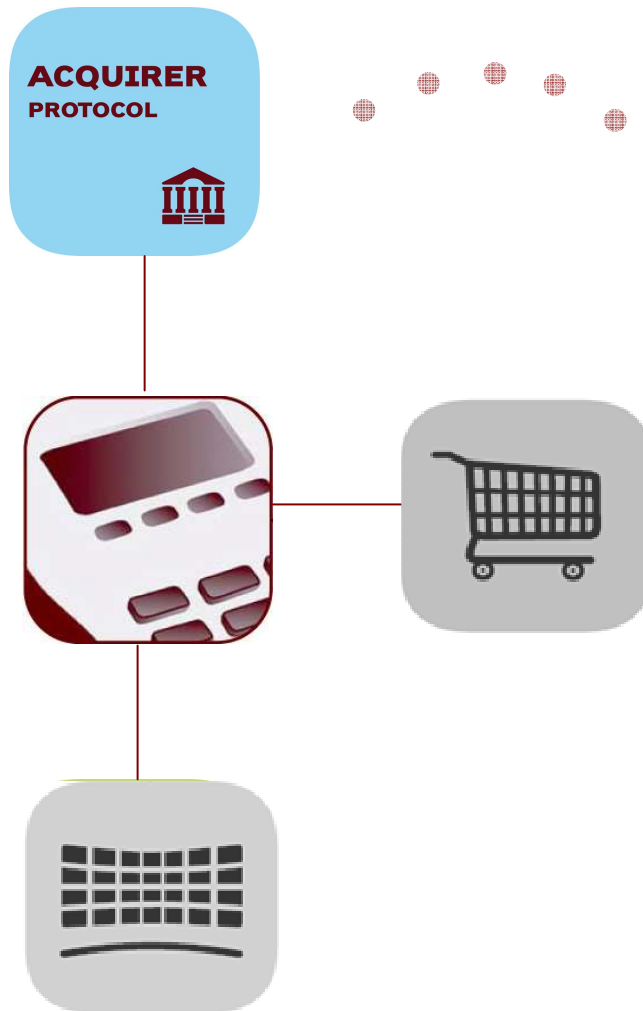


- ISO 20022 for Dummies
(<http://www.swift.com/iso20022fordummies>)

ISO 20022 Card Messages Portfolio

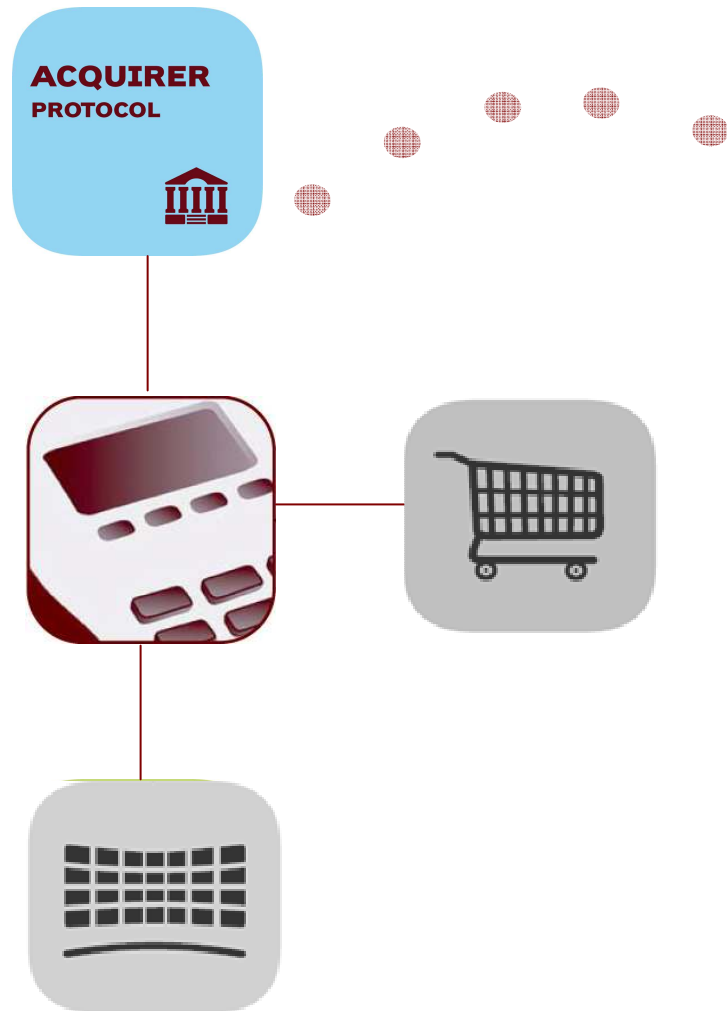


The EPAS Acquirer Protocol (ISO 20022 - CAPE)



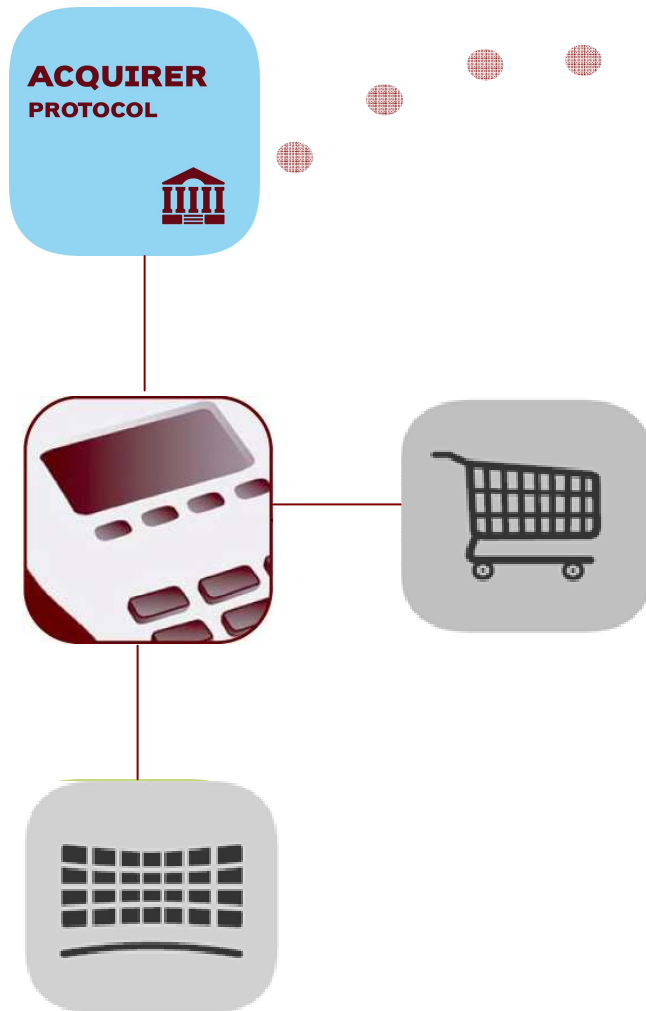
- A set of messages for the Acceptor-to-Acquirer relationship
- Upward and downward compatibility with existing ISO 8583
- A modelling methodology approach independent of the coding of the messages
- A choice in choosing the appropriate coding mechanism (XML, ASN.1/TLV, etc.)

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



- **Clear separation between the protocol and software applications**
- **Flexibility allowing the use of Intermediary Agents**
- **Integration of traceability information**
- **Embedded security: intermixing different levels of message and different levels of security**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



- **Compliance with SEPA requirements**
- **Integration of commercial data**
- **Structured approach vs. flat bit-map structure of ISO 8583**
- **Evolution of the standard through open and public ISO 20022 Change Request mechanisms**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



Benefit for Acceptors

- **Universal ISO-based standard**
- **Non-proprietary common protocol**
- **Multiple-acquiring support and enforcement**
- **Cross-border compliance**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



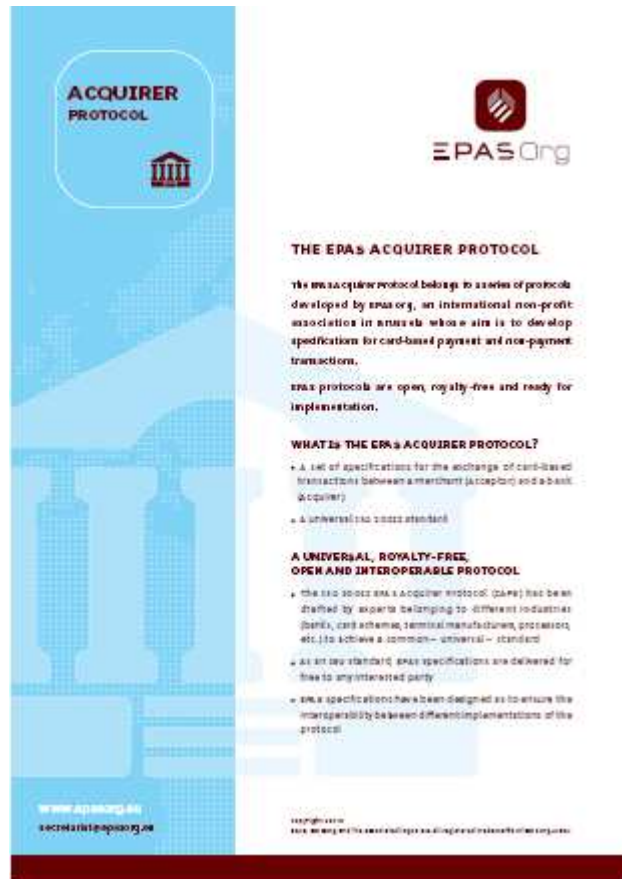
Benefit for Acquirers

- **Universal ISO-based standard**
- **Multiple-acquiring offer to major cross-border retailers (e.g. multi-national companies)**
- **Intermediary Agent to Acquirer support**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



Merchant site integration



- **Single and multi- terminal acquiring**
- **Multi-functions terminal to acquirer**
- **Internal protocol integration capability**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



ISO 20022

Card Payment Exchanges

Approved by the Card and Related Retail Financial Services SEG on 6 October 2010

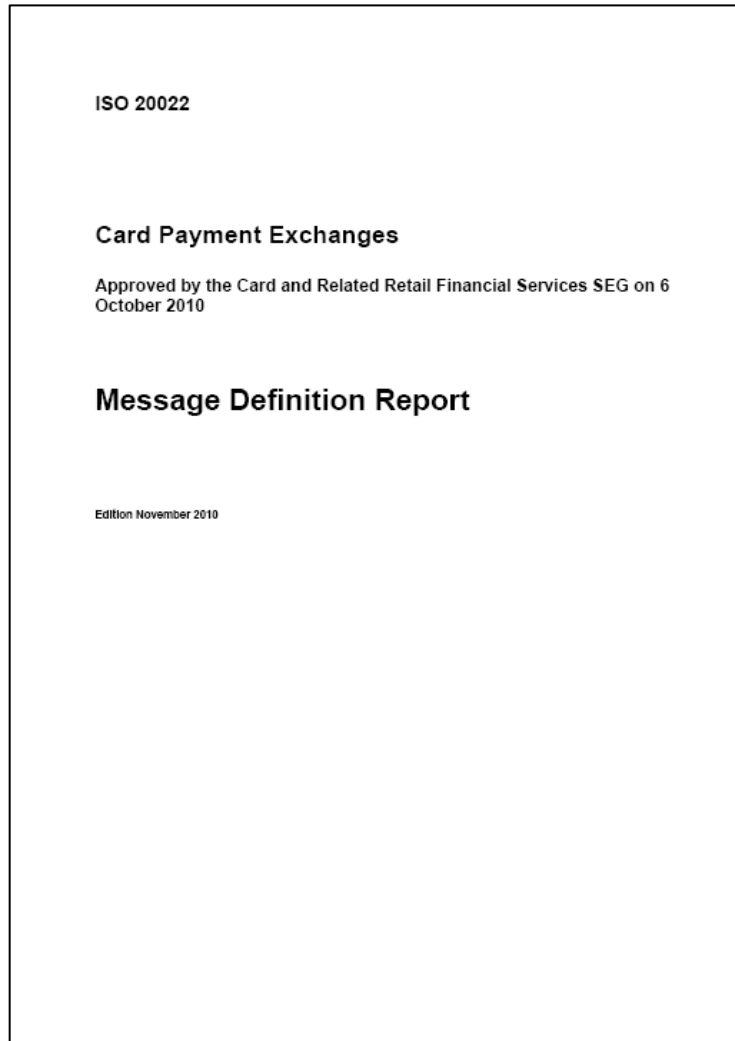
Message Definition Report

Edition November 2010

CAPE messages (MDR)

- **15 messages:**
 - **Authorisation**
 - **Completion**
 - **Cancellation**
 - **Reconciliation**
 - **Batch transfer**
 - **Diagnostic**
 - **Rejection**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



Various contexts

- **Authorisation with capture**
 - **Authorisation exchange**
 - **Completion exchange**
- **Capture through completion of a previously authorised transaction**
- **Capture through batch of previously authorised transactions**
- **Authorisation and completion through an intermediary agent**

The EPAS Acquirer Protocol (ISO 20022 - CAPE)



International Organization for Standardization
ISO 20022 Universal financial industry message scheme

Catalogue of ISO 20022
messages

Status of Submissions

Catalogue of Change Requests

Simple Repository Search

Advanced Dictionary Search

Advanced Catalogue Search

e-Dictionary and FIBIM

External Code Lists, DSS,
Variants and Supplementary
Data

Understanding the ISO 20022
Repository

How to search the ISO 20022
Repository items

Registration Management
Group

Standards Evaluation Groups

Technical Support Group

Registration Authority

Registration Process

The ISO 20022 Standard

Intellectual Property Rights
Policy

FAQ

Home

ISO 20022 Cards and Related Retail Financial Services

This section gives access to the description of ISO 20022 Cards and Related Retail Financial Services message definitions in the following business areas:

Business Areas

[Acceptor to Acquirer Card Transactions](#)

Read more about the [ISO 20022 Intellectual Property Rights policy](#).

Acceptor to Acquirer Card Transactions
- Card Payments Exchanges

Message Name	Msg ID (XML Schema)	Submitting Organization	XML Instances	Msg Def Report	Model	Diagrams
AcceptorAuthorisationRequestV01	caas.001.001.01	EPASOrg	caas.001.001.01			
AcceptorAuthorisationResponseV01	caas.002.001.01	EPASOrg	caas.002.001.01			
AcceptorCompletionAdviceV01	caas.003.001.01	EPASOrg	caas.003.001.01			
AcceptorCompletionAdviceResponseV01	caas.004.001.01	EPASOrg	caas.004.001.01			
AcceptorCancellationRequestV01	caas.005.001.01	EPASOrg	caas.005.001.01			
AcceptorCancellationResponseV01	caas.006.001.01	EPASOrg	caas.006.001.01			
AcceptorCancellationAdviceV01	caas.007.001.01	EPASOrg	caas.007.001.01			
AcceptorCancellationAdviceResponseV01	caas.008.001.01	EPASOrg	caas.008.001.01			
AcceptorReconciliationRequestV01	caas.009.001.01	EPASOrg	caas.009.001.01			
AcceptorReconciliationResponseV01	caas.010.001.01	EPASOrg	caas.010.001.01			
AcceptorBatchTransferV01	caas.011.001.01	EPASOrg	caas.011.001.01			
AcceptorBatchTransferResponseV01	caas.012.001.01	EPASOrg	caas.012.001.01			
AcceptorDiagnosticRequestV01	caas.013.001.01	EPASOrg	caas.013.001.01			
AcceptorDiagnosticResponseV01	caas.014.001.01	EPASOrg	caas.014.001.01			
AcceptorRejectionV01	caas.015.001.01	EPASOrg	caas.015.001.01			

Last updated on: 18 November 2010

(1) Processable format: The model is available in a processable UML 2 format (XMI 2 or Rational Software Modeler 7.5 format) upon request. Please contact the [Registration Authority](#) and specify which model you are interested in and the desired format (XMI or RSM).

(2) Unzip the zipped file in a separate local folder. In that folder or any subfolder, double click on the .wmf or .png file of your choice, and the diagram file will be shown.

▪ EPAS Acquirer Protocol

specifications (MDR - Vers. 1.0)

available on the ISO 20022 Web site (since Nov. 2010)

- http://www.iso20022.org/UNIFI_Cards_messages.page#AcceptorToAcquirerCape

▪ EPAS Acquirer Protocol MUG

(Message Usage Guide – Vers 1.0)
to be made available on the EPASOrg Web site (end of Q.1 2011)



EPAS Org

Thank you for your attention !

www.epasorg.eu