

EPAS

Ensuring interoperability of card payments across Europe and beyond

Impact highlights

- EPAS has paved the way to a series of universal ISO standardised specifications for European card payments free of royalty and charges. Ultimately, this has been extended worldwide with the endorsement of the EPAS specifications (CAPE) as a global ISO 20022 message standard.
- ISO 20022 is today 'the' reference in standardisation in finance. Instant payment solutions are being developed today based on ISO 20022 credit transfer standards which may, in the future, facilitate the development of hybrid card and credit transfer payment solutions.
- EPAS has been targeted by Groupement des Cartes Bancaires as a unique opportunity for its members to address the need for a unified European market for payments as set out by the European Commission. It also provides an appropriate way to rely on open royalty-free standards ensuring robust independence vis-à-vis some proprietary norms owned by and under the control of other industry stakeholders. Such independence is viewed as the only way to maintain today's domestic scheme autonomy vis-à-vis the influence of some major global networks.
- EPAS provides a major competitive advantage to retailers operating card payments in different countries, such as:
 - Total S.A., operating and managing 8 different electronic payment systems in Europe, selected EPAS to reduce its heavy dependence on terminal manufacturers and payment solution providers.
 - AccorHotels found in EPAS standards the ability to overcome the deployment complexity and the costs related to heterogeneous standards among European countries.

Several years ago, the European card payment industry, terminal manufacturers, processors and payment system providers worked together - in line with the preference given by the European Central Bank and the European Commission for ISO 20022 standards - to implement SEPA, the Single Euro Payments Area. SEPA aimed at facilitating payments in Europe beyond national borders in order to achieve a single domestic market of payments. However, this requires the full harmonisation of payment-card use - a necessary step to ensure the complete interoperability of national card payment schemes. The ITEA EPAS project (2006-2008) aimed to involve the main actors of the card payment industry to deliver global standards that would enable European retailers to rely on common specifications for their card acquiring operations. The EPAS project gathered together various actors belonging to the European card payment industry such as Groupement des Cartes Bancaires, Ingenico, ATOS Worldline, Verifone, Wincor-Nixdorf, Total, Equens and many others.

Project results

EPAS contributed to the achievement of SEPA by delivering a series of specifications that enable a smooth migration from non-interoperable proprietary solutions with dedicated interfaces to an open environment based on interoperable hardware and software components from different manufacturers. This work resulted in three major components for point-of-interaction (POI) transactions:

1. **An acceptor-acquirer protocol** covering authorisation, completion, rejection, reconciliation, diagnostic and specific service exchanges between an acceptor (merchant) and an acquirer (bank of the merchant) of card payment transactions.
2. **A terminal management system (TMS)** between a card payment terminal and the bank of the merchant for the management and the downloading of software and functional/security parameters into the terminal.
3. **A retailer protocol** covering a series of administrative, payment-services and device-services

exchanges between a sales application controlled by a merchant (retailer) and a payment application; ensuring a clear separation between sales and payment functions.

A first working demonstration of the EPAS standard took place in November 2008.

Exploitation

After the project end, a formal not-for-profit legal structure - EPASOrg - was set up with the aim of providing a global platform for the evolution and further maintenance of the standards. A year later (November 2010), EPASOrg delivered the very first series of universal ISO 20022 standards for card payments.

In October 2014, the OSCar consortium and CIR SEPA-Fast technical working group joined EPASOrg to create 'nexo', an organisation whose aim is to design, develop, promote and maintain card payment and cash withdrawal standards, protocols and implementation specifications under a universal ISO 20022 standardisation process.

There are currently 32 principal members of nexo, including American Express, VISA, Mastercard, BNP Paribas, Crédit Agricole, SNCF, TOTAL and Auchan. Furthermore, there are 44 associate members, such as AccorHotels, Ayden, FIS, Lidl, LVMH and Subway.

Major international card schemes involved in acquirer-to-issuer card payment such as Visa, Mastercard, AMEX and Discover have ultimately come to the conclusion that ISO 20022 would progressively lead to the replacement of the legacy ISO 8583 industry standard which is still extensively used worldwide. A dedicated initiative in the acquirer-to-card issuer domain, ISO 20022 ATICA, involving the above actors aims at bridging the standard gap by completing the existing series of ISO 20022 card payment standards. The outcome of this work will enable a terminal using the EPAS standard to further reach a card issuer through the ATICA norm and so provide a full-fledged ISO 20022 solution from one end of the chain (the terminal initiating the card payment) to the other end (the issuer of the card giving the authorisation for the payment).

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