



# **Implementation Guidelines for ISO 20022 Interbank Messages**

SIC and euroSIC

Payment Receipts (pacs.002)

## General notes

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## About this document

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### Target audience

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

### Purpose

The Implementation Guidelines consist of a base document with general information concerning all message types and various module documents – one each per ISO 20022 message type, e.g. this document for the message type "pacs.002" – with message-specific information, including information on the application-specific handling of individual elements. They specify the messages to be submitted to and delivered from the RTGS systems SIC and euroSIC in the ISO 20022 message standard.

### Amendment control

All the amendments carried out on this document are listed in an amendment record table showing the version, the date of the amendment, a brief amendment description and a statement of the sections concerned.

### Associated documents

Supplementary information to the Implementation Guidelines can be found in the reference documents listed in the Base Document.

## Amendment control

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All the amendments carried out on this document are listed below, with the version, the date of the amendment, a brief amendment description and a statement of the sections concerned.

Version	Date	Amendment description	Section
1.0	01.01.2014	First edition	all
1.1	01.10.2014	More detailed definitions of status values.	3.1, 3.4
1.2	16.04.2015	Document name changed, Logo replaced, Wording adapted to the terminology of the RTGS platform.	all

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# 1 Overview of documentation structure

These Implementation Guidelines are modular in structure:

- The base document contains general information applying 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.
- For each Implementation Guideline, an XML schema (XSD) and generic XML sample messages will be published.

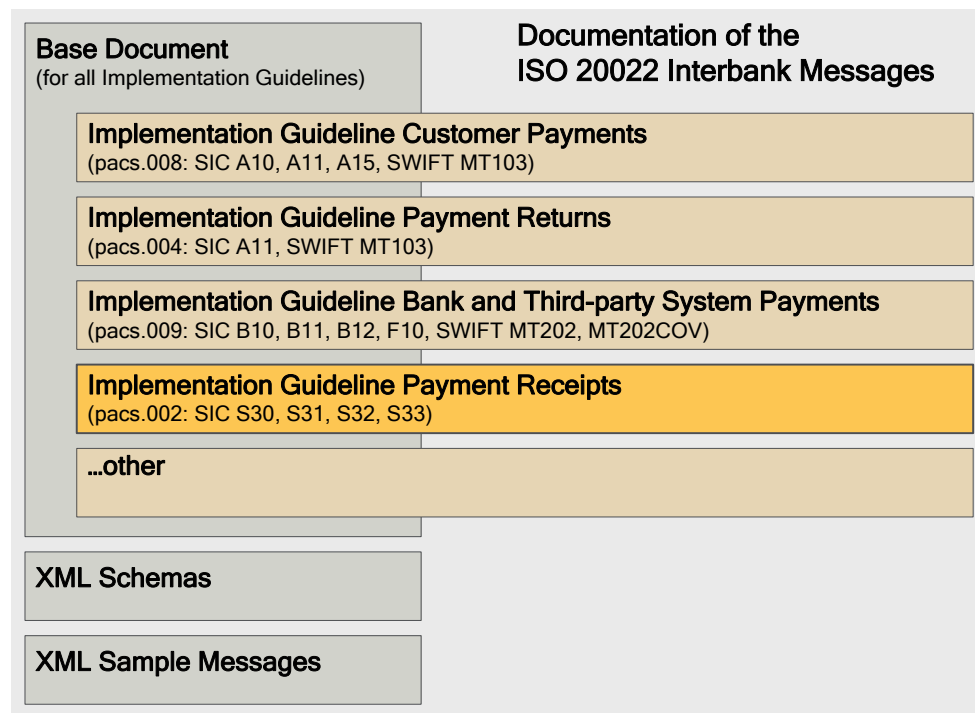
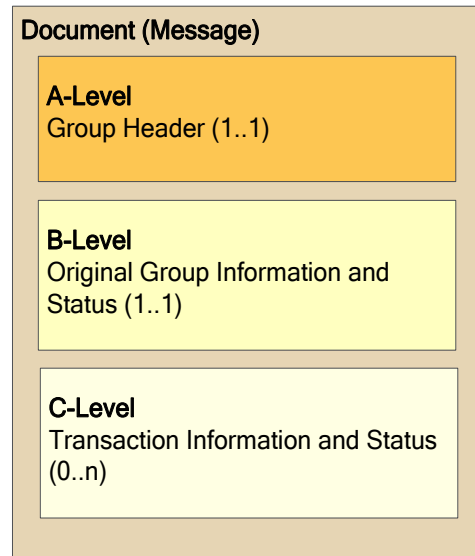


Figure 1: Documentation structure

## 2 ISO definitions

The "FI to FI Payment Status Report" message (pacs.002) is sent from the RTGS systems to the debtor's financial institution (the instructing participant) and from the creditor's financial institution (the instructed participant) to the RTGS systems to acknowledge that a payment has been received. It is used on the basis of the ISO 20022 XML schema "pacs.002.001.03".



The "pacs.002" message is essentially structured as follows:

- **A-Level:** Message level, element *"Group Header"*. This block must occur exactly once.
- **B-Level:** Underlying message and status information, element *"Original Group Information and Status"*. This block must occur exactly once.
- **C-Level:** Transaction information and status, element *"Transaction Information and Status"*. This block is optional and can occur n times in the ISO definition. In the RTGS systems, this block is only permitted once because only individual transactions are supported.

Figure 2: Basic message structure of the "pacs.002" message

### 3 Business specifications for the RTGS systems

#### 3.1 General

The "FI to FI Payment Status Report" message is used in the RTGS systems for acknowledging payment messages as follows:

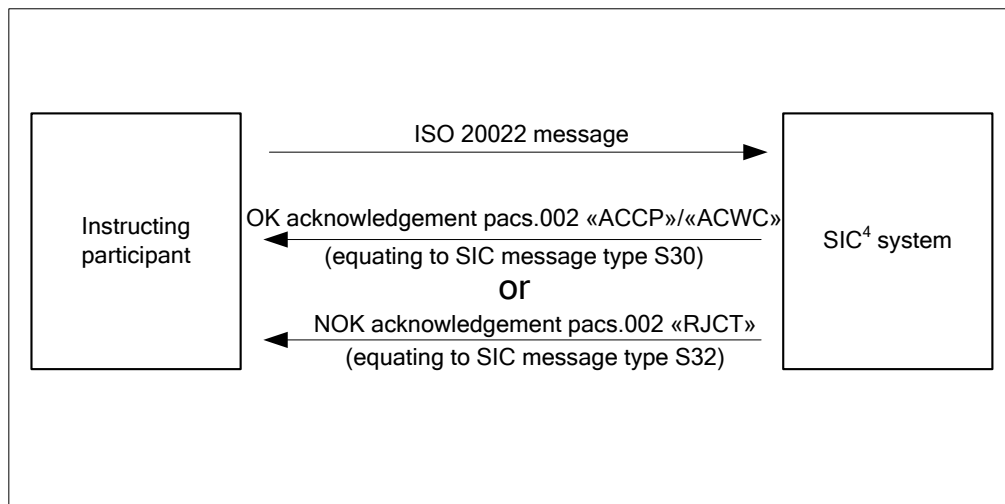


Figure 3: Acknowledgement of a payment message by the RTGS systems

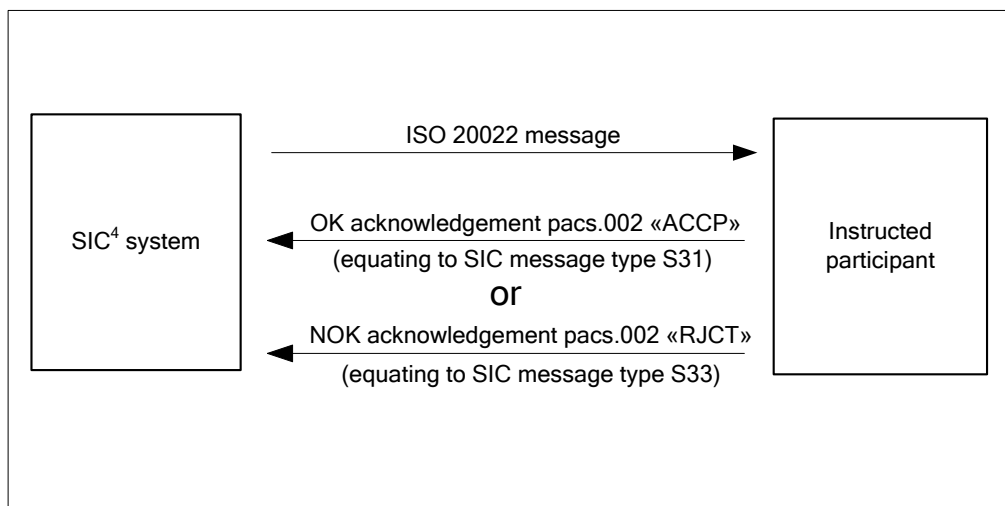


Figure 4: Acknowledgement of a payment message by the participant

**Note:** NOK messages (pacs.002 with the status "RJCT" equating to SIC message type S33) from the participant to the RTGS systems must only be sent in the event of an error in authenticating the message that has been received. The status "RJCT" must only be sent in the B-Level "Original Group Information and Status", the C-Level "Transaction Information and Status" must be omitted.

OK messages (pacs.002 with the status "ACCP" equating to SIC message type S31) from the participant to the RTGS systems: The status must be sent together with the transaction reference in the C-Level "Transaction Information and Status".



Acknowledgement using "pacs.002" occurs in the following use cases and ISO 20022 message types:

Use case	ISO 20022 message
Customer payment	pacs.008
Direct debit payment	pacs.008
SEPA credit transfer (FC-RTGS only)	pacs.008
Refunds	pacs.004
SECOM settlement	pacs.009
Eurex settlement	pacs.009
Repo settlement	pacs.009
Debit settlement	pacs.009
Compensation payment	pacs.009
Sight deposit account transfer by the participant	pacs.009
FI-to-FI payment	pacs.009
Cover payment	pacs.009

Table 1: Messages acknowledged with "pacs.002"

## 3.2 Acknowledging messages that cannot be validated

If a message that is delivered cannot be validated for technical reasons (e.g. message is blank, or not an XML message), it is confirmed by the RTGS systems with a generic NOK message. This consists of only the A and B levels of the "pacs.002".

For the status of the message, the *OrgnlGrplnfAndSts/GrpSts* element (Group Status) is filled in with the code "RJCT". The *OrgnlGrplnfAndSts/StsRsnlnf/Prtry* element (Proprietary Reason for the Status Report) is filled in with the SIC error code "118" (see section 3.5).

*OrgnlGrplnfAndSts/OrgnlMsgld* (Message Identification for the acknowledged message) and *OrgnlGrplnfAndSts/OrgnlMsgNmlld* (Type of acknowledged message) are permanently filled in with the value "UNKNOWN".

In addition, up to 930 characters of the message that was delivered can be returned in the *OrgnlGrplnfAndSts/StsRsnlnf/AddtlInf* element (incorrect element).

### 3.3 References in the Payment Status Report

Along the processing chain, various references are sent in the "pacs.002" message:

A-Level: *GrpHdr/MsgId* – unique message identification for the "pacs.002" message

B-Level: *OrgnlGrpInfAndSts/OrgnlMsgId* – message identification for the acknowledged message

C-Level: *TxInfAndSts/OrgnlTxId* – transaction reference for the acknowledged message

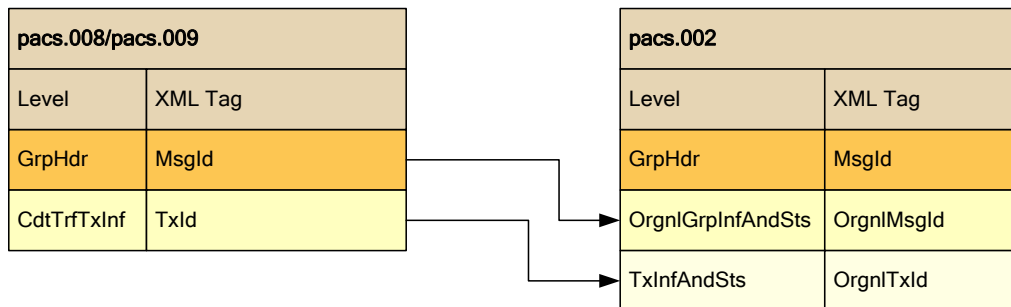


Figure 5: Depiction of references in the "pacs.002" message

### 3.4 Status overview

The following status values are provided for in the *OrgnlGrpInfAndSts/GrpSts* (Group Status) element:

Code	Description
RJCT (Rejected)	From the RTGS systems to the participant: Received message cannot be validated. From the participant to the RTGS systems: Must only be sent in case of an authentication error of the received message.

Table 2: Permitted status values in the *OrgnlGrpInfAndSts/GrpSts* element

The following status values are provided for in the *TxInfAndSts/TxSts* (Status of Transaction) element:

Code	Description
ACCP (Accepted Customer Profile)	Received message is correct.
ACWC (Accepted with Change)	From the RTGS systems to the participant: Received message is correct, the value date or the earliest settlement time has been changed.
RJCT (Rejected)	From the participant to the RTGS systems: There are errors in the message and it cannot be processed.

Table 3: Permitted status values in the *TxInfAndSts/TxSts* element

### 3.5 Error codes

In the "pacs.002" message, the 3-digit error codes are used in accordance with the Swiss RTGS Handbook.

### 3.6 Naming of the parties

In a "pacs.002" message in the RTGS systems, both the participant being debited (*Instructing Agent*) and the participant being credited (*Instructed Agent*) from the underlying message are entered in the "Transaction Information and Status" at C Level in the message.

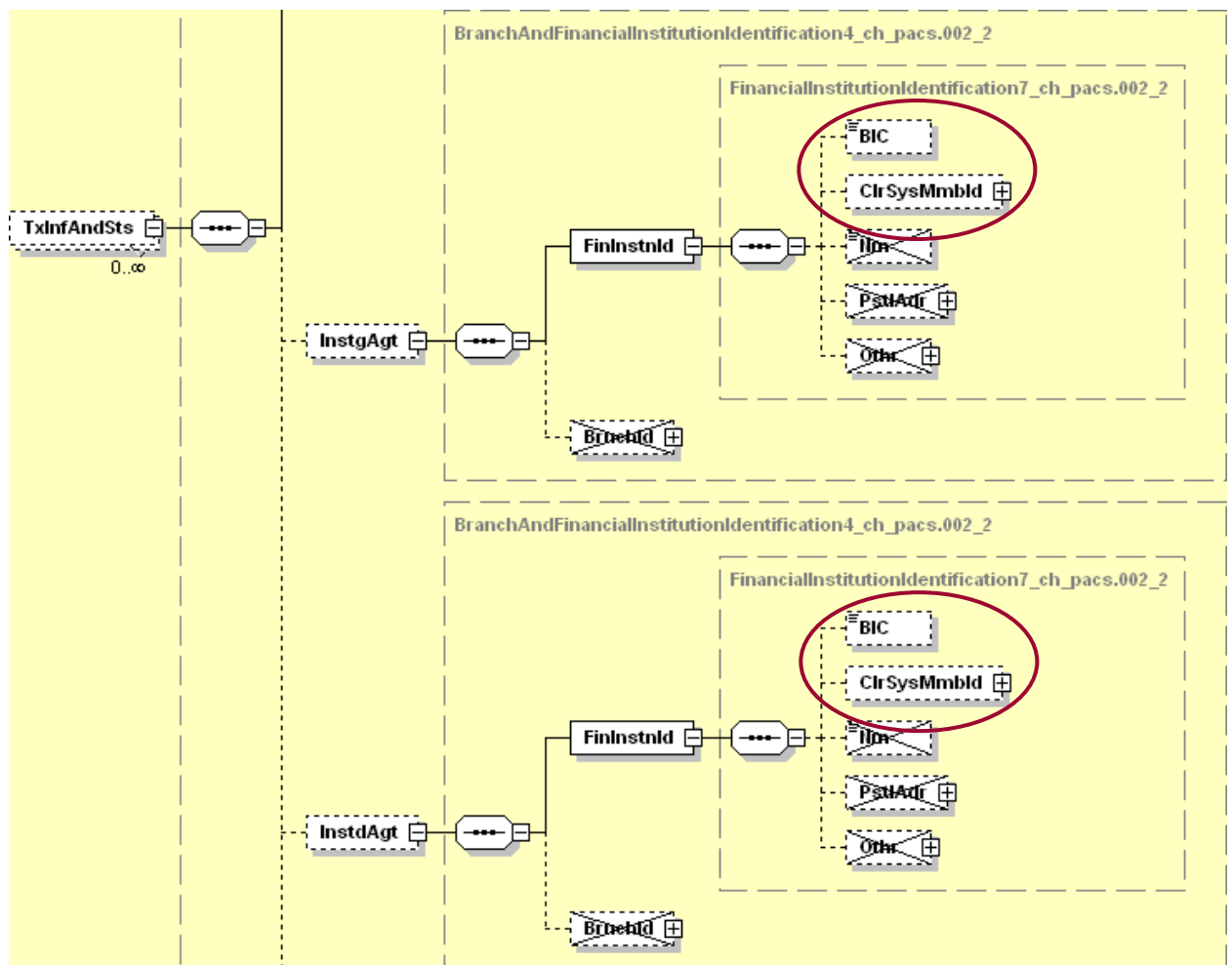


Figure 6: Details of participants

At present, participants are identified solely using the BIC or the relevant IID.

Where the IID is used, it is given as a 6-digit numerical value, i.e. only digits 0 – 9, in the .../ClrSysMmbld/Mmbld element. The .../ClrSysMmbld/ClrSysId/Cd element must contain the value "CHSIC".

### **3.7 Further business specifications**

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Further business specifications can be found in the Base Document.

## 4 Technical specifications for the RTGS systems

### 4.1 Group Header (GrpHdr, A-Level)

The "Group Header" (A-Level of the message) occurs exactly once in the message and contains the following elements:

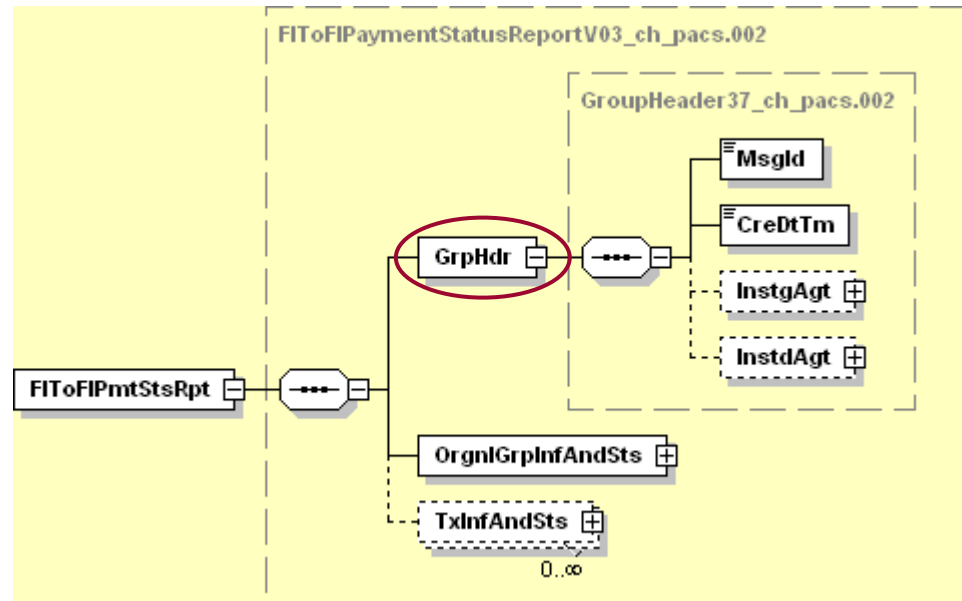


Figure 7: Group Header (GrpHdr)

The following table specifies all the elements of the "Group Header" of the "pacs.002" message that are relevant to the RTGS systems.

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Document +FITo FIPayment Status Report V03	FIToFIPmtStsRpt	1..1	1..1			
Group Header	GrpHdr	1..1	1..1			
Group Header +Message Identification	MsgId	1..1	1..1	<b>Message Identification</b>		
Group Header +Creation Date Time	CreDtTm	1..1	1..1	<b>Creation Date Time</b>		
Group Header +Instructing Agent	InstgAgt	0..1	0..1	Is not used.		
Group Header +Instructed Agent	InstdAgt	0..1	0..1	Is not used.		

Table 4: Group Header (GrpHdr, A-Level)

## 4.2 Original Group Information and Status (OrgnlGrpInfAndSts, B-Level)

The "Original Group Information and Status" (B-Level of the message) contains the information about the underlying message.

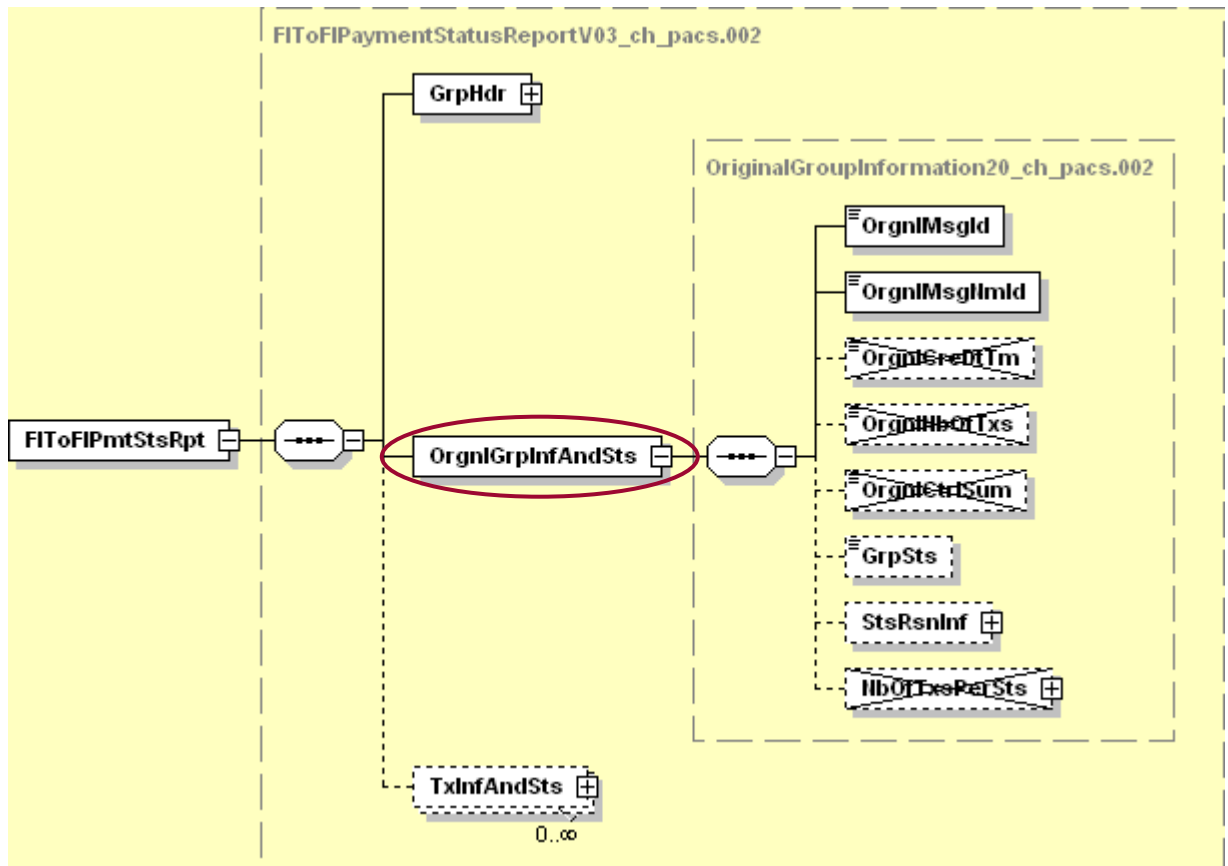


Figure 8: Original Group Information and Status (OrgnlGrpInfAndSts)

The following table specifies all the elements of the "Original Group Information and Status" of the "pacs.002" message that are relevant to the RTGS systems.

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Original Group Information And Status	OrgnlGrpInfAndSts	1..1	1..1			
Original Group Information And Status +Original Message Identification	OrgnlMsgId	1..1	1..1	<b>Original Message Identification</b> If the message identification of the message being acknowledged is not available, fill in with the value "UNKNOWN". Note for messages sent from the participant to the RTGS system: For a payment to be successfully acknowledged, the correct identification from the payment message sent to the participant must be given both at message level (<OrgnlMsgId>) and at transaction level (<OrgnlTxId>).		
Original Group Information And Status +Original Message Name Identification	OrgnlMsgNmId	1..1	1..1	<b>Original Message Name Identification</b> Permitted types: pacs.004/pacs.008/pacs.009. The element contains "UNKNOWN" if the type of the original payment message could not be identified.		
Original Group Information And Status +Group Status	GrpSts	0..1	0..1	<b>Group Status</b> Used only for NOK message if the message could not be validated at all or an authentication error was raised. Only "RJCT" is permitted.		
Original Group Information And Status +Status Reason Information	StsRsnInf	0..n	0..1	<b>Status Reason Information</b> Used only for NOK message if the message could not be validated at all or an authentication error was raised.		
Original Group Information And Status +Status Reason Information ++Reason	Rsn	0..1	0..1			
Original Group Information And Status +Status Reason Information ++Reason +++Code	Cd	1..1	1..1	This element must not be used.		
Original Group Information And Status +Status Reason Information ++Reason +++Proprietary	Prtry	1..1	1..1	<b>Status Report Reason (proprietary)</b> Enter the proprietary 3-digit SIC code. The following codes are permitted: 118 (message unreadable), only from RTGS system to participant 134 (incorrect authenticator), only from participant to RTGS system		



ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Original Group Information And Status +Status Reason Information ++Additional Information	AddtlInf	0..n	0..10	<b>Additional Information</b> Incorrect message packed in CDATA sections. (Maximum 10 x 105 characters, RTGS system to participant) or original transaction reference and delivering participant (if available, from participant to RTGS system after authentication error).		

Table 5: Original Group Information and Status (OrgnlGrpInfAndSts, B-Level)

### 4.3 Transaction Information and Status (TxInfAndSts, C-Level)

The "Transaction Information and Status" (C-Level of the message) contains the information about the status of the underlying message.

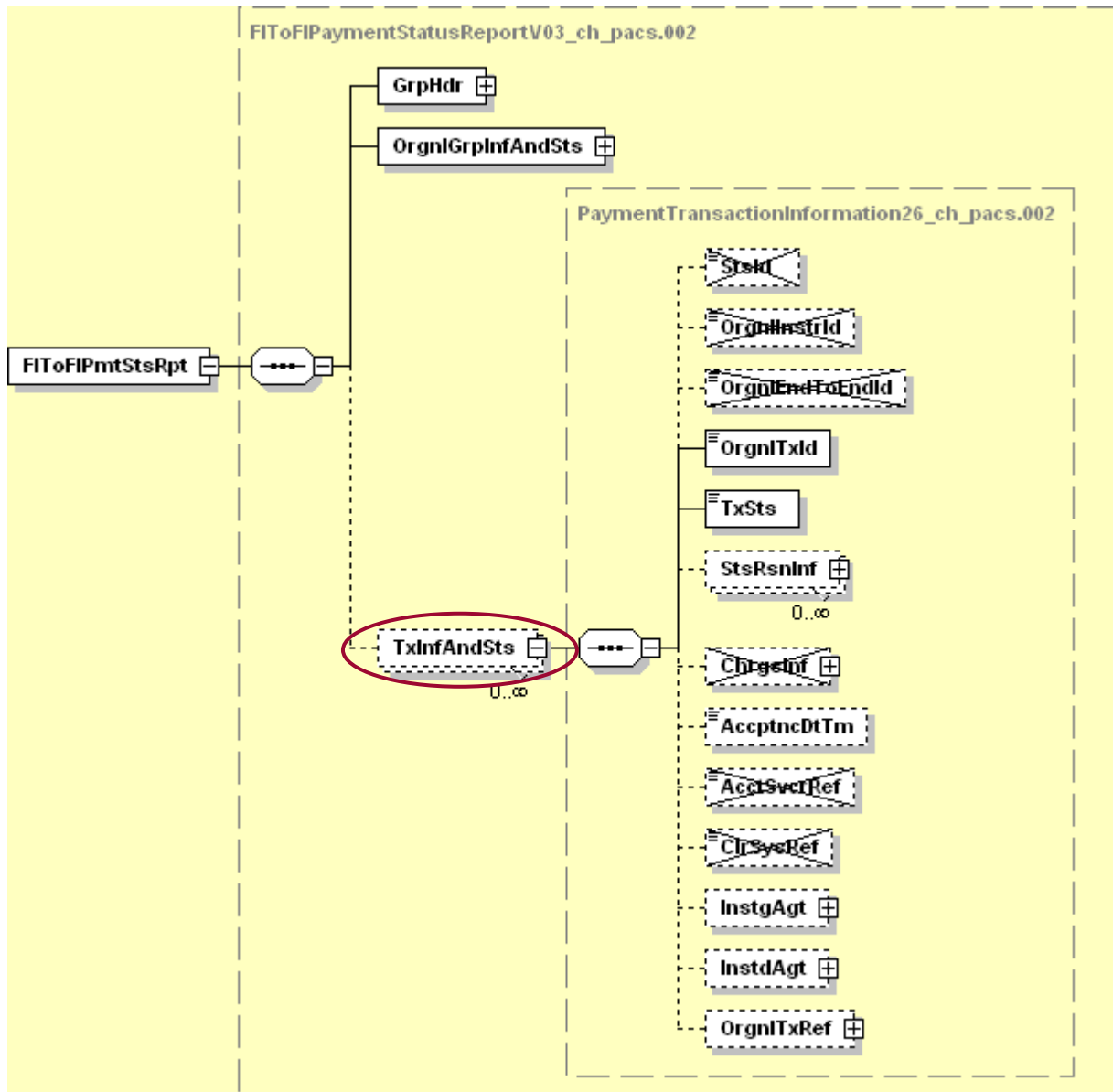


Figure 9: Transaction Information and Status (TxInfAndSts)

The following table specifies all the elements of the "Transaction Information and Status" of the "pacs.002" message that are relevant to the RTGS systems.

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Transaction Information And Status	TxInfAndSts	0..n	0..n	This element must only be used once.		
Transaction Information And Status +Original Transaction Identification	OrgnlTxId	0..1	1..1	<b>Original Transaction Identification</b> Maximum of 16 characters permitted. Messages from participant to RTGS system: For a payment to be successfully acknowledged, the correct identifications of the payment message sent to the participant must be given both at message level (<OrgnlMsgId>) and at transaction level (<OrgnlTxId>).	<b>MT S30 F13</b> <b>MT S32 F13</b>	<b>MT S31 F13</b> <b>MT S33 F13</b>
Transaction Information And Status +Transaction Status	TxSts	0..1	1..1	<b>Transaction Status</b> The following ISO code values are permitted: ACCP = Received message is correct. ACWC = Received message is correct, the value date or the earliest settlement time has been changed (only used in messages from the RTGS system to the participant). RJCT = The message contains errors and could not be processed.		
Transaction Information And Status +Status Reason Information	StsRsnInf	0..n	0..n	<b>Status Reason Information</b> Only used in messages from the RTGS system to the participant. One <StsRsnInf> block will be provided for each error or change that was identified. Mandatory if <TxSts> = RJCT. Not available if <TxSts> = ACCP or ACWC.		
Transaction Information And Status +Status Reason Information ++Reason	Rsn	0..1	1..1	<b>Status Report Reason</b>		
Transaction Information And Status +Status Reason Information ++Reason +++Code	Cd	1..1	1..1	This element must not be used.		
Transaction Information And Status +Status Reason Information ++Reason +++Proprietary	Prtry	1..1	1..1	<b>Status Report Reason (proprietary)</b> Proprietary 3-digit SIC error code. Error codes in accordance with the Swiss RTGS Handbook.	<b>MT S32 F99 Number</b>	
Transaction Information And Status +Status Reason Information ++Additional Information	AddtlInf	0..n	1..10	<b>Additional Information</b> Mandatory if <StsRsnInf> is used. Location of the incorrect element as an XPath. "n/a" will be provided if the error cannot be unambiguously assigned to one element.	<b>MT S32 F99 Identification</b> Contains the SIC field identification.	

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Transaction Information And Status +Acceptance Date Time	AcceptncDtTm	0..1	0..1	<b>Processing Date Time</b> Only used in messages from the RTGS system to the participant. Contains the date of the current clearing day and the time at which the payment was validated. The date of the clearing day may be different from the validation date. Mandatory if <TxSts> = ACCP or ACWC. Not available if <TxSts> = RJCT.	<b>MT S30 F94</b> Format =2d	
Transaction Information And Status +Instructing Agent	InstgAgt	0..1	0..1	<b>Instructing Participant</b> Contains original information from <InstgAgt> of the message being acknowledged. Must be used.	<b>MT S30 F12</b> <b>MT S32 F12</b>	<b>MT S31 F12</b> <b>MT S33 F12</b>
Transaction Information And Status +Instructing Agent ++Financial Institution Identification	FinInstnId	1..1	1..1			
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++BIC	BIC	0..1	0..1	<b>Identification of Instructing Participant (BIC)</b> Element must not be used at the same time as <ClrSysMmbld>.		
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++Clearing System Member Identification	ClrSysMmbld	0..1	0..1	<b>Identification of Instructing Participant (proprietary)</b> Element must not be used at the same time as <BIC>.		
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification	ClrSysId	0..1	1..1	<b>Clearing System Identification</b> Must be used for unambiguous identification of the address type being used.		
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification +++++Code	Cd	1..1	1..1	<b>Clearing System Identification (code)</b> Permitted code value: CHSIC.		

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification +++++Proprietary	Prtry	1..1	1..1	<b>Clearing System Identification (proprietary)</b> Currently not supported.		
Transaction Information And Status +Instructing Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Member Identification	Mmbld	1..1	1..1	<b>Member Identification</b> IID (=6n)		
Transaction Information And Status +Instructed Agent	InstdAgt	0..1	0..1	<b>Instructed Participant</b> Contains the original information from <InstdAgt> of the message being acknowledged. Must be used.		
Transaction Information And Status +Instructed Agent ++Financial Institution Identification	FinInstnId	1..1	1..1			
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++BIC	BIC	0..1	0..1	<b>Identification of Instructed Participant (BIC)</b> Element must not be used at the same time as <ClrSysMmbld>.		
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++Clearing System Member Identification	ClrSysMmbld	0..1	0..1	<b>Identification of Instructed Participant (proprietary)</b> Element must not be used at the same time as <BIC>.		
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification	ClrSysId	0..1	1..1	<b>Clearing System Identification</b> Must be used to unambiguously identify the address type.		

ISO 20022 Standard			Swiss ISO 20022 Payments Standard			
Message Item	XML Tag	Mult.	Mult.	Definition	SIC S30/S32	SIC S31/S33
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification +++++Code	Cd	1..1	1..1	<b>Clearing System Identification (code)</b> Permitted code value: CHSIC.		
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Clearing System Identification +++++Proprietary	Prtry	1..1	1..1	<b>Clearing System Identification (proprietary)</b> Currently not supported.		
Transaction Information And Status +Instructed Agent ++Financial Institution Identification +++Clearing System Member Identification ++++Member Identification	Mmbld	1..1	1..1	<b>Member Identification</b> IID (=6n)		
Transaction Information And Status +Original Transaction Reference	OrgnlTxRef	0..1	0..1	<b>Original Transaction Reference</b> Only used in messages from the RTGS system to the participant. Mandatory if <TxSts> = ACCP or ACWC. Not available if <TxSts> = RJCT.		
Transaction Information And Status +Original Transaction Reference ++Interbank Settlement Date	IntrBkSttlmDt	0..1	0..1	<b>Settlement Date</b> Provides the designated settlement date of the payment after validation has been completed. Mandatory if <TxSts> = ACCP or ACWC. Not provided if <TxSts> = RJCT.	<b>MT S30 F92B</b> Format =8d	

Table 6: Transaction Information and Status (TxInfAndSts, C-Level)

## 5 Examples

The following assumptions were made when defining the parameters for the examples in XML:

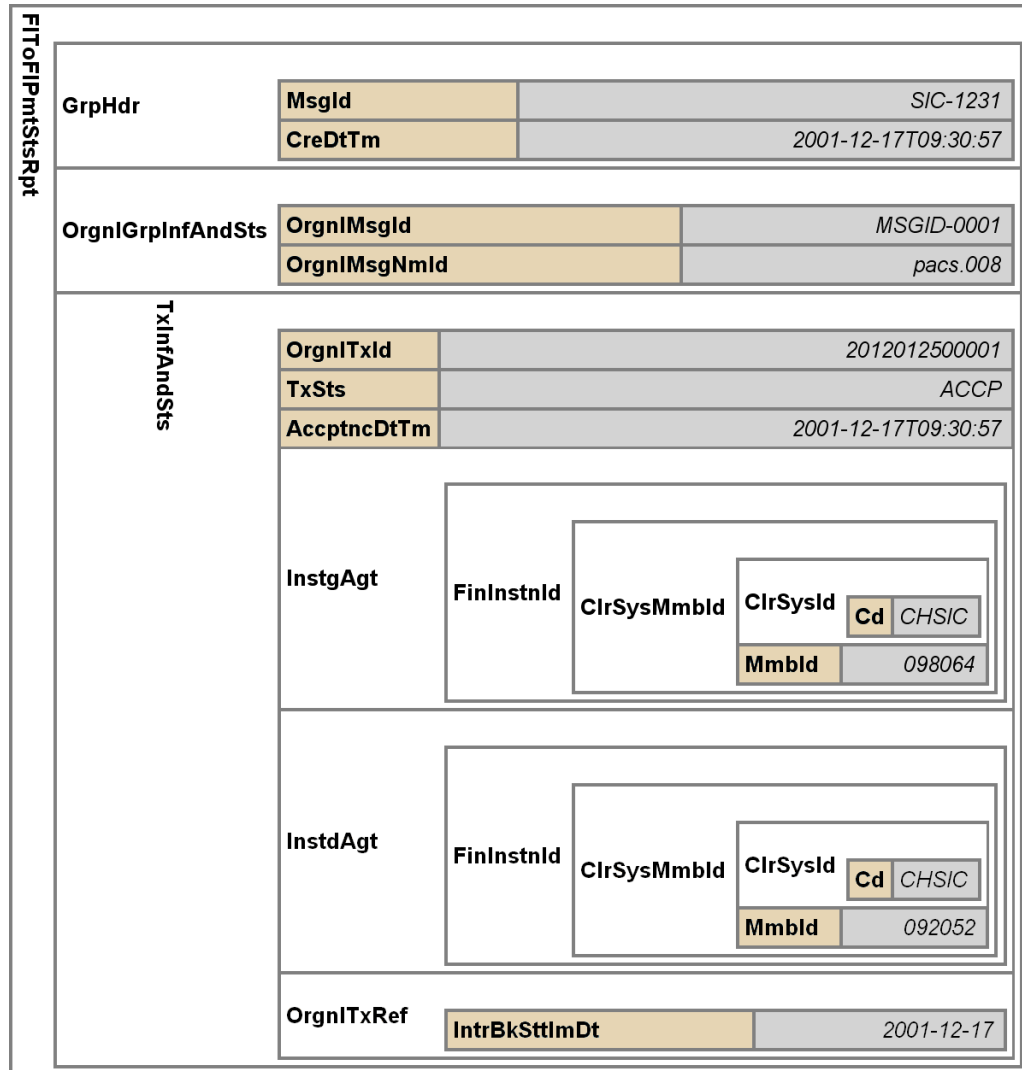
### 5.1 First example: OK situation

The first example shows a positive response message (Payment Initiation Status Report pacs.002) to a payment instruction that has been received in accordance with example IG Customer Payments (FI to FI Customer Credit Transfer pacs.008).

#### Business elements of the OK acknowledgement

Business element	Inhalt
Message identification	SIC-1231
Message identification of the referenced message	MSG-0001
Transaction identification of the referenced message	2012012500001
Message type of the referenced message	pacs.008
Identification of instructing participant	098064 (CHSIC)
Identification of instructed participant	092052 (CHSIC)
Transaction status	ACCP (OK)
Processing date and time of the referenced message	2001-12-17 09:30:57
Settlement date (Interbank Settlement Date)	2001-12-17

### Depiction of the OK acknowledgement using ISO 20022 pacs.002





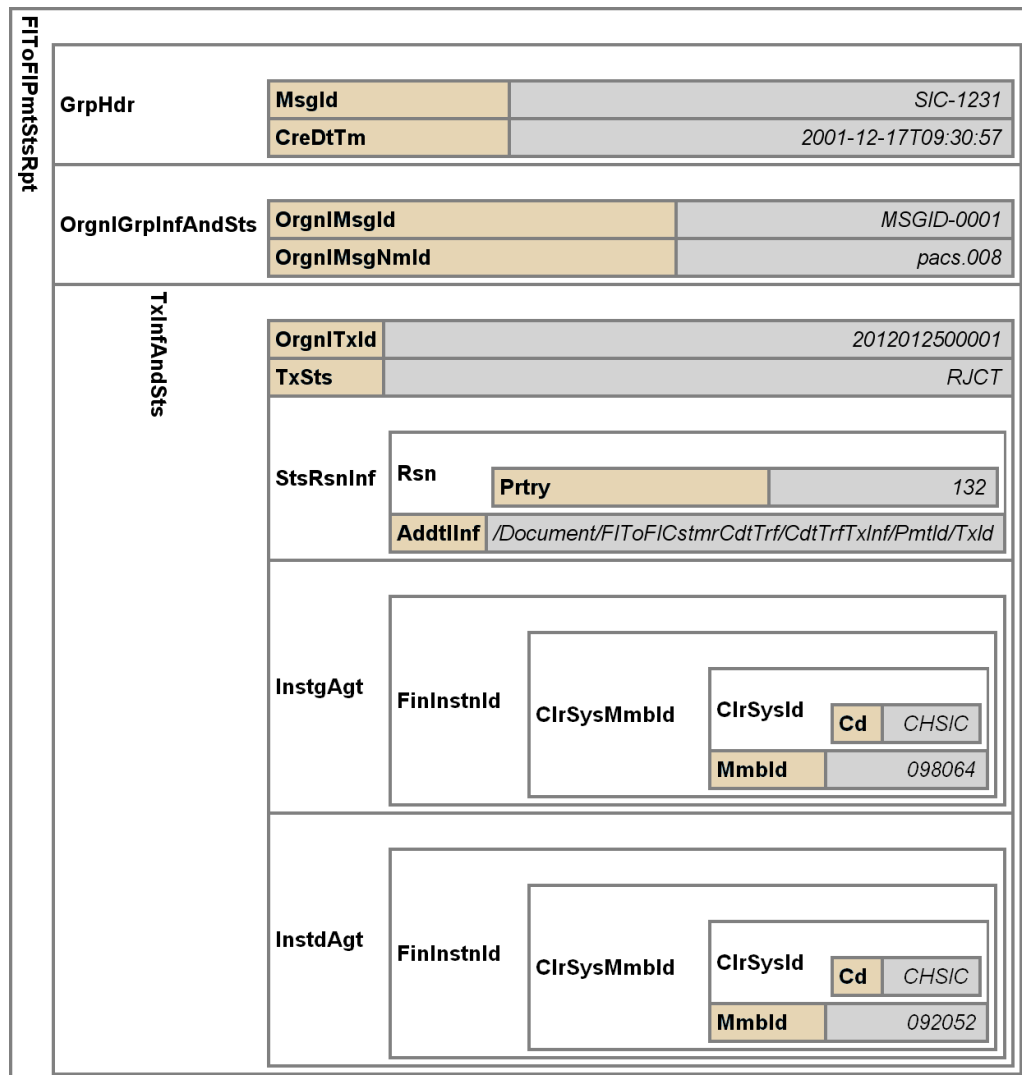
## 5.2 Second example: NOK situation

The second example shows a negative response message (Payment Initiation Status Report pacs.002) to a payment instruction that has been received in accordance with example IG Customer Payments. The following assumption was made: the payment message that was received (FIToFI Customer Credit Transfer pacs.008) was recognised as a duplicate. The identification in the original message had already been used by the instructing participant.

### Business elements of the NOK acknowledgement

Business element	Inhalt
Message identification	SIC-1231
Message identification of the referenced message	MSG-0001
Transaction identification of the referenced message	2012012500001
Message type of the referenced message	pacs.008
Identification of instructing participant	098064 (CHSIC)
Identification of instructed participant	092052 (CHSIC)
Transaction status	RJCT (NOK)
Reason for the rejection	132 (SIC error code)

### Depiction of the NOK acknowledgement using ISO 2002 pacs.002



For XML versions of the examples see Appendix A.

## Appendix A: XML schema and examples

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### XML schema

The XML schema for "pacs.002" for the RTGS systems

- ***pacs.002.001.03.ch.01.xsd***

is published on the SIX Interbank Clearing Ltd website.

It should preferably be opened using specific XML software.

### Examples

The examples shown in section 5 are published on the SIX Interbank Clearing Ltd website as XML files:

- ***pacs\_002\_Beispiel\_OK.xml***
- ***pacs\_002\_Beispiel\_NOK.xml***

### Validation Portal

The above mentioned example messages as well as this implementation guideline, the XML schema and additional examples can also be downloaded from the SIC & euroSIC Validation Portal Interbank Messages (<https://validation.iso-payments.ch/SIC4>).

After successful registration users can upload their own messages and have them validated against this implementation guideline.

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