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**SEPA CARDS STANDARDISATION (SCS) "VOLUME"**

# BOOK 7

**CARDS PROCESSING FRAMEWORK**

*Payments and Cash Withdrawals with Cards in SEPA  
Applicable Standards and Conformance Processes*

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39 **1 GENERAL**

40 **1.1 Book 7 - Executive summary**

41 **1.1.1 Purpose of this document**

42 This book defines business principles and requirements for market access and participation in card  
43 payment domain services, with the main objective of facilitating an open and transparent market.

44 **1.1.2 Migration Roadmap**

45 A migration roadmap will be proposed after discussion and alignment with the CSG and will be  
46 defined in Book 6.

47 **1.1.3 Structure of this book**

48 This book contains three main parts

- 49 1. Description of existing Cards Processing Framework
- 50 2. Business objectives expected via the production of this Book of the SCS Volume
- 51 3. Business Principles applying to the different parts of the card payment value chain (e.g.  
52 Scheme, Acquirer/processor, Issuer/processor) aiming to achieve the defined business  
53 objectives

54

55 1.2 Description of changes since the last version of Book 7

Change history of Book 7		
7.7.0		Working version 2014

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56 **2 CARDS PROCESSING FRAMEWORK**

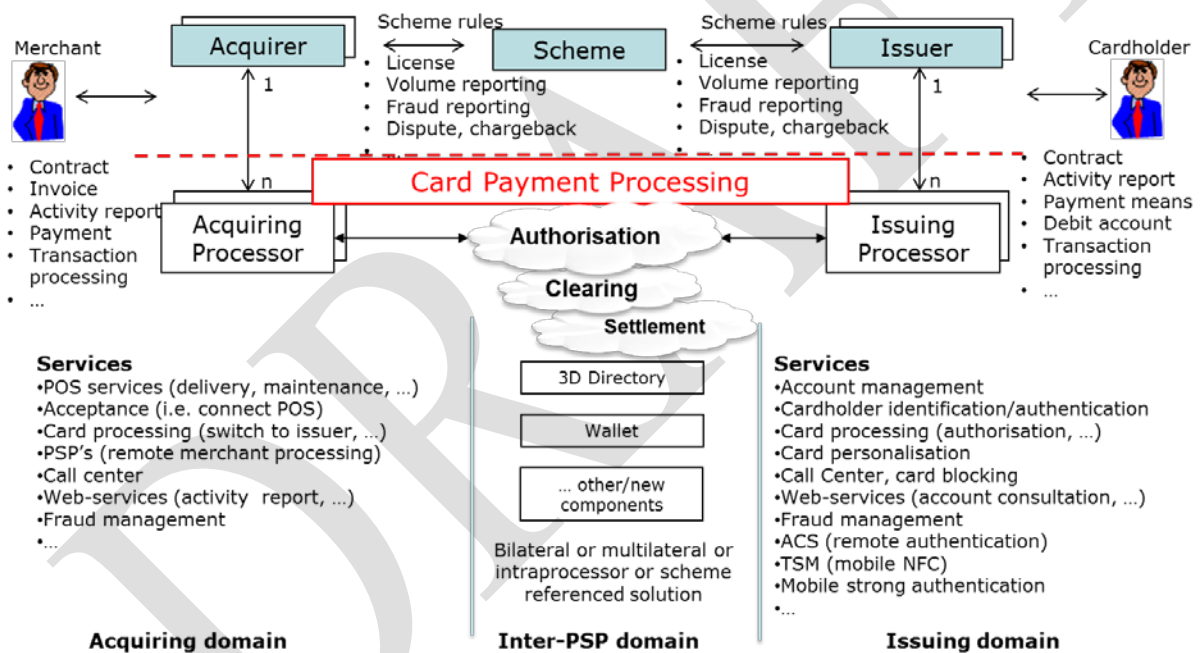
57 **2.1 Introduction**

58 The market model described is the traditional four party card scheme, where  
 59 - Acquirer has contractual relationship with Acquirer;  
 60 - Cardholder has contractual relationship with Issuer;  
 61 - Acquirer and Issuer interact for authorisation, clearing and financial settlement of transaction.

62 The Cards Processing Framework should apply to all SEPA card schemes. The three party card  
 63 scheme model is not covered in this version.

64 **2.2 Context and Environment**

65 The diagram below depicts main actors and services of the four party card scheme.



66  
 67 This model applies to card based payment transactions, on ATM, physical POI, remote payment  
 68 environment (PC, mobile device), i.o.w. any medium that allows the initiation of a Card based transaction

69 Service providers may provide one or several services in one or several domains; type of services are defined  
 70 within contractual agreements between Acceptors / Acquirers / Issuers and their service providers.

71

72 **2.2.1 Schemes play an important role**

73 Card Payment Schemes are key players; they define for each of their card brands the rules  
74 (business, functional, security, procedural) governing the use and deployment of the products and  
75 services and, through oversight requirements, they bear responsibilities for operational reliability  
76 (business continuity), security levels and commercial accountability (financial liabilities and risks).

77 Acquirers and Issuers are Scheme Participants. They sign License Agreements with the Scheme,  
78 follow the Scheme rules and implement the mandatory services, such as Volume reporting, Fraud  
79 reporting, Dispute and Chargeback procedures. In most cases, Acquirers and Issuers support  
80 several card brands potentially from several Card Payment Schemes.

81 Processors provide services to Scheme Participants for the acquiring of transactions and/or issuing  
82 of payment applications for one or several Card Payment Brands for one or several Card Payment  
83 Schemes. For sake of clarity, an Acquirer or an Issuer may be its own processor for part or all  
84 services (or he may subcontract those services to an external supplier).

85 **2.2.2 Three main domains**

86 Three domains are identified in the cards processing landscape:

- 87 - Acquiring domain: services provided to Acquirers and their merchant customers for  
88 acceptance of transactions (acquiring domain also covers merchant acceptance)
- 89 - Issuing domain: services provided to Issuers and their cardholder customers for issuance of  
90 card payment products means
- 91 - Inter-PSP domain (also called inter-bank domain): services allowing Acquirer Processors to  
92 interact with Issuing Processors for the execution of the transactions

93 In each domain, the services are quite broad and can be provided by several suppliers. Scheme  
94 Participants (e.g. acquirers, issuers) may use services from different processors, some being more  
95 specialized in some activities. For instance, services related to delivery of POI and services related  
96 to provisioning of a payment application on a Secure Element of a mobile device are quite specific,  
97 independent and in general provided by different suppliers.

98 **2.2.3 Several solutions possible in the 'inter-PSP' domain**

99 The 'inter-PSP' domain covers the interactions between Acquirer (Processors) and Issuers  
100 (Processors) and ensures the full reachability of any issuer by any acquirer for a specific scheme:

- 101 - An acquirer must be able to reach any issuer
- 102 - An issuer must be reachable by all acquirers.

103 For the Authorisation, Clearing and Settlement services, several solutions are operational on the  
104 market

- 105 - Bilateral agreements between one acquirer and one issuer for the use of a specific solution
- 106 - Multilateral agreements between several acquirers and several issuers to use a common

- 107 solution, either based on a common interface standard and several connections between  
108 each party or via connection to a central switch
- 109 - Intraprocessor solution provided by one processor (acting as acquirer and issuer processor)
  - 110 for its acquirer and issuer customers
  - 111 - Scheme default solution referenced by Scheme (e.g. central solution, multilateral solution)

112 The current market situation already illustrates the fact that a Scheme may not impose the sole  
113 use of its Scheme default Inter-PSP solution. The different solutions may use different technical  
114 standards and implementations provided they are compliant with the Scheme rules, which is also  
115 in line with the standardisation and conformance ecosystem defined within the Volume.

#### 116 **2.2.4 Some services are scheme/brand specific, others are generic**

117 Many services supported by Scheme Participants and/or their Processors are 'scheme/brand  
118 independent' or similar for several brands (of same Scheme or of different Schemes). Examples of  
119 such Scheme/brand independent services usually include but are not limited to:

- 120 - Acceptor payment, reporting, contracting, invoicing
- 121 - POI acceptance (e.g. POI to Acquiring processor protocol, acquiring processing)
- 122 - Card processing (e.g. EMV processing)
- 123 - Financial part of the authorisation process (rather specific per card product type, e.g. a 'pay  
124 before', a 'pay now' or a 'pay later' product, than typically per brand)

125 Other services are 'scheme/brand dependent', mainly for interactions with the Payment Schemes.  
126 Examples of such Scheme/brand dependent services usually include but are not limited to:

- 127 - Interface with the Scheme default brand reachability solution (Switch, Clearing &  
128 Settlement for interaction between acquirer and issuer, Directory for remote transactions  
129 ...) are currently specific per scheme. However, scheme/brand independent  
130 Implementation Specifications can already be used provided they take into consideration  
131 the scheme governed specific business rules (e.g. real time clearing mandated versus batch  
132 clearing).
- 133 - Scheme reporting (e.g. volume of transactions, number of cards)
- 134 - Fraud reporting (e.g. information on cases of frauds encountered)
- 135 - Dispute management, chargeback processes (between Acquirer and Issuer)

136 Some Scheme rules can be specific per payment scheme, for instance the concept of on-line  
137 clearing rather than batch clearing, the support of specific transactions types which are mostly  
138 optional.

139 In the context of emerging solutions, e.g. wallet, mobile payment solutions, it is expected that in  
140 the initial phases, specific solutions will be developed with non-standard features, which ideally  
141 would be aligned to SEPA-wide (scheme independent) standards once the new service becomes  
142 mature.



143 **2.2.5 SCS Volume aims to ease deployment of brand/scheme independent standards**

144 The Standardisation ecosystem is described in Book 5, with some key principles, such as:

- 145 - Several Implementation Specifications per domain of value chain (e.g. POI-acquirer part),
- 146 with some exceptions, e.g. EMV for card-POI part
- 147 - Role of Specification Provider highlighted – independently of Scheme related bodies
- 148 - Optional Labelling process to demonstrate conformance of the Implementation Standard
- 149 with the Volume (requirements and governance)
- 150 - Schemes to make public the list of Implementation Specifications they support
- 151 (transparency objective)
- 152 - Approval process by Schemes of products certified by Specification Providers
- 153

154 The combination of those principles with the fact that several card payment services are similar for  
155 different schemes (same functional and security requirements) will ease the development of  
156 brand/scheme independent Implementation Specifications by Specification Providers which may  
157 be independent of Scheme organisations.

158 **3 Business Objectives**

159 The description of the context and environment highlights some key characteristics of card  
160 payment services:

- 161 - Clear separation of roles between the actors : schemes, acquirers, issuers, processors
- 162 Several services by different suppliers for one acquirer/issuer illustrate that competition
- 163 already exists
- 164 - Most services are 'brand independent' and instead are specific to the card product type
- 165 - Standardisation and conformance ecosystem developed by CSG within this SCS Volume
- 166 aims to ease the development of 'brand independent' Implementation Specifications (e.g.
- 167 EMV, POI-acquirer protocol, ...) and solutions for the benefit of all stakeholders
- 168 - Cooperation already exists, as demonstrated by the use of common technical and security
- 169 standards (e.g. EMV, 3D Secure for remote payment) in a competitive context (e.g. specific
- 170 scheme rules).

171 In addition to the books related to requirements (functional, security) and the conformance  
172 verification process, this book defines additional business principles and requirements for market  
173 access and participation with the main objective of further facilitating an **open and transparent**  
174 **market**, which

- 175 - maintains competition
- 176 - improves efficiency
- 177 - fosters interoperability

178 Based on scheme independent standards developed by Specification Providers in cooperation with  
179 relevant actors in the cards' payment landscape (e.g. schemes, processors, vendors ...).

180 Those additional business principles and requirements can be considered as the 'Cards Processing  
181 Framework'.

182 Business Principles and Requirements per domain

183 In this section, Business Principles and Requirements refer to the business dimensions that apply to  
184 the actors of the card payment value chain with the objectives mentioned above.

### 185 **3.1.1 Schemes**

186 Req S1: Schemes shall not discriminate among Acquirers and Issuers for licensing their products  
187 provided the parties meet the Scheme requirements to get a Scheme license.

188 Req S2: Schemes shall make available without discrimination and at the same time, to their  
189 Participants (Acquirer, Issuer) and their Processors, the applicable scheme rules and  
190 specific information, (e.g. BIN tables, MIF rules, product rules), allowing them to setup  
191 and operate the Scheme related services according to their contractual agreement  
192 (License) with the Scheme.

193 Req S3: Schemes shall ensure that their Rules are in line with the requirements of the Volume  
194 for products or services in a mature stage. If some requirements of the Volume are  
195 considered as not aligned with the latest market needs or with emerging solutions that  
196 ensure secure services, Schemes shall propose an update of the requirements of the  
197 Volume. For emerging solutions<sup>1</sup> (e.g. new wallet solutions) it is expected that a Scheme  
198 will define its own specific rules until such solutions are covered by the requirements  
199 within the SCS Volume.

200 Req S4: Schemes shall make publicly available the list of Implementation Specifications they  
201 support (e.g. POI application and POI to Acquirer protocol).

202 Req S5: In order to promote deployment of brand independent SEPA Implementation  
203 Specifications, Schemes shall not

- 204 • Impose their own Implementation Specifications as the only possible solution,
- 205 • Refuse Implementation Specifications, which have been proven to be Volume  
206 conformant, without objective reasons (e.g. specific functionality within the Scheme  
207 rules not supported by this specification),
- 208 • Impose amendments to Volume conformant Implementation Specifications.

209 However, as Solution Providers, Schemes may decide which Implementation  
210 Specifications they use and accept for their default scheme processing infrastructure.

---

<sup>1</sup> Emerging solutions refer to new services not yet described in the SCS Volume

- 211 Req S6: In line with the requirements outlined within Book 5, Schemes and Approval Bodies shall  
212 ensure that certified products or solutions) can be submitted for Type Approval,  
213 provided that the product has implemented a listed Implementation Specification and it  
214 has been certified by an approved certification body.
- 215 Req S7: Schemes shall ensure full reachability (of all Issuers by all Acquirers) by identifying the  
216 default infrastructure components required to achieve this (e.g. Connectivity for  
217 authorisation, clearing, settlement).
- 218 ReqS8: Schemes shall not provide their Participants more favourable services and terms when  
219 these Participants are using default inter-PSP processing infrastructure identified by the  
220 Scheme. For instance, card schemes shall not discriminate when pricing services or  
221 charging fees, between banks and payment institutions who use additional services  
222 offered by the said card scheme and banks and payment institutions who do not, or only  
223 partially do so.
- 224 Req S9: Schemes shall not impose a specific solution provider (e.g. processor) on their  
225 Participants. Schemes may however define minimum standards to ensure quality and  
226 scheme integrity as long as it does not create discriminatory barriers.
- 227 Req S10: Schemes shall not bundle the characteristics of their Card Products (defined in Scheme  
228 Rules) such that it requires the use of a specific processing infrastructure (e.g. supported  
229 card transaction types are independent of inter-PSP infrastructure used). For emerging  
230 solutions (e.g. new wallet solutions) to develop and promote the new service, Schemes  
231 may allow the development and operation of a dedicated infrastructure until the  
232 requirements have been described in the SCS Volume; at which point, the principle of  
233 free choice of solution provider by Participant as defined above shall apply.

### 234 **3.1.2 Acquirer and acquirer processing**

- 235 Req A1: Acquirers, who are working with several brands, shall not restrict Acceptors from  
236 choosing the brands they want to accept.
- 237 Req A2: Acquirers shall not prevent Acceptors from choosing their acquirer for each brand, so  
238 that Acceptors shall be free to choose. However, Acceptors may be subject to risk  
239 assessment and certification by the acquirer.
- 240 Req A3: Acquirers shall not discriminate amongst POI vendors or POI and Acceptance host  
241 solution providers, chosen by their Acceptors, provided those parties meet the acquirer's  
242 technical and security requirements and support the Acquirer's protocol.
- 243 Req A4: Acquirers shall be able to choose which schemes they want to acquire. The scheme shall  
244 not discriminate among acquirers in relation to participation in the scheme. However,  
245 Acquirers may be subject to risk assessment and certification by the scheme.
- 246 Req A5: Acquirers shall follow Scheme rules as stated in their licence agreement.
- 247 Req A6: Acquirers shall be free to choose the processor(s) of choice for acquirer processing  
248 services.

- 249 Req A7: Acquirer processors shall be free to choose which schemes they want to process and for  
250 those schemes which optional transactions as per its Acquirer contract. Sometimes a set  
251 of transactions is mandated by schemes and in this case the Acquirer Processor shall be  
252 able to process all transactions of this set. For example an Acquirer Clearing Processor  
253 shall be able to process Charge Backs, Re-presentments, etc. as per Schemes rules.
- 254 Req A8: As provider of services to Acquirer, Acquirer processors shall also follow Scheme rules.  
255 Acquirer processors shall have the right to obtain scheme specific information to enable  
256 them to process scheme transactions (e.g. BIN routing information). Such necessary  
257 information could be provided by the Scheme or the Acquirer to the Acquiring processor.
- 258 Req A9: Acquirer processors are free to define the level of services they offer to acquirers (and  
259 their customers, the acceptors), how they implement and operate them, e.g. the  
260 interfaces between acquirer and processor.
- 261 Req A10: Acquirer processors shall be free to choose which Inter-PSP Service Providers  
262 (Authorisation, Clearing and Settlement) solutions they use to connect to the issuers  
263 under a given scheme (with the agreement of their acquirer customers).
- 264 Req A11: Acquirer processors may be subject to certification by the Inter-PSP Service Providers to  
265 which they connect.
- 266 Req A12: Acquirer / processor may be subject to approval by the schemes (e.g. security  
267 compliance of HSM, data protection).
- 268 Req A13: Acquirer processors shall decide which Implementation Specifications they want to  
269 support, e.g. the POI-Acquirer interface, taking into consideration the customers' needs  
270 and the standards recognised by the Schemes they support.
- 271 Req A14: Acquirer processors may be subject to certification by the Specification Provider of the  
272 Implementation Specifications they use.
- 273 Req A15: Acquirer processor may get card transactions from the POI either directly or through one  
274 or several levels of acceptance host solutions which connect to the POI.
- 275 Req A16: A POI or a combination of POI and acceptance host solutions should support features  
276 which allow the Acceptor to facilitate (e.g. by configuration) the support of new card  
277 brands and/or new acquirers/processors.
- 278 It is expected that the new card brands and/or acquirer processors implement the same  
279 Implementation Specification as the one already supported on the POI or its acceptance  
280 host.
- 281 Req A17: POI or combination of POI and acceptance host solutions may be subject to certification  
282 by the Specification Provider of the Implementation Specifications they use.

### 283 **3.1.3 Issuers and issuing processing**

- 284 Req I1: Issuers shall be able to choose which schemes they want to issue. The scheme shall not  
285 discriminate between issuers in relation to participation in the scheme. However, Issuers  
286 may be subject to risk assessment and certification by the Scheme.

- 287 Req I2: Issuers shall follow Scheme rules as stated in their licence agreement.
- 288 Req I3: Issuers shall be free to choose the processor(s) of choice for issuing processing services.
- 289 Req I4: Issuing processors shall be free to choose which schemes cards they want to process and  
290 for those schemes which optional transactions as per its Issuer contract. Sometimes a  
291 set of transactions is mandated by schemes and in this case the Issuer Processor shall be  
292 able to process all transactions of this set. For example an Issuer Clearing Processor shall  
293 be able to process Charge Backs, Re-presentments, etc. as per Schemes rules.
- 294 Req I5: As provider of services to Issuers, Issuing processors shall also follow Scheme rules. Issuer  
295 processors shall have the right to obtain scheme specific information to enable them to  
296 process scheme transactions (e.g. product specific requirements). Such necessary  
297 information could be provided by the Scheme or the Issuer to the Issuing processor.
- 298 Req I6: Issuing processors are free to define the level of services they offer to issuers (and their  
299 customers, the cardholders), how they implement and operate them, e.g. the interfaces  
300 between issuer and processor.
- 301 Req I7: Issuing processors shall be free to choose which Inter-PSP Service Providers  
302 (Authorisation, Clearing and Settlement) solutions can be used to connect acquirers for  
303 a given scheme (with the agreement of their issuer customers), provided they shall  
304 ensure that they are reachable by any Acquirer processor.
- 305 Req I8: Issuing processors may be subject to certification by the Inter-PSP Service Providers to  
306 which they connect.
- 307 Req I9: Issuing processors may be subject to approval by the schemes (e.g. security compliance  
308 of HSM, data protection).
- 309 Req I10: Issuing processors shall choose which Implementation Specifications they support, e.g.  
310 the Acquirer (processor)-Issuer (processor) interface (aligned with customers' needs and  
311 standards recognized by the Schemes supported).
- 312 Req I11: Issuing processors may be subject to certification by the Specification Provider of the  
313 Implementation Specifications they use.

#### 314 **3.1.4 Inter-PSP processing**

- 315 Req IP1 Inter-PSP service providers may propose inter-PSP services to acquirers (processors) and  
316 issuers (processors) without discrimination between those customers.
- 317 Req IP2 Inter-PSP service providers may choose which schemes' services they process.
- 318 Req IP3 Inter-PSP service providers may decide which level of services they deliver to their  
319 customers (e.g. transport of authorisation and/or transport of clearing data and  
320 settlement); they shall ensure that those services follow scheme rules.
- 321 Req IP4 Inter-PSP service providers may require issuer and acquirer processors to certify their  
322 interfaces and their behaviour (e.g. connection and transaction authorisation and/or  
323 clearing files).

- 324 Req IP5 A Processor acting as an acquirer and issuer processor may propose inter-PSP solutions  
325 to its acquirer and issuer customers (intra-processor solutions without obligation to open  
326 the service to other processors).
- 327 Req IP6 Inter-PSP service providers may be subject to approval by the schemes (e.g. security  
328 compliance of HSM, data protection).

### 329 **3.1.5 Implementation Specifications**

330 The standardisation and conformance ecosystem described in the SCS Volume envisage  
331 the existence of several Implementation Specifications for each part of the card payment  
332 value chain, with some exceptions, such as for the contact card-POI interface (EMV).

333 Migration/Convergence to a smaller set of Implementation Specifications per domain of  
334 the card payment value chain will be market driven.

335 Req IS1: The Specification Providers are responsible to develop the Implementation  
336 Specifications (e.g. description of functionalities, interfaces, protocols), to ensure  
337 Products implementing those Implementation Specifications may be certified, and once  
338 certified can be smoothly deployed in the field (e.g. solving potential interoperability  
339 issues between parties implementing the same implementation standard).

340 Req IS2: Specification Providers shall ensure their Implementation Standard and their  
341 Governance is conformant with the requirements of the SCS Volume.

342 Req IS3: Specification Providers shall make the Implementation Specifications available to the  
343 Service Providers candidates to implement them, without discrimination and at the same  
344 time.

345 Req IS4: Specification Providers and Certification Bodies involved in the certification processes  
346 shall not discriminate between Service Providers applying for certification.

## 347 **4 Governance**

348 The principles suggested are deemed to be an important contribution to the realisation of 'SEPA  
349 for Cards'. As such, the implementation of, and adherence to these principles by the relevant actors  
350 is considered to be a critical factor.

351 As for other books of this SCS Volume, the revision of the principles described in this book will  
352 follow the standard review process of the SCS Volume.

353 The conformance process and the body in charge will be addressed in Book 5 'Conformance  
354 Verification Procedures'.

355 The planning for the market adoption of the principles will be described in Book 6.

356 Monitoring the adoption of the requirements and principles by relevant stakeholders has to be  
357 organised.

358 A dispute management and arbitration process to manage complaints, from any of the actors  
359 regarding any of the above mentioned requirements and principles, needs to be catered for.

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