



INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

EPAS Innovation in Card Payment Protocols

ITEA 2 Symposium, 29-30 October 2009, Madrid
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Today's situation



Challenges to address 1/3

- Card Payment : a **mature activity** with constant evolutions
- **Complexity of the domain**
 - *Communication*
 - real time online transactions
 - multiple parties
 - very short response time
 - *Security*
 - Protection of the exchange of transaction data
 - Protection of the card data
 - *Payment*
 - regulation rules
 - integration with the sale process



Challenges to address 2/3

- **Today's protocols based on outdated standards**
 - Security usually not part of the standard
 - Definition and coding of data usually interdependent
 - Lack of interoperability due to
 - loose definition of the standards
 - their possible interpretation
 - Modelling approach missing
 - Evolution of the standard restricted



Challenges to address 3/3

- **Various card and communication technologies**
 - plastic card, smart card, contactless, RFID
 - deployment and generalisation of IP technology
 - each new technology adding its own information requirements
- **Different types of payment services**
 - not foreseen in protocols available today
- **Card schemes specific requirements**
 - rules, levels of protection., etc.
- **Variety of payment acquisition contexts**
 - face to face/unattended, merchant store/at home, standard network/Internet, secure/public environment



Market environment

- **Fragmented card payment market**
 - per country: different levels of requirements, incompatible implementations
 - per domain: different national practices, different needs
- **Strong competitive pressure**
 - Consolidation of: the card value chain
 - Manufacturers
 - Acquirers
 - Service providers
- **EU Regulation is impacting all major actors**
 - Banks
 - Card and Terminal manufacturers
 - Card payment systems
 - IT services providers

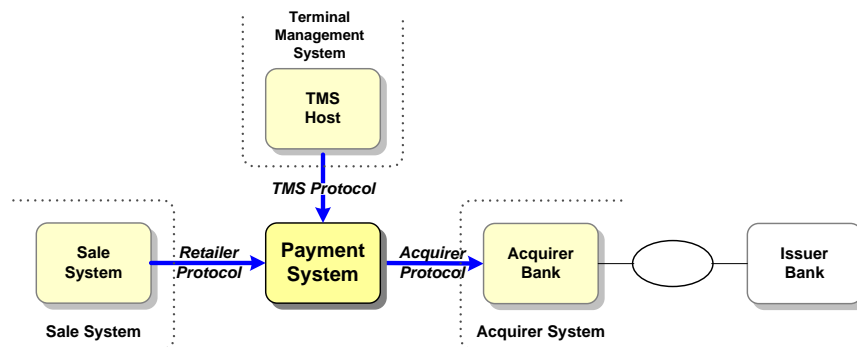


Scope of the Project 1/2

- **Acquirer Protocol**
 - Exchange of data between a retailer (acceptor) and his bank (acquirer) to carry out real-time payment transactions
- **Retailer Protocol**
 - Exchange of data between a sale and its related payment transaction
- **Terminal Management Protocol**
 - Exchange of data to manage and supervise payment terminals



Scope of the Project 2/2



State of the Art

- Clear separation of data definition and coding
 - Definition of the data independently of its coding giving more flexibility in the evolution of the protocol
 - Isolation of the specificities of the data coding (XML, ASN.1)
- Data modelling approach
 - Structuring of data at a functional level
 - Modelling adapted to the exchange of message through a standard interface

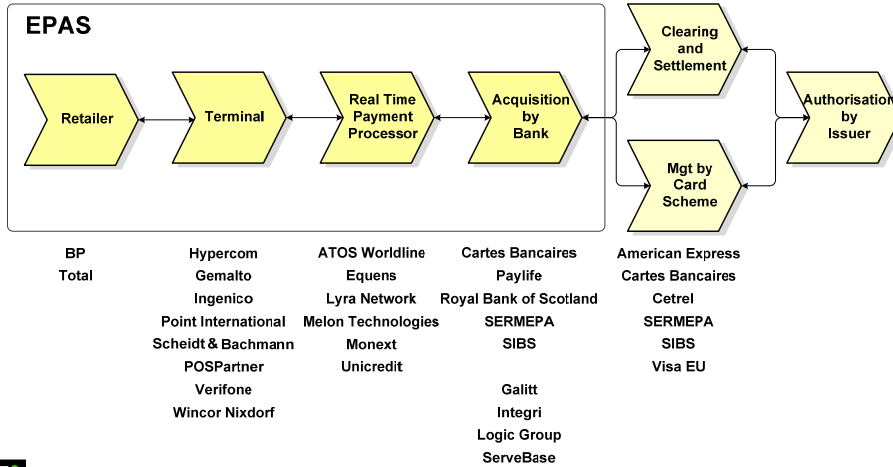


Strengths of the Project

- **Involvement of all the actors** of the card payment value chain (banks, merchants, vendors)
- Drafting of brand **new specifications** based on a new methodology of work (UML)
- Development of **demonstrators**
- **Implementation** of specifications in actual products by the market (2010-2011)
- Create the **condition** to:
 - Leverage the market at the European level
 - Foster this leverage at worldwide level (ISO 20022)



Card Payment Value Chain



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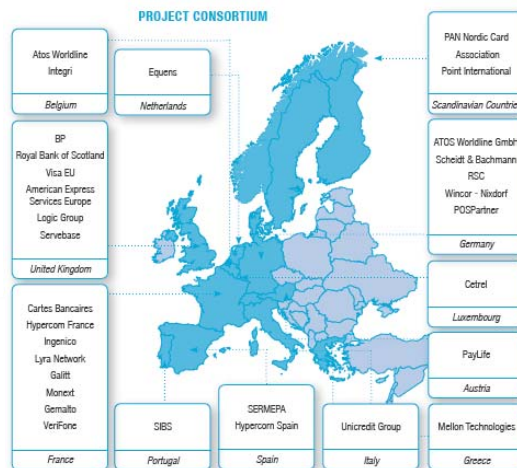
Project Partners

EPAS PARTNERS

- 20 members:
 - Large companies (5)
 - Small companies (15)
- 13 associate members
- 15 countries

WORK PACKAGES OVERVIEW

- Business and functional analysis
- Development of specifications
- Integration of specifications
- Development of software
- Building of Demonstrators



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Results



Result Standardisation

- Very first card payment protocol to become an ISO 20022 standard
 - Convergence with other non-card payment instruments (credit transfers, direct debit)
 - Single and common repository of messages, data definition and data coding
 - World wide royalty free specifications



International Organization for
Standardization

ISO 20022 Universal financial
industry message scheme

Result Exploitation

- Legal structure in Brussels (EPASOrg) to:
 - preserve the intellectual assets of the project
 - further develop and ensure the maintenance of the protocols
 - carry out marketing activities
- Instrument requested ASAP by multi-national companies for centralised acquiring in Europe
- Reduction of development and maintenance costs ('one for all' common solution)
- Simplification of the offer of international products or services
- Increase competition and innovation throughout the market



Result Conclusion

- What has been achieved so far ...
 - Delivery of a common series of specifications addressing the needs of the different industries involved in the project
 - Response to the requirements of the regulators in Europe (European Commission, European Central Bank) in delivering common protocols to overcome technical barriers
 - Compliance with the requirements of the banking industry (EPC) in delivering specifications which meet those requirements (EPC Volume)
 - Endorsement as candidate messages by ISO 20022 to become full-fledged ISO standards by end of 2010



Result Conclusion



ITEA 2 Symposium, 29-30 Oct - Madrid

Plenary Project Presentation:
EPAS: Innovation in Card Payment Protocol

EPAS: a success story!

- Support of all stakeholders in the card payment value chain
- Vehicle to implement the Directive on Payment Services (“unbundling”, common specifications, royalty-free solution, all main stakeholders involvement)
- Removal of today’s technical, legal and commercial barriers
- Solution requested ASAP by most stakeholders, especially in the retail industry (e.g. EuroCommerce requirement for a common protocol in Europe)
- Protocol free of any royalty or fee which meets the requirements of the regulators in Europe and of the market
- Commercial relays through the setting-up of a legal structure (EPASOrg)



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Thank you for your attention

