Swiss Payment Standards

Swiss Implementation Guidelines for the QR-bill

Technical and functional specifications of the payment section with Swiss QR Code and of the receipt

Version 2.2, with effect from 22 February 2021

General note

Comments and questions about this document can be directed to the respective financial institution or to SIX at the following address: support.billing-payments@six-group.com.

For ease of legibility, this document uses the masculine form to refer to all genders.

Change control

This document "Swiss Implementation Guidelines for the QR-bill", Version 2.2 dated February 22, 2021, entirely replaces the previous Version 2.1 dated September 15, 2019. Compared to the previous version, no changes have been made to the content of the technical specifications. The changes are limited to corrections and clarifications.

All changes that have been made compared with Version 1.0 are listed in the *Change Documentation*. This can be found in the archive under www.paymentstandards.ch/archives.

Revision history

Version	Date	Change description	Chapter
2.2	22.02.2021	Clarifications and corrections across the document. No technical content changes.	All
2.1	30.09.2019	Clarifications and corrections across the document. No technical content changes.	All
2.0	15.11.2018	Important changes regarding QR-bill layouting - introduction of a receipt and mandatory perforation on the payment slip. Addition of new fields in the QR-bill data structure - introduction of two address types and the"Trailer" and "Billing information" fields. Clarifications and inclusion of additional information across the document.	All
1.0	27.04.2017	First publication.	All

Patent notice

SIX, the entire SIX Group, and the responsible project sponsors for the new QR-bill for the Swiss financial center have together carefully reviewed the technical and legal framework conditions for the territory of Switzerland in consultation with specialists and provide corresponding specifications for a standardized QR-bill ("standardization"). The usage possibilities for invoicing and paying a QR-bill listed below were used as a basis:

- Payer captures QR code using a reader or camera in e-/m-banking
- Payer captures QR code using a reader or scanner in their own infrastructure and transmits the payment instruction electronically (e.g. as a *pain* message)
- Cash deposit at post office counter (branches and branches with a partner company)
- Credit transfer instruction form

Further uses of the QR-bill that are not listed, such as payment via an ATM, are also not a component of the standardization.

For the commercial technological implementation of the standardization, accepted industry solutions and measures are to be planned by the commercial users.

Important notices

Third-party specifications and company-specific functionality do not form part of the standardization process. Individual providers are responsible for finding appropriate solutions. This applies particularly to the option of embedding "Billing information" or content in the "Alternative procedures" fields.

The "Billing information" element can be used for sending structured information between the bill issuer and bill recipient. The layout of the QR-bill includes a data field for this purpose.

Containers for alternative payment procedures are also provided in the "Alternative procedures" elements. The content and use of such data are the responsibility of the providers of those procedures.

In order for the content of the "Billing information" and "Alternative procedures" fields to be identifiable, SIX is prescribing certain parameters for coding syntax. This, and use of the fields at all, must be agreed with SIX before they are published or used (see Annex E).

Specifications for the QR-bill

If all the processes involved in producing and processing QR-bills are to work smoothly, the QR-bill Guidelines must be carefully observed.

The specifications for the QR-bill are addressed primarily to the issuers of invoices, but they also apply to financial institutions and their service providers who offer their customers payment traffic services based on the QR-bill, the developers of software for invoice issuers and recipients and banks, and all other associated participants in the market.

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

- Swiss Implementation Guidelines for the QR-bill: Technical and functional specifications for the payment section with Swiss QR Code and receipt (this document)
- Style Guide QR-bill (summary of layout rules from this document)
- Processing Rules for QR-bills (Business Rules)
- Technical Information about the QR-IID and QR-IBAN
- Bank Master (list of IIDs and QR-IIDs of banks)
- Swiss Payment Standards (Implementation Guidelines on exchanging data between customers and banks)
- Implementation Guidelines for Interbank Messages

Failure to comply with the QR-bill Guidelines may result, for example, in:

- preventing the debtor and their financial institution from being able to enter the payment.
- preventing payments from being executed by the debtor and their financial institution.
- incorrectly booking credits to the bill issuer and their financial institution, or not booking them at all.
- violating banking and financial laws (e.g. data protection).

SIX Interbank Clearing Ltd assumes no responsibility or liability for the correctness and completeness of the information provided. Likewise, SIX Interbank Clearing Ltd does not offer advice for the specific scope of functionality for systems for using the QR-bill, provides no control mechanisms for technical procedures and offers no guarantee and accepts no liability for the actual mechanical or procedural implementation of the standardization process or of solutions for using and processing QR-bills.

Support and resources

SIX makes various help resources and other support materials available without liability. Find out more at www.paymentstandards.ch.

Table of contents

Sensitivity: C2 Internal

1 Introduction

The Swiss Implementation Guidelines for the QR-bill were compiled on behalf of the Board of Directors of SIX Interbank Clearing Ltd. The primary target group comprises the developers of software for bill issuers, bill recipients and banks.

The most recent version of this document can be found at www.paymentstandards.ch.

1.1 Introduction to the QR-bill

The payment slips used in Switzerland go back over a hundred years and are used 100 million times a year.

The increasing regulatory requirements for payment traffic make some system modifications necessary, in particular a review of data management. Payment traffic must also take account of digital structural changes in business and society, without forgetting those groups of the population who make payments over the post office counter or by post.

The QR-bill replaces the existing multiplicity of payment slips in Switzerland and so helps to increase efficiency and simplify payment traffic, at the same time offering a way of dealing with the challenges presented by digitalization and regulation.

The following illustration shows a schematic, basic process in the Swiss payment traffic based on a QR-bill. Its purpose is to outline the synchronized scopes of application of the various Implementation Guidelines and business rules:
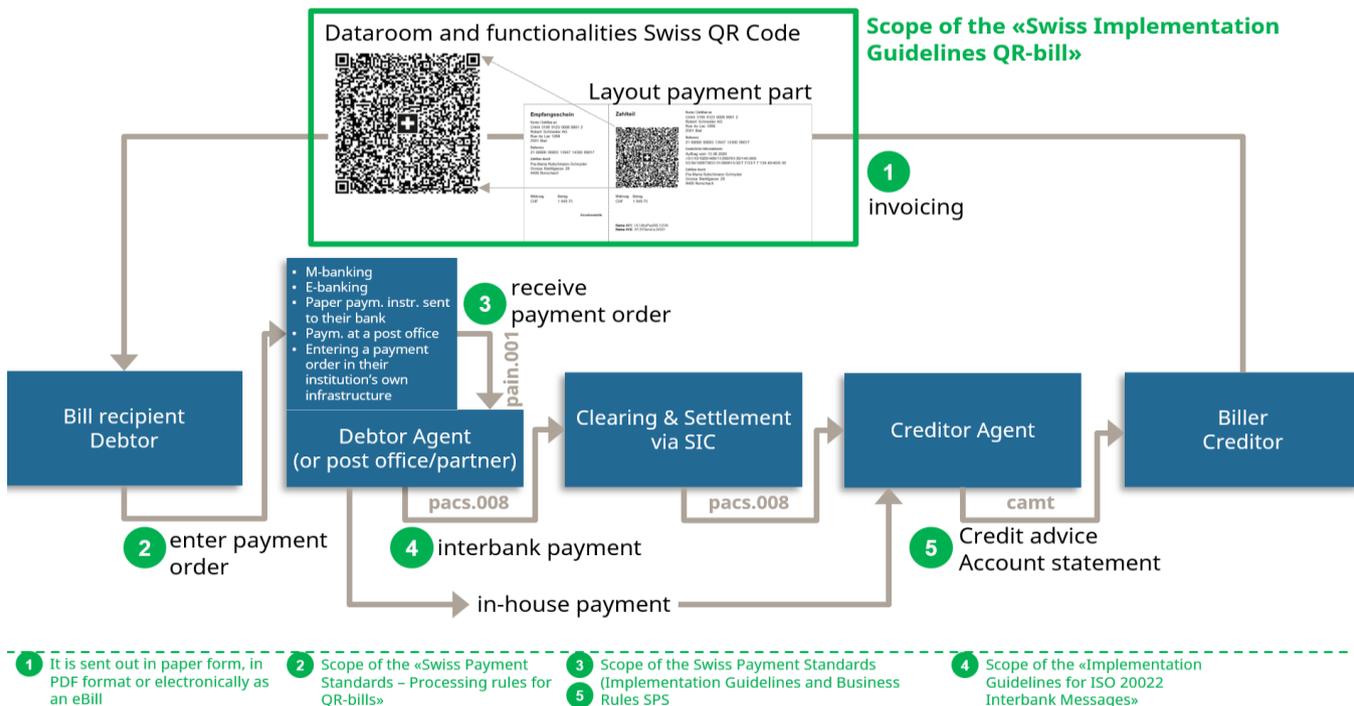

Figure 1:   Basic process of Swiss payments traffic

This basic process is primarily intended as an educational tool and does not represent a complete presentation of all possible use case configurations. There are also other use cases which vary slightly from this one (e.g. where the payer and the debtor are different; the payment part with receipt is used for a donation; the debtor is unknown when the payment is set up). We will not explore those any further in this document.

The basic process comprises the following steps: the bill issuer generates a QR-bill with a payment part and receipt and sends it to the bill recipient. It is usually sent on paper or digitally as a PDF document. The bill recipient (who in this case is also the debtor) can now trigger the payment using various payment channels, for example:

- M-banking
- E-banking
- Paper payment instruction sent to their bank
- Cash deposit at the post office counter (branches and branches with a partner company)
- Entering a payment order in their institution's own infrastructure (e.g. ERP software)

The data contained in the QR-code serves as an aid in populating the data so that no manual entries are required. Alternatively, data can be entered manually based on the textual information.

Complying with the requirements stated in this document will ensure that payments processing via any payment channel can be executed reliably.

In addition to various Swiss Implementation Guidelines governing customer-bank data exchange based on the ISO 20022 standard (e.g. for credit transfers, cash management), the following documents are also relevant to QR-bills:

- QR-bill Style Guide (summary of layout rules from this document)
- Processing rules for QR-bills (Business Rules)
- Technical information about the QR-IID and QR-IBAN
- Bank Master (list of IIDs and QR-IIDs of banks)

The "Processing rules for QR-bills" document [5] describes the relevant technical processing stages. The "Technical information about the QR-IID and QR-IBAN" document provides detailed information about the use of the QR-IBAN based on a QR-IID.

1.2   Change ownership

The document "Swiss Implementation Guidelines QR-bill" contains recommendations made by Swiss financial institutions and may only be changed by

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

Future changes and updates are made by SIX Interbank Clearing Ltd, which expressly reserves the right to amend, supplement or delete any part or all of it.

The latest version of this document is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.

1.3   Versioning of the Swiss Implementation Guidelines QR-bill

The major versions are identified in the versioning counter before the decimal point (Version 1.0; Version 2.0). Major versions either have an impact on the data structure, the content or on the design recommendations, and generally require technical modifications to implement.

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

The version must be depicted in the data structure (for details, see chapter 4.2 Data structure, "Version" element).

1.4   Reference documents

Ref	Document/schema	Title	Source
[1]	ISO 18004	18004 Third Edition of 2015-02-01 (Information technology – Automatic identification and data capture techniques – QR Code bar code symbology specification)	ISO
[2]	pain.001.001.03	XML Schema Customer Credit Transfer Initiation V03	ISO
[3]	pain.001.001.03.ch.02	Swiss ISO Implementation Guidelines for customer-bank messages for credit transfers in payment traffic	SIX
[4]	Style Guide	Layout rules and recommendations for QR-bills	SIX
[5]	Processing rules	Processing rules for QR-bills (Business Rules)	SIX
[6]	QR-IID; QR-IBAN	Technical information about the QR-IID and QR-IBAN	SIX
[7]	Bank Master	List of IIDs and QR-IIDs of banks	SIX
[8]	SWIFT User Handbook	Knowledge Center, MT Standard	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)	www2.swift.com/knowledgecentre/productcategory#Standards

Table 2:   Links to the relevant Internet pages

2　Definition of terms

2.1　QR-bill

The term "QR-bill" is understood to mean:

- a bill with a payment part and receipt integrated on the form, and
- a bill with a separately enclosed payment part and receipt.

The following figure serves a sketch of two possible designs of a QR-bill with payment part, intended to improved comprehension of the subsequent definitions.
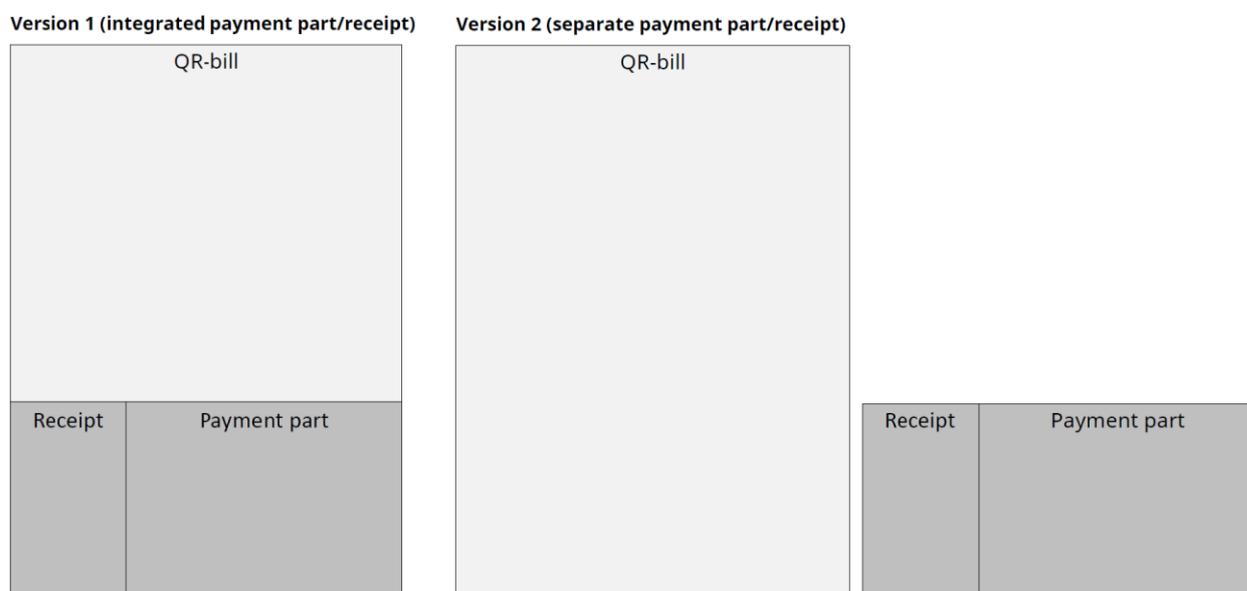
Figure 2:　Schematic illustration of a QR-bill with integrated payment part/receipt and with payment part/receipt as an enclosure

2.2　Payment part with Swiss QR code and receipt

The payment part of the QR-bill with receipt contains the information that is required to execute the payment in the form of a QR code and also as readable information.

The receipt must be on the left of the payment part, regardless of whether it is integrated in the bill or on a separate sheet of paper.

The payment part is in DIN-A6 landscape format (148 x 105 mm). The receipt to the left of the payment part measures 62 x 105 mm, so the two together measure 210 x 105 mm.

As existing payment slips are measured in inches, they differ slightly from these metric values. For instance, the actual payment slip measures approx. 150 x 106 mm (width x height), and the receipt measures 60 x 106 mm (width x height).

Conversion from inches to the DIN format widely used in Switzerland and abroad presents no problems when processing the payment sections of payment slips.

2.3   QR Code according to ISO 18004

The QR Code is a two-dimensional barcode, in accordance with ISO 18004, based on the development of the company DENSO WAVE INCORPORATED. "QR Code" is a registered trademark of DENSO WAVE INCORPORATED.

For more information, refer to the ISO 18004 reference documentation [1].

The QR Code standard stipulates versions for the coding of various data volumes (from Version 1 to Version 40) with correspondingly different storage capacities in the form of modules. The respective codeable data volume depends, on the one hand, on the error correction level chosen, and on the other, on the data to be encoded (numeric, alphanumeric, binary, Kanji).

A fixed number of modules is allocated to each version.

2.4   The term "module" according to ISO 18004

A module designates the smallest information unit of the QR Code, comparable with a data bit. In the QR Code, the modules correspond to the white and black dots of the code.

2.5   The term "error correction level" according to ISO 18004

The QR Code has the ability to restore the data contained in the code if the code is damaged (e.g. through dirt, folding, imprinting). The standard includes four error correction levels corresponding to different restoration capacities (L = approx. 7%, M = approx. 15%, Q = approx. 25%, H = approx. 30%). The higher the error correction level that is chosen, the lower the codeable data volume.

2.6   Swiss QR Code

The Swiss QR Code complies with the specifications in this document and enables payments to be triggered by financial institutions across all payment channels and at post office counters (at branches and branches of a partner company). It is marked with a Swiss cross in the middle.

Figure 3:   Swiss QR Code

2.7   DPI

The printer and scanner resolution are customarily specified in dots per inch (dpi).

2.8   IID

The IID (institution identification) is used in Switzerland and Liechtenstein to identify financial institutions as participants in the Swiss RTGS systems. Every institution is assigned at least one IID.

2.9   QR-IID

The QR-IID is derived from the institutional identification (IID). QR-IIDs consist exclusively of numbers from 30000 to 31999. IBANs (QR-IBANs) based on these QR-IIDs are used only for the new procedure with a QR reference in the QR-bill (see chapter 2.11).

2.10   IBAN

The IBAN is the internationally standardized representation of a bank account number in accordance with the ISO 13616 standard.

2.11   QR-IBAN

For payments with a structured QR reference, the QR-IBAN must be used to indicate the account to be credited. The formal structure of the QR-IBAN corresponds to the rules stipulated in ISO 13616 standard for IBAN. A QR-IBAN can only be used for incoming payments. There is no plan for payments debiting with a QR-IBAN. The payment scheme with reference is recognized through a special financial institution identification (QR-IID). The values 30000 – 31999 are exclusively reserved for the QR-IID. Each legally independent financial institution participating in the scheme is assigned one QR-IID. The QR-IBAN contains the QR-IID of the account-keeping financial institution for identification of the scheme.

Detailed information about the QR-IID and QR-IBAN can be found in the "Technical information on the QR-IID and QR-IBAN" document [6].

The latest version is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.

2.12   Customer references

For payments with structured reference, the two following reference types are used.

2.12.1   QR reference

The structure of the QR reference corresponds to that of the ISR reference (always 26 numerical characters followed by a Modulo 10 recursive check digit, see Annex B "Check digit generation by Modulo 10 recursive") and can be used by the bill issuer as a structured reference.

2.12.2   Creditor Reference

The Creditor Reference is according to the ISO 11649 standard. The check digit of the creditor reference must be calculated with modulo 97-10.

3 Layout rules for the payment part with Swiss QR Code and receipt

3.1 The basics

The following layout rules apply to the payment part on a QR-bill with receipt which can be used in the following ways:

1. integrated in a QR-bill in paper form
2. as an eBill, if eBill is established as an available alternative payment scheme
3. as an enclosure to a QR-bill in paper form

- The QR-bill can also be produced as a PDF file (see chapter 3.7 "Notes about the QR-bill in PDF format").

- The layout rules for the payment part apply regardless of whether it is incorporated in a bill or enclosed with it.

- The payment part with receipt must be positioned at the lower edge of the QR-bill.

- The receipt must be positioned to the left of the payment part. It is of the same height as the payment part. The payment part and receipt together come to the same length as the shorter side of DIN-A4 format.

- If the payment part with receipt is integrated in a QR-bill in paper form, there must be a perforation between the bill details and the payment part and receipt.

- There should be a perforation between the payment part and the receipt, if the QR-bill is generated in paper form.

- A perforation between the payment part and the receipt is also required if the payment part and the receipt are enclosed separately with a bill.

- If information about the amount and debtor (payable by (name/address)) are not imprinted during the billing process, then corresponding fields are to be provided both in the payment part and on the receipt, for entry by hand (see Figure 5, Figure 6, and Figure 9). Other handwritten additions are not permitted.

- Only the defined headings and information or values may be imprinted (see chapter 3.5 "Sections of the payment part") for the individual sections (see chapter 3.5.4 "Information section").

- Use of payment part and receipt as an advertising platform or advertising is not permitted. The reverse side may not be imprinted.

- A Style Guide [4] providing detailed layout information and examples of the payment part and receipt – whether integrated or separate – is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.

3.2 Correspondence language

The QR-bill can be generated in any of these correspondence languages: German, French, Italian and English. The bill issuer is free to choose the correspondence language used. The terms to be used in the respective correspondence languages are listed in multiple languages in Annex D.

3.3   Paper format and quality

A physical payment section with a receipt must be created on white, perforated paper with a weight of no less than 80 and no more than 100 g/m2.The use of certified recycled, FSC and TCF papers is permitted. Neither coated nor reflecting paper stocks may be used.

The payment part is in DIN-A6 landscape format (148 x 105 mm). The receipt to the left of the payment part measures 62 x 105 mm, so that the two together measure 210 x 105 mm (DIN long).

3.4   Fonts and font sizes

Only the sans-serif fonts Arial, Frutiger, Helvetica and Liberation Sans are permitted in black. Text may not be in italics nor underlined.

The font size for headings and their associated values on the payment part must be at least 6 pt, and maximum 10 pt. Headings in the "Amount" and "Details" sections must always be the same size. They should be printed in **bold** and 2 pt smaller than the font size for their associated values. The recommended font size for headings is 8 pt and for the associated values 10 pt. The only exception, in font size 11 pt (**bold**), is the title "Payment part".

When filling in the "Alternative procedures" element, the font size is 7 pt, with the name of the alternative procedure printed in **bold** type.

The "Ultimate creditor" element is intended for use in the future but will not be used when QR-bill is introduced and should therefore not be filled in. If approval is given for the field to be filled in, the font size is expected to be 7 pt with the designation in **bold** type.

The font sizes for the receipt are 6 pt for the headings (**bold**) and 8 pt for the associated values. The exception, in font size 11 pt (**bold**), is the title "Receipt".

If, during scanning, in addition to the content of the Swiss QR Code, the information in the visible section of the payment part is also read, the best results will be achieved if the headings are in font size 8 pt. and the text information is in 10 pt. However, it must be ensured that all the required information can be shown in the visible section.

3.5   Sections of the payment part

The following illustration depicts the five sections of the payment part. The contents are described in the chapters that follow.
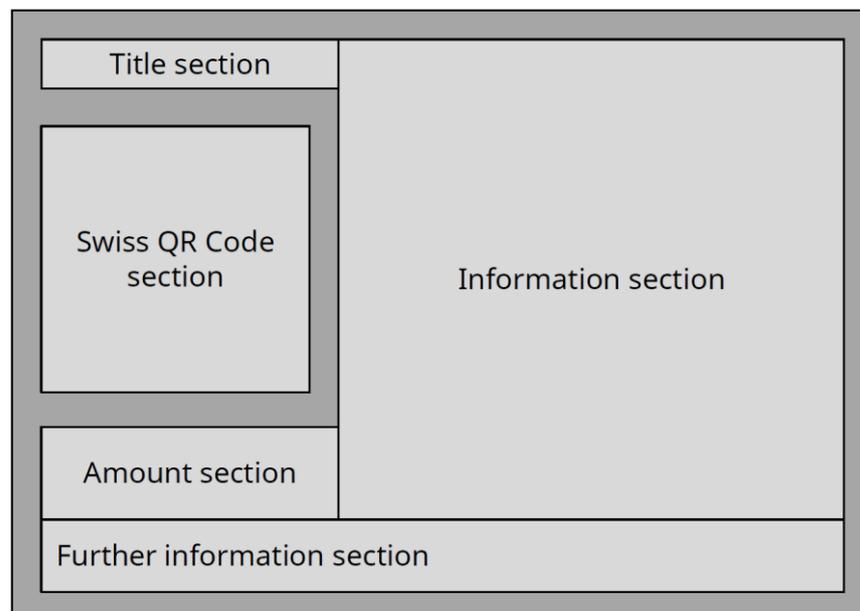

Figure 4:   Schematic illustration of the payment part of a QR-bill

The spaces between the sections – darker in color in Figure 4 – are mandatory, must be at least 5 mm in height and width, and may not be printed.

3.5.1   Title section

The text "Payment part" must be printed in the title section in 11 pt type **bold** type.

3.5.2   Swiss QR Code section

In the Swiss QR Code section, adhering to the 5 mm wide border ensures that the Swiss QR Code can be read.

3.5.3   Amount section

The amount section includes the currency and the amount, which are used as headings. Swiss francs and euros are the supported currencies. The currency codes "CHF" or "EUR" must be printed to the left in front of the amount or the amount field. The amount must be between CHF/EUR 0.01 and CHF/EUR 999999999.99. For amounts below CHF/EUR 1.00, the display variant e.g. CHF/EUR 0.10 is recommended.

If the amount is included in the Swiss QR Code, then it must be printed after the currency code. A blank (space) should be used as the thousands separator and a full stop "." as the decimal separator. The amount must always include two decimal places. (for example CHF 1 590.00 / EUR 1 590.00).

If no amount is contained in the Swiss QR Code, a blank field measuring 40 x 15 mm and with black edges (line thickness 0.75 pt) must be provided in which the debtor ("Payable by") can add the amount by hand, preferably in black. A file used for creating the corner marks is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.
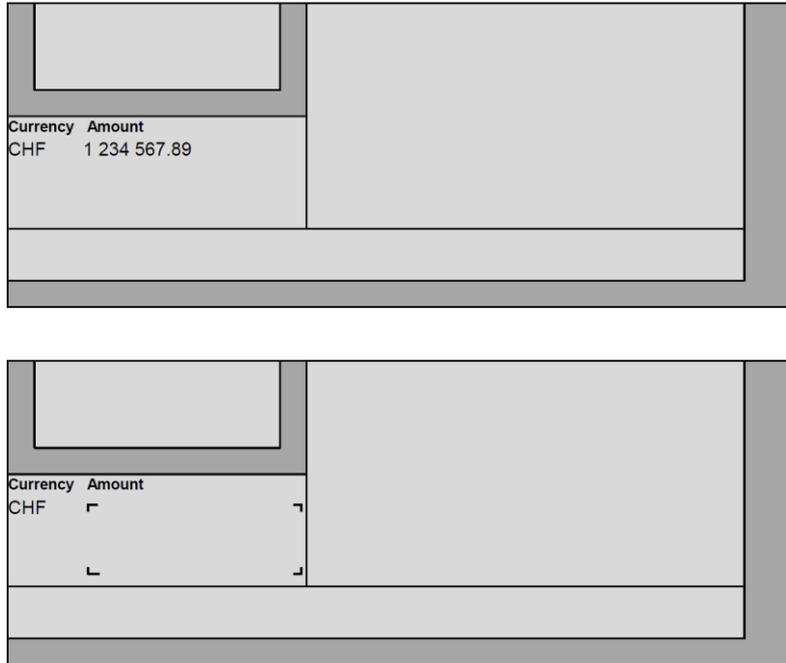
Figure 5:   Schematic illustration of the amount section

3.5.4   Information section

All values relevant for a payment from the Swiss QR Code must be printed in the information section. While doing so each bit of information must be marked with a heading. The values **must, if they are contained in the Swiss QR Code,** be positioned in the following correct order. If the Swiss QR Code contains no figures, neither the associated headings nor another text may be displayed.

Heading	Comments
Account / Payable to	IBAN/QR-IBAN from the Swiss QR Code. Printed in blocks of 4 characters (5x4-character groups, the last character separate). Holder of the listed account: • The details of the creditor in the QR-bill must match the details under which the credit account of the creditor is administered. • If the name of the creditor is too long, it can be truncated. Truncation is only permitted if the information remains clear. The name can be printed on two lines in the visible part.

Heading	Comments
	Address: • For invoicing to countries outside Switzerland, including Lichtenstein, the country code shall be printed on the payment section.
Reference	QR reference or Creditor Reference (ISO 11649). The QR reference is printed in blocks of 5 characters (beginning with 2 characters, then 5x5-character groups). The Creditor Reference is printed in blocks of 4 characters.
Additional information	Additional information for the bill recipient. This is where the content from the data elements "Ustrd" (Unstructured message) **and** "StrdBkginf" (Billing information) is shown. Both fields together can only contain a maximum of 140 characters. If both elements are filled in, then a line break can be introduced after the information in the first element "Ustrd" (Unstructured message). If there is insufficient space, the line break can be omitted (but this makes it more difficult to read). If not all the details contained in the QR code can be displayed, the shortened content must be marked with an ellipsis "…" at the end. It must be ensured that all personal data is displayed.
Payable by or Payable by (name/address)	If the debtor is not included in the Swiss QR Code, then instead of "Payable by" the heading "Payable by (name/address)" must be used and a blank field with black edges (line thickness 0.75 pt) printed out (see Figure 6). The field must measure at least 65 x 25 mm. A corresponding file is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix. If the name of the debtor is too long, it can be truncated. Truncation is only permitted if the information remains clear. The name can be printed on two lines in the visible part. For invoicing to countries outside Switzerland, including Lichtenstein, the country code should be printed on the payment section.

Table 3:   Headings of the payment part in the Information section

Comments

Use of the above-listed headings (see Annex D) is mandatory and they may not be changed inasmuch as they are contained in the Swiss QR Code.
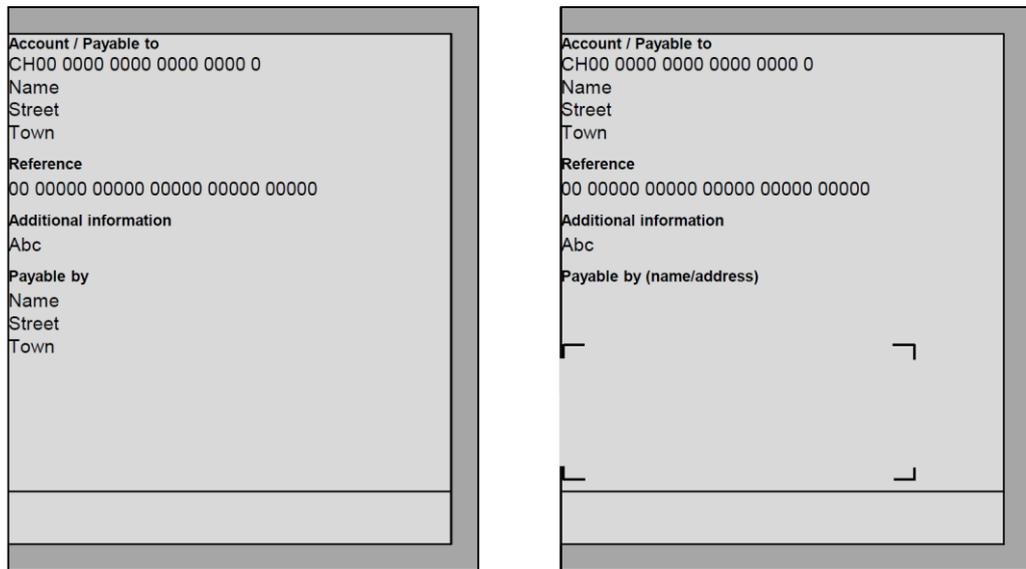
Figure 6:   Schematic illustration of the Information section

3.5.5   Further information section

This area contains the two data elements "Ultimate Creditor" and "Alternative procedures".

1. Ultimate Creditor

Note: The following information about the "Ultimate Creditor" field is only for advance information, in the event of it being used in the future.

This section is where the "Ultimate creditor" field, if available and approved for use, is displayed. Instead of the designation "Ultimate creditor", the relevant values in the Swiss QR Code are preceded by the words "In favour of" (**bold**). Just one line is available, so it is possible that not all the information in the QR-bill can be printed there. If that is the case, the shortened entry must be marked by an ellipsis "…" at the end. The data is printed in font size 7 pt, in the same order as in the Swiss QR Code.

2. Alternative procedures

The bottom area of the payment part or of the area "Further information section" may be used to indicate an alternative procedure. There are a maximum of two elements, each consisting of one line in font size 7 pt. The element includes at the start the (abbreviated) name of the alternative procedure. This must be followed by the personal data, so that this is certain to be displayed.

In the Swiss QR Code, there are always 100 alphanumerical characters available for the "Alternative procedures". A maximum of approx. 90 characters can be printed on one line, so it is possible that not all the data included in the QR code can be displayed. If that is the case, the shortened entry must be marked by an ellipsis "…" at the end. It must be ensured that all personal data is displayed.

3.6   Sections of the receipt

The following illustration shows the four sections of the receipt. The content of the different sections is described in the paragraphs below. The QR code and further "Information section"s from the payment part are omitted.

The blank areas – shaded dark in Figure 7 below – are mandatory, must measure at least 5 mm in height or width and must not be physically printed.
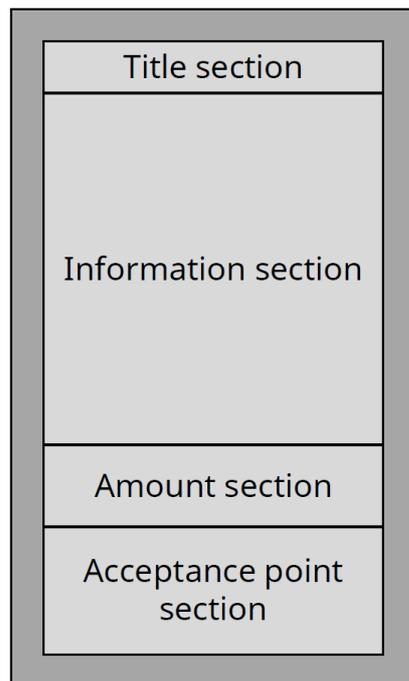
Figure 7:   Schematic illustration of the receipt for the payment part of a QR-bill

3.6.1   Title section

The text "Receipt" must be printed in the title section in 11 pt **bold** type.

3.6.2   Information section

In the information section, the values used must be printed, just as they are in the payment part, exactly matching those in the Swiss QR Code. Each piece of information must be labelled with a heading.

The values **must, if they are contained in the Swiss QR Code**, be positioned in the following correct order:

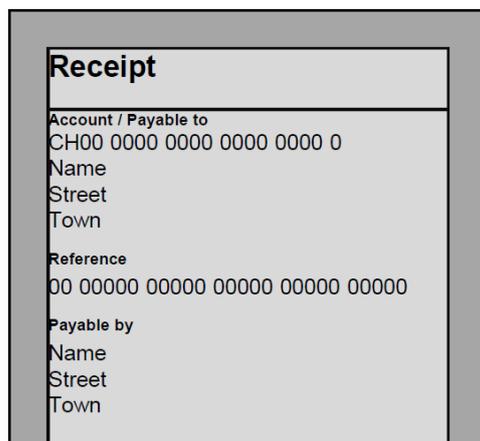| Heading	Comments
Account / Payable to	IBAN/QR-IBAN from the Swiss QR Code. Printed in blocks of 4 characters (5x4-character groups, the last character separate). Holder of the listed account: • The details of the creditor in the QR-bill must match the details under which the credit account of the creditor is administered. • If the name of the creditor is too long, it can be truncated. Truncation is only permitted if the information remains clear. The name can be printed on two lines in the visible part. Address: • For invoicing to countries outside Switzerland, including Lichtenstein, the country code should be printed on the payment section.
Reference	QR reference or Creditor Reference (ISO 11649). The QR reference is printed in blocks of 5 characters (beginning with 2 characters, then 5x5-character groups). The Creditor Reference is printed in blocks of 4 characters.
Payable by or Payable by (name/address)	If the debtor is not included in the Swiss QR Code, then instead of "Payable by", the heading "Payable by (name/address)" must be used and a blank field with black edges (line thickness 0.75 pt) printed out (see Figure 9). The field must measure at least 52 x 20 mm. A corresponding file is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix. If the name of the debtor is too long, it can be truncated. Truncation is only permitted if the information remains clear. The name can be printed on two lines in the visible part. For invoicing to countries outside Switzerland, including Lichtenstein, the country code should be printed on the payment section.

Table 4:   Headings of the payment part in the information section

Comments

Use of the above-listed headings (see Annex D) is mandatory and they may not be changed inasmuch as they are contained in the Swiss QR Code.

Figure 8:   Schematic illustration of the information section on the receipt of a QR-bill

Because of the limited space, it is permitted to:

- enter information in smaller or different font sizes in the payment part. The minimum font size is 6 pt.
- omit the street name and building number from the addresses of the creditor (Payable to) and the debtor (Payable by).

3.6.3   Amount section

The amount section includes the currency and the amount, which are printed as headings. The currencies Swiss francs and euros are supported. The currency codes "CHF" or "EUR" must be printed to the left in front of the amount or the amount field. The amount must be between CHF/EUR 0.01 and CHF/EUR 999999999.99. For amounts below CHF/EUR 1.00, the display variant e.g. CHF/EUR 0.10 is recommended.

If the amount is included in the Swiss QR Code, then it must be printed after the currency code. A blank (space) should be used as the thousands separator and a full stop "." as the decimal separator. The amount must always include two decimal places (e.g. CHF 1 590.00 / EUR 1 590.00).

If no amount is contained in the Swiss QR Code, a blank field measuring 30 x 10 mm and with black edges (line thickness 0.75 pt) must be provided in which the debtor can add the amount by hand.

A file for creating the corner marks is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.

3.6.4 Acceptance point section

The acceptance point section contains the text "Acceptance point", which should be printed right-aligned in the language of correspondence.
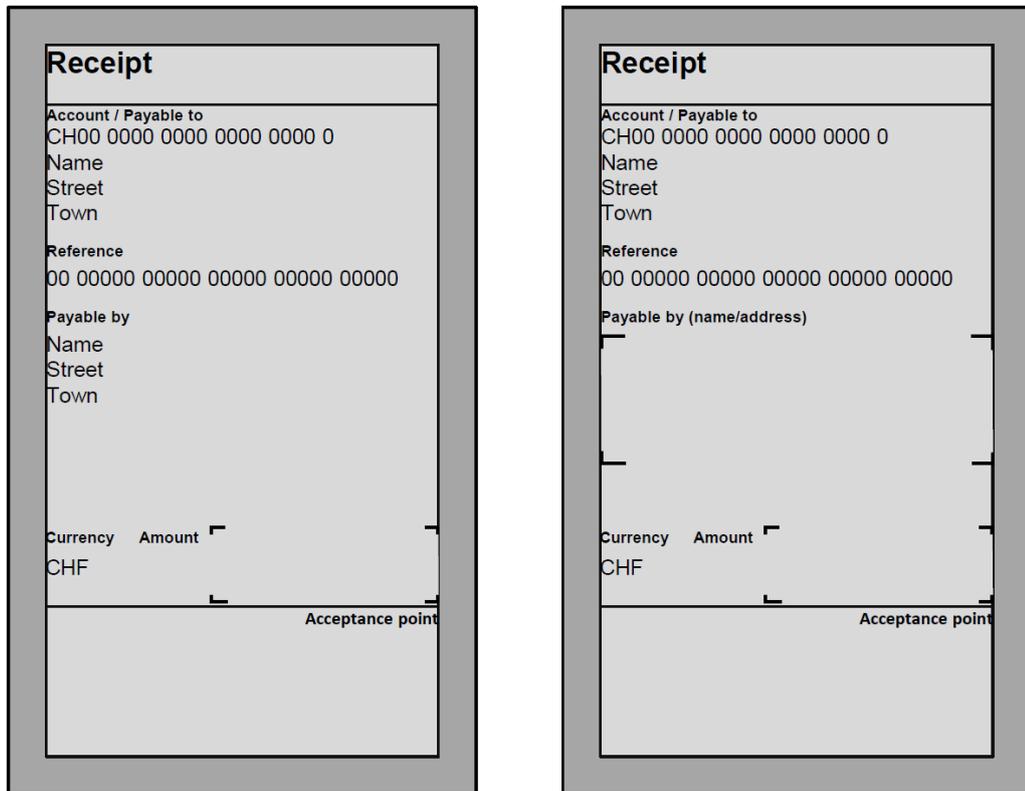
Figure 9:   Schematic illustration of the receipt of a QR-bill

3.7 Notes about the QR-bill in PDF format

QR-bills (or separate payment parts with receipts) in PDF format are only suitable for payments in e-banking or mobile banking, but not for paper-based payment transactions at the counter. When printing out PDF files, it must be ensured that the format specifications given above are complied with.

If the QR-bill with payment part and receipt or the separate payment part with receipt are generated as a PDF document and sent electronically, the A6 format of the payment part and the receipt on the left must be indicated by lines. Each of these lines must bear the scissors symbol "✂" or alternatively the instruction "Separate before paying in" above the line (outside the payment part). This indicates to the debtor that he or she must neatly separate the payment part and receipt if they want to forward the QR-bill to their financial institution by post for payment, or settle it at the post office counter (post office branches or branches of partner organizations).

4   Swiss QR Code database

4.1   Technical specifications

4.1.1   Character set

To ensure compatibility with the Swiss Implementation Guidelines for Credit Transfers relating to the ISO 20022 message "Customer Credit Transfer Initiation" (pain.001) [3], only the Latin character set (unescaped) is permitted in the Swiss QR Code as per the Swiss standard. Only characters in Unicode character set UTF-8 (8-bit Unicode Transformation Format) can be used in ISO 20022 XML messages (the message must be UTF-8-encoded). For this reason, the Swiss QR Code must also be UTF-8-encoded.

4.1.2   Permitted characters in the field definitions

Details about the "Field definitions" column in Table 7 "Swiss QR Code data elements":

Characters	Field definitions
general	Character set as stipulated in chapter 4.1.1
numeric	0–9
alphanumeric	A–Z a-z 0–9
decimal	0–9 plus decimal separator "."

Table 5:   Characters permitted

4.1.3   Field lengths

The field lengths specified represent the maximum lengths for the individual elements. It is not permitted to fill in the elements with blanks up to the maximum length.

4.1.4   Separator element

The individual elements in the Swiss QR Code according to the Swiss standard are separated from one another with a carriage return (CR + LF). All data elements must be present. If the data element has no content, at least a new line must be present (CR + LF or LF, but not CR alone).

The sole exceptions are the additional data elements "Alternative Procedures" marked with "A". These are omitted if they are not used, and no further subsequent data element is used.

The carriage return after the final element is eliminated.

4.1.5   Data groups

The data groups highlighted in light blue in Table 7 "Swiss QR Code data elements" serve solely for clarification of the technical context and the definition of common rules.

Such data groups may not be delivered in the Swiss QR Code.

If a data group is used, in those marked with "Optional", all sub-elements marked as "Dependent" must be filled.

4.2   Data structure

Table 7 "Swiss QR Code data elements" specifies all elements relevant for the Swiss QR Code.

4.2.1   Presentation conventions

The following presentation conventions apply for this document.

Table 7 "Swiss QR Code data elements" contains the following columns and information about the data structure:

1. Data structure

   - Logical data structure, defined data groups (name of the data group always in the blue fields) which logically belong to one another

2. Element name

   - Technical element name

3. St.

   - Status

4. General definition

   - Technical definitions and terms

5. Field definition

   - Technical field definitions

Status

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

Status (St.)	Designation	Description
M	Mandatory	Field must mandatorily be delivered filled. The phrase "Mandatory data group" is used in the data element table (see chapter 4.2.2).
D	Dependent	Field must mandatorily be filled if the superordinate data group is filled.

Status (St.)	Designation	Description
A	Additional	Must only be delivered if the element is not empty.
O	Optional	Field must mandatorily be delivered, but not necessarily filled (can be empty).
X	Do not fill in	Field must not be filled in but must be sent (intended "for future use", so the field separator must be sent).

Table 6:   Valid Status values for elements

Coloring in the tables

Data elements that contain at least one sub-element represent so-called data groups and are colored light blue.

Depiction of the logical structure in the tables

To be able to recognize where in the logical structure of the Swiss QR Code an element is positioned, the nesting depth is indicated with a "+" sign placed in front of the "Data structure" column. For example, the IBAN in the "Creditor information" is shown as follows:

QRCH

+CdtrInf

++IBAN

Depiction of deviations in naming in the payment part/receipt

A name is listed in the table for individual data groups that differ from the field names, which is to be used as a designation in the payment part/receipt. This designation is listed in the tables *in italics and in blue* beneath the designation of the data group:

Ultimate Creditor
Payable by

Figure 10:   Data group with technical element name and technical name for the payment part

4.2.2 Data elements in the QR-bill

QR Elements			Swiss QR Definition	
Data Structure	Element Name	St.	General Definition	Field Definition
QRCH +Header	Header		**Header** Header Data. Contains basic information about the Swiss QR Code	Mandatory data group
QRCH +Header ++QRType	QRType	M	**QRType** Unambiguous indicator for the Swiss QR Code. Fixed value "SPC" (Swiss Payments Code)	Fixed length: three-digit, alphanumeric
QRCH +Header ++Version	Version	M	**Version** Contains version of the specifications (Implementation Guidelines) in use on the date on which the Swiss QR Code was created. The first two positions indicate the main version, the following two positions the sub-version. Example: fixed value of "0200" for Version 2.0 Note: In collaboration with representatives of the financial center, SIX has decided that only the version designation "0200" is permitted in master version 02. From master version 03 onwards, depiction of subversions is enabled.	Fixed length: four-digit, numeric
QRCH +Header ++Coding	Coding	M	**Coding Type** Character set code. Fixed value 1 (indicates UTF-8 restricted to the Latin character set)	Fixed length: one-digit, numeric
QRCH +CdtrInf	CdtrInf		**Creditor information** *Account / Payable to*	Mandatory data group
QRCH +CdtrInf ++IBAN	IBAN	M	**IBAN** IBAN or QR-IBAN of the creditor.	Fixed length: 21 alphanumeric characters, only IBANs with CH or LI country code permitted.
QRCH +CdtrInf ++Cdtr	Cdtr		**Creditor**	Mandatory data group
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)	Fixed length: one-digit, alphanumeric

QR Elements		Swiss QR Definition		
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +CdtrInf ++Cdtr +++Name	Name	M	**Name** The creditor's name or company according to the account name. Comment: always matches the account holder	Maximum 70 characters permitted First name (optional, sending is recommended, if available) + last name or company name
QRCH +CdtrInf ++Cdtr +++StrtNmOrAdrLine1	StrtNmOrAdrLine1	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	Maximum 70 characters permitted
QRCH +CdtrInf ++Cdtr +++BldgNbOrAdrLine2	BldgNbOrAdrLine2	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	Structured Address: max. 16 characters allowed Combined address elements: maximum 70 characters permitted Must be provided for address type "K".
QRCH +CdtrInf ++Cdtr +++PstCd	PstCd	D	**Postal code** Postal code from creditor's address	Maximum 16 characters permitted The postal code is must be provided without a country code prefix. Combined address elements: must not be provided
QRCH +CdtrInf ++Cdtr +++TwnNm	TwnNm	D	**Town** Town from creditor's address	Maximum 35 characters permitted Combined address elements: must not be provided
QRCH +CdtrInf ++Cdtr +++Ctry	Ctry	M	**Country** Country from creditor's address	Two-letter country code according to ISO 3166-1
QRCH +UltmtCdtr	UltmtCdtr		**Ultimate Creditor** *In favour of* Information about the ultimate creditor	Optional data group; may only be used in agreement with the creditor's financial institution This whole data group must not be filled in for the time being (for Future Use)
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)	Fixed length: one-digit, alphanumeric

QR Elements			Swiss QR Definition	
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +UltmtCdtr ++Name	Name	X	**Name** The ultimate creditor's name or company	Maximum 70 characters permitted First name (optional, sending is recommended, if available) + last name or company name
QRCH +UltmtCdtr ++StrtNmOrAdrLine1	StrtNmOrAdrLine1	X	**Street or address line 1** Structured Address: Street/P.O. Box from ultimate creditor's address Combined address elements: Address line 1 including street and building number or P.O. Box	Maximum 70 characters permitted
QRCH +UltmtCdtr ++BldgNbOrAdrLine2	BldgNbOrAdrLine2	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	Structured Address: max. 16 characters allowed Combined address elements: maximum 70 characters permitted Must be provided for address type "K".
QRCH +UltmtCdtr ++PstCd	PstCd	X	**Postal code** Postal code from ultimate creditor's address	Maximum 16 characters permitted The postal code is must be provided without a country code prefix. Combined address elements: must not be provided
QRCH +UltmtCdtr ++TwnNm	TwnNm	X	**Town** Town from ultimate creditor's address	Maximum 35 characters permitted Combined address elements: must not be provided
QRCH +UltmtCdtr ++Ctry	Ctry	X	**Country** Country of the ultimate creditor's address	Two-letter country code according to ISO 3166-1
QRCH +CcyAmt	CcyAmt		**Payment amount information**	Mandatory data group
QRCH +CcyAmt ++Amt	Amt	O	**Amount** The payment amount	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. The amount must be between CHF/EUR 0.01 and CHF/EUR 999999999.99.

QR Elements			Swiss QR Definition	
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +CcyAmt ++Ccy	Ccy	M	**Currency** The payment currency, 3-digit alphanumeric currency code according to ISO 4217	Only CHF and EUR are permitted.
QRCH +UltmtDbtr	UltmtDbtr		**Ultimate Debtor** *Payable by*	Optional data group
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)	Fixed length: one-digit, alphanumeric
QRCH +UltmtDbtr ++Name	Name	D	**Name** The ultimate debtor's name or company	Maximum 70 characters permitted First name (optional, sending is recommended, if available) + last name or company name
QRCH +UltmtDbtr ++StrtNmOrAdrLine1	StrtNmOrAdrLine1	O	**Street or address line 1** Structured Address: Street/P.O. Box from ultimate debtor's address Combined address elements: Address line 1 including street and building number or P.O. Box	Maximum 70 characters permitted
QRCH +UltmtDbtr ++BldgNbOrAdrLine2	BldgNbOrAdrLine2	O	**Building number or address line 2** 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	Structured Address: max. 16 characters allowed Combined address elements: maximum 70 characters permitted Must be provided for address type "K".
QRCH +UltmtDbtr ++PstCd	PstCd	D	**Postal code** Postal code from ultimate debtor's address	Maximum 16 characters permitted The postal code is must be provided without a country code prefix. Combined address elements: must not be provided
QRCH +UltmtDbtr ++TwnNm	TwnNm	D	**Town** Town from ultimate debtor's address	Maximum 35 characters permitted Combined address elements: must not be provided
QRCH +UltmtDbtr ++Ctry	Ctry	D	**Country** Country from ultimate debtor's address	Two-letter country code according to ISO 3166-1

QR Elements			Swiss QR Definition	
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +RmtInf	RmtInf		**Payment reference**	Mandatory data group
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	Maximum four characters, alphanumeric Must contain the code QRR where a QR-IBAN is used; where the IBAN is used, either the SCOR or NON code can be entered

QR Elements		Swiss QR Definition		
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +RmtInf ++Ref	Ref	D	**Reference** Note: The structured reference is either a QR reference or an ISO 11649 Creditor Reference	Maximum 27 characters, alphanumeric; must be filled if a QR-IBAN is used. QR reference: 27 characters, numeric, check sum calculation according to Modulo 10 recursive (27th position of the reference) Creditor Reference (ISO 11649): max 25 characters, alphanumeric The element may not be filled for the NON reference type. Banks do not distinguish between upper and lower case capitalization. QR reference - Must be used in conjunction with a QR-IBAN - Always 27 characters - Numeric - Check-digit calculation as per modulo 10 recursive (27th digit of reference) Creditor reference (ISO 11649): - 5 to 25 characters - Alphanumeric - The check digit of the creditor reference must be calculated with modulo 97-10 (digits 3&4 of reference) Comments - The element must not be filled in for the reference type NON. - The banks draw no distinction between lower and upper case when processing.
QRCH +RmtInf ++AddInf	AddInf		**Additional information** Additional information can be used for the scheme with message and for the scheme with structured reference.	Unstructured message and Booking instructions may contain a common total of up to 140 characters
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.	Maximum 140 characters permitted

QR Elements		Swiss QR Definition		
Data Structure	**Element Name**	**St.**	**General Definition**	**Field Definition**
QRCH +RmtInf ++AddInf +++Trailer	Trailer	M	**Trailer** Unambiguous indicator for the end of payment data. Fixed value "EPD" (End Payment Data).	Fixed length: three-digit, alphanumeric
QRCH +RmtInf ++AddInf +++StrdBkgInf	StrdBkgInf	A	**Bill information** Bill information contain coded information for automated booking of the payment. The data is not forwarded with the payment.	Maximum 140 characters permitted Use of the information is not part of the standardization. In the Annex you will find the version of Swico's "Recommendations on the structure of information from the bill issuer for QR-bills" that is valid at the time of publication of these Implementation Guidelines.
QRCH +AltPmtInf	AltPmtInf		**Alternative schemes** Parameters and data of other supported schemes	Optional data group with a variable number of elements
QRCH +AltPmtInf ++AltPmt	AltPmt	A	**Alternative scheme parameters** Parameter character chain of the alternative scheme according to the syntax definition in the "Alternative scheme" section	A maximum of two occurrences may be provided. Maximum 100 characters per occurrence permitted

Table 7:   Swiss QR Code data elements

4.3   Technical specifications

The mapping of the data in the Swiss QR Code in the ISO 20022 pain.001 message is described in Swiss "Implementation Guidelines for Credit Transfers" (pain.001) [3].

4.3.1   Use of address information

The address of the parties involved – for example that of the creditor – may be sent either structured (separately) or as combined address fields (two pieces of data in each field).

Structured address fields: The elements "Street or address line 1", "Building number or address line 2", "Postal code", "Town" and "Country" should be filled in. For a P.O. Box, the "Street or address line 1" element should be used.

Combined address fields: The elements "Street or address line 1", "Building number or address line 2" and "Country" should be filled in. For a P.O. Box, the "Street or address line 1" element should be used.

Element	Example: Structured	Example: Combined	Remarks
Address type	"S"	"K"	"S" - Structured address "K" - Combined address
Name	Pia-Maria Rutschmann-Schnyder	Pia-Maria Rutschmann-Schnyder	
Street or address line 1	Grosse Marktgasse	Grosse Marktgasse 28	"S" - Street/P.O. Box "K" - Street and building number of P.O. Box
Building number or address line 2	28	9400 Rorschach	"S" - Building number "K" - Postal code and town
Postal code	9400		"S" - Postal code "K" - Do not fill in
Town	Rorschach		"S" – Town "K" - Do not fill in
Country	CH	CH	

Table 8:   Examples of how to use address information

4.3.2   Customer references

Structured reference as "payment reference"

The two following types of structured references can be delivered in the "Reference" element:

- **Use of the QR Reference (QRR)**

  The QR reference (see chapter 2.12.1) enables the creditor to compare their invoices and the incoming payments automatically.

  Use of the QR reference presupposes that a QR-IBAN has been used. The QR-IBAN identifies the payment across all payment channels as one which must have a QR reference delivered with it. An IBAN must therefore not be used.

- **Use of the Creditor Reference (SCOR)**

  The internationally used Creditor Reference (ISO 11649) also enables the creditor to compare their invoices and incoming payments automatically.

  The check digit of the creditor reference must be calculated with modulo 97-10.

  Use of the Creditor Reference (ISO 11649) presupposes that an IBAN has been used. A QR-IBAN must not be used.

4.3.3   Additional information

The two elements "Unstructured message" and "Billing information" are available for additional information. The number of characters in the two fields together must not exceed 140 characters:

- Unstructured messages can be used to give the payment purpose or for additional textual information about payments with a structured reference. Unstructured references are printed on the payment part under the heading "Additional information".
- The element "Billing information" contains coded information of the bill issuer for the bill recipient. This information may be used for automating accounts payable processes, for instance. The data is not forwarded with the payment but it is printed on the payment part. The coding of the element always begins with "//" (slash slash) followed by the double-digit, abbreviated name of the proposed version of the "Structured information for the bill issuer" that is being used.

Regarding the "Billing information" element: Swiss financial institutions do not prescribe the structure of this information, to allow for the individual needs of the different sectors. A flexible solution has therefore been defined which allows for the use in parallel of different ways of coding this information. For this purpose, the first two characters are reserved as the code for the rule defining how the remaining characters of this field should be interpreted. For more information on coding, see www.paymentstandards.ch.

So that the relevant "Billing information" can be identified, SIX is prescribing a two-digit coding system. This and the Structural recommendations (syntax) must be agreed with SIX before it is used (process, see Annex E). Billing data must not include any personal data.

Applicable structural recommendations for Billing information are available on www.paymentstandards.ch.

4.3.4 Alternative schemes

In the Swiss QR Code, the bill issuer can offer data for alternative schemes in the element "Parameter alternative procedures" in the context of making payments. In the current Implementation Guidelines, the element may be delivered a maximum of twice.

Since only about 90 characters can be displayed on the payment part in "Alternative schemes", the following rules are to be followed in order to ensure data protection while populating this element:

- First, the (abbreviated) name of the alternative procedure must be coded (e.g. eBill).The next character must contain the subelement "Separator" that is used (e.g. "/").
- Subsequently, the data that may include personal data should be coded so that they are displayed on the payment part.
- An unlimited number of sub-elements can be delivered within the permitted field length of the element.

The data in the alternative scheme element is only interpreted and used by the corresponding scheme.

It solely serves the debtor for the easy use of this scheme.

For current information about alternative procedures, see https://www.paymentstandards.ch/de/shared/communication-grid/alternative-procedures.html.

4.4 QR-bill "DO NOT USE FOR PAYMENT"

In general, all three forms of QR-bill can be used as notifications. The specifications for the QR-bill must still be complied with nonetheless. It is important that the entries in both fields "Additional information" and "Amount" are filled exactly according to the guidelines in the following table. This applies both to the Swiss QR Code, the payment part, and the receipt.

Language	Amount	Additional information (unstructured message)
German		NICHT ZUR ZAHLUNG VERWENDEN
French	0.00	NE PAS UTILISER POUR LE PAIEMENT
Italian		NON UTILIZZARE PER IL PAGAMENTO
English		DO NOT USE FOR PAYMENT

Table 9:   Population Rules for Notification with a QR-bill

Comments

- The "DO NOT USE FOR PAYMENT" notification must be printed in capital letters in the "Additional information" field. Deviating entries may lead to misprocessing.

- The amount field may not be left blank. A blank amount field is only used if the amount to be paid is selected by the debtor themselves. Hence, this pertains to another use case.

- The amount field may not contain any letters (e.g. "XXX") or special characters. It is a purely numeric field.

- The amount of CHF 0.00 guarantees that for conversion into an eBill (alternative procedure), the invoice is converted into a notification that may not be released for payment.
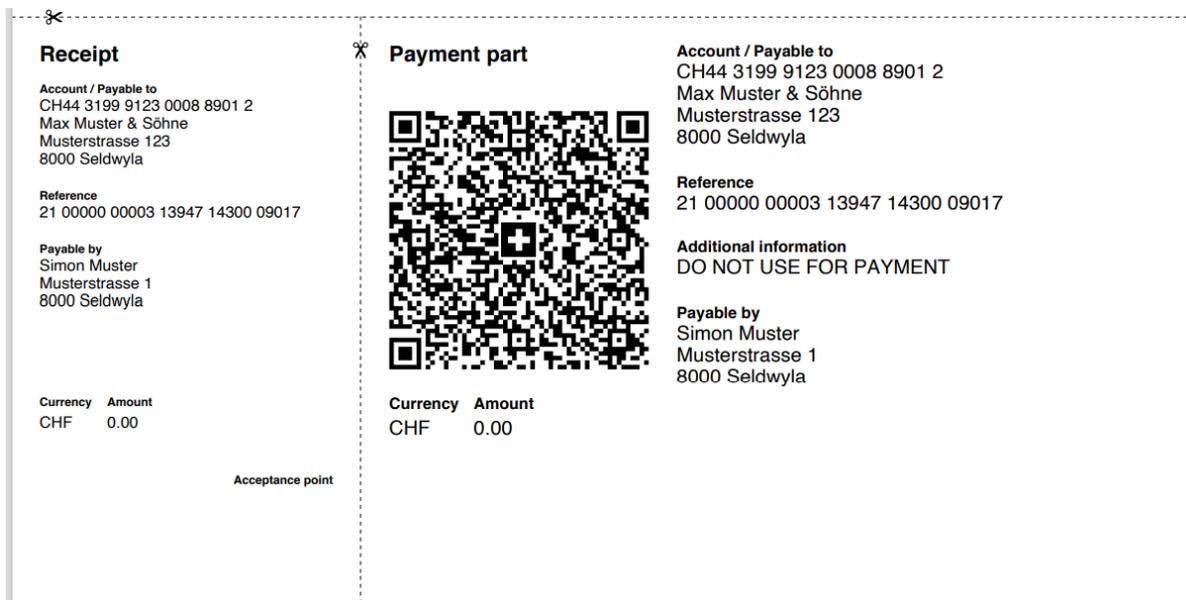
Figure 11:   "DO NOT USE FOR PAYMENT" QR-bill

5   Parameters for generating the Swiss QR Codes

The following points are binding for generating a Swiss QR Code.

5.1   Error correction level

The code generation must take place with error correction level "M", which means a redundancy or assurance of around 15%.

5.2   Maximum data range and QR code version

The maximum Swiss QR Code data content permitted is 997 characters (including the element separators). The version of the QR Code resulting with error correction level "M" and binary coding is version 25 with 117 x 117 modules.

5.3   Minimum module size

To ensure that the Swiss QR Code is read securely, a minimum module size of 0.4 mm is required when printing.

5.4   Measurements of the Swiss QR Code for printing

The measurements of the Swiss QR Code for printing must always be 46 x 46 mm (without surrounding quiet space) regardless of the Swiss QR Code version. Depending on the printer resolution, the Swiss QR Code produced must be enlarged or reduced accordingly. This must occur on the basis of a vector graphic in order to maintain the quality of the Swiss QR Code.
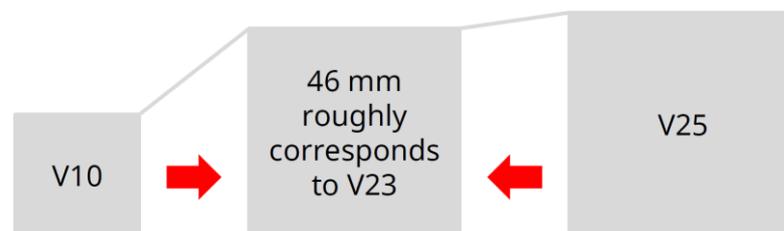
Figure 12:   Scaling of the Swiss QR Code to fixed sizes

All QR codes must be generated in the smallest version and only then scaled to the dimensions 46 x 46 mm.

5.4.1   Quiet space according to ISO 18004

To ensure the readability of the Swiss QR Code, an unprinted border must be provided around the Swiss QR Code corresponding to the width of four modules (corresponds to >= 1.6 mm).

In the design recommendations, this border was expanded to 5 mm to improve user-friendliness (see chapter 3.5.2, Swiss QR Code section).

5.4.2   Recognition symbol

To increase the recognizability and differentiation for users, the Swiss QR Code created for printout is overlaid with a Swiss cross logo measuring 7 x 7 mm.

A corresponding file with the logo is available in the Download Center at www.paymentstandards.ch/kommunikationsmatrix.
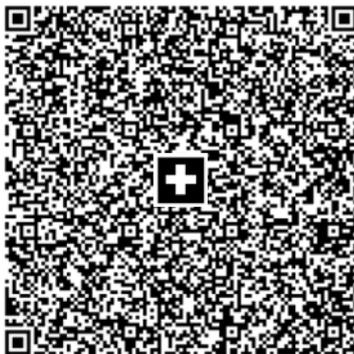
Figure 13:   Swiss QR Code with Swiss cross as recognition feature (not true to scale)

6 Field contents and meta data

The following rules apply for payment instructions to financial institutions as well as to payments at post office counters (branches and branches with partner organizations). They relate to their solutions for reading from the Swiss QR Code and further processing. This especially applies for scanning solutions (physical payment instructions) as well as for mobile end devices (M-banking). Producers of software solutions must adhere to these rules in order to enable smooth processing.

6.1 Checking the field contents

Before the further processing of the values read from the Swiss QR Code, individual field contents that are listed in the Implementation Guidelines must be checked. This means that:

- The content must match a valid value; this applies for QRType, the version, the coding type and the currency.
- The general specifications must be adhered to as per chapter 4.1 "Technical specifications".
- The value must be syntactically correct; this applies for the amount (if entered).
- The permitted combinations of account with reference type (IBAN only with "SCOR" [Creditor Reference] or "NON" [optional free text information]; QR-IBAN with "QRR" [QR reference]) must be used.

6.2 Meta data

The following elements from the Swiss QR Code (data group header) are never transmitted as metadata for a payment and must not be present in the visible part:

- QRType
- Version
- Coding Type

7   Paying QR-bills with a SWIFT MT101/MT103 Message

7.1   Purpose

This chapter describes the banking rules that enable the mapping of the fields of the Swiss QR Code into a SWIFT FIN message (MT101 and MT103). The mapping table is included in Annex F.

7.2   Demarcation

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

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

Detailed information on the QR-bill and on SWIFT MT messages can be found in the reference documents e.g. "SWIFT User Handbook" [8].

7.3   Preliminary remarks

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

- 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 mapping table in Annex F, the different variants 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 into SWIFT FIN messages include the following risks, among others:

- Not all information contained in the data schema of a QR-bill can be included in a SWIFT MT message. Every such 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.

Annex A: Examples

The QR-bills shown in the following examples are schematic and not drawn to scale. The exact presentation formats are published in the Style Guide [4].

The following abbreviations and symbols are used in the examples below:

¶	=	CR + LF	**Note:** Instead of the character string CR + LF, the character LF can be used alone.
CR	=	Creditor	
UCR	=	Ultimate creditor	This group must not be filled in at present, because it is intended for future use.
UD	=	Ultimate debtor	
APn	=	Alternative scheme n	

Table 10:   Abbreviations used in the examples

Figure 14:   Example of a QR-bill (schematic, not true to scale)

Data example for the QR code with two additional schemes and Billing information

Element as described in chapter 4.2 Data structure (partially shortened)	Content
QRType	SPC¶
Version	0200¶
Coding Type	1¶
Account	CH4431999123000889012¶
CR – AdressTyp	S¶
CR – Name	Max Muster & Söhne¶
CR – Street or address line 1	Musterstrasse¶
CR – Building number or address line 2	123¶
CR – Postal code	8000¶
CR – City	Seldwyla¶
CR – Country	CH¶
UCR – AdressTyp	¶
UCR – Name	¶
UCR - Street or address line 1	¶
UCR – Building number or address line 2	¶
UCR – Postal code	¶
UCR – City	¶
UCR – Country	¶
Amount	1949.75¶
Currency	CHF¶
UD– AdressTyp	S¶
UD– Name	Simon Muster¶
UD– Street or address line 1	Musterstrasse¶
UD– Building number or address line 2	1¶
UD– Postal code	8000¶
UD– City	Seldwyla¶
UD– Country	CH¶
Reference type	QRR¶
Reference	210000000003139471430009017¶
Unstructured message	Order from 15.10. 2020¶
Trailer	EPD¶

Element as described in chapter 4.2 Data structure (partially shortened)	Content
Billing information	//S1/10/1234/11/201021/30/102673386/32/7.7/40/0:30¶
AV1 – Parameters	Name AV1: UV;UltraPay005;12345¶
AV2 – Parameters	Name AV2: XY;XYService;54321

Table 11:   Data for QR code, example 1

Figure 15:   Payment part, example 1 (schematic, not true to scale)

Data example for QR code without amount (e.g. donation) and without debtor

Element as described in chapter 4.2 Data structure (partially shortened)	Content
QRType	SPC¶
Version	0200¶
Coding Type	1¶
Account	CH5204835012345671000¶
CR – AdressTyp	S¶
CR – Name	Sample Foundation¶
CR – Street or address line 1	P.O. Box¶
CR – Building number or address line 2	¶
CR – Postal code	3001¶
CR – City	Bern¶
CR – Country	CH¶
UCR – AdressTyp	¶
UCR – Name	¶
UCR - Street or address line 1	¶
UCR – Building number or address line 2	¶
UCR – Postal code	¶
UCR – City	¶
UCR – Country	¶
Amount	¶
Currency	CHF¶
UD– AdressTyp	¶
UD– Name	¶
UD– Street or address line 1	¶
UD– Building number or address line 2	¶
UD– Postal code	¶
UD– City	¶
UD– Country	¶
Reference type	NON¶
Reference	¶
Unstructured message	¶
Trailer	EPD¶
Billing information	¶
AV1 – Parameters	¶
AV2 – Parameters	

Table 12:   Data for QR code, example 2

Figure 16:   Payment part, example 2 (schematic, not true to scale)

Data example for QR code with structured reference without additional information and without alternative scheme

Element as described in chapter 4.2 Data structure (partially shortened)	Content
QRType	SPC¶
Version	0200¶
Coding Type	1¶
Account	CH5800791123000889012¶
CR – AdressTyp	S¶
CR – Name	Muster Krankenkasse¶
CR – Street or address line 1	Musterstrasse¶
CR – Building number or address line 2	12¶
CR – Postal code	8000¶
CR – City	Seldwyla¶
CR – Country	CH¶
UCR – AdressTyp	¶
UCR – Name	¶
UCR - Street or address line 1	¶
UCR – Building number or address line 2	¶
UCR – Postal code	¶
UCR – City	¶
UCR – Country	¶
Amount	211.00¶
Currency	CHF¶
UD– AdressTyp	S¶
UD– Name	Sarah Beispiel¶
UD– Street or address line 1	Musterstrasse¶
UD– Building number or address line 2	1¶
UD– Postal code	8000¶
UD– City	Seldwyla¶
UD– Country	CH¶
Reference type	SCOR¶
Reference	RF720191230100405JSH0438¶
Unstructured message	¶
Trailer	EPD¶

Element as described in chapter 4.2 Data structure (partially shortened)	Content
Billing information	¶
AV1 – Parameters	¶
AV2 – Parameters	

Table 13:   Data for QR code, example 3

Figure 17:   Payment part, example 3 (schematic, not true to scale)

Example data for QR code with invoice issuer / creditor outside Switzerland, with a structured reference and with no additional information and no alternative procedures

Element as described in chapter 4.2 Data structure (partially shortened)	Content
QRType	SPC¶
Version	0200¶
Coding Type	1¶
Account	CH5800791123000889012¶
CR – AdressTyp	S¶
CR – Name	Max Muster & Söhne¶
CR – Street or address line 1	Musterstrasse¶
CR – Building number or address line 2	123¶
CR – Postal code	9490¶

Element as described in chapter 4.2 Data structure (partially shortened)	Content
CR – City	Vaduz¶
CR – Country	LI¶
UCR – AdressTyp	¶
UCR – Name	¶
UCR - Street or address line 1	¶
UCR – Building number or address line 2	¶
UCR – Postal code	¶
UCR – City	¶
UCR – Country	¶
Amount	199.95¶
Currency	CHF¶
UD– AdressTyp	S¶
UD– Name	Sarah Beispiel¶
UD– Street or address line 1	Musterstrasse¶
UD– Building number or address line 2	1¶
UD– Postal code	8000¶
UD– City	Seldwyla¶
UD– Country	CH¶
Reference type	SCOR¶
Reference	RF18539007547034¶
Unstructured message	¶
Trailer	EPD¶
Billing information	¶
AV1 – Parameters	¶
AV2 – Parameters	

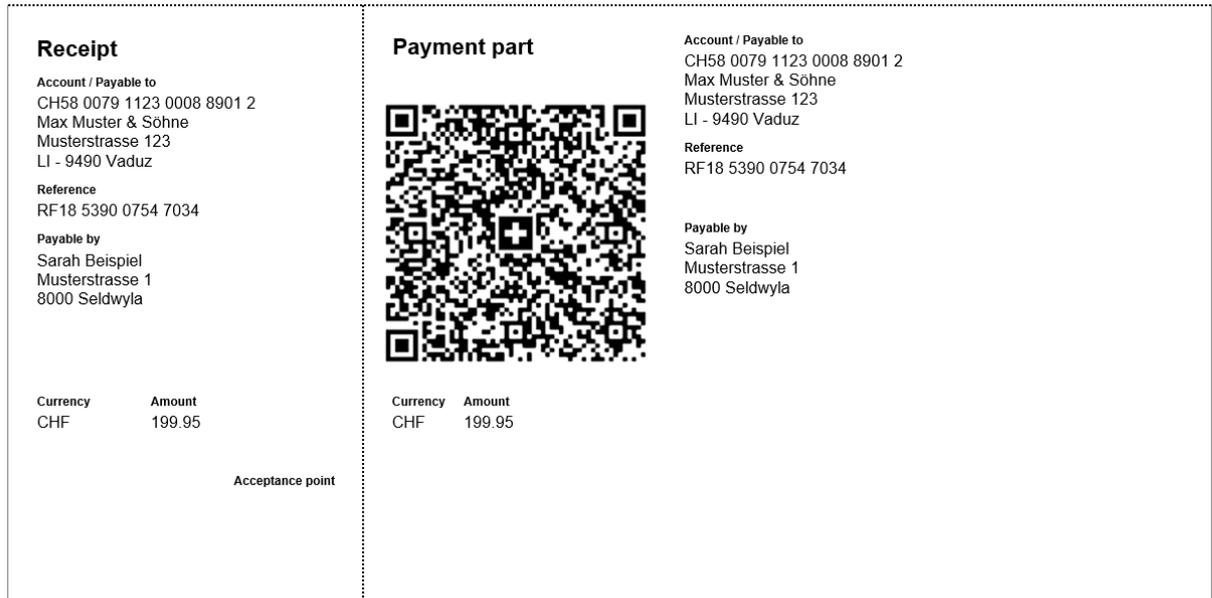*Table 14:   Data for QR code, example 4*

Figure 18:   Payment part, example 4 (schematic, not true to scale)

Example data for QR code with invoice recipient / customer outside Switzerland, with a structured reference and with no additional information and no alternative procedures

Element as described in chapter 4.2 Data structure (partially shortened)	Content
QRType	SPC¶
Version	0200¶
Coding Type	1¶
Account	CH5800791123000889012¶
CR – AdressTyp	S¶
CR – Name	Max Muster & Söhne¶
CR – Street or address line 1	Musterstrasse¶
CR – Building number or address line 2	123¶
CR – Postal code	8000¶
CR – City	Seldwyla¶
CR – Country	CH¶
UCR – AdressTyp	¶
UCR – Name	¶
UCR - Street or address line 1	¶
UCR – Building number or address line 2	¶
UCR – Postal code	¶

Element as described in chapter 4.2 Data structure (partially shortened)	Content
UCR – City	¶
UCR – Country	¶
Amount	199.95¶
Currency	CHF¶
UD– AdressTyp	S¶
UD– Name	Sarah Beispiel¶
UD– Street or address line 1	Musterstrasse¶
UD– Building number or address line 2	1¶
UD– Postal code	78462¶
UD– City	Konstanz¶
UD– Country	DE¶
Reference type	SCOR¶
Reference	RF18539007547034¶
Unstructured message	¶
Trailer	EPD¶
Billing information	¶
AV1 – Parameters	¶
AV2 – Parameters	

Table 15:   Data for QR code, example 5

Figure 19: Payment part, example 5 (schematic, not true to scale)

Annex B: Check digit generation by Modulo 10 recursive

The QR reference consists of 27 positions and is numerical. The last position (on the right) is occupied by a check digit (P).

The use of check digit generation in the reference prevents errors by the debtor in the order entry.

Modulo 10 recursive must be used to generate the check digit. The recursive schema for calculating the QR reference consists of using Modulo10 to repeat separating off the next digit of the 26-digit reference until the number only consists of one digit.

The sequence of numbers to be checked is processed from left to right. For the first digit, the carry-forward = 0.

The number to be checked corresponds to the column number, and the carry-forward to the line number in the table. The combined value of both produces the carry-forward for the next digit in the sequence.

Carry over	Digits of sequence of digits to be checked										Check digit
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
0	0	9	4	6	8	2	7	1	3	5	**0**
1	9	4	6	8	2	7	1	3	5	0	**9**
2	4	6	8	2	7	1	3	5	0	9	**8**
3	6	8	2	7	1	3	5	0	9	4	**7**
4	8	2	7	1	3	5	0	9	4	6	**6**
5	2	7	1	3	5	0	9	4	6	8	**5**
6	7	1	3	5	0	9	4	6	8	2	**4**
7	1	3	5	0	9	4	6	8	2	7	**3**
8	3	5	0	9	4	6	8	2	7	1	**2**
9	5	0	9	4	6	8	2	7	1	3	**1**

Figure 20:   Check digit matrix

Example

Input: Sequence of digits 2100000000313947143000901
(positions 1 to 26 of the 27-digit QR reference)

Figure 21:   Check digit calculation example
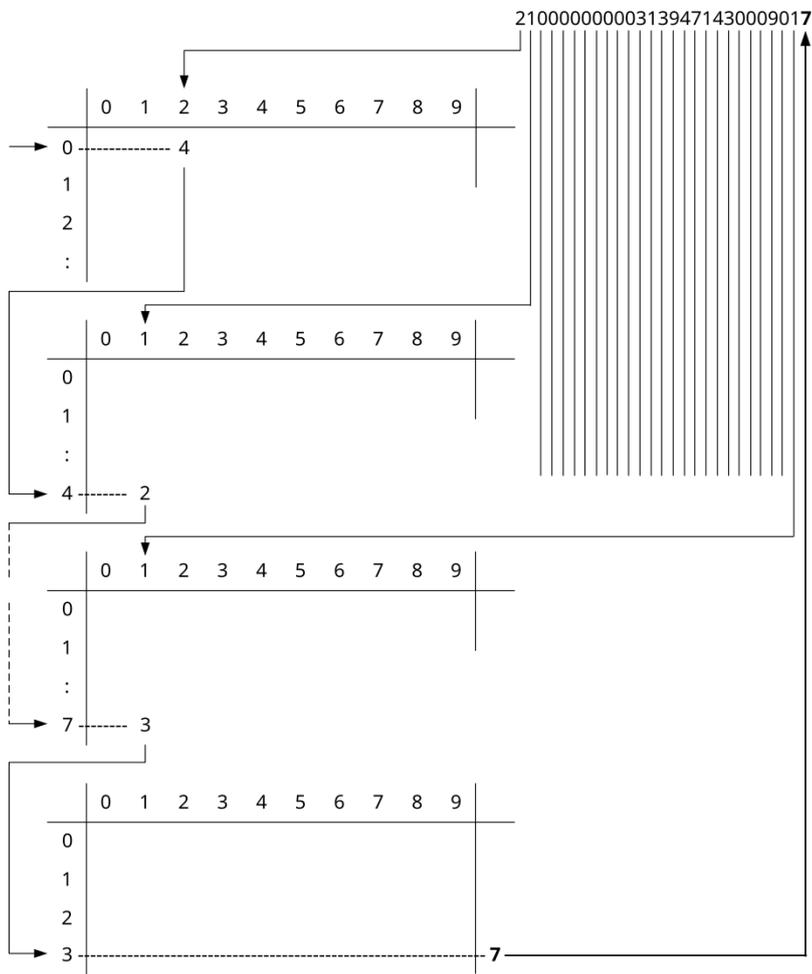
Rules

- Commence with carry-over 0 and combine with the **1st digit** of row 2, resulting in a value or carry-over of 4
- Carry-over 4 combined with the **2nd digit** of row 1 results in a combination or carry-over of 2

etc.

- Carry-over 7 combined with the **last digit** of row 1 results in a combination or carry-over of 3
- The value in the last column in the extension of carry-over 3 is the check digit = 7

Output: Sequence of digits 21 00000 00003 13947 14300 09017
(positions 1 to 27 of the 27-digit QR reference)

Annex C: Depiction of the customer reference in the ISO 20022 pain.001 payment message

The options listed above for the provision of a customer reference are to be delivered when generating a pain.001 payment message as follows:

Scheme with structured reference without additional information

Figure 22:   pain.001 – Scheme with structured reference without additional information

QR element/Content	pain.001 element	pain.001 element content
Reference QR reference (presupposes the use of the QR-IBAN) or Creditor Reference (ISO 11649; presupposes the use of an IBAN)	RmtInf/Strd/CdtrRefInf/Ref	Structured reference (QRR, SCOR)

Table 16:   Structured reference in pain.001

Scheme with structured reference with additional information

Data element in the QR code   **Depiction in pain.001**
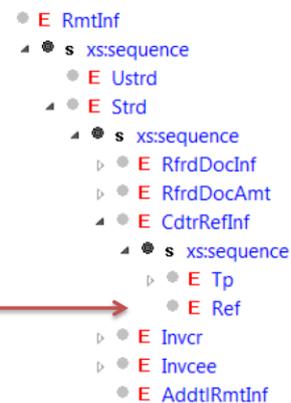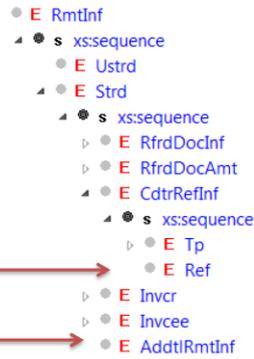

Figure 23:   pain.001 – Scheme with structured reference with additional information

QR element/Content	pain.001 element	pain.001 element content
Reference QR reference (which presupposes the use of the QR-IBAN) or Creditor Reference (as per ISO 11649 which; presupposes the use of an IBAN)	RmtInf/Strd/CdtrRefInf/Ref	Structured reference (QRR, SCOR)
Unstructured message	RmtInf/Strd/AddtlRmtInf	Messages

Table 17:   Structured reference with additional information in pain.001

Scheme with message

Data element in the QR code   **Depiction in pain.001**
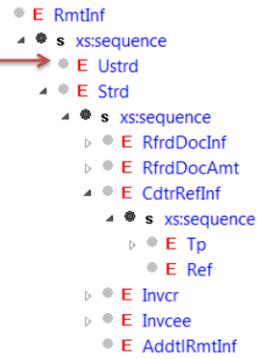
Figure 24:   pain.001 – Scheme with message

QR element/Content	pain.001 element	pain.001 element content
Unstructured message	RmtInf/Ustrd	Messages

Table 18:   Bill issuer's additional information in pain.001

Annex D: Multilingual glossary

Text literals for use in the payment part of a QR-bill

German	French	Italian	English
Heading			
Zahlteil	Section paiement	Sezione pagamento	Payment part
Empfangsschein	Récépissé	Ricevuta	Receipt
Name of field			
Konto / Zahlbar an	Compte / Payable à	Conto / Pagabile a	Account / Payable to
Referenz	Référence	Riferimento	Reference
Zusätzliche Informationen	Informations supplémentaires	Informazioni supplementari	Additional information
Zahlbar durch	Payable par	Pagabile da	Payable by
Zahlbar durch (Name/Adresse)	Payable par (nom/adresse)	Pagabile da (nome/indirizzo)	Payable by (name/address)
Währung	Monnaie	Valuta	Currency
Betrag	Montant	Importo	Amount
Annahmestelle	Point de dépôt	Punto di accettazione	Acceptance point
Hints			
Vor der Einzahlung abzutrennen	A détacher avant le versement	Da staccare prima del versamento	Separate before paying in
Ultimate Creditor (Future Use)			
Zugunsten	En faveur de	A favore di	In favour of

Table 19:   Multilingual headings in the payment part

General terms relating to the QR-bill

German	French	Italian	English
QR-Rechnung	QR-facture	QR-fattura	QR-bill
QR-Referenz	Référence QR	Riferimento QR	QR reference
QR-IID	QR-IID	QR-IID	QR-IID
QR-IBAN	QR-IBAN	QR-IBAN	QR-IBAN
Rechnungsinformationen	Informations de facture	Informazioni per la fattura	Billing information
Alternative Verfahren	Procédures alternatives	Procedure alternative	Alternative procedures

Table 20:   General terminology of the QR-bill

Annex E: Guidelines for syntax definitions in the "Billing information" and "Alternative procedures" fields in the QR-bill

The field **"Billing information"** supports automation of debtor's accounts payable. A user group interested in using the field, e.g. a business sector, may add Creditor information here on the invoice, such as VAT number, VAT amount, date on which the service was provided, etc. The definition of structure and data content is, with few restrictions, at the discretion of the relevant user group.

The **"Alternative procedures"** field contains information necessary to convert a QR-bill into another procedure (e.g. an eBill requires the Debtor's e-mail address). The definition of structure and data content is, with few restrictions, at the discretion of the relevant service provider.

Target groups

This guide is dedicated to invoice senders and recipients as well as their industry associations which wish to use the "Billing information" field in the QR-bill.
The description of the "Alternative procedures" field is dedicated to service providers in the Swiss payment system which convert the QR-bills into a form preferred by their customers.

Purpose

This guide describes the process for defining, implementing and invalidating syntax definitions for the "Billing information" and "Alternative procedures" fields.

Delimitation

The specifications of relevant fields are to be found in the main section of the Implementation Guidelines for the QR-bill (see chapter 4.3). This process description is limited to the presentation of the syntax definition life cycle.

Syntax definition life cycle

Tasks to be carried out by the interested users (groups).

1. Creating and implementing

#	Process step	Pertaining to the field "Billing information"	Pertaining to the field "Alternative procedures"
1	Start	*User group:* Identification of needs and coordination within the user group (e.g. business sector)	*Service provider:* Clarification of customer needs
2	Determination of the document owner	To be determined by the *User group* (normally it is an industry association providing central services to its members)	*Service provider* which offers the alternative procedure
3	Identification of necessary information	*Document owner:* Determination of contents, scope and technical structure of information which are necessary in addition to the data already available in the database of the QR code.	
4	Creation of syntax or guidance	Definition by the *Document owner*, if need be with support of SIX. Contact: support.billing-payments@six-group.com	
5	Validation of syntax	*Document owner:* Making contact with SIX. Contact: support.billing-payments@six-group.com *SIX:* Review of compliance with technical guidelines (field length, character set, etc.)	
6	Implementation and publication	*Document owner:* Implementation and providing information to the user group *SIX:* Information and link on www.paymentstandards.ch	

Table 21:   Process for implementing the "Billing information" and "Alternative procedures" fields

2. Version changes

#	Process step	Pertaining to the field «Billing information»	Pertaining to the field «Alternative procedures»
1	Creation of syntax or guidance draft	By the document owner, if need be with support of SIX. Contact: support.billing-payments@six-group.com	
2	Validation of syntax	*Document owner:* Making contact with SIX. Contact: support.billing-payments@six-group.com *SIX:* Review of compliance with technical guidelines (field length, character set, etc.)	
3	Implementation and publication	*Document owner:* Implementation and providing information to the user group *SIX:* Information and link on www.paymentstandards.ch	

Table 22:   Process for version changes of the "Billing information" and "Alternative procedures" fields

3. Invalidation

#	Process step	Pertaining to the field «Billing information»	Pertaining to the field «Alternative procedures»
1	Invalidation and providing information	*Document owner:* Invalidation and providing information to the user group *SIX:* Removing the link from www.paymentstandards.ch	

Table 23:   Process for invalidating the "Billing information" and "Alternative procedures" fields

Notes:

- Applicable Syntax definitions for billing information as well as for alternative procedures are available on www.paymentstandards.ch.

- At the time of publication of these Implementation Guidelines, only Swico has published the document: "Recommendations on the structure of information from the invoice sender for QR-bills".

Example: Syntax definition for the Billing Information of Swico (as of 31st December 2020)

Syntax definition of Swico (Version 1.2) for populating the "Billing information" field in the Swiss QR code and QR-bill payment part. This description corresponds to the current state as of the implementation date of Implementation Guidelines in Version 2.2 and has been included only as an example. It has to be taken into account that it may not represent the most current version. The latest version can be found at www.swico.ch.

Area	Tag	What	Examples of values	Comments
Separator	//		//	Fixed "//"
Prefix	S1	Organization identifier	S1	Fixed for syntax definition by Swico in Version 1.x
Voucher number	/10/	Invoice/bill number	/10/10201409	Free text
Voucher date	/11/	Voucher date	/11/190512	12.05.2019
Customer reference	/20/	Customer reference	/20/140.000-53	Free text
VAT number	/30/	UID number	/30/106017086	UID CHE-106.017.086 without the CHE prefix, separator and without MWST/TVA/IVA/VAT suffix
VAT date	/31/	Date or start and end date of the service	/31/180508 /31/181001190131	08.05.2018 01.10.2018 bis 31.01.2019
VAT details	/32/	Rate for calculation or list of rates with	/32/7.7	7.7% for the total amount

Area	Tag	What	Examples of values	Comments
		corresponding net amounts	/32/8:1000;2.5:51.80;7.7:250	8.0% on 1000.00, 2.5% on 51.80 and 7.7% on 250.00
VAT import tax	/33/	Pure VAT amount or a list of pure VAT amounts and respective rates for import	/33/7.7:16.15 /33/7.7:48.37;2.5:12.4	16.15 pure VAT (7.7% rate) where goods are imported 48.37 pure VAT (7.7% rate) and 12.40 pure VAT (2.5% rate) where goods are imported with many rates
Conditions	/40/	Conditions or list of conditions	/40/0:30 /40/2:10;0:60 /40/3:15;0.5:45;0:90	0% discount for 30 days (payable within 30 days from the voucher date) 2% discount for 10 days, 0% for 60 days 3% discount for 15 days, 0.5% for 45 days, 0% for 90 days

Table 24:   Data elements in the field "Billing information", example of Swico

Rules
The separators // are prescribed by SIX. They are intended to identify the beginning of billing information (structured information for the invoice sender) when it is printed on the visible part.
The /nn/ tags must be filled in in ascending order.
Each tag may only be given once.
A tag with no data can be omitted.
A tag with no data is the equivalent of an omitted tag.
The length of the value for any tag is not directly limited.
The "Unstructured message" and "Structured information from the biller" fields must not contain more than 140 characters in total.
Field content may not contain the characters "/" and "\"; these must be replaced by "\/" and "\\" (escape).
An amount or a percentage with decimal places must use the character "." (full stop) as the separator.
Numbers smaller than 1 are presented with a leading zero (e.g. "0.3").
Dates are formatted as YYMMDD (year, month, day).
Fields including more than one data element in a list use the character ";" (semicolon) as a separator.

Table 25:   Rules for the field "Billing information", example of Swico

Information such as amount and currency is contained in dedicated fields in the data set of the QR code, so it is not sent in the "Billing information".

Fields	
/11/	• The voucher date is the same as the date of the invoice; it is used as the reference date for the terms and conditions. • Together with the field /40/0:n, a maturity date of the invoice can be calculated (payable within n days after the voucher date).
/20/	• The customer reference is a reference sent by the customer and is used to identify the bill.
/30/	• The VAT number is the same as the numerical UID of the service provider (without the CHE prefix, separator and VAT suffix). • The VAT number can be used by the bill recipient to identify the bill issuer unambiguously. All bill issuers who have a UID should enter it here, even if the other VAT fields are omitted. • For a bill with more than one VAT number, the first should be entered.
/31/	• The VAT date can either be the date on which the service was provided or the start and end date of the service (e.g. for a subscription). • If the document refers to several services with different dates of delivery, the /31/ field must be omitted (enter manually).

/32/	• The VAT details refer to the invoiced amount, excluding any discount.
	• VAT details contain either:
	  – a single percentage that is to be applied to the whole invoiced amount or
	  – a list of the VAT amounts, defined by a percentage rate and a net amount; the colon ":" is used as the separator.
	• The net amount is the net price (excluding VAT) on which the VAT is calculated.
	• If a list is given, the total of the net amounts and the VAT calculated on them must correspond to the amount in the QR Code.

/33/	• Where goods are imported, the import tax can be entered in this field. The amount is the VAT amount. • The rate serves correct recording of VAT in the accounts. • This makes it easier for the bill recipient to record the VAT in the case of an import.
/40/	• The terms and conditions may refer to a discount or list of discounts. • The voucher date /11/ counts as the reference date. • Each discount is defined by a percentage and a deadline (in days); the colon ":" is used as the separator. • The indication with a percentage rate equal to zero defines the default payment date of the invoice (e.g. "0:30" for 30 days net). **Attention:** when this day is used, at least the default payment date of the invoice should be indicated. Without this indication, the payment software will not be able to suggest any date for the payment.

Table 26:   Description of the field "Billing information", example of Swico

Examples
Example 1
//S1/10/10201409/11/190512/20/1400.000-53/30/106017086/31/180508/32/7.7/40/2:10;0:30
/10/ Invoice number 10201409
/11/ Invoice date 12.05.2019
/20/ Customer reference 1400.000-53
/30/ VAT number CHE-106.017.086 MWST
/31/ VAT date on which the service was provided 08.05.2018
/32/ VAT rate on the total invoice amount 7.7%
/40/ 2% discount for 10 days, payment date of 30 days
Example 2
//S1/10/10104/11/180228/30/395856455/31/180226180227/32/3.7:400.19;7.7:553.39;0:14/40/0:30
/10/ Invoice number 10104
/11/ Invoice date 28.02.2018
/30/ VAT number CHE-395.856.455 MWST
/31/ VAT date on which the service was provided from 26.02.2018 until 27.02.2018
/32/ VAT rate 3.7% on 400.19 net (415.00 gross)
VAT rate 7.7% on 553.39 net (596.00 gross)
VAT rate 0% on 14.00 net (14.00 gross)
The VAT details yield a total amount for the invoice equal to (400.19+14.81) + (553.39+42.61) + (14.00+0.00) = 1025.00
/40/ payment date of 30 days
Example 3
//S1/10/4031202511/11/180107/20/61257233.4/30/105493567/32/8:49.82/33/2.5:14.85/40/0:30
/10/ Invoice number 4031202511
/11/ Invoice date 07.01.2018
/20/ Customer reference 61257233.4
/30/ VAT number CHE-105.493.567 MWST
/32/ VAT rate 8% on 49.82 net (53.80 gross)
/33/ Pure VAT for import of 14.85, VAT rate 2.5%
The VAT details yield a total amount for the invoice equal to (49.82+3.98) + (14.85) = 68.65
/40/ payment date of 30 days
Example 4
//S1/10/X.66711\V8824/11/200712/20/MW-2020-04/30/107978798/32/2.5:117.22/40/3:5;1.5:20;1:40;0:60
/10/ Invoice number X.66711/8824
/11/ Invoice date 12.07.2020
/20/ Customer reference MW-2020-04
/30/ VAT number CHE-107.978.798 MWST
/32/ VAT rate 2.5% on 117.22 net (120.15 gross)
The VAT details yield a total amount for the invoice equal to (117.22+2.93) = 120.15
/40/ 3.0% discount for 5 days
1.5% discount for 20 days
1.0% discount for 40 days
payment date of 60 days

Table 27:   Billing information Swico, examples

Annex F: Conversion Swiss QR Code to SWIFT MT101/ MT103: introduction to the mapping table

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.

Status values

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

Status (St.)	Designation	Description
M	Mandatory	Field must mandatorily be delivered filled.
D	Dependent	Field must mandatorily be filled if the superordinate optional data group is filled.
A	Additional	Must only be delivered if the element is not empty
O	Optional	Field must mandatorily be delivered, but not necessarily filled (can be empty).
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).

Table 28:   Valid Status values for elements

Mapping table

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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: • 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, 2.1 and 2.2.	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 +CdtrInf	CdtrInf		**Creditor information** *Account / Payable to*	N/A	Mandatory data group in the Swiss QR Code.
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.

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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	

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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 & address 35x 35x 35x 35x	
QRCH +CdtrInf ++Cdtr +++PstCd	PstCd	D	**Postal code** Postal code 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 & address 35x 35x 35x 35x	

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
QRCH +CdtrInf ++Cdtr +++TwnNm	TwnNm	D	**Town** 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 & address 35x 35x 35x 35x	
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 & address 35x 35x 35x 35x	
QRCH +UltmtCdtr	UltmtCdtr		**Ultimate creditor** *In favor of* 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).

Swiss QR Code				SWIFT FIN messages	Comments
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	
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	There is no tag for the ultimate creditor in SWIFT FIN messages.
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	

	Swiss QR Code			SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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**	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
QRCH +CcyAmtDate ++Ccy	Ccy	M	**Currency** The payment currency, 3-digit alphanumeric currency code according to ISO 4217	32B **Currency**/Transaction Amount	Only CHF and EUR are permitted.
QRCH +UltmtDbtr	UltmtDbtr		**Ultimate debtor**	N/A	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. 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.
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	

Swiss QR Code				SWIFT FIN messages	
QR element	**Element name**	**St.**	**General definition**	**Tag MT101 / Tag MT103**	**Comments**
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.

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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/000000000000000000000123457 --- SCOR – Creditor Reference Line 1: /**SCOR/**Reference (only in connection with IBAN/proprietary account number in Tag 59a = Liability) Example: /SCOR/RF1800000000000539007547034	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.

Swiss QR Code				SWIFT FIN messages	
QR element	Element name	St.	General definition	Tag MT101 / Tag MT103	Comments
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 29:   Mapping table

Annex G: Index of tables and figures

Index of tables

Index of figures