Annual Stock Taking Exercise Report

ERPB meeting - November 2024

The **European Payment Stakeholders Group (EPSG)** is an International Non-Profit Association located in Brussels. The main task of the EPSG is the definition of SEPA requirements for payment services. The Association is governed by the provisions of the Belgian Companies and Associations Code. Its membership is open to any entity which is active in the market for payments services in an EEA Member State. According to this scope the EPSG as a multi-stakeholder group brings together the following industry sectors along the value chain of payment services:

- Retailers
- Vendors (manufacturers of cards, payment devices, and/or related IT systems);
- Processors (of payment transactions);
- Schemes and
- Payment Service Providers.

The European Central Bank is invited to attend the meetings of the bodies of the EPSG as an Institutional Observer.

The primary focus of the work of the EPSG is the 'SEPA Payments Standardisation Volume'. Developed and agreed by all relevant sectors active for payments in Europe it demonstrates a strong self-commitment of the European stakeholders within the payment ecosystem and is well recognised by the European Central Bank and the European Commission. In accordance with the vision of Single Euro Payments Area (SEPA), the purpose of The Volume is to enable payment standardisation and promote interoperability of payment transactions in a secure environment throughout the SEPA region. The VOLUME aims to do this by defining a set of harmonised SEPA requirements ('SEPA Payment Standards') applicable to payments, card payments and beyond.

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1. Executive Summary

For the 10th consecutive year, the European Payments Stakeholders Group (EPSG) welcomes the opportunity to report to the ERPB the status of the preceding 12 months' work on SEPA Cards standardisation.

Of course, the EPSG's work in 2024 was still focused on its decision to expand the scope beyond card payments on 1 December 2022. To implement this decision, it was necessary in a first step to align on a first basic approach how to structure the SEPA **Payments** Standardisation Volume (SPS Volume) for this new scope, which allows the EPSG's working structure to allocate the Volume Books, the necessary resources and budget. This could be achieved during the Board's meeting on 16 November 2023. Following to this a common understanding was needed about the nature of Instant Payments in order to identify the SEPA requirements for the Volume, based on the comprehensive overview delivered by the Transition Task Force before, which demonstrated a large diversity of IP implementations compared to the well standardized card payments. Therefore, in 2024 a dedicated IP Flows Task Force worked on this objective and is still providing the necessary input for the Expert Teams to enhance their books accordingly and on common ground.
Initial steps of the work for the integration of instant payments in the Volume are therefore in progress and are described in more detail in this document.

Beyond this decisive aspect, the EPSG activity in 2024 has been focused on continuing discussions for the content of Version 11 of the Volume in line with its three-year release schedule. The following work items can be listed in this regard:

- A Bulletin to update the Book 1, Book 2 and Book 4 of Volume v.10 in order to include Elliptic-Curve Cryptography (ECC) cryptography has been published in May this year and will be integrated in v.11 of the Volume.

- The integration of security requirements for so called COTS solutions in Book 4 was completed by defining requirements for PIN-based COTS payments basing on the industries' security programmes.

- The complete revision of Book 6 gained momentum. The Book was enhanced by the topics of staged wallets, transparency, accessibility and choice of application for contactless cards.

- The Labelling process continued and was enhanced by enabling a labelling of security requirements listed in Book 4.

- The Innovation Expert Team continued the work which started in 2023 analysing whether Digital Wallets should be included in the Volume. This work also considers the potential of e-IDAS Wallets and the European Commission's collaboration with different governments in several EUDIW Large-Scale Pilot Projects. Managers of two of these EUDIW Large-Scale Pilots, Nordic-Baltic eID Project (NOBID) and the European Wallet Consortium (EWC), contacted the EPSG in order to start a constructive win-win collaboration. The EPSG accepted this collaboration and an agreement has been signed for the two co-chairs of the Innovation Expert Team (Inno ET) to participate in these two projects.

- The evolvement of Post-Quantum Cryptography remains to be continuously observed and assessed by the Inno Expert Team.

- The EPSG aligns its internal working structure to better handle the increasing amount and pace of legislation that impact payments and payment services. A dedicated Payment Legislation Expert Team (PLET) was established for analysing the impact of all payment-specific legislation such as PSD/PSR, IFR, CBPR, IPR, WTR, SEPA Regulation etc. PLET will also act as first point-of-entry for all new legislation, to decide if it falls within the payment-specific scope of PLET. For legislation considered out of scope of the PLET, i.e. non-payment legislation such as AMLD, GDPR, DORA, CRA, etc., PLET will refer it to e.g. Innovation Expert Team (INNO ET), which will perform a Regulatory Volume Inclusion Assessment Criteria (R-VIAC) assessment of the legislation, in order to evaluate the degree of Volume impact, and based on that propose next steps if the legislation is considered to have considerable Volume impact. The Digital Operational Resilience Act (DORA) was the first candidate to be analysed by an R-VIAC.

- nexo standards became a new EPSG member in the Standards Observers category. As nexo standards provides worldwide comprehensive implementation specifications of a terminal application and terminal interfaces -the latter are based on ISO 20022-, a closer cooperation targeting at a better standardisation can be achieved.

2. The new activities of the European Payments Stakeholders Group

The General Assembly decided to expand the scope of the association beyond card payments during its meeting on 1 December 2022, and approved the setup of a Transition Task Force dedicated to the management of the transition.

The Task Force presented its report to the Board during their meeting on 16 November 2023. The Board approved the report and the various expert teams started working in 2024 on the recommended changes proposed by the Task Force to transform the SEPA **Cards** Standardisation Volume (SCS Volume) into the SEPA **Payments** Standardisation Volume (SPS Volume): namely:

- Step 1, update Book 2's Scope section that contains the different Payment Services, Technologies, Environments and Functionalities
- Step 2, update the various Books based on the deliverable of Step 1:
  - Book 1: update references and the overall flows for IP's
  - Book 2: review requirement sections for selected (eligible) payment services and functions, add co-existence (choice) requirements
  - Book 3: add SEPA Instant Credit Transfer (SCT_Inst) and request-to-pay related Data Elements
  - Book 4: Security requirements of QR Codes in both consumer presented and merchant presented modes and security requirements of IP processing
  - Book 5: prepare adapted framework for the labelling of IP specifications when available
  - Book 6: integrate relevant examples, guidelines from consumer choice work etc.
  - Book 7: integrate relevant principles for IP processing as needed
  - Tokenisation Annex: envisage new sections relative to QR Code contents

3. Update on Payments standardisation in Europe

The Volume v.10 was released in October 2022, earlier than planned.

3.1 2023-2025 Volume cycle towards v.11

In line with its three-year release schedule, the EPSG activity in 2024 has been focused on continuing discussions for the content of Version 11 of the Volume that for the first time will also include requirements for instant payments.

According to what was announced within the previous report, a Bulletin to update the Book 1, Book 2 and Book 4 of Volume v.10 in order to include Elliptic-Curve Cryptography (ECC) cryptography has been published in May this year.

Version 11 will also include provisions facilitating compliance with regulatory requirements related to transparency and accessibility applied to payment systems. The following section of this document provides details.

3.2 Regulatory Updates

Over the last decade we have seen an increasing amount and pace of legislation that impact payments and payment services; both payment-specific legislation such as PSD/PSR and IFR, as well as non-payment legislation such as AMLD, GDPR, DORA, CRA, etc. This has made it necessary for EPSG to pay specific attention and time to analysing in depth the content of new legislation from a multi-stakeholder perspective, in order to find out whether there is impact specific to EPSG scope that may deserve subsequent work at the different Expert Teams (ETs) and result in new or changed requirements or guidelines in the Volume, and/or in some cases also impact EPSG's ways of working and EPSG communication.

For that reason, the EPSG Board has decided to optimise the internal processes for a more efficient analysis and impact assessment of the relevant EU regulatory frameworks. The work is likely to be carried out along the following three concrete lines of action:

1. The categorisation of relevant EU legislation in five domains: Payments, Cybersecurity, Data Protection, Access to Payment Services and Anti-Money-Laundering.
2. The prioritisation of the evaluation of new legislation: DORA, CRA and the new proposals for PSD3 and PSR.
3. The transformation of the former PSD2 Task Force into a permanent working group, the Payments Legislation Expert Team (PLET).

This strengthening of our internal processes will improve how well and fast we evaluate the impact of EU legislation on the Volume and EPSG to make appropriate accommodations if needed.

Last year, the Volume Sub-group paid particular attention to the evaluation of legislation improving the consumer experience:

(1) by identifying guidelines to facilitate access to payments for persons with special needs, and

(2) by integrating in the Volume the ERPB's recommendations on Transparency for retail payment end-users.

3.3 Progress in Volume Conformance

The Volume Conformance Management Committee (VCMC) has continued its ongoing activity of evaluating and granting labels for implementation specifications.

The process was confirmed by the Board to continue to be based on two pillars:
- Self-Assessment
- Voluntary nature

The main pan-European implementation specifications have obtained the conformance label, the detailed status of the labelled specifications can be accessed on the VCMC web page.

Labels are issued following an enhanced process using a checklist of individual functional requirements which leads to more clarity of the labelling process and results in a larger degree of accuracy regarding the Self-Assessment process, both for the applicant and the VCMC.

After the clarification regarding the optional applicability of the labelling process for security requirements, the labelling principles described in Book 5 "Conformance Processes" have been updated taking into account that implementation specifications may not cover security requirements as defined in Book 4 "Security Requirements". Therefore – as an option – a separate list of security requirements may be delivered to the VCMC for security labelling.

As part of the adaptations necessary to implement the expanded scope into the different EPSG processes and workstreams, the VCMC will work to put the necessary processes and documentation in place to accommodate the labelling of non-card implementation specifications.

3.4 Annual Report on ISO 20022 initiatives in the card Acquirer to Issuer Domain

3.4.1 Context

Since 2017, the ECSG (now EPSG) Volume Sub-Group has been monitoring the status of the initiatives to use ISO 20022 in the card A2I domain in the market, in order to identify specific SEPA requirements to be taken into account, e.g., triggered by Schemes or by legislation.

3.4.2 Current status

At the date of the report, no new initiative using ISO 20022 in the card A2I domain has been identified in the market.

The same two initiatives as last year are using ISO 20022 in the card A2I domain.

- o The SEPA Card Clearing (SCC) Framework, which specifications have been labelled as conformant towards the SCS Volume Version 8.0, and the conformance has been renewed against v9.0.

- o ATICA provides a specification covering the full transaction life cycle (Authorisation, Clearing, Settlement and Disputes) within the Acquirer to Issuer environment. The latest version is version 4, published by ISO in August 2024.

3.5 ISO 20022 initiatives in the Terminal-to-Acquirer Domain

nexo standards, the not-for-profit organisation involved in standardizing the exchange of data between all payment acceptance stakeholders, has recently joined the EPSG in the quality of Standards Observer, to reinforce the collaboration between the two associations.
nexo standards provides to the actors in the payment acceptance domain a full set of high-level functional and security requirements based on ISO 20022. Historically, the association focused on card-based payments, but like the EPSG, it expanded its scope a few years ago to cover non-card retail payments.

3.6 Standardisation progress in the Card-to-Terminal, Terminal-to-Acquirer and Acquirer-to-Issuer domains

The main activities on the Volume consist of:

- • Publication of a bulletin amending Volume v10 to include the ECC (Elliptic-Curve Cryptography) based protocols XDA for contact, BDH Secure Channel and RRP for contactless transactions. The objective is to publish changes related to ECC in the form of a Bulletin amending Volume v10
- • Addition in Book 4 of the requirements for PIN entry on COTS devices
- • Integration in Book 5 of the optional labelling of security requirements.
- • Review in Book 6 of the topics of staged wallets, transparency, accessibility, choice of application for contactless cards
- • Initial steps of the work for the integration of instant payments in the Volume, in progress:
  - o Review of the Book 2 Scope section to identify services, acceptance technologies, transaction environments and functions to be covered for the integration of instant payments
  - o Definition of how to integrate instant payment-related data in Book 3
  - o Definition in Book 7 of an IP processing framework based on the current card framework, and subsequently define a general processing framework

3.7 Standardisation progress in the Terminal Security domain

In Book 4 of Volume version 10 Commercial-Off-The-Shelf programmes were integrated following a paradigm shift in the industry from traditional payment devices relying on hardware security as the primary protection mechanism to a new payment acceptance method utilising Commercial Off-the-Shelf (COTS) solutions. Instead of relying on physical security the assurance of these COTS solutions moves to initial security evaluations and continuing monitoring by a back-end system. The Volume version 10 was updated with the COTS methods

- contact card payment with PIN on COTS, requiring a secure card reader, and
- contactless card payment without PIN on COTS.

The third variant, contactless card payment with PIN on COTS, was integrated in 2024 based on the industries' published security programmes. Because the three programmes show a considerable amount of overlap regarding their security requirements, the Volume Subgroup intents to restructure these new chapters for better readability.

Following the guidance of the B2 Expert Team the Book 4 started to define security requirements for IP transactions including the security of QR Code specifications.

4. Ongoing EPSG activities for Volume v11

The EPSG continues to monitor the impact of technological innovation, payment-related regulations and the initiatives of other standards bodies on the development of card and non-card payments in SEPA to prepare v11 of the Volume.

4.1 Integration of Instant Payments within the Volume

The EPSG faces different challenges for the consistent integration of Instant Payments (IP) in the next release of the Volume Book of Requirements. Compared with the well harmonized payment card systems, IP in the EU market rely on a diversity of processing circuits. IP use cases may be intermediated by a Third Party Payment Service Provider (TPP) according to the PSD2. This TPP may initiate an IP by connecting to the API of the Bank of the payer. That adds to the complexity of the IP flows and creates security vulnerabilities.

The EPSG outlines that IP also show specificities in terms of Payment Initiation mechanisms and Strong Customer Authentication. However this rich context for IP implementations makes more difficult for the EPSG to specify the set of IP services equivalent to card payments. To progress, the EPSG launched the Instant Payment Flows Sub-Group (IPFSG). This Sub-Group has initially identified three main IP processing flows representative of the existing implementations in the EU IP market. They're now to be completed with additional IP data flows initiated with a NFC/Contactless interface.

The objective is to detail in the new version of the Volume, how standard IP services are supported by any of the selected IP flows, so that the level of protection of the end-users is the same. With this respect, the EPSG made the choice not to develop new Books specific to IP. Instead, the content of the existing Books will integrate IP requirements as an extension of the existing requirements for card payments. The Volume will now focus on the Interoperability and Security aspects of both card payments and IP.

4.2 Evolution towards enhanced cryptography

In 2024 the EPSG approved a bulletin for the integration of functional and security requirements for Elliptic Curve Cryptography (ECC) for card payments. It does not apply to Instant Payments. The migration to ECC will increase the security of card payments in the coming years keeping a fast transaction time and thus preserving the user journey.

Formally, this Bulletin is part of the current version of the Volume v10 and will be integrated in the main text of the next release of the Volume v11. From the technical point of view, the content of the Bulletin aligns the Volume with the recent EMVCo Specifications for ECC. That fact will ensure the global interoperability of ECC cards and terminals and back compatibility with card payments protected using RSA.

With that respect, we notice that the ECC specifications differ for contact and contactless payments and rely on different protocols. For the first time, ECC contactless payment cards and terminal will establish a Secure Channel (SC). This SC will preserve the privacy of the transaction by encrypting any personal data exchanged between the contactless card and the terminal kernel. ECC contact and contactless transactions will also differ in the protocol used to authenticate the card.

The ECC Bulletin brings about updates of different Books of the Volume, including new definitions (Book 1), functional requirements (Book 2) and security requirements (Book 4). Overall this Bulletin is part of the continuous effort of the EPSG to align the cryptography used to protect payment transactions, with the best security industry practices.

4.3 Digital wallet use cases for Payments

For the first time, the EPSG is discussing the role of Digital Wallets to support use cases for instant and/or card payments. Proprietary Digital Wallets implemented in smartphones are increasingly used for payments, either in proximity or for e/m-commerce transactions. Yet the recent e-IDAS regulation recognizes the right of the European Citizens to be issued a Digital Wallet by their governments for access to public and private services including banking ones.

The e-IDAS Wallet supports security functionalities such as Strong Customer Authentication including a qualified electronic signature. These functionalities could be used by banks (1) to identify a new end-user (for Know-Your-Customer conformance), (2) authenticating a payment transaction (3) to provide end-users with more control over shared personal data and (4) facilitating financial inclusion.

Aware of the potential of e-IDAS Wallets, the European Commission in collaboration with different governments has organized several EUDIW Large-Scale Pilot Projects. They are intended to prove the feasibility of e-IDAS Wallets to support payment-related use cases. In the EC views, the acceptance of e-IDAS Wallets to pay could significantly improve customer journeys.

Managers of two of these EUDIW Large-Scale Pilots, Nordic-Baltic eID Project (NOBID) and the European Wallet Consortium (EWC), contacted the EPSG in order to start a constructive win-win collaboration. On one hand, the outcome of these projects will benefit the overall payments industry if standardisation is facilitated by the EPSG. On the other hand, the EPSG may contribute with its technical expertise to fine-tune the findings of both projects. The EPSG has accepted this collaboration and an agreement has been signed for the two co-chairs of the Innovation Expert Team (Inno ET) to participate in these two projects.

In between, the EPSG Inno ET has produced a Regulatory Volume Inclusion Assessment Criteria (R-VIAC) for the eIDAS regulation. The R-VIAC conclusion was that it is premature for the EPSG to start technical work because e-IDAS Delegated Acts are still pending. These Acts are expected to provide the payments industry with technical rules and implementation guidelines, needed to focus the technical work to be produced by the EPSG on e-IDAS Wallets.

4.4 Cooperation with the ERPB

The association continued during the last year to collaborate with the ERPB.

The main collaboration regarded the follow-up on the recommendations issued by the ERPB on the topic of Transparency for retail payment end-users, followed by the impact assessment endorsed by the July 2022 ERPB meeting.

The EPSG's contribution has consisted in the updating of the EPSG´s SEPA Payments Standards Volume.

The following Volume's Books have been identified to receive updates, facilitating the adoption of the ERPB's transparency recommendations:

1. Book 2: definition of functional requirements for SEPA payments, via a reference to Book 6 for detailed guidance on the use of the merchant's name;
2. Book 6: guidance on practical examples for implementation;

Furthermore, in addition to the above, the terminology used in the Volume needs to be enhanced with new definitions to support these integrations.

The update work was completed last year for Books 2 and 7.

Book 6 is currently undergoing a complete revision, which is why the Expert Team responsible for its management has only recently finalised the additions regarding transparency.

In parallel, we are updating the Volume glossary and definitions with many changes, not only those required by the ERPB transparency recommendations but also those derived from legislation currently under development such as the PSR. All the changes will be part of version 10.5 that will be published for public consultation.

The EPSG continues to report on the implementation of standards related to the extended scope, i.e. card and non-card payments (the present document).

4.5 Innovations in Card and Instant Payments

The Innovation Expert Team (INNO ET) has continued evaluating technologies for potential inclusion in the Volume v11. After the EPSG extension of scope, these technologies may be applicable to card and/or instant payment implementations. The INNO ET also advises the EPSG Board in terms of priorities for standardization, depending on the level of maturity of relevant IT technologies. During the last year the INNO ET has focused on the following:

1. Monitoring the progress of Quantum Computing, of the NIST standardization project on Post-Quantum Cryptography and the positions expressed by EU National Security Agencies

2. The use cases for payments of Digital Wallets, in collaboration with the NOBID and EWC projects

3. Evaluations of EU Regulations relevant for the Payments Industry such as the e-IDAS, the Data Act and the Digital Market Act in collaboration with the PLET

4. The revision of the initial VIAC conclusions for technologies such as the QR-Code with a clear use case to initiate an Instant Payment

5. Ongoing EMVCo standardization initiatives relevant for the EU payments industry

6. Authentication Methods (Secure Payment Confirmation, FIDO) that facilitates the customer journey for e/m-commerce transactions

For next year, the INNO ET is planning to investigate:

- The outcome of the NIST standardization program and the implementation challenges of Post-Quantum algorithms using state-of-the-art technology for retail payments

- Enhance the effort on Wallets, including:
  - o (1) the production of a Taxonomy for Digital Wallets
  - o (2) Recommendations to the EPSG Board on the scope of the technical work to be produced for both Volume v11 and Volume v12 and
  - o (3) Contributions for both NOBID and the EWC projects

- Review of the original VIACs for QR-Code extended to the Instant Payment use case for inclusion of QR-Code requirements in the Volume v11

- Review of the original taxonomy for Internet of Things (IoT) considering new use cases for SCA in specific contexts (e.g., hands-free payment at petrol station)

- Impact assessment of legislation relevant to the INNO ET scope, including new implementation/delegated acts

- Assistance to the EPSG ET's in the drafting process of the Volume v11

4.6 Collaboration with standardisation bodies and specification providers

The EPSG continues to extend its collaboration with internationally recognised Standards bodies for payments and/or authentication methods. They include:

- Enhancement of technical collaboration with EMVCo and PCI-SSC in view of the publication of Volume v11

- Start of a regular collaboration with the W3C and FIDO in areas such as online transaction authentication using their standardized functionalities based on Browsers
- nexo standards decision to join the EPSG as a Standards Observer to improve consistency for their technical specifications
- The aforementioned collaboration agreement with NOBID and EWC on the e-IDAS Wallet use cases for payments

5. Conclusion

In 2024 the EPSG succeeded in paving the way to implement properly the decision to expand its scope beyond card payments. Via dedicated Task Forces and their support of its permanent working structures it became more and more clear how to integrate the new and less harmonized payment means of Instant Payments. It will be more than interesting to learn after the consultation phase in 2025 how the different markets and stakeholders assess the chosen approaches.

However, the evolutions of card payments in terms of innovation (e.g. further programmes for the use of mobile-off-the-shelf devices as payment terminals and enhancements for contactless payments), and the changes in the technological context (e.g. the eIDAS Regulation, digital Wallets and, still, enhanced cryptography following the advance in quantum computing), remain constant challenges to be reflected for the Volume v.11. The invitations of the Nordic-Baltic eID Project (NOBID) and the European Wallet Consortium (EWC) for participation were accepted by the EPSG and showed that the EPSG's relevance in these innovative projects is recognized.