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Financial services — Specification of QR codes for mobile initiated (instant) credit transfers

National foreword

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Finanzdienstleistungen - Spezifikation von QR-Codes für mobil initiierte (Echtzeit-)Überweisungen

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European foreword

This document (EN 18184:2025) has been prepared by Technical Committee CEN/TC 225 “AIDC technologies”, the secretariat of which is held by TSE.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

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Introduction

QR codes are one of the proximate technologies that may be used for the data exchange between a payer and a payee to enable the initiation of an (instant) credit transfer.

The basis for this document was prepared by the Multi-Stakeholder Group on Mobile Initiated SEPA (Instant) Credit Transfers, established by the European Payments Council (see <https://www.europeanpaymentscouncil.eu/>), called *Standardization of QR codes for mobile initiated SEPA (instant) credit transfers* (see EPC024-22, [5]). The present derived document has been drafted in accordance to the CEN editorial rules.

This document specifies the QR code formats for both a payer-presented and a payee-presented QR code. This document uses as a basis the revised Payment Services Directive (PSD2) [12]. The QR codes have been defined to support the initiation of (instant) credit transfers by the payer (so-called push payments) for various payment contexts, including person-to-person, person-to-business, business-to-person and business-to-business payments, including public services.

1 Scope

This document provides a specification for QR codes for mobile (instant) credit transfers (MCTs) whereby the payer uses a mobile device to initiate the payment transaction. The QR code is used to exchange data between the payer and the payee to enable the initiation of the (instant) credit transfer by the payer.

This document is applicable to both cases where the QR code is presented by the payee or by the payer.

This document excludes the following from its scope:

- The details of technical requirements and the supporting infrastructure to achieve interoperability amongst mobile (instant) credit transfer (MCT) service providers;
- The detailed implementation specification of the payload included in the QR code.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 18004, *Information technology — Automatic identification and data capture techniques — QR code bar code symbology specification*

ISO/IEC 15415, *Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols*

ISO/IEC 16480, *Information technology — Automatic identification and data capture techniques — Reading and display of ORM by mobile devices*

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Vocabulary*

ISO 12812-1, *Core banking — Mobile financial services — Part 1: General framework*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12812-1, ISO/IEC 19762 and the following apply.

3.1

proxy

pseudonym for the payer or payee uniquely linked to the name and account associated to the payment instrument

[SOURCE: ISO 12812-1 [7]]

3.2

account servicing payment service provider

ASPSP

PSP providing and maintaining a payment account for a PSU

[SOURCE: ISO 23195: 2021, 3.1.6 [9]]

3.3

business identifier code

BIC

8- or 11-character ISO code assigned by SWIFT and used to identify a financial institution

[SOURCE: ISO 9362 [6]]

3.4

consumer device

internet capable device used by the consumer (payer) to conduct an (instant) payment

EXAMPLE mobile phone, tablet.

3.5

2D barcode

machine-readable optical label that contains digital information

EXAMPLE QR codes, tag barcodes.

3.6

MCT service provider

mobile financial service provider that offers or facilitates a mobile initiated (instant) credit transfer to a payer and /or a payee

3.7

hub

infrastructure ensuring connectivity between MCT service providers

3.8

instant

at once, without delay

3.9

instant payment

electronic retail payment solutions available 24/7/365 and resulting in the immediate or close-to-immediate interbank clearing of the transaction and crediting of the payee's account with confirmation to the payer (within seconds of payment initiation)

3.10

MCT payment application

set of modules (application software) and/or data (application data) needed to provide functionality for an MCT as specified by the MCT service provider in accordance with the rules of the (instant) credit payment scheme

3.11

merchant-presented data

data provided by the merchant's POI to the consumer to enable the initiation of an MCT

3.12

payee-presented data

data provided by the payee to the payer to enable the initiation of an MCT

3.13**payee reference party**

person/entity on behalf of or in connection with whom the payee receives a payment

3.14**payer-presented data**

data provided by the payer to the payee to enable the initiation of an MCT

3.15**payload issuer**

entity responsible for issuing the payload

3.16**payment transaction**

act, initiated by the payer or on his/her behalf or by the payee (beneficiary), of placing, transferring or withdrawing funds, irrespective of any underlying obligations between the payer and the payee

3.17**payment account**

account held in the name of one or more PSUs which is used for the execution of payment transactions

3.18**payment account identifier****PA-ID**

unique identifier that is assigned by an ASPSP and references a payment account record held by a PSU

EXAMPLE IBAN, see [8].

3.19**payment initiation service provider****PISP**

third party payment service provider that initiates a payment on behalf of the payer with the payer's ASPSP holding the payment account

3.20**payment institution**

entity authorized to provide payment services under the applicable regulations

3.21**account servicing payment service provider identifier****ASPSP-ID**

unique identifier that is assigned to every payment institution

EXAMPLE BIC, see [6].

3.22**payment request**

set of rules and technical elements (including messages) that allow a payee to claim an amount of money from a payer for a specific transaction

3.23

payment service provider

PSP

entity that provides payment services to a payment service user

EXAMPLE ASPSP, PISP.

3.24

payment service user

PSU

natural or legal person making use of a payment service in the capacity of payer, payee, or both

3.25

QR code

two-dimensional barcode as defined in ISO/IEC 18004

3.26

dynamic QR code

QR code which changes for every transaction and is intended for a single usage

3.27

static QR code

QR code which remains unchanged and is intended for repetitive usage

3.28

token

surrogate value for PSU identification and/or transaction data

Note 1 to entry: If the token is included in the payee-presented data it might be referred to as a payee token and if the token is included in the payer-presented data it might be referred to as a payer token.

3.29

token service

system comprised of the key functions that facilitate generation and issuance of tokens and maintain the established mapping of tokens to the related data when requested by the token requestor

3.30

token service provider

TSP

entity that provides a token service

4 Symbols and abbreviated terms

For the purposes of this document, the following symbols and abbreviations apply:

an	Alphanumeric
API	Application programme interface
ASPSP	Account servicing payment service provider
ASPSP-ID	Account servicing payment service provider identifier
BIC	Business identifier code
CDUVM	Consumer device user verification method

CT	(Instant) credit transfer
SCT	SEPA (instant) credit transfer
IBAN	International bank account number
IG	Interoperability guidance
IPR	Instant Payment Regulation
MCT	Mobile initiated (instant) credit transfer
MSCT	Mobile initiated SEPA (instant) credit transfer
PA-ID	Payment account identifier
PISP	Payment initiation service provider
POI	Point of interaction
POS	Point of sale
PSD2	Revised Payment Services Directive
PSP	Payment service provider
PSU	Payment service user
SEPA	Single euro payments area
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TSP	Token service provider
TTP	Trusted third party

5 Interoperability of MCTs

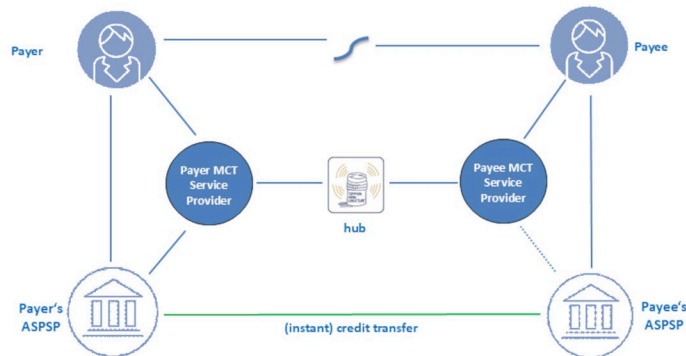
Mobile initiated (instant) credit transfers (MCTs) are initiated directly (by the payer) or indirectly (by an MCT service provider at the request of the payer) using a mobile device. MCT solutions are offered by so-called MCT service providers which are service providers that offer or facilitate a payment service to a payer/a payee based on an (instant) CT. As an example, an MCT service provider could be an ASPSP, a PISP or a technical service provider supporting a PSP.

NOTE 1 Regarding MCTs, local regulation can apply. The revised Payment Services Directive (PSD2) [12] contains provisions on payment systems.

MCTs typically use an MCT payment application or a browser on the payer device to initiate or at least authenticate and authorize the (instant) CT transaction, besides some features of the payer device such as the support of a CDUVM (e.g. a mobile code or biometrics on the mobile device), the mobile device screen to display transaction information, etc. MCTs may involve the provision of a dedicated MCT payment application for download on the payer's or the payee's device or the provision of dedicated software for the payee's (e.g. merchant's) POI.

In this document the following generic 4-corner model is used for the technical interoperability of MCTs. Hereby it is assumed that both payer and payee are customers of different ASPSPs that are (instant) CT scheme participants, while the entities assuming the role of MCT service provider are depicted as separate entities that are different for the payer and the payee. Obviously, if the role of MCT service provider would be assumed by an ASPSP the model below would simplify. Alternatively, multiple PSPs (such as a PISP or a collecting PSP on behalf of the merchant) could be involved between the payer/payee and their respective ASPSP.

NOTE 2 Interoperability models involving a PISP or collecting PSP have for instance been studied in the MSCT IG [4].



1

Figure 1 — Generic 4-corner interoperability model for MCTs

As depicted in Figure 1, the payer's MCT service provider is linked to the payer's ASPSP and the payee's MCT service provider may be linked to the payee's ASPSP (this linkage may include both technical and contractual aspects).

The MCT ecosystem involves some new stakeholders in the payment value chain, including a so-called token service provider (TSP) who is a TTP which is involved if tokens are used in MCTs as surrogate values for MCT related data (including for instance the payee/payer identification data, the payee/payer PA-ID, the ASPSP-ID, transaction amount or merchant transaction identifier). The TSP manages the generation and issuance of tokens, and maintains the established mapping of tokens to the related transaction data. For simplification it is assumed in this document that the role of the TSP is assumed or is under the control of the MCT service provider (and therefore the TSP is not depicted in Figure 1).

To achieve interoperability for the generic basic 4-corner model, the concept of a "hub" to interconnect the respective MCT service providers is considered as shown in Figure 1. Hereby the term "hub" is used to indicate an "infrastructure" that enables interconnectivity between MCT service providers but it is meant to be agnostic to the way it might be implemented – different implementation models may be possible (centralized or de-centralized (e.g. a direct API)).

EXAMPLE The technical interoperability requirements between MCT service providers involving a "hub" have been analysed and defined in detail in the MSCT IG [4]. Examples of interoperability process flows can also be found in Annex B.

One of the technical interoperability aspects for MCTs is the exchange of (transaction) data between the payer and the payee to enable the initiation of an MCT. The usage of QR codes for this data exchange will be treated in the next clause.

6 Standardization of QR codes for MCTs

6.1 General

This chapter is devoted to MCTs whereby a QR code as defined in ISO/IEC 18004 (see also Annex C) is used as proximate technology for the data exchange between the payer and the payee to enable the initiation of an MCT. Hereby two modes may be distinguished: