



Paying QR-bills with a SWIFT FIN Message

Datasheet on QR-bill

Rules for mapping the fields in the Swiss QR Code
into a SWIFT message (MT101/MT103)

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SIX Interbank Clearing Ltd
 Pfingstweidstrasse 110
 P.O. Box
 CH-8021 Zurich

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Subversions (Version 1.1; Version 1.11) generally do not require any technical adaptations.

Reference documents

The following documents contain technical and layout-related specifications for the QR-bill and payments made on the basis of a QR-bill:

Document/schema	Content	Source
pain.001.001.03	XML Schema Customer Credit Transfer Initiation V03	ISO
pain.001.001.03.ch.02	Swiss Implementation Guidelines for customer-bank messages for credit transfers in payment traffic	SIX
pacs.008	Implementation Guidelines for Interbank Messages	SIX
Swiss Implementation Guidelines QR-bill	Technical and specialist specifications for the payment section with Swiss QR Code and receipt	SIX
Business Rules	Processing rules for QR-bills	SIX
QR-IID; QR-IBAN	Technical information about the QR-IID and QR-IBAN	SIX

Bank Master	List of IIDs and QR IIDs of banks	SIX
SWIFT User Handbook	Knowledge Center, standards MT	SWIFT

Table 1: Reference documents

Organization	Link
ISO	www.iso20022.org
SIX	www.iso-payments.ch www.sepa.ch www.six-group.com/interbank-clearing
Harmonization of Swiss payments	www.PaymentStandards.CH
SWIFT (Knowledge Center)	https://www2.swift.com/knowledgecentre/productcategory#Standards

Table 2: Links to the relevant Internet pages

Failure to comply with the specifications for the QR-bill can lead to mistakes:

- Error during entering the payment by the debtor and their financial institution.
- Error in the execution of the debtor's payment and their financial institution.
- No or incorrect booking of the credits to the invoice issuer and their financial institution.
- Infringement of the law (e.g. data protection).

Table of Contents

1	Introduction.....	5
1.1	Purpose.....	5
1.2	Demarcation.....	5
1.3	Preliminary remarks.....	5
2	Conversion Swiss QR Code to SWIFT MT101/MT103.....	6
1.1	Status.....	6
1.2	Mapping table.....	7

1 Introduction

This document is primarily intended for financial institutions and their service providers offering payment services to their customers, as well as developers of bill recipient and banking software.

The current version of this document is available at www.PaymentStandards.CH.

1.1 Purpose

This document describes the banking rules that enable the mapping of the fields of the Swiss QR Code into a SWIFT FIN message (MT101 and MT103).

1.2 Demarcation

This document does not include the general technical and functional requirements for credit transfers that apply to SWIFT FIN messages.

Information relevant to QR invoicing is only repeated here to the extent that it is necessary for understanding the topic presented.

Detailed information on the QR invoice and on SWIFT MT messages can be found in the reference documents listed above.

1.3 Preliminary remarks

It is important to note that the QR invoice has three characteristics:

- QR-bill with QR-IBAN and QR reference
- QR-bill with IBAN and creditor reference
- QR-bill with IBAN, without reference

For the correct interpretation of the following mapping table, the different characteristics must be taken into account.

It should also be noted that the QR-bill is based on the ISO 20022 standard and was designed primarily for invoicing in Switzerland and Liechtenstein. Conversions in SWIFT FIN messages include, among others, the following risks:

- Not all information contained in the data schema of a QR-bill can be included in a SWIFT MT message. Every conversion involves the risk of truncation.
- SWIFT MT messages do not have a dedicated field for references. These are transferred to the field "Remittance Information". This can lead to processing problems when using a QR-IBAN, which must be supplied with a QR reference.

2 Conversion Swiss QR Code to SWIFT MT101/MT103

The mapping table is not a complete picture of the data schema of an MT101 or MT103 message. Rather, it maps the data schema of the QR-bill and lists only those fields of the MT messages that are affected by a conversion of a QR-bill.

1.1 Status

The following status values (information about usage) are possible for the individual elements:

Status (St.)	Designation	Description	Status (St.)	Designation	Description
M	Mandatory	Field must mandatorily be delivered filled.	O	Optional	Field must mandatorily be delivered, but not necessarily filled (can be empty).
D	Dependent	Field must mandatorily be filled if the superordinate optional data group is filled.	X	Do not fill	Field must not be filled in but must be sent (intended «for future use», so the field separator needs to be sent).
A	Additional	Field does not necessarily have to be delivered.			

Table 3: Legend status designations

1.2 Mapping table

QR element	Swiss QR Code			SWIFT FIN messages	Comments
	Element name	St.	General definition	Tag MT101 / Tag MT103	
QRCH +Header	Header		Header Header data. It contains basic information about the QR code	N/A	The following elements from the Swiss QR Code will never be forwarded with the payment: <ul style="list-style-type: none"> • QRType • Version • Coding Type
QRCH +Header ++QRType	QRType	M	QRType Unambiguous indicator for the QR code. Fixed value "SPC" (Swiss Payments Code)	N/A	
QRCH +Header ++Version	Version	M	Version It contains version of the Implementation Guidelines (IG) in use on the date on which the QR code was created. The first two positions indicate the main version, the following two positions the subversion. Fixed value "0200" for versions 2.0 and 2.1	N/A	
QRCH +Header ++Coding	Coding	M	Coding Type Character set code. Fixed value 1 (indicates UTF-8 restricted to the Latin character set)	N/A	
QRCH +CdrInf	CdrInf		Creditor information <i>Account / Payable to</i>	N/A	

QRCH +CdtrInf ++IBAN	IBAN	M	IBAN IBAN or QR-IBAN of the beneficiary.	59a Beneficiary	For payments with a structured QR reference, the QR-IBAN must be used to indicate the account to be credited. The 27-digit QR reference (QRR) must be used in case of a QR-IBAN with bank identifier "3xxxx". Otherwise, the payment must be rejected.
QRCH +CdtrInf ++Cdtr	Cdtr		Creditor	N/A	Mandatory data group in the Swiss QR Code.
QRCH +CdtrInf ++Cdtr +++AdrTp	AdrTp	M	Address type The address type is specified using a code. The following codes are defined: "S" – structured address "K" – combined address elements (2 lines)	N/A	
QRCH +CdtrInf ++Cdtr +++Name	Name	M	Name The creditor's name or company according to the account name. Note: always matches the account holder	59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/ Name 2/Street No. 3/ISO country code/Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x	

QRCH +CdtrInf ++Cdtr +++StrtNmOr AdrLine1	StrtNmOr AdrLine1	O Street or address line 1 Structured address: Street/P.O. Box from the creditor's address Combined address elements: Address line 1 including street and building number or P.O. Box	59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/Name 2/ Street No. 3/ISO country code/Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x	
QRCH +CdtrInf ++Cdtr +++BldgNbOr AdrLine2	BldgNbOr AdrLine2	O Building number or address line 2 Structured Address: Building number from creditor's address Combined address elements: Address line 2 including postal code and town from creditor's address	59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/Name 2/ Street No. 3/ISO country code/Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x	

<p>QRCH +CdtrInf ++Cdtr +++PstCd</p>	<p>PstCd</p>	<p>D</p>	<p>Postal code Postal code from creditor's address</p>	<p>59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/Name 2/Street No. 3/ISO country code/Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x</p>	
<p>QRCH +CdtrInf ++Cdtr +++TwnNm</p>	<p>TwnNm</p>	<p>D</p>	<p>Town Town from creditor's address</p>	<p>59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/Name 2/Street No. 3/ISO country code/Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x</p>	

QRCH +CdtrInf ++Cdtr +++Ctry	Ctry	M	Country Country from creditor's address	59a Beneficiary If AdrTp = "S": :59a:/IBAN or QR-IBAN 1/Name 2/Street No. 3/ ISO country code /Postal code and town If AdrTp = "K": :59a:/IBAN or QR-IBAN + name & adress 35x 35x 35x 35x	
QRCH +UltmtCdtr	UltmtCdtr		Ultimate creditor <i>In favor of</i> Information about the ultimate creditor	N/A	Optional data group in the Swiss QR Code. This whole data group must not be filled in the Swiss QR Code for the time being (for future use). There is no tag for the ultimate creditor in SWIFT FIN messages.
QRCH +UltmtCdtr ++AdrTp	AdrTp	X	Address type The address type is specified using a code. The following codes are defined: "S" – structured address "K" – combined address elements (2 lines)	N/A	
QRCH +UltmtCdtr ++Name	Name	X	Name The ultimate creditor's name or company	N/A	

QRCH +UltmtCdtr ++StrtNmOr AdrLine1	StrtNmOr AdrLine1	X	Street or address line 1 Structured address: Street/P.O. Box from the ultimate creditor's address Combined address elements: Address line 1 including street and building number or P.O. Box	N/A	
QRCH +UltmtCdtr ++BldgNbOr AdrLine2	BldgNbOr AdrLine2	X	Building number or address line 2 Structured Address: Building number from ultimate creditor's address Combined address elements: Address line 2 including postal code and town from ultimate creditor's address	N/A	
QRCH +UltmtCdtr ++PstCd	PstCd	X	Postal code Postal code from ultimate creditor's address	N/A	
QRCH +UltmtCdtr ++TwnNm	TwnNm	X	Town Town from ultimate creditor's address	N/A	
QRCH +UltmtCdtr ++Ctry	Ctry	X	Country Country from ultimate creditor's address	N/A	
QRCH +CcyAmt	CcyAmt		Payment amount information	N/A	Optional data group in the Swiss QR Code.



QRCH +CcyAmt ++Amt	Amt	O	Amount The payment amount	32B Currency/ Transaction Amount	<p>The amount element is to be entered without leading zeroes, including decimal separators and two decimal places. Decimal, maximum 12-digits permitted, including decimal separators. Only decimal points (.) are permitted as decimal separators.</p> <p>Only CHF and EUR are permitted.</p> <p>Optional data group in the Swiss QR Code which data may not be forwarded with MT101/MT103, since SWIFT does not support the ultimate debtor.</p> <p>The Tag 70 Remittance Information can be used to forward information on the ultimate debtor. It must also be verified whether the field is not already used for customer reference and/or additional information.</p>
QRCH +CcyAmtDate ++Ccy	Ccy	M	Currency The payment currency, 3-digit alphanumeric currency code according to ISO 4217	32B Currency /Transaction Amount	
QRCH +UltmtDbtr	UltmtDbtr		Ultimate debtor	N/A	
QRCH +UltmtDbtr ++AdrTp	AdrTp	D	Address type The address type is specified using a code. The following codes are defined: "S" – structured address "K" – combined address elements (2 lines)	N/A	
QRCH +UltmtDbtr ++Name	Name	D	Name The ultimate debtor's name or company	N/A	
QRCH +UltmtDbtr ++StrtNmOr AdrLine1	StrtNmOr AdrLine1	O	Street or address line 1 Structured address: Street/P.O. Box from the ultimate debtor's address Combined address elements: Address line 1 including street and building number or P.O. Box	N/A	



QRCH +UltmtDbtr ++BldgNbOr AdrLine2	BldgNbOr AdrLine2	O	Building number or address line 1 Structured Address: Building number from ultimate debtor's address Combined address elements: Address line 2 including postal code and town from ultimate debtor's address	N/A	
QRCH +UltmtDbtr ++PstCd	PstCd	D	Postal code Postal code from ultimate debtor's address	N/A	
QRCH +UltmtDbtr ++TwnNm	TwnNm	D	Town Town from ultimate debtor's address	N/A	
QRCH +UltmtDbtr ++Ctry	Ctry	D	Country Country from ultimate debtor's address	N/A	
QRCH +RmtInf	RmtInf		Payment reference	N/A	Mandatory data group in the Swiss QR Code.

QRCH +RmtInf ++Tp	Tp	M Reference type Reference type (QR, ISO) The following codes are permitted: QRR – QR reference SCOR – Creditor Reference (ISO 11649) NON – without reference	70 Remittance Information QRR – QR reference Line 1: QRR /QR reference (in connection with QR-IBAN in Tag 59a = Liability) Example: QRR/00000000000000000000123457 --- SCOR – Creditor Reference Line 1: SCOR /Reference (only in connection with IBAN/proprietary account number in Tag 59a = Liability) Example: SCOR/ RF18000000000539007547034	There is no tag for the reference types QRR/SCOR/NON in SWIFT FIN messages.
QRCH +RmtInf ++Ref	Ref	D Reference Note: The structured reference is either a QR reference or a Creditor Reference (ISO 11649)	70 Remittance Information Compare mapping information above for the following QR element: QRCH +RmtInf ++Tp	QR reference: always 27 characters, numeric. Creditor Reference (ISO 11649): max. 25 characters, alphanumeric.
QRCH +RmtInf ++AddInf	AddInf	Additional information Additional information can be used for the procedure with message and for the procedure with structured reference.	N/A	Optional data group in the Swiss QR Code.

QRCH +RmtInf ++AddInf +++Ustrd	Ustrd	O	Unstructured message Unstructured information can be used to indicate the payment purpose or for additional textual information about payments with a structured reference.	70 Remittance Information If not QRR or SCOR: 4x35x If QRR or SCOR: Lines 2-3 for additional messages (3x35x)	If there are not enough characters available when a structured and unstructured message is delivered at the same time, the structured reference is to be preferred so that the automatic reconciliation of the accounting by the biller on the basis of the reference number (=structured message) remains guaranteed. In this case, the unstructured message should be shortened.
QRCH +RmtInf ++AddInf +++Trailer	Trailer	M	Trailer Unambiguous indicator for the end of payment data. Fixed value "EPD" (End Payment Data).	N/A	
QRCH +RmtInf ++AddInf +++StrdBkgInf	StrdBkgInf	O	Bill information Billing information contains coded information for automated booking of the payment. The data is not forwarded with the payment.	N/A	
QRCH +AltPmtInf	AltPmtInf		Alternative procedures Parameters and data of other supported procedures	N/A	
QRCH +AltPmtInf ++AltPmt	AltPmt	A	Alternative procedure parameter Parameter character chain of the alternative procedure according to the syntax definition in the "Alternative procedure" chapter	N/A	

Table 4: Mapping table