White Paper on Extended Remittance Information (ERI) and Payment Notification

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Note: Relevant regulations and any applicable legislation take precedence over the guidance notes issued by this body. These guidelines represent an industry's best effort to assist peers in the interpretation and implementation of the relevant topic(s). The PMPG - or any of its members - cannot be held responsible for any error in these guidelines or any consequence thereof.

1 Introduction

The Payments Market Practice Group (PMPG) is an independent body of payments subject matter experts from Asia Pacific, Europe and North America. The mission of the PMPG is to:

- take stock of payments market practices across regions,
- discuss, explain, and document market practice issues, including possible commercial impact,
- recommend market practices, covering end-to-end transactions,
- propose best practice, business responsibilities and rules, message flows, consistent implementation of ISO messaging standards and exception definitions,
- ensure publication of recommended best practices,
- recommend payments market practices in response to changing compliance requirements

The PMPG provides a truly global forum to drive better market practices which, together with correct use of standards, will help in achieving full STP and improved customer service.

2 Definitions and scope for the PMPG approach

End to end STP across the entire payments value chain remains an aspiration of the various stakeholders in the payments ecosystem. While in the interbank space this has been largely achieved it still seems an elusive goal for the corporate end users of payment services. The introduction of ISO 20022 and the efforts of the CGI group have made significant advances in the outbound payments space but two critical issues remain that need to be addressed to close the payments loop:

A positive payment confirmation to the debtor that the creditor's account has been credited

Sufficient machine readable details in the bank statement or a related information feed that allows the creditor to automate its own reconciliation process against the commercial terms of the received payment

While the information content in both cases is different one aspect that both issues have in common is that the benefit does not accrue to the sender of the information but to the receiver. Hence both topics are subject of this white paper which describes the problem statement, the impact on the actors in the payment chain and the different approaches markets have tried to address it. The scope of this paper is to focus on describing the environment and typical practices for further community debate, but not to propose solutions. Finally the paper will come up with a recommended approach for further industry discussion.

3 The impacted actors

To analyse the use case in more detail we have to look at the two main actors: the debtor and the creditor. The debtor is an involved party that owes an amount of currency to the creditor. In many cases this obligation derives from a contractual agreement due to the receipt of goods or services. In their respective accounting processes both parties have to make a determination when the mutual obligations are considered to be discharged. The more this process can be automated and exceptions highlighted the better for both parties.

The creditor requires remittance information related to the transaction to identify the underlying reason for the payment. This information can both be sent via a separate channel and matched to the payment or travel with the payment. Using the remittance data the creditor can automatically update its Enterprise Resource Planning (ERP) system and update the debtor's credit line which might become immediately available to facilitate the next commercial transaction. Delays in applying the payment can delay the next sale or shipment and slow down commerce.

The debtor, after sending the payment order to the bank, does not know for certain when the payment has arrived as its intended destination. Unless some other information channel between creditor and debtor acknowledges the receipt of the payment the debtor is left in a state of uncertainty about the payment.

4 Underlying customer requirements (The problem statement)

Typically a payment may contain settlement of one or several invoices. A subset of these invoices might not have been paid in full. The creditor has to be able to identify the invoice(s) and amount(s). It is possible that the invoices are bundled together in one payment and also may contain credit notes, leading to a net total payment amount.

In some businesses it is customary to settle very large numbers of invoices in a single payment, which causes an additional requirement for extended space for remittance information.

With the increased need for corporates to automate their reconciliation and matching processes, the requirement for structured and standardized data is becoming more pronounced.

We can analyse the problem further by looking at it from the perspective of the two core payment models that exist in the industry. The credit model that is very established in the cross-border space and the debit model that is the dominant model in some domestic markets.

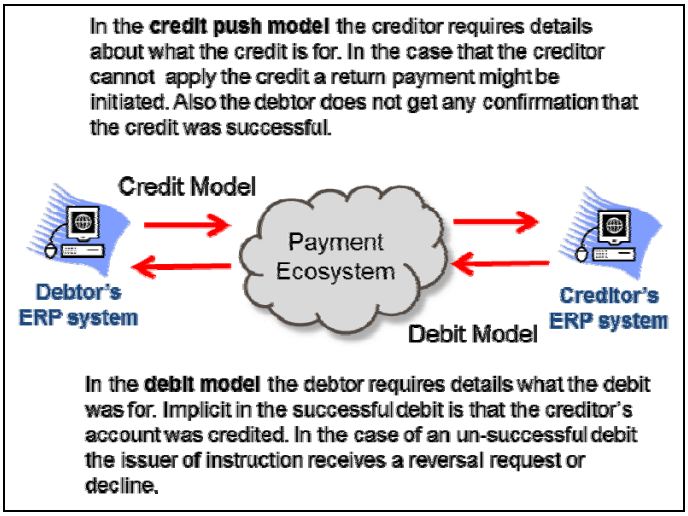

Figure 1: Corporate ERP systems interacting via payment channels

In the debit model the information issue has been solved in payment systems like the card network. The creditor initiates the debit requests and receives either a positive or negative confirmation that the payment will be successful. Level 2[1] and in some instances level 3 [2]data containing individual purchase line items can be transported via the card payments network and make it to the debtor's agent and, depending on the level of integration, to the debtor's ERP system. Notifications of authorisations inform the debtor in real-time about the charges made to the account while the underlying remittance details are transported in batch mode on settlement day.

The debit model also provides the creditor with a high level of control of the aggregation level of invoice and payments data. As the debit instruction is generated by the creditor the reconciliation on the Accounts Receivable side will be easier. However, the A/P reconciliation on the debtor side will become more complex if the debit does not follow a one to one model but includes adjustments. In this case more remittance data will also be required in the payment chain to improve reconciliation. In the debit model the creditor drives the level of payment aggregation.

In the credit push model the interplay of notifications and remittance data lacks an integrated model. The traditional credit push model is very minimalistic in its message protocol (as the assumption was that only money - not data - was being moved).The following sections will go into more details about the issues in the credit model and the ways to address them. In the following the term payment will refer to the credit push model.

It is important to point out that a business will play the role of a debtor or a creditor at any point in time depending on the underlying contractual arrangement.

5 Remittance information in payment message

Historically payments were the first business process that banks digitized and thus many of the current models have a « lock-in » in regard to legacy processes and technologies. Initially designed for mainframe technology the core payment messages and processes are built around

[1] Level 2 data in commercial card processing contains: Merchant name, transaction amount, date, tax amount, customer code, merchant postal code, tax identification, merchant minority code, merchant state code

[2] Level 3 data in commercial card processing contains level 2 data plus: item product codes, item descriptions and quantities, item tax rate, ship from postal code, freight amount, duty amount, destination postal code, destination country code, and more

a certain total message size of 2,000 bytes. Many of the existing payment systems are built around this restriction and the challenge is how to address the evolving corporate business need in the legacy environment.

A. Limited message size

The challenge is to create a balance between the invoice data and other competing uses that require additional data in the limited space of a SWIFT payment messages. The typical example is field 70 of a SWIFT MT 103 message that provides only 140 char of space. Many of the legacy payment systems might restrict the size even further. The new ISO 20022 XML-standard can support much larger data content but is not yet widely used in the cross-border payments area.

In the current reality of cross-border payments the message space is typically limited. One easy solution to identify the underlying payment(s) is to provide an identifier that is known upfront to the creditor, i.e. invoice number, date, customer number or similar. For a single invoice this is usually sufficient, but once a payment is used for settling multiple invoices the field size does become a challenge.

A few alternative ways to cope with limited message size:

Standard reference:

To address the need for more automatable information, several solutions have been promoted in the market to 'standardize' the reference to the underlying payment reason/invoice:

- Industry specific references (or bilaterally agreed)
- Local community standard (country based practices)
- ISO RF reference (ISO 11649 structured creditor reference)

The reference is created by the creditor and refers to an underlying invoice (customer/transaction). The reference is included in the invoice and sent to the debtor. If the debtor includes the reference in the payment it can be used to automate the match of the payment to the invoice.

The efficiency of this model depends on the debtor to include the reference number in the payment instruction.

B. Extended message model

In some markets the size of the message has been expanded to carry more information.

- Extending the SEPA payment message (AOS).
  Inclusion in the core SEPA data model: the structured remittance field allows x times recurrence (example: Finland).
- The extended US wire format. (Fedwire Customer Transfer Plus or Chips 820). Please read http://www.swift.com/assets/swift_com/documents/about_swift/PMPG_Ext_Remittance_v1_4.pdf for more details.

C. Separate remittance data models

Suggestions have also been made to separate the remittance data from the payment:

- Reference to separate remittance data:
  - Reference created by the debtor and included in the payment message

- Remittance data delivered through another channel than payment (like e-mail, Edifact)
- Reference in payment connects the payment to the remittance data.
- A/R reconciliation against remittance data

- Payment with reference to invoices in a repository:
  - Reference created by the debtor and included in the payment message.
  - Refers to invoice data in a separate data repository and referenced via a unique id.
  - A/R reconciliation against selected structured invoice data

- The European Payment Council proposal for extended remittance information:
  The proposal is to separate the remittance information exceeding 140 characters from the SEPA Credit Transfer (or SEPA Direct Debit) message into a separate message and only carry the information of the location of the extended information in the payment message. This proposal builds on the just released ISO 20022 Extended Remittance Advice message **remt**:

  - allows for unlimited number of characters
  - allows for structured or unstructured data
  - facilitates the automated reconciliation at the Creditor, as the remittance data is in the same XML format as the SEPA Credit Transfer message. Also other formats could be used for delivering the separate extended remittance information.

The Extended Remittance Advice can be
- sent directly from the Originator to the Creditor
- downloaded from a repository service provided by the Originator or the Creditor
- downloaded from a repository service provided by Creditor Bank, Originator Bank, a CSM or a third party service provider.

6 Inventory of remittance models

Through its members the PMPG has documented the current state of remittance data. Based on the classification methodology outlined above the existing remittance models can be classified in the following table:

Remittance Model	Limited space message: (max 140 char of unformatted text)		Extended Message size model (structured and unstructured data exceeding 140 char)
	no standard	ISO 11649 Structured Creditor reference	
Country/Community			
USA EPN & FedACH			Up to 9999 records (94 characters each)
USA Fedwire/CHIPS			Up to 9999 records
Italy ICBPI Domestic			300-800 characters (500 additional)
Mexico SPEI	40 characters		
Canada ACSS/CPA	34 characters		
Canada LVTS/CPA	140 characters		
New Zealand BECS/PaymentsNZ	30 characters		
UK Faster Payments	18 characters		
UK BACS/VocaLink	18 characters		
India NEFT	16 characters		
India NECS/ECS	13 characters		
Switzerland SIC (MT)	7 x 35 characters		
SEPA EBA	140 characters		
SEPA EPC	140 characters limited		
SEPA AOS2 (Finland)	140 characters	optional (instructions included)	10 occurrences of 140 characters (1st unstructured, 2-10 structured)
SEPA Equens SEPA	140 characters		
SEPA ICBPI SEPA	140 characters		
SEPA STET	140 characters		
Switzerland SIC	140 characters		
Japan Zengin	20 (technically 140 are supported but local market used only 20)		
Denmark, Norway NETS	140 characters		
South Africa SAMOS	140 characters		
Australia APCA	140 characters		
Brazil CIP-Sitraf			140 characters
Sweden Bankgirot	80 characters (12 additional)		

Table 1: Remittance data models across different market places

The first one documents various local solutions that have been implemented. The second table covers the ISO 20022 solutions and their variants that have been implemented in some other markets.

Data Standards: ISO or moving toward			
Country/Community	**System Name**	**Data Standard**	**Remittance data transmitted**
SEPA	EBA	ISO 20022 compulsory	140 characters (not required)
SEPA	EPC	ISO 20022 compulsory	140 characters limited
SEPA	Equens SEPA	ISO 20022	140 characters
SEPA	ICBPI SEPA	ISO 20022	140 characters
SEPA	STET	ISO 20022	140 characters
Australia	APCA	Proprietary, moving to ISO	140 characters
Brazil	CIP-Sitraf	Proprietary XML, moving to ISO	Up to 1MB of data
Denmark, Norway	NETS	UDUS, moving to ISO 20022	140 characters
Japan	Zengin	ISO 20022	20 (technically 140 are supported but local market used only 20)
South Africa	SAMOS	SWIFT MT, moving to ISO	140 characters
Sweden	Bankgirot	Proprietary, moving to ISO	80 characters (12 additional)
Switzerland	SIX	ISO 20022	140 characters
Canada	ACSS and LVTS	ISO 20022	Under development

Table 2: Remittance data models in the ISO 20022 space

7 Observations and conclusions

The desire to use the payments network also for information delivery is best explained by the lack of an alternative ubiquitous (secure) network that all corporate users can have access to. Establishing bi-lateral solutions or industry specific solutions lead to duplication and increase in cost.

The general information requirements can be summarized in the figure below:

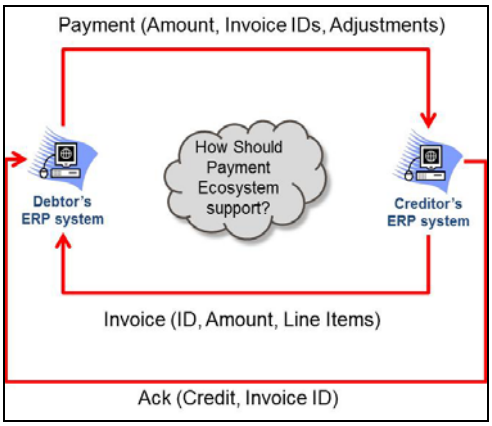

Figure 2: Information needs for ERP systems

The simplest approach will be to use the single Creditor Reference approach as it takes up the least space in the message. However, as seen in the examples from the EPC as well as the US market the need for richer information content seems to be increasing and thus a single reference approach will not meet future needs.

Using a separate standardized remittance advice message will provide a common format but lacks a common transport mechanism. It should be explored if corporates with access to the SWIFT Network should send these directly to the creditor/invoicer and what solution can be offered to corporates that are not on the SWIFT network. Any future solution should not be restricted to a specific network but should be network agnostic.

Another alternative would be to agree on a standard repository model that the debtor/invoicee can use to store extended remittance data and that the creditor or the creditor agent can access to retrieve the information and reconcile against the received payment. The directory can either be offered as a centralized service or in a distributed manner as long as the access protocol is harmonized. The flow chart below describes such a model.

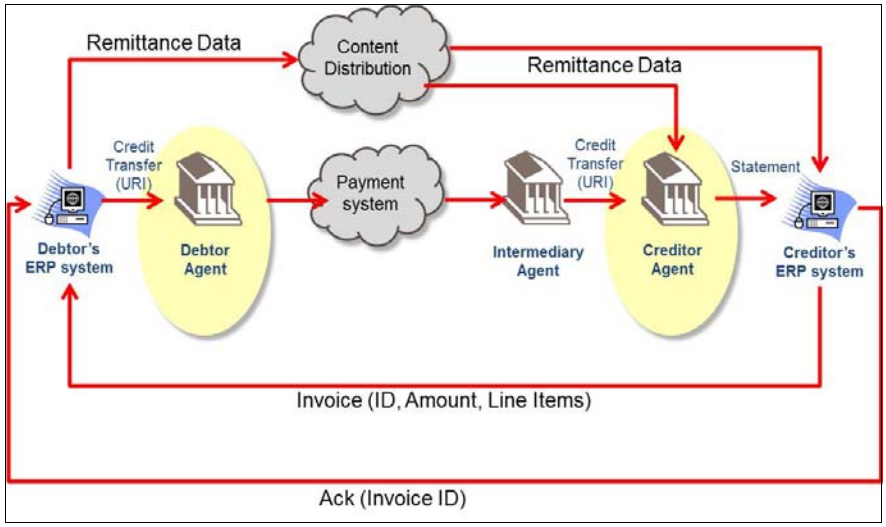

Figure 3: Distributing extended remittance details via a common repository

The model described above has the additional advantage that multiple industry formats can be supported without impacting the payments chain. Ideally the repository should be agnostic to the format of the remittance data. However, a minimum standard format like the ISO 20022 Remittance advice should be the default in the absence of a bilateral agreement between the debtor and creditor. The creation of a central directory service listing the accepted formats for participants (corporate or FI) could should be considered.

The minimum requirement for the payment and correspondent system will be to ensure that a Universal Resource Identifier or URI can be transported in the payment message. As most legacy systems allow only for one to four lines of 35 characters the challenge will be to agree on a URI that can fit within this constraint.

In regard to the credit notification the best solution is if the creditor's ERP system generates such an advice and provides it to the debtor. In the case that creditor's system cannot generate this notification it could make sense for the creditor agent to offer such a service. Especially in the consumer to consumer or consumer to corporate/government space the notification can help to reduce inquiries from the debtor bank and enhance the user experience in the cross-border payments environment.

The surveys that the PMPG conducted on this topic in previous years shows a definite interest by banks in this feature, however the outstanding question is if and how the creditor agent can charge for such a service.

8 Recommendations and suggested work

No clear solution can be identified at this time. It is also not clear if a single solution will emerge or if various alternatives need to be supported. After various internal meetings on this topic the PMPG has decided to seek input from the community on the following questions:

- Should the Creditor Reference model be promoted as the "got to" model for the cross-border market place in the absence of any agreed upon extended message size for payment orders?
- Should corporates with access to the SWIFT Network send these directly to the creditor/invoicer?
- Should the PMPG sponsor a practice/standard on how to reference an external remittance data repository (such as TSU) in a payment message? (Example: PMPG could recommend how to transport a URL in field 70.)

- Should the PMPG recommend a standard format that market participants should use to exchange remittance data in the absence of a bilateral agreement?
- Should the PMPG provide a market practice for a payment notification process
- Does a payment notification generated by the creditor agent instead of the creditor offer business value?

9 Next Steps

As next steps the PMPG is planning the following:

- PMPG and CAG will create terms of reference describing the mission of the task force
- The PMPG and CAG will form a joint task force with the goal to develop an industry best practice paper prior to the 2015 SIBOS.
- Continue the industry dialogue based on the output of the task force during the 2015 PMPG Annual Forum

Industry Update:

In a panel discussion during the 2014 PMPG Annual Forum in Boston the topic of remittance data was identified as an important topic not just for banks but also for the corporate community. The panel concluded that the needs of the community will be best served by a joint effort between the SWIFT Corporate Advisory Group (CAG) and the PMPG to recommend an industry practice

The PMPG is looking forward to an active industry discussion on this topic. Feel free to give any input or suggestions by emailing the PMPG secretariat: info@pmpg.info