Implementation Guidelines for ISO 20022 Interbank Messages

SIC and euroSIC

Base Document

Version 2.0, valid from 18 November 2022

Change history

All changes made to this handbook are listed below with the version number, change date, a brief description of the change and reference to the chapters affected.

Version	Date	Description of the change	Chapter
2.0	05.11.2021	Complete revision due to update of ISO 20022 version 2019	Alle
		New chapter "Introduction" (replaces and includes the previous chapters "About this document", "Overview of the documentation structure", "Message definitions", "Validation portal", "Reference documents and Appendix C "Overview of the ISO 20022 messages and schemas")	1
		Revision of "Message definitions and XML schemas"	1.4
		Revision of "Reference documents"	1.6
		Modifications to "Representation of XML messages", paragraph "Data in tables": Reference to individual column information removed due to complete removal of references to SWIFT FIN MT from all Implementation Guidelines.	2.2
		Modifications to "Character set": Complete revision due to extension and alignment with the character set for customer-bank messages "Swiss Payments Standards" (SPS), specific notes regarding cross-system payments and individual SEPA use cases added.	3.3
		Definition of "Using the BIC (Business Identifier Code)" clarified (editorial correction)	3.4
		Updates to "Assignment of use cases to ISO 20022 message types and payment types"	3.5
		Modifications to "Representation of XML messages", paragraph "Elements not used in Switzerland": Modified due to changed design principle (unused elements are removed from schema definitions and are therefore no longer visible)	Appendix A
1.13	22.03.2021	Last version based on the previous ISO20022 version status	
1.0	01.01.2014	First edition	

Table 1: Change history

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If you detect any errors in this document or have any ideas or suggestions for improvements we would be extremely grateful if you would notify these by e-mail to **operations.sic@six-group.com**.

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1   Introduction

1.1   Overview of the documentation structure

The Implementation Guidelines consist of a base document (this document) with general information concerning all message types, and several module documents – one each per ISO 20022 message type – with message-specific information, including information on the application-specific handling of individual elements. These specify how the messages are to be submitted to and received from the RTGS systems SIC and euroSIC using the ISO 20022 message standard.

These Implementation Guidelines are modular in structure:

- The base document contains general information which applies to all messages.

- The module documents – one for each ISO 20022 message type – contain message-specific information, including information on the application-specific handling of certain elements.

- An XML schema (XSD) and generic XML sample messages are published for each Implementation Guideline.
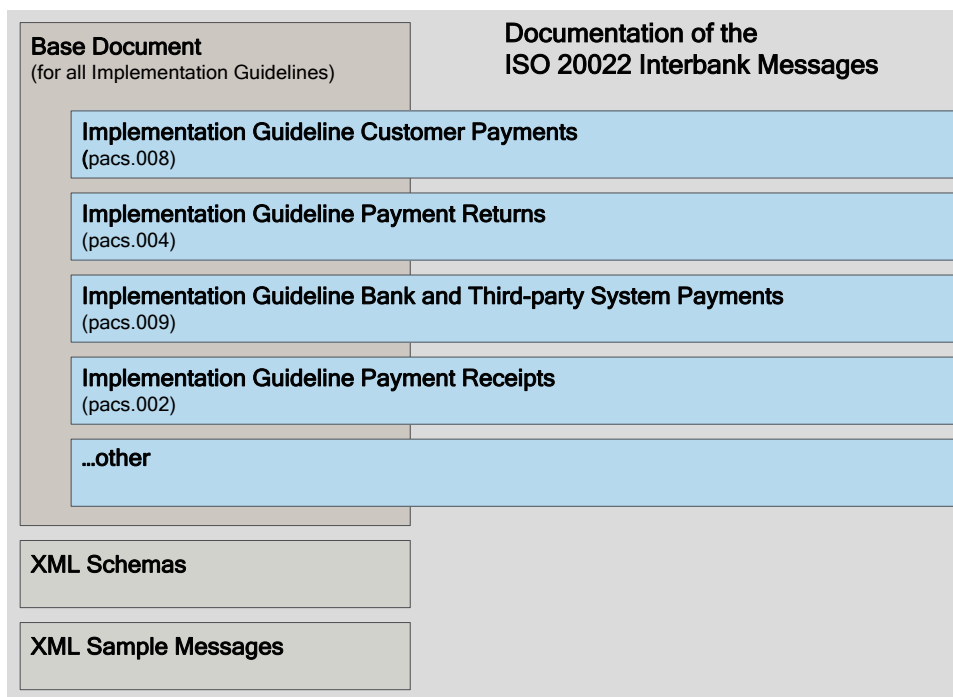

Figure 1:   Documentation structure for all ISO 20022 message types

1.2   Target audience

The "Implementation Guidelines for ISO 20022 Interbank Messages" are addressed to all participants of the Swiss RTGS systems SIC and euroSIC.

1.3   Change control

All changes made to this document are listed in the change history with the version number, change date, a brief description of the change and references to the chapters affected.

1.4   Message definitions and XML schemas

The message definitions for the RTGS systems SIC and euroSIC are based on the ISO 20022 standard. XML schemas for each message-specific Implementation Guideline are also published for the RTGS systems on the www.iso-payments.ch website.

The message definitions contained in the following SIC and euroSIC Implementation Guidelines and XML schemas are binding for all RTGS system participants:

ISO 20022 Message	Implementation Guideline	XML Schema
pacs.002.001.10	Payment receipts	pacs.002.001.10.ch.01.xsd
pacs.004.001.09	Payment returns	pacs.004.001.09.ch.01.xsd
pacs.008.001.08	Customer payments	pacs.008.001.08.ch.01.xsd
pacs.009.001.08	Bank and third-party system payments	pacs.009.001.08.ch.01.xsd
pacs.028.001.01	SEPA query status*	pacs.028.001.01.chsepa.02.xsd
camt.003.001.07 camt.004.001.08	Settlement account query / response	camt.003.001.07.ch.01.xsd camt.004.001.08.ch.01.xsd
camt.005.001.08 camt.006.001.08	Transaction query / response	camt.005.001.08.ch.01.xsd camt.006.001.08.ch.01.xsd
camt.007.001.08	Settlement order modification	camt.007.001.08.ch.01.xsd
camt.008.001.08	Cancellation	camt.008.001.08.ch.01.xsd
camt.019.001.07	Clearing day information	camt.019.001.07.ch.01.xsd
camt.025.001.05	Cash management receipts	camt.025.001.05.ch.01.xsd
camt.027.001.06	SEPA missing incoming payment query*	camt.027.001.06.chsepa.01.xsd
camt.029.001.08	SEPA investigation resolution*	camt.029.001.08.chsepa.01.xsd
camt.029.001.09	Return request rejection	camt.029.001.09.ch.01.xsd
camt.048.001.05	Liquidity reservation	camt.048.001.05.ch.01.xsd
camt.050.001.05	Sight deposit account transfers (system managers)	camt.050.001.05.ch.01.xsd
camt.052.001.08	Recapitulations	camt.052.001.08.ch.01.xsd
camt.054	Settlement confirmation	camt.054.001.08.ch.01.xsd
camt.056	Return request	camt.056.001.08.ch.01.xsd
camt.087	SEPA value date adjustment request*	camt.087.001.05.chsepa.01.xsd

Table 2:   Overview of ISO 20022 Messages, Implementation Guidelines and Schemas

*   These Implementation Guidelines describe use cases that are currently only permitted for SEPA transactions in euroSIC.

1.5   Validation portal

The implementation of RTGS system messages using the ISO 20022 message standard is supported by a central validation portal.

The goals of the validation portal are:

- To encourage the consistent use of the ISO 20022 message standard, in particular the Implementation Guidelines, by all financial institutions and software vendors.

- To support software developers in the implementation process.

- To prevent errors and problems in the submission and reception of ISO 20022 messages.

- To centralize upstream validation of ISO 20022 messages as a basis for subsequent mandatory testing between financial institutions and RTGS systems.

The validation portal supports all ISO 20022 message types for which Implementation Guidelines are currently published.

The validation portal covers the following features:

- Software vendors and financial institutions can upload generated messages to the validation portal via the web.

- The validation results are provided in the form of a generated description of the test result (text and HTML) for viewing as well as downloading.

- The generated description of the validation results distinguishes between an "Error" and a "Hint". While messages with an "Error" are usually rejected by the RTGS systems, a "Hint" is intended to draw attention to possible deviations of the validated message from the recommendations in the Implementation Guidelines. A "Hint" should not result in rejection of the message.

- Provide interactive documentation.

- Download area for Implementation Guidelines, schemas and sample messages.

- Simplified graphical structure representation of tested messages to support business groups.

The SIC & euroSIC Validation Portal for Interbank Messages can be accessed at https://validation.iso-payments.ch/SIC4 . Prior registration is required to use the validation portal.

1.6   Reference documents

Ref	Document	Title	Source
[1]	SIC/euroSIC Handbooks	SIC Handbook euroSIC Handbook	SIX (Closed User Group)
[2]	Swiss Business Rules Customer - Bank	ISO 20022 Payments – Swiss Business Rules for Payments and Cash Management for Customer-to-Bank Messages	SIX
[3]	Swiss Implementation Guidelines Customer - Bank	ISO 20022 Payments – Swiss Implementation Guidelines for Credit Transfer, Cash Management and Status Report (Customer-to-Bank)	SIX
[4]	EPC115-06	SEPA Credit Transfer Scheme Inter-PSP Implementation Guidelines	EPC
[5]	EPC132-08	SEPA Credit Transfer Scheme Customer-To-PSP Implementation Guidelines	EPC
[6]	ISO External code sets	ISO 20022 External code sets	ISO
[7]	CBPR+ UHB	CBPR+ User Handbook, ISO 20022 Programme (Cross-Border Payment Reporting plus)	SWIFT
[8]	ISO Definitions	ISO 20022 XML Credit Transfers and Related Messages, January 2017: • Exceptions & Investigations (pacs.028.001.01) ISO 20022 XML Credit Transfers and Related Messages, February 2018: • Exceptions & Investigations (camt.027.001.06; camt.029.001.08; camt.087.001.05) ISO 20022 XML Credit Transfers and Related Messages, February 2019: • Clearing and Settlement • Exceptions & Investigations • Cash Management (camt.052.001.008; camt.054.001.08) ISO 20022 XML Credit Transfers and Related Messages, March 2020: • Cash Management (camt.003.001.07; camt.004.001.08; camt.005.001.08; camt.006.001.08; camt.007.001.08; camt.008.001.08; camt.019.001.07; camt.025.001.05; camt.048.001.05; camt.050.001.05)	ISO
[9]	SWIFT gpi Market Practices	Annex for Clearing and Settlement through Payments Market Infrastructures	SWIFT

Table 3:   Reference documents

Organization	Link
SIX	www.iso-payments.ch
	www.six-group.com/interbank-clearing
ISO	www.iso20022.org
EPC	www.europeanpaymentscouncil.eu
SWIFT	www.swift.com

Table 4:   Links to relevant internet sites

2   General information

2.1   Message flows

Note about SWIFT InterAct messages

SWIFT InterAct messages received via the RTGS systems must not be acknowledged by the participant.

2.1.1   Payments

The following diagram shows the message flows for payment messages between participants and the respective RTGS systems.
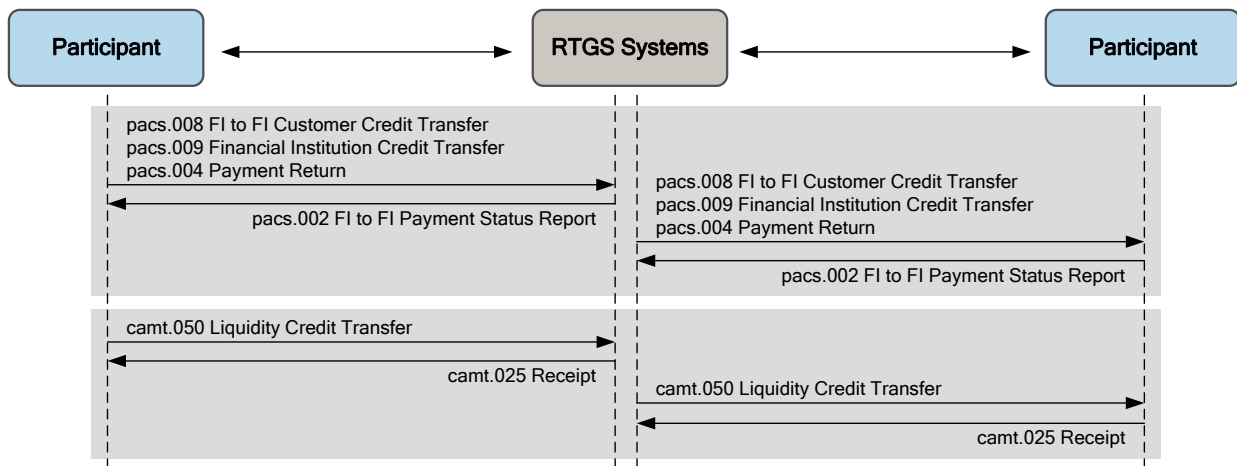
Figure 2:   Message flows for payment messages

Commentary on the message flows:

1. A participant sends a "pacs.008" message to the RTGS system.

2. The RTGS system acknowledges receipt by sending a "pacs.002" to this participant.

3. The RTGS system settles the payment and then sends a "pacs.008" message to the participant for whom the payment is intended.

4. That participant acknowledges receipt by sending a "pacs.002" to the RTGS system.

2.1.2   Reconciliation and notification

The following diagram shows the message flows for reconciliation and notification messages between the respective RTGS systems and participants.

Figure 3:   Message flows for reconciliation and notification messages

Commentary on the message flows:

1. The RTGS system sends a "camt.054" message to a participant.

2. The participant acknowledges receipt by sending a "camt.025" to the RTGS system.

2.1.3 Message transfers for the payment return request

The following diagram shows the message flows for a payment return request and rejection of a payment return request. With these messages the system only validates the submitted messages and forwards them to the receiver, but does not really process the messages.
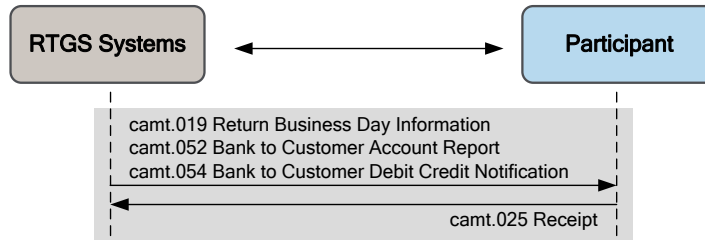

Figure 4:   Message flows for payment return requests

Commentary on the message flows (the return request starts at step 3):

1. A participant sends a "pacs.008" message to the RTGS system.

2. The RTGS system settles the payment and then sends a "pacs.008" message to the participant for whom the payment is intended.

3. The Debtor Agent initiates a return request (camt.056).

4. The RTGS system forwards the return request (camt.056) to the Creditor Agent.

5. The Creditor Agent decides to reject the return request and sends a return request rejection (camt.029.001.09) to the RTGS system.

6. The RTGS system forwards the return request rejection (camt.029.001.09) to the Debtor Agent.

7. As an alternative to the rejection, the Creditor Agent may opt for a repayment return and send a payment return (pacs.004) to the RTGS system.

8. The RTGS system settles the payment return and then sends a "pacs.004" message to the participant for whom the payment return is intended.

2.1.4 Message transfers for SEPA investigations

The following diagram shows the message flows for SEPA investigations (SEPA missing incoming payment query "camt.027" and SEPA value date adjustment request "camt.087") and a SEPA investigation resolution "camt.029.001.08". With these messages, the system only validates the submitted messages and forwards them to the receiver, but does not really process the messages.
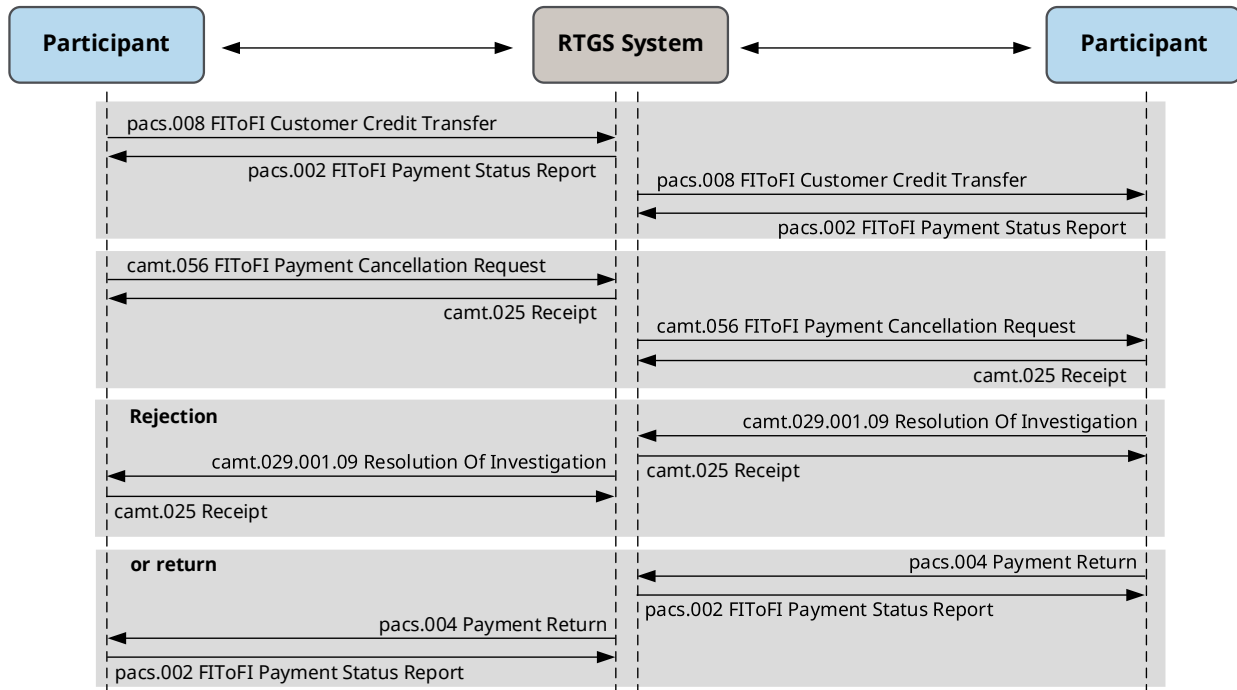

Figure 5:   Message flows for SEPA investigations

Commentary on the message flows (the SEPA query starts at step 3):

1. A participant sends a "pacs.008" message to the RTGS system.

2. The RTGS system settles the payment and then sends a "pacs.008" message to the participant for whom the payment is intended.

3. The Debtor Agent initiates a SEPA missing incoming payment query (camt.027).

4. The RTGS system forwards the SEPA missing incoming payment query (camt.027) to the Creditor Agent.

5. The Creditor Agent sends a SEPA resolution of investigation (camt.029.001.08) with either a positive or negative answer to the RTGS system.

6. The RTGS system forwards the SEPA investigation resolution (camt.029.001.08) with positive or negative answer to the Debtor Agent.

2.1.5 Message transfers for SEPA query status

The following diagram shows the message flows for SEPA query status. The SEPA query status can be a query for an unanswered "SEPA return request", an unanswered "SEPA missing incoming payment query" or an unanswered "SEPA value date adjustment request". With this message, the system only validates the submitted message and forwards this to the receiver, but does not really process the message.

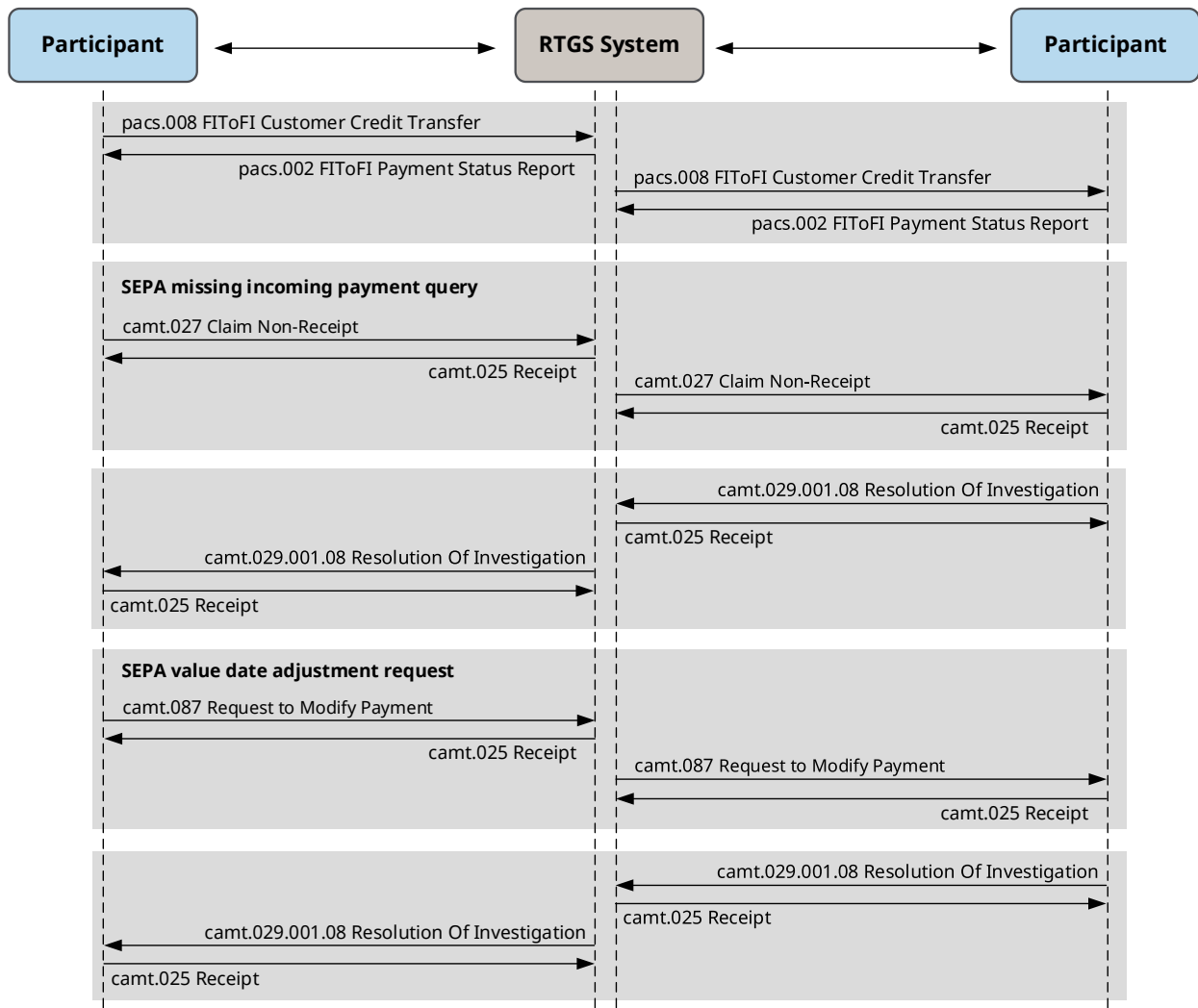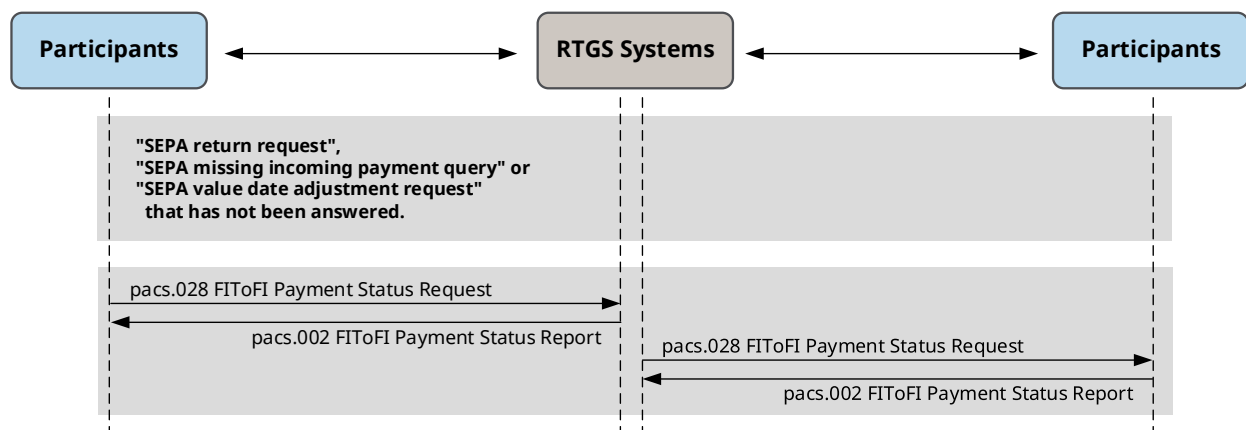*Figure 6:   Message flows for SEPA query status*

Commentary on the message flows:

1. A Debtor Agent sends a SEPA query status (pacs.028) to the RTGS system, because there has been no response to a previously sent "SEPA return request", "SEPA missing incoming payment query" or "SEPA value date adjustment request" message.

2. The RTGS system forwards the SEPA query status (pacs.028) to the Creditor Agent.

3. The Creditor Agent responds with a corresponding message* to the RTGS system.

4. The RTGS system forwards the corresponding message* to the Debtor Agent.

   * Notes:

   • Response to unanswered "SEPA return request":
     Return (pacs.004) or "SEPA return request rejection" (camt.029.001.09).

   • Response to unanswered "SEPA missing incoming payment query":
     "SEPA resolution of investigation " (camt.029.001.08).

   • Response to unanswered "SEPA value date adjustment request":
     "SEPA resolution of investigation " (camt.029.001.08).

2.1.6   Queries

The following diagram shows the message flows for payment query messages between participants and the respective RTGS systems.

Transaction query
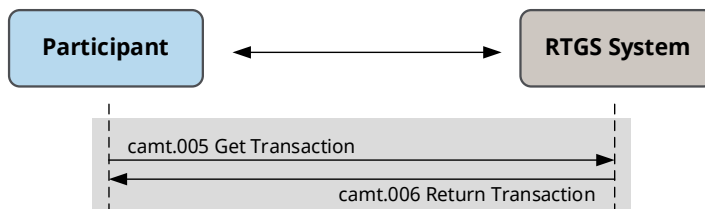
Figure 7:   Message flows for transaction query messages

Commentary on the message flows:

1. The participant sends a "camt.005" transaction query message to the RTGS system.

2. The RTGS system acknowledges receipt by sending the participant a "camt.006", containing either the query result or an error message.

Settlement account query
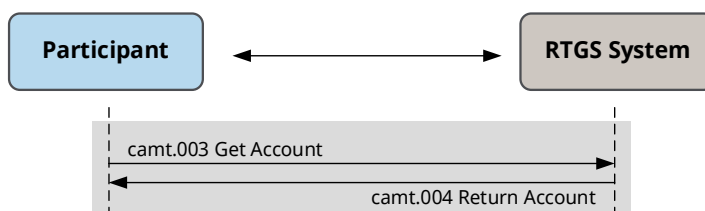
Figure 8:   Message flows for settlement account query messages

Commentary on the message flows:

1. The participant sends a "camt.003" settlement account query message to the RTGS system.

2. The RTGS system acknowledges receipt by sending the participant a "camt.004", containing either the query result or an error message.

2.1.7   Modifications

The following diagram shows the message flows for modifications between participants and the respective RTGS systems.

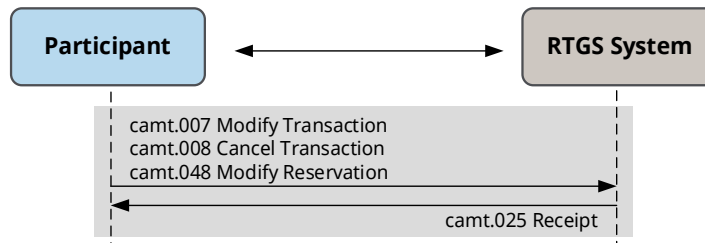*Figure 9:   Message flows for modifications*

Commentary on the message flows:

1. The participant sends a modification message "camt.007" (settlement order modification), "camt.008" (cancellation) or "camt.048" (liquidity modification) to the RTGS system.

2. The RTGS system acknowledges receipt by sending a "camt.025" to the participant as confirmation of execution or as an error message.

2.2   Representation of XML messages

The logical structure of XML messages is a tree structure. This can be represented in various ways: in diagrams, tables or text. Representation in text is suitable for actual examples of messages, while tables and diagrams are mainly suitable for giving an overview of the XML schemas. The figures shown in the Implementation Guidelines for ISO 20022 Interbank Messages are based on the schema of the Swiss XML message specifications.

XML editors which have the option of graphical representation use symbols which may appear different depending on the type of editor (the illustrations in this document were produced using the editor XMLSpy™ from Altova GmbH). The main symbols are briefly introduced in Appendix A.
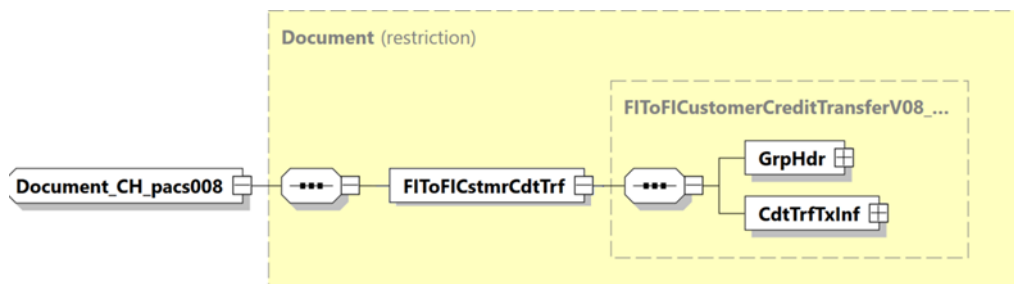
Figure 10:   Example of the graphical representation of an XML message

The following conventions apply to the presentation of Implementation Guidelines for ISO 20022 Interbank Messages:

Description of XML elements

In some publications, the nomenclature of XML elements are expressed as a single text string without spaces, for example "*CreditTransferTransactionInformation*". In the interests of legibility, spaces are generally used in this document.

Data in tables

The tables contain information from the ISO 20022 Standard (Message Item, XML Tag, Multiplicity). The tables also contain information about the Swiss ISO 20022 payment standard as it applies to the RTGS systems.

The first line of each "Definition" column always contains the English name of the technical element highlighted in bold. (In the German version of each document, there is a second line that contains the German name in italics). The rest of the text describes the use of the element, and the "Payment Type-specific Definition" column contains more detailed information about its use.

Colors used in the tables

The column headings are marked in clay brown for the information from the ISO 20022 standard and light grey for the information from the Swiss ISO 20022 payment standard for the RTGS systems. "Parent" elements containing one or more "child" sub-elements are marked in light blue in the ISO 20022 columns.

Representation of the tree structure in the tables

To make it easy to know where an element occurs in the tree structure, the Message Item column indicates the hierarchy levels with preceding "+" signs.
For example, the IBAN for the "Debtor Account" is listed as follows:

Credit Transfer Transaction Information
+Debtor Account
++Identification
+++IBAN

Representation of choices

Elements with a choice are marked in the "XML Tag" column as follows:

    {Or   for start of the choice

    Or}   for end of the choice

2.3 Representation of terms from the ISO standard

To be able to better distinguish between terms from the ISO standard and business elements, the Implementation Guidelines for ISO 20022 Interbank Messages use the following representation conventions:

- All terms relating to the underlying ISO standard are written in *italics*.
  Exceptions: In the tables of technical definitions that are automatically generated, it is not possible to show individual terms in italics and no italic style is used in headings.

- XML tags are also written in angle brackets. (Example: The transaction status is reported using the *<ReqHdlg>* element. This may only contain the sub-element *<StsCd>*.)
  Exception: XML tags separated by forward slashes in path names are written without angle brackets. (Example: The type of reference number can be identified in the element *CdtTrfTxInf/RmtInf/Strd/CdtrRefInf/Tp/CdOrPrtry/Cd*).

- Names of XML elements are written between quotation marks.
  (Example: The "*Instructing Agent*" is used together with the "*Transaction Identification*" element and the "*Message Identification*" for duplicate checking.)

3   Business specifications for interbank messages

3.1   Duplicate checking

For payment messages and message transfers, the RTGS systems perform duplicate checking on two levels:

- Message level

- Payment or transaction level

The two checks are carried out independently of each other.

The RTGS systems only support individual transactions. This means that there must be no errors at either the message level or at the transaction level for the message to be processed correctly.

Duplicate checking is carried out on both levels within the value dates permitted in the RTGS systems. The period therefore extends over the current value date at the time of delivery and two (2) value dates back in time.

If a duplicate is detected during checking at the message and/or transaction levels, the payment is rejected.

Duplicate checking includes the message identification (message level) or the transaction reference (transaction level) in association with identification of the paying or instructing participant (*Instructing Agent / Assigner / Debtor*).

The following pairs of elements are therefore used for duplicate checking (the appropriate exact elements are listed in the corresponding Implementation Guidelines):

Level	Element pair
Message level	Message identification paired with the paying or instructing participant
Payment or transaction level	Transaction reference paired with the paying or instructing participant

Table 5:   Levels for duplicate checking for payment messages (pacs)

Special case queries camt.003 and camt.005

No duplicate checking is performed for query messages.

Special case liquidity management participant camt.007, camt.008 and camt.048

No duplicate checking is performed for messages of the type Liquidity Management Participant.

3.2 Representation conventions

3.2.1 Representation conventions for amount fields

In an XML context, various forms of representation are permitted in the amount fields. To ensure smooth processing, the following specifications apply:

- No use of leading or closing filler characters (space, white space, zero, plus sign).

- The maximum allowed number of decimal points depends on the currency, in accordance with ISO 4217.

- Amounts are always given as absolutes (no preceding characters). Wherever it is technically necessary to show negative amounts (e.g. the balance), the standard provides a separate element for classification purposes (Credit Debit Indicator).

3.2.2 Representation conventions for date fields

In an XML context, various forms of representation are permitted in date fields. To ensure smooth processing, the following representations are defined:

ISODate

Representation in accordance with the W3C specifications: www.w3.org/TR/xmlschema11-2/#date.

Specifying time zones is not supported in the RTGS systems. Dates are interpreted as the local date (Switzerland) or as the RTGS system date. Entering a time zone in an incoming message will cause it to be rejected.

ISODateTime

In contrast to the W3C specifications (www.w3.org/TR/xmlschema11-2/#dateTime), only the following form of representation is supported by the RTGS systems:

Form of representation	Interpretation in the RTGS systems
Local time (YYYY-MM-DDThh:mm:ss) Example: 2021-11-05T10:46:48	The time entered is interpreted as local time and is considered as the relevant time for all subsequent processing steps.

Table 6:   Representation of ISODateTime

Local time means the current time zone in Switzerland, taking account of summer/winter time (UTC+2 or UTC+1).

All other ways of representing time supported by the "ISODateTime" data type will lead to the submitted message being rejected when it is validated by the RTGS systems.

Exception: This general definition for "ISODateTime" does not apply to the element *<CreDtTm>*. Here, only the specifications according to W3C are to be considered.

3.3 Character set

Generally speaking, ISO 20022 XML messages can use all characters from the Unicode character set UTF-8 (8-bit Unicode Transformation Format). The message must be UTF-8 encoded, without the BOM – Byte Order Mark.

Only a subset of these characters is actually allowed within the XML messages. This includes the printable characters of the following Unicode blocks:

- Basic-Latin (Unicode point U+0020 – U+007E)

- Latin1-Supplement (Unicode point U+00A0 – U+00FF)

- Latin Extended-A (Unicode point U+0100 – U+017F)

as well as the following additional characters:

- Ș – (LATIN CAPITAL LETTER S WITH COMMA BELOW, Unicode point U+0218)

- ș – (LATIN SMALL LETTER S WITH COMMA BELOW, Unicode point U+0219)

- Ț – (LATIN CAPITAL LETTER T WITH COMMA BELOW, Unicode point U+021A)

- ț – (LATIN SMALL LETTER T WITH COMMA BELOW, Unicode point U+021B)

- € - (EURO SIGN, Unicode point U+20AC)

Notes:

- The range of permitted characters within the interbank message definitions matches that of the "Swiss Payments Standards" customer-bank messages. This allows financial institutions to transport information from payments based on the Swiss recommendations unchanged from the payer's order to the payee's notification without character conversions.

- For cross-system payments that are forwarded by a system participant to another network, the corresponding specifications of these networks must be taken into account and - where necessary – perform the appropriate character conversions. The correct handling of such conversions is the full responsibility of the institutions concerned.

- For the following use cases or messages, which are currently only permitted for SEPA transactions in euroSIC, the full range of previously mentioned characters cannot be used. The concrete specifications are contained in the corresponding patterns of the respective scheme definitions. The alignment of the character ranges for these use cases will take place within the next upgrade to a new underlying ISO 20022 schema version.

Affected use cases / messages:

- SEPA query status (pacs.028.001.01.chsepa.02.xsd)

- SEPA missing incoming payment query (camt.027.001.06.chsepa.01.xsd)

- SEPA resolution of investigation (camt.029.001.08.chsepa.01.xsd)

- SEPA value date adjustment request (camt.087.002.05.chsepa.01.xsd)

Escapes

The characters below should use the escaped representation (partially optional):

Character	Description	Escape	Remark
&	AMPERSAND	&	only Escape permitted
<	LESS-THAN SIGN	<	only Escape permitted
>	GREATER-THAN SIGN	>	Escape or character permitted
'	APOSTROPHE	'	Escape or character permitted
"	QUOTATION MARK	"	Escape or character permitted

Table 7:   Escape characters

Validation of permitted characters on the schema level

Compliance with the above-mentioned restrictions in text elements is provided by character patterns in the schema. Different sets of characters are permitted depending on the usage of the element:

- **Text fields in general:**
  - For general text fields, all printable characters are allowed as per the previous description.
  - Pattern: [\p{IsBasicLatin}\p{IsLatin-1Supplement}\p{IsLatinExtended-A}€ȘșȚț-[\p{C}]]+

- **Mandatory references:**
  - For the references for message or transaction reference identification at their respective levels, which are mandatory to be used in the context of the duplicate check (see chapter 3.1), only the following restricted character set may be used, which in particular does not allow spaces.
  - Pattern: [A-Za-z0-9+?/:()\.,'\-]*

Note: This restricted character set also applies to elements referencing one of the previously mentioned references of an original message such as "*Original Message Identification*" (<*OrgnlMsgId*>) or "*Original Transaction Identification*" (<*OrgnlTxId*>).

Using special characters

The following special characters comply with XML syntax but must not be used within text elements/data: tab character (hexadecimal #x9), line feed character (#xA) and carriage return character (#xD).

Using CDATA

The use of CDATA is not permitted and any such information shall be ignored.

CDATA is only used on payment receipts from RTGS systems to participants resulting from an incorrect payment message, or when answering a query about a single transaction.

3.4   Using the BIC (Business Identifier Code)

Only valid "published BIC"s may be used in all elements intended to indicate a BIC (Business Identifier Code) (*<AnyBIC>* or *<BICFI>*).

BICs for financial and non-financial institutions are registered and published by the ISO 9362 Registration Authority in the ISO directory of BICs and consist of eight (8) or eleven (11) contiguous alphanumeric characters.

3.5 Assignment of use cases to ISO 20022 message types and payment types

Use case	ISO 20022 message type	Payment type	Designation
SEPA credit transfer	pacs.008	SEPPMT	SEPA payment
SEPA credit transfer	pacs.008	SEPFCP	SEPA fee and/or compensation payment
Customer payment	pacs.008	CSTPMT	Generic customer payment
FI-to-FI-payment	pacs.009	F2FPMT	FI-to-FI-payment
Compensation payment	pacs.009	CMPPMT	Compensation payment
Cover payment	pacs.009	COVPMT	Cover payment
Sight deposit account transfer by the participant	pacs.009	PPTTSD	Sight deposit account transfer by the participant
Return	pacs.004	CSTRTN	Payment return
Return	pacs.004	SEPRTN	SEPA payment return
Direct debit payment	pacs.008	ESRDEB	Direct debit payment (LSV reference)
Direct debit payment	pacs.008	IPIDEB	Direct debit payment (IPI reference)
SECOM settlement	pacs.009	SECSTM	SECOM settlement
Eurex settlement	pacs.009	EUXSTM	Eurex settlement
Repo settlement	pacs.009	REPSTM	Repo settlement
Terravis settlement	pacs.009	STVSTM	Terravis settlement
Viseca settlement	pacs.009	VISSTM	Viseca settlement
Debit settlement	pacs.009	BCMSTM	Bancomat settlement
Debit settlement	pacs.009	POSSTM	EFT/POS settlement
Sight deposit account transfer by the system manager	camt.050	SMTTSD	Sight deposit account transfer by the system manager
Transfer from sight deposit account	camt.050	SMTFSD	Transfer from sight deposit account

Table 8:   Assignment of use cases to ISO 20022 message types and payment types

Appendix A: Symbols used in the XML diagrams

Expand and collapse symbols

Wherever parts of the tree structure can be expanded or collapsed, expand [+] and collapse [-] symbols are added to the symbols in the graphical representation.

These consist of a small square containing either a plus sign or a minus sign.

⊞   Expand symbol: when you click on the plus sign, the tree structure is expanded so that subsequent symbols (attributes or so-called child elements) are displayed. The expand symbol then changes to a collapse symbol.

⊟   Collapse symbol: when you click on the minus sign, the tree structure is collapsed again, i.e. the subsequent symbols disappear. The collapse symbol then changes to an expand symbol again.
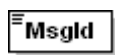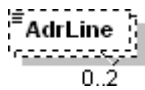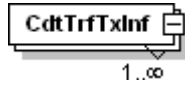
Elements

Elements are shown as rectangles containing the name of the element. For mandatory elements, the rectangle is shown with a continuous line, for optional elements the line is dotted.

For complex elements, which, unlike simple elements could contain attributes or other elements (child elements), the rectangle has an expand or collapse symbol on the right.

Three little lines in the top left corner of the rectangle indicate that the element contains data (otherwise the element contains child elements).

Elements which are allowed to occur more than once are shown as two (2) superimposed rectangles. Bottom right, you can see the minimum and maximum number of occurrences.

Examples:

MsgId	Mandatory simple element
XchgRate	Optional simple element
AdrLine 0..2	Optional simple element which may occur a maximum of twice
PmtId ⊞	Mandatory complex element (with child elements) with collapsed tree structure
GrpHdr ⊟	Mandatory complex element (with child elements) with expanded tree structure
CdtTrfTxInf ⊟ 1..∞	Mandatory complex element (with child elements) which can occur any number of times, but at least once
InstdAmt ⊞	Mandatory complex element (with attributes)

Attributes

Attributes are also shown as rectangles, containing the name of the attribute. They are surrounded by a box containing the word "attributes" and an expand or collapse symbol. For mandatory attributes, the rectangle is drawn with a continuous line, and for optional attributes the line is dotted.
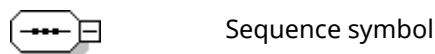
Example:

     Expanded attribute

     Collapsed attribute
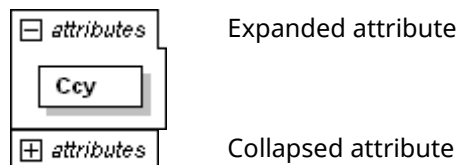
Choice

To the right of a choice symbol, the connecting lines branch off to the possible elements, of which only one can be present in the XML message.

   Choice symbol

Sequence

To the right of a sequence symbol, the connecting lines branch off to the elements which are to be used in the XML message in the order shown (optional elements and attributes can of course also be omitted).

     Sequence symbol

Frame

For increased clarity, all the child elements, attributes and other information belonging to a complex element are surrounded by a dotted frame with a yellow shaded background.

Example:
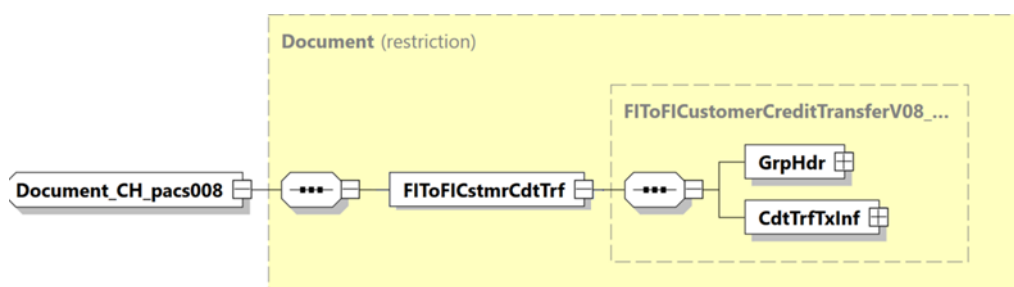
Elements not used in Switzerland

Elements not used in Switzerland are removed from the schema definitions and are not visible in the figures.

Appendix B: Definition of terms

Term	Definition
Use case	A use case describes the interaction between the user and the system that is required in order to achieve a technical objective on the part of the user. The description is in general terms, not related to the specific technical solution. Use cases effectively meet the requirements of the participants.
Direct routing	For certain messages or payment types in favor of PostFinance, the RTGS system checks whether the creditor agent's account is saved in the master data for a participant. If it is, the payment is routed by the RTGS system directly to that participant and not to PostFinance.
Concatenation	In concatenation, one external identification (e.g. SIC IID) is connected to another external identification of the same type. Payments in favor of a concatenated identification are automatically routed in the RTGS system to the other identification. Concatenation is a preliminary stage before cancellation.
Payment type	One ISO 20022 message type maps to several different forms of payment. To distinguish between them, different payment types are defined (e.g. Generic customer payment, SEPA payment).

Table 9:   Definition of terms