

POSITION PAPER

The SEPA ePayments Framework in the context of the greater ePayments landscape

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1 Executive summary

The European eCommerce and ePayments landscape is blossoming, complex and diverse. However, despite numerous solutions for facilitating payment transactions in the online environment, there is as yet no one solution that meets the needs of consumers, merchants and banks alike. This has not been a barrier to market growth so far, and consequently it is unclear why European policy makers and regulators are seeking to interfere in a healthy, competitive market.

One of the solutions coming close to meeting several stakeholder needs is a system based on internet banking and automated completion of credit transfer instructions – however a business model for this construction (to avoid that those not using this system still indirectly paying for it) has still to be implemented. The EPC's SEPA ePayments Framework (SEF) initiative seeks to leverage internet banking based systems and build reachability through interoperability of the existing schemes using them. However, the SEF does not go below the scheme level and so misses an opportunity to capture the experience of numerous initiatives of this type at bank level.

Within the SEF the business model for individual schemes and cooperation between schemes has yet to be addressed, particularly given that the SEF leverages the zero-interchange SEPA Credit Transfer instrument. Given that the participating schemes or banks will be required to offer a payment guarantee to the merchant, this makes the attractiveness of the framework to new players low and will likely discourage new entrants to expand the scheme. Although, it is a major success criterion for all market entrants that costs for the consumer are visible and as close to zero as possible, there needs to be some competitive margin to encourage new players.

While the SEPA ePayments Framework being developed by the EPC is being shaped around the three existing schemes, and so unlike SCT and SDD the framework does not reflect the needs of all of SEPA but the needs of these schemes to interoperate, it is at least a positive initiative. However, there is an alternative path that would enable the creation of more value for the eCommerce sector as a whole. Indeed, in order for the framework to be successful, it would be better to concentrate on standardising authentication methods across multiple instruments and making multiple schemes easier for implementation by merchants. What is clear is that the EPC should not seek to create a single scheme for ePayments as this would not be conducive to promoting innovation and competition in this dynamic sector.

The EPC should take a wider view of payments in eCommerce and create a framework that stimulates innovation and drives towards the adoption of multiple methods of payment by merchants, as in the face-to-face retail sector, rather than frame only a single payment method. In order to do this, EPC needs to:

- Create a policy for resolving difficulties in Card Not Present transactions and data management;
- Lead the creation of SEPA tools to aid merchants in fighting eCommerce fraud;
- Work alongside the EU Digital Agenda to promote innovation and best practise in a competitive environment;
- Promote the use of all SEPA instruments for eCommerce by extending schemes to cover the e-channel and unbundle processing channels to increase competition between the instruments and schemes.

The overall response to the eCommerce market needs to be one of facilitating the same diversity of payment methods prevalent in other retail channels, maintaining competition while structuring for interoperability and efficiency.



2 Description of the Current Situation

2.1 A contextual definition of ePayments

Within the context of this document, ePayments is defined as payment for goods or services rendered where the medium for customer to merchant interaction is an online environment. This in simpler terms comes down to paying for goods or services in eCommerce. This is a broader definition than that used for the SEPA ePayments Framework, where a specific type of ePayment based on credit transfer (discussed further in section 2 of this document) is considered by EPC.

2.2 Background to creation of the SEPA ePayments Framework

With the growth of the ePayments sector year-on-year, driven by greater access to the internet, an increasing diversity of merchants offering goods and the increasing time poverty of Europe's citizens, it became clear from a political point of view that payments for goods and services purchased via the internet needed to be compatible with SEPA. This view was echoed by both the European Commission and ECB in their clear instructions to the EPC to work on standardisation in this area.

As illustrated in the ESBG discussion paper on the ePayments landscape 1512/2009, the bulk of Europe's eCommerce transactions result from four transaction types: Card Not Present (covered by the SEPA Cards Framework); Direct Debit (to be covered by the SDD Scheme); Cash on Delivery; and Credit Transfer (covered partially by the SCT Scheme, but also in the proposed SEPA ePayments Framework). There are also a number of proprietary deported credit transfer schemes, such as PayPal and Google Checkout. While a payment method in their own right, they are usually based on accounts funded using one of the aforementioned methods.

It should be further noted that:

- E-Commerce is certainly not a novel development, and this market space has traditionally been alive with payment initiatives.
- In spite of this, e-commerce occupies *ceteris paribus* a marginal space in overall commerce. The European Commission's Guidelines on Vertical Restraints furthermore allow suppliers to restrict Internet sales under a certain number of situations and conditions¹.
- In terms of customer expectations assurance to obtain redress in case of faulty or absent performance of the contract by the seller are unevenly met. Although not a payment function as such, going forward this capability will probably become a key service differentiator.
- Equally it is clear that consumers tend to port to the e-commerce space – to the greatest extent possible – their real world payment behaviour. It is well known that the usage of payment instruments still differs widely through the Internal Market. It would come as a surprise if a “one size fits all” approach (such as a single ePayment scheme) could be the golden bullet.

2.3 Existing ePayment Solutions in eCommerce

The auction site and shop-front eCommerce models, alongside many others that have come and gone, have been, and continue to be, the driver for the creation and adaptation of ePayment solutions. As of today, there are

¹ Note to Section 52: “This does not exclude the supplier requiring, without limiting the online sales of the distributor, that the buyer sells at least a certain absolute amount (in value or volume) of the products off-line in order to ensure an efficient operation of its brick and mortar shop, nor does it preclude the supplier's distribution model [...]. This absolute amount of required off-line sales can be the same for all buyers, or determined individually for each buyer on the basis of objective criteria, such as the buyer's size in the network or its geographic location”. (ESBG's underlining)



numerous solutions for P2P, P2B and B2B payments on the web, all based on a set of simple mechanisms, yet none are the magic bullet that fill all requirements. This failure, coupled with national legacies has created an eCommerce landscape where there is no dominant ePayment mode in Europe.

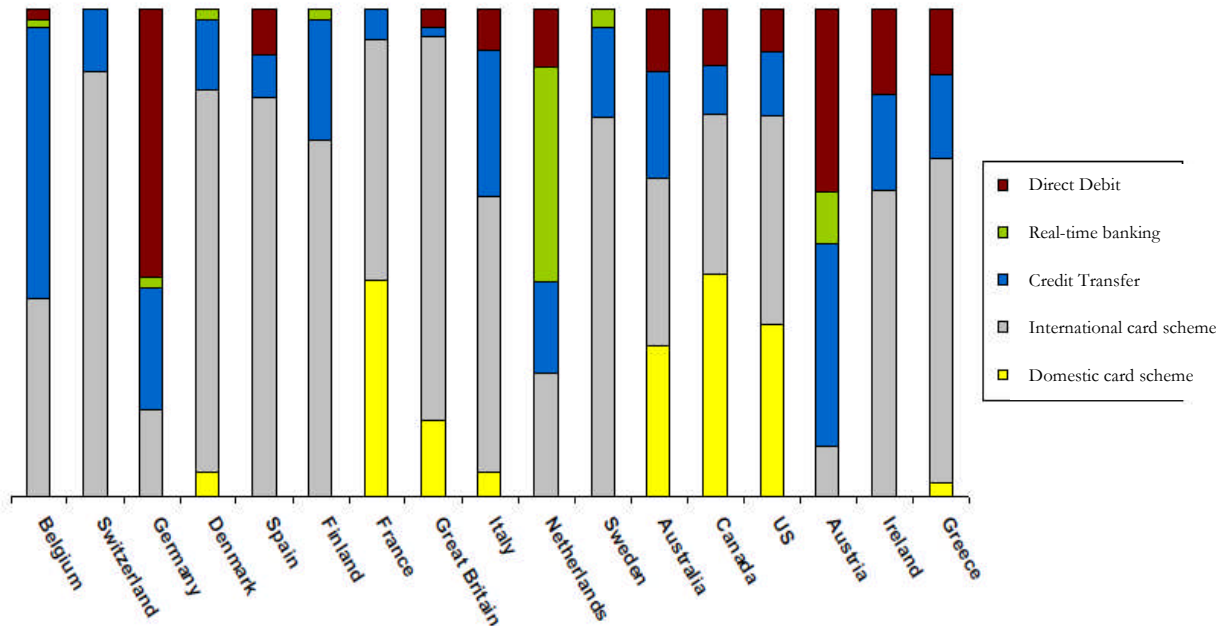


Figure 1: Preferred payment instruments for eCommerce depend on the legacy in national markets²

The prevalent technologies deployed in any single market are usually reflective of a number of factors. This could be legacy approach to electronic payments, prevalence and adoption levels of internet banking, adoption of payment system aggregators by internet merchants, market preference for credit or debit, ease of use of direct debit for single payment, and other indefinable factors. However, it is undeniable that this divergence in market conditions has led to a competitive and dynamic European landscape.

2.4 Payment Mechanisms used in eCommerce

2.4.1 [Card-based Schemes]

As shown in Figure 1, credit card payments were the leading eCommerce payment instrument in Europe with an average 40% of transactions.³ In markets across Europe, acceptance has varying degrees of security and complexity depending on the merchant. On the majority of sites, the 16 digit Primary Account Number (PAN), expiry date, cardholder name and Card Verification Value (CVV) need to be transmitted to the merchant either via email, a web form or directly into the interface of an authorization system, allowing the merchant to gain online authorisation for the payment. This method is also applicable to many debit cards, although MasterCard's Maestro brand has exceptionally low acceptance on the web. The simplicity of credit cards for both eCommerce consumer and merchant has made them popular. However, the intrinsic insecurity in this method of payment (with data that can be intercepted and replayed at other merchants) contributes to the perceived risk of potential consumers in this channel.

² Source: Global Collect presentation 'What are my payment options?' April 2009

³ Figures from Ogone, Belgium



This risk has been addressed at some levels by the introduction of 3D-Secure processes by the two major payment schemes, MasterCard & Visa, which has subsequently been strengthened with the addition of dynamic pass codes (see section 4.1). It has also led to a rise in fraud detection technologies meaning that the average large eCommerce retailer will use eight different methods of fraud detection on every transaction.⁴ This is both a considerable overhead for these retailers and a source of potential lost orders.

2.4.2 [Credit Transfers]

Credit Transfer is a customer-triggered method for transferring funds from an account that they own to that of the merchant providing the goods or services. Invariably in eCommerce, this is through their internet banking system or, as described later, as deported credit transfers through a direct pay/p2p scheme.

The increasing popularity of internet banking has seen solutions being delivered by individual banks and also credit transfer schemes at a national level. Essentially, at the moment of payment, the consumer initiates a standard credit transfer from their current account to a current account nominated by the merchant, usually through an automated interaction with their internet banking system. Upon receipt of payment, the merchant ships the goods/releases the service. By relying on internet banking security, this method of payment is difficult for fraudsters to replay elsewhere and may support up to immediate (“D0”) and irrevocable payment to the merchant. However, unlike credit card, the method does not offer any repudiation mechanism for the consumer-merchant contract and does not facilitate a merchant reversal or conciliation of payment and refund transactions.

2.4.3 [Direct Debits]

Direct debit schemes use a mandate completed by the customer to inform their bank of their consent for a merchant to debit funds from their account. In eCommerce, the mandate can often be completed on the merchant site and transmitted to the customer’s bank by the merchant, along with the first request for a debit transfer. More popular in some markets than others, this is a more complex transaction than a credit transfer. In a number of national schemes it offers the security of direct debit guarantees which allow for refund on occasion of non-delivery, faulty goods or not-as-specified. However, with the impetus provided by the Payment Services Directive (PSD) and the rollout of the SEPA Direct Debit Scheme, the benefits should eventually be available in all markets.

2.4.4 [Cash on Delivery]

Another major method of payment in eCommerce is Cash on Delivery (COD). As the name suggests, this is where the consumer orders goods from a merchant and supplies funds (cash, card, cheque) to the delivery agent at the moment of delivery. The latter then transfers funds to the merchant. While secure and offering a good guarantee to both parties, this method places considerable trust in the delivery agent and also requires that the consumer be available to receive goods at a specific time and location. COD is migrating away from cash thanks to portable card acceptance devices that facilitate card payments with online authorization at the point of delivery.

2.5 More Complex Payment Solutions

2.5.1 [“Deported Credit Transfer” through Direct Pay/P2P Schemes]

Leveraging a similar mechanism to standard credit transfers but through a scheme platform, Direct Pay or P2P schemes, such as PayPal, Moneybookers and Click2Buy, first appeared to service the auction (EBay-like) market. They use an account prefunded by the consumer (or on-demand funded by credit/debit card) to allow the consumer to transfer money to a merchant or other beneficiary’s account within the scheme, which can then be transferred to a bank account or credit card account if required. Ideal for the original niche they served,

⁴ Cybersource – 10th Annual Online Fraud Report – published May 2009



PayPal-like providers are not currently making inroads into non-auction eCommerce due to the high cost of service and currently account for only 3% of non-auction eCommerce payments. PayPal has also been the subject of account takeover due to its low security interface (although this is reportedly being addressed at the moment). Average PayPal transactions cost 1,5 EUR and 3,4% of the amount sent⁵ – this is paid by the beneficiary. However, its use in eBay, its parent company, is exceptionally high, with 97% of transactions offering the possibility to pay with PayPal. This is in part due to its use as a one of the payment methods mandated in a number of markets (A mandate which has already led to some competition issues, with eBay in Australia dropping the mandate following Government intervention⁶). This type of system is also attracting the attention of regulators with regards to Anti-Money Laundering (AML) legislation⁷.

2.5.2 [Virtual Currencies and Virtual Economies]

During the late 90's a number of other innovative payment schemes such as virtual currencies (Beenz, Flooz), tokenized payments and web payment cards (not affiliated to schemes) emerged. While some of these survive, such as Tencent QQ coins in China, they are now viewed as distorting physical economies and are subsequently being heavily regulated. The anonymous nature of some of these products also has the potential to circumnavigate AML systems, despite the lack of guarantee of value retrieval at the point of redemption.

However, the early experiments with virtual currencies have recently led to the appearance of 'virtual economies' within online communities and massively multi player online role-playing games (MMORPGs). Designed to make the games more like real life with the ability to trade and earn, in less well policed examples of MMORPGs, the virtual economies use virtual currencies, pegged or traded directly against genuine currencies, which then are apparently used for payment of goods or services in the real world.

2.5.3 [Post-Delivery Payment following Merchant Billing]

A small number of merchants currently allow payment after shipping through provision of a payment demand or bill to the consumer. This type of payment accounts for only a small number of transactions due to the higher merchant risk, but allows the consumer to pay via credit transfer, payment card or cash as with any other invoice. However, in the longer term there is potential for the European Commission's announced focus on e-invoicing to solve some of the merchant risk issues incumbent in this mechanism. Initially enabling acceptance from a tax point of view, in the longer term changes in legislation should make e-invoices acceptable as evidence and allow merchants greater efficiency in their billing and collections cycle. This change may also impact other mechanisms similarly.

2.6 Participants' requirements with respect to eCommerce Payments

2.6.1 Payment Service Providers

In eCommerce, as in traditional payments, Payment Service Providers (PSPs), which are usually Banks and Payment Institutions (PIs), are the facilitators, and often guarantors, of the movement of money whether directly in the transaction; to fund eMoney accounts; or purchase of Private Currencies. Therefore they need to establish the identities of both parties to a transaction and ensure that both are willing participants. They also need to ensure that facilitating payments is a profitable, yet compliant business.

From their interest as commercial organisations, Banks need to ensure that eCommerce payment instruments help with customer retention, increase their top and bottom line growth, improve their reputation as part of the

⁵ Figures from PayPal.com

⁶ Finextra.com – eBay drops Australian PayPal plans – Published 3. July 2009

⁷ Finextra.com – PayPal found in breach of Australian anti-money laundering rules – Published 23. November 2009



digital economy, and ensure that they are not exposed to any unnecessary risk. Ideally the payment instrument should require as little infrastructure change (within the organisation and beyond) as possible.

As to PIs they need to ensure that their payment instruments facilitate network growth; ensure continuing profitability; that risk is mitigated via the account funding providers (usually Banks); that their brand is the focal point for consumers.

2.6.2 Consumers

Consumers want payment methods to be simple and convenient. They need them to be secure, not exposing them to any immediate or future risk. They also want the cost to appear to be elsewhere, as it is with cash, i.e. either with the merchant or the bank: a point well highlighted by vocal consumer opponents of e.g. some low cost airlines' transparency and 'over' charging for use of cards, although inevitably consumers end up paying in the long run. Consumers need a solution that allows for refund in case something goes wrong with the commercial transaction – not delivered, not as ordered or faulty – whether this is through the payment instrument, the payment scheme, or an ancillary form of guarantee. Finally, to make best use of the eCommerce advantage, the payment instrument should be as ubiquitous as possible, allowing consumers to pay merchants all around the world with the same solution.

Virgin web consumers (those new to eCommerce or even the internet) have a further need – overcoming the perception of insecurity in eCommerce payments. About one third of the population not having used the internet for eCommerce had concerns about payment security⁸ despite the relatively low incidence of fraud.

2.6.3 Merchants

Merchants need assurance that they will be paid for the goods or services that they provide, ideally before they provide them. They also need to mitigate the risk for fraudulent transactions – one of the greatest complaints about 3D-Secure technology is that merchants were still having chargeback issues. Merchants also want payments that are open to as much of the market as possible to make the channel viable, and finally they want the costs for implementing and accepting payment methods to be as low as possible.

What this essentially means is that for an eCommerce payment solution to be successful it needs to be low cost, secure, simple to use and implement, and reputable while remaining profitable for the PSPs.

2.7 Table of Requirements

Table 1 shows the requirements of each participant in eCommerce for payment instruments.

Banks	PIs	Consumers	Merchants
<ul style="list-style-type: none"> Retention Profitable (Top & Bottom line) 	<ul style="list-style-type: none"> Profitable Acceptance Growth (Saturation) 	<ul style="list-style-type: none"> Simple to Use Convenient 	<ul style="list-style-type: none"> Certainty of Payment Not liable for all (any) fraud
<ul style="list-style-type: none"> Know-Your-Customer (KYC) Market Share Growth Reputation Low Infrastructure Impact Mitigated Risk 	<ul style="list-style-type: none"> Mitigated Risk Market Share Growth Brand Awareness Low operating cost 	<ul style="list-style-type: none"> Perceived as Secure No cost at POI Ubiquitous Reversible 	<ul style="list-style-type: none"> Low Infrastructure Impact Ubiquitous Generates traffic Low operating cost

⁸ Eurostat - Internet usage in 2009 - Households and Individuals – Published 8 December 2009



Table 1: Extrapolated Table of Needs for eCommerce Payment Instruments

3 SEPA ePayments Framework

As part of the ongoing SEPA program, EPC was encouraged by the Eurosystem to look at a European approach to ePayments. While their initial insistence that Europe required its own payment scheme for eCommerce was so far rejected by the EPC, the latter has been working on the development of a SEPA ePayments Framework (SEF). The SEF is designed to support growth in the European eCommerce sector through a harmonised payment infrastructure and in doing so ensuring a continuing role for banks in this space. By adopting the framework and its standards, payments schemes would display a European ePayments logo which guarantees a user the same experience as when using other SEF-compliant schemes.

“It is now hereby resolved that a requirement of the SEPA ePayment Framework will be that an ePayment scheme that elects to enrol to the SEPA ePayment Framework is obliged to become technically and commercially interoperable with all other enrolled ePayment schemes, and that only enrolled schemes will be able to make use of a SEPA ePayment Framework branding.”⁹

The published long-term goal for SEF is “full reachability” for consumers. The EPC ePayments Framework defines this as:

- All ePayment schemes in SEPA are enrolled to the Framework
- Each bank in SEPA is a member of (at least) one SEPA compliant ePayment scheme
- Each account holder in SEPA can make SEPA ePayments
- The use of the “SEPA” logo by enrolled ePayment schemes should provide a consistent user experience throughout SEPA

This appears to be an acknowledgement of the eCommerce sector’s insistence that none of the current payment methods fulfil the needs of all participants.

“Payment challenges for our sector are fundamentally different from traditional retail because physical distance is involved. This leads to a higher risk profile for both sellers and buyers. Payment solutions for our sector should mitigate this risk. Today SEPA and PSD developments do not address our needs specifically enough.”¹⁰

In essence, the SEF is designed to create a playing field in which payment systems can leverage SEPA instruments to better facilitate cross-border payments under the same set of rules as national payments – meaning that their local and cross-border business can use the same system. It is exclusively to promote seamless interoperability of smaller (national) schemes, allowing them to extend the reach of their customers and merchants in across SEPA. However, with cross-border transactions currently accounting for 20% of European eCommerce,¹¹ it seems that the existing payment systems are already doing a reasonable job in meeting this market requirement. In order for the sector as a whole to grow, it is important that a level playing field for eCommerce in Europe is created, backed by pan-European payment solutions that inspire confidence and support from consumers, merchants and banks alike.

⁹ EPC - Resolution: Interoperability Requirements of the SEPA e-Payment Framework – 30 October 2009

¹⁰ EMOTA presentation to the EPC E-SEPA meeting, Frankfurt, 7 December 2009

¹¹ Eurostat - Internet usage in 2009 - Households and Individuals – Published 8 December 2009



This will mean solutions that:

- Do not expose consumers or merchants to risk of fraud or identity theft;
- Reach across but also beyond Europe
- Have a sustainable business model
- Demonstrate authenticity and compliance of the merchants and consumers that they support;
- Facilitate the bi-directional flow of funds between consumer and merchant;
- Build the financial trust framework implicit in any commercial transaction.

The key to market adoption of any solution will be the match to the needs of consumers and merchants primarily as they are the major counterparties in eCommerce transactions. However, the needs of PSPs are often the driving factor as they take the bulk of the financial risk and implementation effort.

“Heavy technical integration efforts have to be avoided. Therefore, EMOTA is looking for an integral approach from the financial sector regarding new online payments services with identified buyers. EMOTA calls upon the financial sector to introduce services that are easy to use for buyers and easy to integrate for sellers.”¹²

A first step will see some changes to the existing schemes, iDEAL, eps and GiroPay, which should in the medium term enable them to create pools of co-operation to widen their acceptance. However, where credit transfer-based payments are under- or un- used in a market, the benefits from SEF seem minimal. Indeed, in a market such as France, where card payments with 3D Secure and two factor authentication account for the bulk of ePayment transactions, it is hard to see where the business model for implementing SEF will appear from.

“Banks have a unique selling proposition regarding payment services, i.e. they are perceived as trustworthy providers by the general public. However, the direct involvement of banks in offering ePayment solution varies considerably in the different European countries. While a small number of communities offer online banking ePayment solutions already very successfully on a domestic level, other have not even started such services yet. This different stage of development make the EPC’s task to deliver in due course a SEPA ePayments Framework, which is agreeable to all communities, difficult but for sure not impossible.”¹³

3.1 iDEAL

iDEAL is an ePayment scheme in the Netherlands, based on automated credit transfer initiated at the merchant website. Introduced in 2005, this payment method allows customers to buy securely on the Internet using direct online transfers from their bank account. The participating banks in iDEAL are: Rabobank, ABN AMRO, and ING Bank/ Postbank, together serving the vast majority of the Dutch market.

iDEAL offers merchants a low-cost, virtually risk-free and real-time¹⁴ payment method to accept Internet payments. For customers, iDEAL uses the same familiar environment as their banks' online banking sites. A high level of security is realized by using two-factor authentication (2FA), such as a challenge-response token based on the chip embedded in the debit card or ATM card. Furthermore, there is no need to share any sensitive information to the merchant, such as account or credit card numbers. However, its business model is yet to be proven despite the obvious consumer and merchant advantages that it offers: Currence iDeal B.V. posted a 380.000 EUR loss in 2008 even though it generated 28 million transactions and was used for 42% of all Dutch

¹² EMOTA presentation to the EPC E-SEPA meeting, Frankfurt, 7 December 2009

¹³ Eurosystem – Letter to EPC on E-Payments – Dated 30 October 2009

¹⁴ Within the Netherlands



eCommerce transactions in a population where 85% of citizens are active internet users¹⁵ and the average transaction value is 75 EUR.¹⁶

The concept of iDEAL is based on Rabobank Direct Betalen, an Internet payment method initially launched in 1997. The system was reportedly updated in early 2009 to bring it into line with the proposed SEPA ePayments Framework. However, the specifications for iDEAL are not freely available and it appears that the only way for a PSP to offer payments using this consolidated Credit Transfer scheme is to join.

In May 2009 the owners iDeal, Currence, offered the scheme and its IP forwards to the EPC as a ‘ready-to-go’ solution for European e-Payments. Conditions for this sale still to be discussed, but it is unlikely that Currence would allow this to be unprofitable, despite the current loss-making position of iDeal.

3.2 Austria - eps

eps is the major Credit Transfer-based scheme in Austria. Its specifications and implementation guidelines are freely available via the eps website. Like iDeal, it is being touted by its creators as the future European direction for Credit Transfer under the SEPA ePayments framework. It has already been adopted by many Austria eCommerce merchants as well as public authorities in Austria. More than 2 million bank customers can use eps ePayment, without registration, through their internet banking. It allows secure and convenient online payments both for the merchant and the consumer.

The eps ePayment specifications have been developed by STUZZA, a joint venture company of the largest Austrian banks with the objective of reducing the costs of payment transfers in Austria, the Ministry of Finance (BMF) and the CIO (Chief Information Office, www.cio.gv.at) of the Austrian Government. The ECBS ePI standard is an integral part of the eps interface in XML syntax: within this standard all relevant data elements for the payment request are specified.

3.3 Germany – giropay

Giropay is an initiative of the German Savings Banks now open to other institutions and is similar in methodology to both iDEAL and eps. However, Giropay has taken a proactive approach to opening the market by working strongly with PSAs and direct pay/p2p schemes like PayPal, Moneybookers and Click2Buy.

This approach has seen volumes grow by 40% year on year with over 17 million registered users with 1500 banks.

¹⁵ Source: Currence Annual Report 2008

¹⁶ Source: iDeal – January 2010

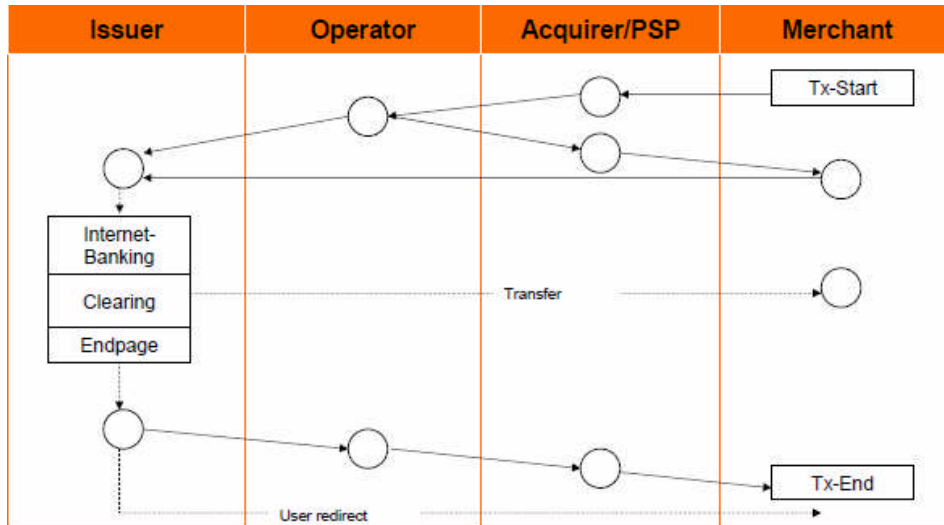


Figure 2: Transaction flows in Giro pay (source: Giro pay)

3.4 Other Credit Transfer-based schemes

While no other country has yet implemented a unified scheme like the previous three examples, many countries in the EU-27 already have push-to-merchant credit transfer mechanisms as an available ePayment method. In Belgium, for example, the dominance of a single payment system aggregator has negated the need for a single scheme as the aggregator makes the link to each bank on behalf of the merchant, providing credit transfer as a method of payment alongside card payments, deposited credit transfer and mobile payment. Whereas in Norway, a partial move towards a scheme has been initiated with the BankAxess system, which leverages electronic BankID in a standardised way to facilitate payments, with deployment for each bank is left to the merchant. In Finland, each bank has its own mechanism and each merchant implements the mechanisms on an individual basis.

4 Exploring the Alternatives to SEF

4.1 Card-Not-Present Payments

The use of credit, and in some cases debit, cards from the major international brands – and in a few instances, debit cards from national brands - has been a part of eCommerce since day 1. While it is now rare to send your order via email complete with card details, this was the beginning for card payments and perfectly describes the way that the system works – with the merchant and acquirer unable to see the physical card and accepting the risk that this entails. This type of payment is known as ‘Card (holder) Not Present’ or CNP transactions.

CNP transactions work essentially by manually collecting the Track 2 data for a card and processing it in the same way as a keyed-in magstripe transaction, offering similar levels of security and risk. More specifically, CNP in eCommerce is in essence exceptionally simple for the consumer. They merely input the details printed on their card and the transaction is authorized and settled.

That said, with the increasing technology and procedures implemented to prevent fraud or mitigate risk, card payments are becoming more complex for the consumer. The dominant technology in this space is 3D-Secure (SecureCode/Verified by Visa), which creates a secure link between the consumer’s PC and their card issuer prior to authorization in order to authenticate them with a password. This creates an additional step in the process and reduces convenience for the consumer.



Merchants are now better able to manage fraud risk in CNP themselves following recent moves forward in technology and by employing additional checks to validate the consumer. These include IP Geolocation, where the physical location of the consumer is mapped against their recorded details; Address Verification Systems (AVS) where the delivery and billing addresses are verified against postal databases and the cardholder address held by the card issuer; Device Fingerprinting, which flags if orders under different usernames are being made from the same machine; and Velocity Checking, to see if a particular card is being used a number of times in a short timeframe.

Although Issuers can manage fraud risk by implementing 3D Secure, from a risk point of view this should ideally be further strengthened with a one-time passcode using a protocol like MasterCard Chip Authentication Program (CAP) or a dynamic TAN generator. However, the impact on the consumer process is considerable and much of the simplicity and convenience of credit cards is lost. Although given that 84% of consumers are adamant that their banks are responsible for the security of transactions and data¹⁷ it is difficult for banks not to look at these technologies.

4.1.1 The impact of SEPA Cards Framework

While the SEPA Cards Framework (SCF) is not focused on changing the playing field for credit cards, it may be a considerable advantage for debit. With the predicted increasing cross-border acceptance of local debit schemes and the potential creation of pan-European acceptance, the no-web policy of the dominant Maestro debit brand is being forced to change. With Visa Debit well accepted, but under-used due to security concerns, the hope that the SCF will bring more debit players to the market in Europe could change the face of debit card usage on the web.

4.2 Merchant Direct Debit Payments

Unlike the credit transfer-based payments, direct debit payments are enacted upon a 'pull' advice from the merchant which debits the amount from the consumer's current account and deposits it into their own. However, in order for a direct debit to be allowed, the consumer must first either notify their bank that the merchant has their authority to pull the payment or directly authorize the merchant to do so (mandate).

Within national legacy systems, and in countries where this mechanism is simplified (i.e. Germany and the Netherlands) direct debit payments are commonly used for one-off payments in eCommerce. Other countries have this payment instrument available but setting up the authorisation is more difficult and so it tends to be used more for recurring bill payments such as credit card balances or utility payments.

4.3 The impact of SEPA Direct Debits

As of 1 November 2010 at the latest, SEPA Direct Debit services should enable consumers – for the first time ever – to make and receive both domestic and cross-border euro direct debit payments throughout the 32 SEPA countries. However, this goal requires migration from a complex legacy of considerably disparate national systems.

As the full picture of how SEPA Direct Debits will be accepted by the market slowly appears, Merchant Associations would not seem to be satisfied with the choices made for the SDD Scheme. A coalition of associations, known as the End Users Committee has raised a number of objections:¹⁸

- Too much risk for debtors

¹⁷ From MasterCard presentation – MasterCard Remote Authentication – published November 2009

¹⁸ Payment System End-Users Committee (EUC) Position Paper on SEPA DIRECT DEBIT – Published July 2009



- Too much uncertainty for creditors on the finality of collections due to long refund periods
- Unbalanced distribution of tasks and responsibilities, which fall mostly on the creditor
- Too passive a role for banks, particularly the debtor bank
- Too much rigidity in the operating cycle and too large an administrative burden on creditors
- Significant and unnecessary changes in creditors collection procedures.

At time of writing, it is unclear how these objections will impact merchant take-up of the scheme outside of traditional direct debit strongholds.

However, SEPA Direct Debit includes the option to create mandates through the use of electronic channels – called e-mandates. If the consumer issues an e-mandate, the mandate information stays directly with the consumer’s bank and facilitates the debit payment at the same time as the mandate is presented. This will inevitably make the entire process easier for consumers and merchants alike by making one-off payments much simpler.

4.4 Deported Credit Transfer through Direct Pay/P2P Schemes

With the year 2000 arrival of PayPal and competitors like Citibank’s c2it, Yahoo PayDirect and Western Union’s BillPay, a whole new category of payments systems was born. These systems, functionally similar to a bank, allow a user to open an account, which is then prefunded and used to send payments to other people or businesses. The payment instructions either arrive as notifications in the receiving user’s account details or as an email invitation to join the system for non-users. In this way, the growth of these systems primarily came from transaction revenues and not the liquidity management of their PSP rivals. Of the four mentioned early players, only PayPal survives, recently joined in the marketplace by Moneybookers, Google Checkout and a few other smaller rivals.

Unlike a standard credit transfer, P2P schemes allow some level of anonymity for the users within the confines of their scheme, effectively outsourcing KYC silently to the PSP facilitating account funding. This meant that users were not subjected to the rigorous scoring and checking that opening a bank account necessitates (but could at times create an account through an anonymous prepaid or virtual credit card). Coupled with the rising tide of micro-merchants created by auction and listings sites, the P2P schemes have created a second economy, with EBay itself seeing over 50bn USD worth of goods traded through its sites in 2008. However, with their relatively high and visible transaction charges, P2P schemes have failed to make an impact in the European eCommerce market outside of their original niche channels. To offset this, and due to impending legislation, PayPal Europe became a Luxembourg-registered bank in 2006 and has subsequently begun to issue credit and debit cards as easy access to the funds in PayPal accounts. But the company hit some obstacles in the form of compliance with AML requirements and been at odds with the Government in Australia over some of its restrictive practises.

PayPal and its rivals invariably attempt to match the convenience of credit card payments on the web and so use a simple user-password method to gain access to accounts. This approach has led them to become a victim of considerable¹⁹ phishing activity²⁰ and the subsequent introduction of two-factor authentication in some countries.

¹⁹ Aviva – Blog: The most phished brands of 2009 – <http://techblogaviva.com/2009/12/19/the-most-phished-brands-of-2009/en/>



In 2003, Visa launched a system to rival PayPal known as Visa Direct. This allowed Visa card holders to transfer money directly to the card or bank account of others via a simple website. Adopted initially by Swedbank, BBVA, La Caixa and CartaSi, the product failed to live up to its potential and is now used primarily for remittances.

5 The e-Payments Market Today and Tomorrow

As it stands today, there is not a single payment solution available to European consumers that meets all of their real or perceived needs. Card-based schemes are insecure payment instruments if tailored for convenience and are inconvenient if tailored for security. Credit Transfer works exceptionally well for the bank and merchant, but doesn't offer the refund mechanism required by the consumer. Direct Debits are closest to meeting the needs of all parties, but are under-used in many markets due to the difficulty in setting them up prior to embarking on a major migration to the SDD Scheme. COD is the oldest cross-border payment method and seems to tick all the boxes other than the increased difficulty of the delivery cycle, a key element for both merchant and consumer, but it is considerably simpler when limited to national markets and introduces a new third party to the cost base. This said, the Eurosystem is adamant that EPC should drive the creation of a European ePayment scheme based on Credit Transfer.

“Recommendation 2: The Eurosystem strongly encourages the EPC to consider returning to its original approach of establishing a European scheme. Alternatively, the EPC could consider taking over one of the existing schemes and make it the European scheme. In both cases the E-Payments framework could be used as a complimentary layer for the interoperability with other schemes. If a European scheme is after all not feasible, the EPC should recommend banks/communities without a scheme to adopt one of the existing interoperable schemes instead of establishing a new one from scratch.”²¹

With regards to facilitating mass market eCommerce on traditional home computers (PC) this seems to be a logical step. However payments via mobile browsers using Credit Transfer as described earlier will not be possible until individual banks make their internet banking system accessible via this channel. This is happening on a very limited scale and is by no means widespread or in the near-future planning of many banks. This means that should the e-Payments Framework move forwards only with this payment type, the possibility for European ePayments on mobile web is negligible. This may drive mobile web users towards more insecure or perhaps non-banking methods of payment, in direct conflict with the intended aim of the SEF. Indeed, MasterCard recently announced that it would be porting its CAP security for card payments to a mobile phone applet, making this available for card schemes supporting EMV chip transactions.

Large, usually non-financial institution players are keen to leverage disruptive access technologies for the existing payment mechanisms to possibly disintermediate the traditional schemes and banks. For example, Google Checkout is seeking to grow its acceptance footprint considerably. PayPal in Europe has a banking license and can now perform a considerable variety of transactions through its own network, although PayPal has recently announced that it will begin to offer what is essentially white labelling of its system through the PayPal Debit Access scheme: a system to directly link internet banking systems of consumers with the PayPal system to make transactions more immediate and seamless. Deutsche Telekom recently purchased ClickandBuy²², another disruptive player, and is aiming to considerably increase its acceptance footprint in the coming years.

²⁰ Phishing is a type of attack where account holders are redirected to cloned websites (either through misinformation or automated malware redirection) and offer their login details to the miscreant – who then performs an “account takeover” of their P2P account, possibly making numerous transactions using the funds of the genuine account holder.

²¹ Eurosystem – Letter to EPC on E-Payments – Dated 30 October 2009

²² Finextra.com - Deutsche Telekom buys ClickandBuy- Published 25 March, 2010



The reshaping of European banking following the crisis is bringing new players into retail banking (such as Tesco and Virgin Money in the UK) and the ensuing innovation that these changes may bring. Indeed, one of the players in iDEAL, Rabobank, is already innovating outside of this platform with Minitix.nl. Following a recent announcement by the New York Times²³ on how it will now charge for content online, the next 12 months will see new schemes for micropayments on the web appear, particularly those facilitating paid-for content in other newspaper and journal websites. There are also plans within facebook, one of the world's largest online communities, to create a virtual economy similar to those in MMORPGs, alongside a recently announced p2p scheme beginning operations in this closed user group²⁴. Any one or a combination of these could transform the payments landscape, or perhaps the rising use of cash²⁵ will ripple through to the web and COD will become European's payment method of choice.

In order to facilitate this pattern of growth and innovation, any European Framework for ePayments would need to be all-encompassing, facilitating the variety of methods of payments enjoy in face-to-face retail. Already at a standard POS consumers are able to pay by cash, debit card, credit/charge card, general or store-specific vouchers, private-label cards, and in most cases, cheques. Each of these currently has an equivalent in the ePayments arena, with Credit Transfer approximating the space held by cash in face-to-face. However each scheme is currently separate and lacking in interoperability of acceptance and processing. Going forward a wide choice for consumers of payment instruments can only be encouraged. Such choice will certainly be promoted by lowering costs and broadening competition through the processing of card payments through ACH networks, or vice-versa credit transfers and direct debits through the (unbundled) card networks. It is through this kind of interoperability that payment service providers will be able to improve efficiency in their offering and allow them to meet the needs of consumers. It is also this kind of broadened interoperability framework that will ensure the continuing emergence of innovative payment methods both within and without the banking sector.

²³ NYTimes.com – The Times to Charge for Frequent Access to Its Web Site – Published 20. January 2010

²⁴ Finextra.com – ClickandBuy launches P2P payments app for facebook users – Published 18. January 2010

²⁵ Finextra.com – Downturn prompts dash for cash – Published 21. April 2008



About ESBG (European Savings Banks Group)

ESBG (European Savings Banks Group) is an international banking association that represents one of the largest European retail banking networks, comprising about one third of the retail banking market in Europe, with total assets of € 5967 billion (1 January 2008). It represents the interest of its members vis-à-vis the EU Institutions and generates, facilitates and manages high quality cross-border banking projects.

ESBG Members are typically savings and retail banks or associations thereof. They are often organised in decentralised networks and offer their services throughout their region. ESBG Member banks have reinvested responsibly in their region for many decades and are one distinct benchmark for corporate social responsibility activities throughout Europe and the world.



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