

# Protocol Description

## Switch Interface Description

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2.5	Valid	A.MERAWZA	03/10/2018	- Adding new tags ‘P66’ and ‘K06’ to F48
2.6	Valid	N.ABDALLAOUI	23/11/2018	-Adding new value ‘3’ (mPOS Software based PIN Entry Capability) to F022.12 -Adding new values ‘1’ and ‘2’ to F048.P61.21

## Reference Documents

Code	Document name	Version	By

## Terminology & Abbreviations

Term	Definition

## Distribution List

Company	Name	Position

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# 1. Introduction

**PowerCARD** uses the exchange format based on the ISO 8583/1993-12-15 standard.

This standard allows formats of content messages with variable length depending on the messages exchanged.

This document describes the format of the messages exchanged between **PowerCARD** and the servers from the Bank and defines the data elements embedded in these messages.

## 2. Structure and content of the messages

Message Length	Protocol identification	<b>PowerCARD</b> Header	Message type	Bitmap	Data element
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### 2.1 Message length

This element contains the length of the rest of the message. It is coded on four characters right-justified and completed with zeros in ASCII format.

This element is mandatory. It is used by the communication API.

### 2.2 Protocol identification

This element is used to identify the protocol of the message. It must contain the 3 ISO characters. The identification of the protocol is always available.

### 2.3 PowerCARD Header

The header is required in all messages. Its format :

<u>Position</u>	<u>Content</u>
2	Specifies to which product the message is referring to. Possible values : '6' = Issuer member interface only '7' = Issuer and Acquirer members interface

'8' = Acquirer member interface only

2-5                      Protocol version = '0100'

6-8                      When **PowerCARD** rejects a message due to an error format, this element contains the number of the first invalid data element. Otherwise, this element contains '000'.

## 2.4 Message type

The message type is an element of 4 positions to identify the general function of the message. This element is mandatory for all messages.

Following messages are exchanged between **PowerCARD** and the Center.

**1100** : Authorisation request,  
**1110** : Authorisation request response,

**1120** : Authorisation advice,  
**1121** : Authorisation advice repeat,  
**1130** : Authorisation advice response,

**1200** : Financial transaction request,  
**1210** : Financial transaction request response,

**1220** : Financial transaction advice,  
**1221** : Financial transaction repeat,  
**1230** : Financial transaction response,

**1400** : Acquirer reversal request,  
**1410** : Acquirer reversal response,  
**1420** : Acquirer reversal advice,  
**1421** : Acquirer reversal advice repeat,  
**1430** : Acquirer reversal advice response.

**1422** : Issuer reversal advice,  
**1423** : Issuer reversal advice repeat,  
**1432** : Acquirer reversal advice response.

**1520** : Acquirer reconciliation advice,  
**1521** : Acquirer reconciliation advice repeat,  
**1530** : Acquirer reconciliation advice response.

**1522** : Issuer reconciliation advice,  
**1523** : Issuer reconciliation advice repeat,  
**1532** : Issuer reconciliation advice response.



**1304:** File management request,  
**1314:** File management request response.

**1324:** File management advice,  
**1334:** File management advice response.

**1604 :** Administrative message  
**1614 :** Administrative message response

**1720 :** Fees collection request (acquirer)  
**1722 :** Fees collection request (issuer)  
**1730 :** Fees collection request response (acquirer)  
**1732 :** Fees collection request response (issuer)

**1804 :** Network management request,  
**1814 :** Network management request response.

## 2.5 Bit maps

The ISO 8583/1993-12-15 standard uses a messages scheme by bits vector or « bit map ». The bit map structure indicates the presence or absence of data element ('1' inside the bitmap indicates the element is present, while '0' indicates the element is absent). The bits in the bitmap are numbered from left to right.

2 bit maps having a 64 bits length can be used in the messages exchanged with **PowerCARD**:

- A primary bit map indicates the presence/absence of elements from 1 to 64.
- A secondary bit map indicates the presence/absence of elements from 65 to 128.

The primary bit map is mandatory in all messages.

The secondary bit map is included in the message if at least one element from the interval 65 to 128 is present.

The presence of the secondary bit map is indicated by the bit 1 of the primary bit map (the leftmost bit).

## 2.6 Naming convention for the data elements attributes

The conventions below are used to represent the data elements attributes based on the ISO 8583/1993 standard :

- a**      alphabetic characters (ASCII),
- n**      numeric characters,
- an**     alphanumeric characters,

- b**     binaries fields,
- s**     special characters,
- z**     field containing the magnetic track data.

Fixed length fields are represented by the attribute followed by the length (i.e. n3 : 3 numeric characters - fixed length).

Variable length fields are represented by the attribute followed by two points then by the maximum of positions. (i.e. an..25 : an alphanumeric character that can contains up to 25 characters – variable length).

Variable length fields contains 2 sub-fields :

- the first sub-field showing the length encoded on 2 or 3 positions,
- the second sub-field which contains the data.

The fields with length less than 99 positions have a sub-element of length encoded under 2 positions.

The fields between 100 and 999 positions have a sub-element of length encoded under 3 positions.

For example a field representing track 3 is encoded as follows:

LLL	TTTTTTTTTT.....TTTTTTTTT
<u>Length</u>	<u>Data</u>

### Element No. 1

This chapter provides detailed descriptions of all data elements used by the messages of the switch.

For each field, the following information is provided:

<u>Attribute :</u>	logical representation of the data element. The following conventions are used:
a	alphabetical characters
n	numeric digits
s	special characters
an	alphabetic & numeric characters
as	alphabetic & special characters
ns	numeric & special characters
ans	alphabetic, numeric & special characters
MM	month

DD	day
YY	year
hh	hour
mi	minute
ss	seconds
LL,LLL	length of variable
3	fixed length of three characters
..17	variable length, up to 17 characters
x	“C” for credit, “D” for debit
b	binary representation of data in the field. See example below:



z	tracks 2 & 3 code set as defined in ISO 7811 and ISO 7813
---	---

Description : describes the purpose of the field.

Valid values : if applicable provides the list of possible values the field can take.

Usage : lists the message types where the field is used.

## Field No 1

### Secondary Bit map

Attribute : b 64.

Description : The secondary bit map is used to indicate the presence ('1') or the absence ('0') of the fields between 65 and 128.  
If the message contains at least one field between 65 and 128, the secondary bit map is present.  
The value '1' on the leftmost bit of the primary bit map indicates the presence of the secondary bit map.

Usage : All messages containing index elements greater than 127

## Field No 2

### Primary Account Number

Attribute : LLVAR n..19.

Description : A serial number used to identify the card.  
The primary account number is derived from Track 2 or the chip. Also, it can be read on the card for manual transactions.

Usage : 11XX, 12XX, 13XX, 14XX.

## Field No 3

### Processing code

Attribute : n 6.

Description : Code used to describe the impact of a transaction on the client and related accounts.

Valid Values :

Positions 1-2: Transaction Type

00: Purchases & Services  
01: Withdrawal  
02: Adjustment-Debit  
09: Cashback  
11: Quasi cash  
17: Cash Advance  
19: Fees  
20: Credit Voucher  
22: Adjustment-Credit  
28: Payment  
29: Funds  
31: Balance request  
38: Short statement request  
40: Account transfer  
91: PIN change request

Positions 3-4: Source Account Type

00: Not specified  
10: Savings account  
20: Checking account  
30: Credit card account  
38: Loan account  
40: Universal account

Positions 5-6: Destination Account Type

00: Not specified  
10: Savings account  
20: Checking account  
30: Credit card account  
38: Loan account  
40: Universal account

Usage : 11XX, 12XX, 14XX.

#### **Field No 4**

##### **Transaction amount**

Attribute : n 12.

Description : The amounts requested by the card owner expressed in the transaction currency as described in Data Element 49.

The amount is indicated with two exponents. For example, an amount of 1000\$ is represented as « 000000100000 ».

Usage : 11XX, 12XX, 14XX.

#### **Field No 5**

##### **Settlement amount**

Attribute : n 12.

Description : The amounts to transfer between the acquirer and card issuer equal to the transaction amount in the reconciliation currency as described in Data Element 50.

The amount is indicated with two exponents. For example, an amount of 1000\$ is represented as « 000000100000 ».

Usage: 12XX, 14XX, 15XX.

## Field No 6

### Billing amount

Attribute : n 12.

Description : The amount billed on the card owner expressed in the owner card account currency as described in Data Element 51.  
The amount is indicated with two exponents. For example, an amount of 1000\$ is represented as « 000000100000 ».

Usage: 11XX, 12XX, 14XX.

## Field No 7

### Transmission date and time

Attribute : n 10.

Description : Date and time expressed in UTC (GMT) of the message sent by the initiator (Format : YYMMDDhhmm).

Usage: All messages

## Field No 9

### Settlement conversion rate

Attribute : n 8.

Description : Factor used for conversion between transaction amount and reconciliation amount. The transaction amount is multiplied by the

conversion rate of reconciliation in order to set the reconciliation amount.

Usage: Present in all messages containing “reconciliation amount” element.

Format The first character indicates the number of exponents (e.g. 51020030 corresponds to 10.02030)

## Field No 10

### Card owner billing conversion rate

Attribute : n 8.

Description : Factor used for conversion between transaction amount and amount billed to the card owner. The transaction amount is multiplied by the billing conversion rate in order to set the owner billing amount.

Usage: Present in all messages containing “billing amount” element.

Format : The first character indicates the number of exponents (e.g. 51020030 corresponds to 10.02030)

## Field No 11

### System Trace Audit Number

Attribute : n 6.

Description : This number is generated by the sender. It is a unique identification of the transaction. This number should remain unchanged in all messages related to this transaction.



Usage: All messages.

## **Field No 12**

### **Transaction local date and time**

Attribute : n 12.

Description : Local date and time of the transaction.

Usage : All messages.

Format : YYMMDDhhmmss.

## **Field No 13**

### **Start expiry date**

Attribute : n 4.

Description : Effective date of the card.

Usage : 11XX, 12XX.

Format : YYMM.

## **Field No 14**

### **Expiry date**

Attribute : n 4.

Description : The card expiry date.

Usage : 11XX, 12XX.

Format YYMM

## Field No 15

### Reconciliation date

Attribute : n 6.

Description : Reconciliation date of the transaction between the card acquirer and issuer.

Usage : 11XX, 12XX, 14XX, 15XX.

Format YYMMDD.

## Field No 16

### Exchange date

Attribute : n 4.

Description : Month and day on which the exchange rate is effective to convert the transaction amount from transaction currency to reconciliation currency and/or the card owner billing currency.

Usage: All messages where exchange rate is present.

Format : MMDD.

## Field No 18

### Merchant type

Attribute : n 4.

Description : Code of the merchant type of activity.

Usage : 11XX, 12XX

## Field No 19

### Acquiring institution country code

Attribute : n 3.

Description : Country code where the acquiring institution is located.

Usage : 1100, 1200, 1120, 1220

## Field No 21

### Forwarding Institution Country Code

Attribute : n 3.

Description : Country code where the forwarding institution is located.

Usage: 11XX, 12XX, 14XX

## Field No 22

### Point of service data code

Attribute : an 12.

Description : Series of codes used to identify the capability and environment of the terminal and the presentation security data. These data are used to indicate the specific conditions that are (or were) present at the time of transaction and/or when the transaction was initiated in the point of service.

Valid Values :

Position **01** : Data entry capability  
**0**: Not specified  
**1**: Manual, no terminal  
**2**: Magnetic stripe read  
**3**: Bar code read  
**4**: Optical read  
**5**: Chip read and magnetic stripe read  
**6**: Manual entry  
**7**: Manual entry & magnetic stripe  
**8**: Manual entry & magnetic stripe & chip read  
**9**: Chip read  
**M**: Magnetic stripe, & ICC contact reader, ICC contactless reader.

Position **02** : Cardholder Authentication Capability  
**0** : No authentication  
**1** : PIN  
**2** : Manual signature

Position **03** : Card Retention Capability  
**0** : No  
**1** : Yes  
**2** : Unknown

Position **04** : Operating Environment  
**0** : No terminal used  
**1**: Inside card acceptor premises, Attended

- 2:** Inside card acceptor premises, Unattended
- 3:** Outside card acceptor premises, Attended
- 4:** Outside of card acceptor premises, Unattended
- 5:** Inside card owner premises, Unattended
- 9:** Undetermined
- S:** CAT level1, unattended
- T:** CAT level2, unattended
- U:** CAT level3, unattended
- V:** CAT level4, unattended

**Position 05 :** Cardholder Presence Indicator

- 0:** Cardholder present
- 1:** Cardholder not present
- 2:** Cardholder not present, mail order
- 3:** Cardholder not present, phone order
- 4:** Cardholder not present, authorized
- 5:** Electronic order

**Position 06 :** Card Presence Indicator

- 0 :** Card not present
- 1 :** Card present

**Position 07 :** Card Data Input Mode

- 0 :** Not specified
- 1 :** Manual, no terminal
- 2 :** Magnetic strip read (Track 2)
- 5 :** Chipe read
- 6 :** Manual entry
- 7 :** Magnetic strip read (Track 1)
- 8 :** Fallback
- 9 :** E-Commerce
- F:** Credentials on file
- J :** Chip read and CVV reliable
- P :** PAN Auto Entry via Server
- S :** E-commerce, Non-Authenticated, attempt.
- T :** E-commerce, Authenticated
- U :** E-commerce, no security
- V :** E-commerce, channel encryption
- W :** Unaltered track provided
- A :** PAN auto-entry via contactless magnetic stripe
- M :** PAN auto-entry via contactless M/Chip
- R :** PAN entry via electronic commerce, including remote chip

**X** : PAN auto entry via server (issuer, acquirer, or third party vendor system)

**Position 08** : Cardholder Authentication Method

- 0** : Not authenticated
- 1** : PIN
- 2** : Electronic signature
- 5** : Manual signature

**Position 09** : Cardholder Authentication Entity

- 0** : Not authenticated
- 1** : Chip
- 2** : Terminal,
- 3** : Acquiring center
- 4** : Merchant
- 5** : Other
- 9** : Not specified

**Position 10** : Rewrite Capability

- 0** : Not specified
- 1** : No rewrite capability
- 2** : Track 3 rewrite possible
- 3** : Track rewrite

**Position 11**: Terminal Output Capability

- 1** : None
- 2** : Printing
- 3** : Display
- 4** : Printing and display

**Position 12** : PIN length

- 3**: mPOS Software-based PIN Entry Capability
- 4** : Four characters
- 5** : Five characters
- .
- .
- C** : Twelve characters

Usage

11XX, 12XX.

**Field No 23**

**Card Sequence Number**

Attribute : n 3

Description : Allows distinguishing between separate cards related to the same primary account number.

Usage: 11XX, 12XX.14XX  
Mandatory for EMV authorization requests in case the data is present in the card application.

## Field No 24 Function Code

Attribute : n 3.

Description : Indicates the specific object of the message in its message class.

Valid values :

If message type = **1100/1120/1121**

- 100** = Initial request, exact amount,
- 101** = Initial request-estimated,
- 108** = Balance request,
- 181** = Account request,
- 182** = Address verification request,
- 190** = Initial request, final amount,

If message type = **1200**

- 101** = Initial request-estimated,
- 190** = Initial request, final amount,
- 200** = Initial request, exact amount,
- 281** = Balance request.

If message type = **1220/1221**

**190** = Initial request, final amount,

**200** = Offline processing,

**201** = Authorized previously,

**205** = 1<sup>st</sup> presentment,

**206** = 2<sup>nd</sup> presentment.

If message type = **1304/1324**

**301** = Add record,

**303** = Delete record,

**304** = Replace record,

**305** = Inquiry.

If message type = **1400/1420/1421**

**400** = Full reversal,

**401** = Reversal status undefined,

**402** = Partial reversal.

If message type = **1422/1423**

**450** = 1<sup>st</sup> chargeback,

**451** = 2<sup>nd</sup> chargeback.

**452** = Annulation chargeback

If message type = **1520, 1521, 1522, 1523**

**500** = Final reconciliation,

**501** = Intermediate reconciliation,

**502** = Final reconciliation in a specific currency,

**503** = Intermediate reconciliation in a specific currency.

If message type = **1804**

**801** = Session logon,

**802** = Session logout,

**803** = Test message,

**804** = Sign on SAF,



**805** = Sign off SAF,  
**811** = Transport key change request,  
**899** = MAC key change request.

**821** = Final reconciliation request,  
**822** = Intermediate reconciliation request.

Usage

1100, 1120, 1200, 1220, 1221, 1320, 1324, 1400 ,1420, 1421,  
1520, 1521, 1522, 1523.

## Field No 25

### Message reason code

Attribute : n 4.

Description : Indicates to the recipient of a request message, advice or notification the reason/object of the message.

Valeurs valides: If message type = **1120** ou **1220**  
**1002** = Issuer Timeout  
**1003** = Issuer system malfunction  
**1004** = Issuer unavailable  
**1005** = Pending message in SAF with the same card during authorisation request. Request processed by stand-in.

If message type = **1304**  
**3000** = Card lost, Card capture  
**3001** = Card stolen, Card capture  
**3002** = Card inactive, Rejected  
**3003** = Counterfeit, Card capture  
**3701** = Fraudulent card use, Card capture  
**3702** = Other reasons, Rejected

**3721** = Card expired, Card capture  
**3722** = Security violation, Card capture  
**3723** = Dispute, Card capture  
**3724** = Abusive usage, Rejected  
**3725** = Abusive usage, Card capture  
**3726** = Contact issuer  
**3728** = Rejected  
**3729** = Card capture  
**3732** = Cardholder deceased

If message type = **1400/1420**

**4000** = Cancellation by cardholder

**4001** = Not specified

**4002** = Malfunction suspected

**4004** = Partially processed

**4006** = Late response

**4007** = Card acceptor device unable to perform transaction

**4013** = Cannot deliver message to POS

**4014** = Malfunction suspected / Card retained

**4015** = Malfunction suspected / Card returned

**4016** = Malfunction suspected / Track 3 not updated

**4017** = Malfunction suspected / Cash not dispensed

**4018** = Card returned / Cardholder time out / Cash not dispensed

**4019** = Card retained / Cardholder time out / Cash not dispensed

If message type = **1422/1423/1220 UC='2'**

**4022** = Transaction potentially duplicated,

**4023** = Transaction duplicated,

**4513** = Credit not received,

**4525** = 4022

**4514** = Fraudulent transaction.

VISA reasons codes must be used when sending representation  
/ fees / adjustments.

Usage : 112X, 122X, 13XX, 142X.

## Field No 27

### Authorization code length

Attribute : n 1.

Description : The maximum length of the authorization code that the acquirer can accommodate. The issuer (or the agent) is expected to limit response to this length.

Usage: 1110, 1130, 1210, 1230, 1314, 1324, 1530, 1532, 1814

## Field No 30

### Replacement amounts

Attribute : n 24.

Description : Data element regarding the replacement amount in case of a partial reversal. This field contains from position 1 to position 12 the new amount of transaction expressed in the transaction currency. From position 13 to position 24 the amount of transaction in reconciliation currency.

Usage: 1400,1420, 1422.

## Field No 32

### Acquiring institution identification code

Attribute : LLVAR n..11.

Description : Identification code of the acquirer institution.

Usage : 11XX, 12XX, 14XX.

### **Field No 33**

#### **Forwarding institution identification code**

Attribute : LLVAR n..11.

Description : Identification code of the forwarding institution.

Usage : 11XX, 12XX, 14XX.

### **Field No 35**

#### **Track 2**

Attribute : LLVAR z..37.

Description : Data encoded on track 2 of the magnetic strip based on ISO7813, excluding the start and end sentinels and the LRC.

Usage : 1100, 1200.

### **Field No 37**

#### **Retrieval reference number**

Attribute : n 12.

Description : Unique reference used to retrieve the original messages and used to help find these data.

Usage : All messages.

### **Field No 38**

#### **Authorization code**

Attribute : an 6.

Description : Code delivered by Authorization institution to confirm the agreement.

Usage : All response messages.

### **Field No 39**

#### **Action code**

Attribute : n 3.

Description : Indicates the action taken or to take and the reason. (list of values in appendix).

Usage : All response messages.

### **Field No 41**

#### **Card acceptor terminal identifier**

Attribute : an 8.

Description : Unique code identifying the terminal on the card acceptor side.

Usage : 11XX, 12XX, 14XX.

## **Field No 42**

### **Card acceptor identification code**

Attribute : an 15.

Description : Unique code identifying the card acceptor.

Usage : 11XX, 12XX, 14XX.

Format : Left-justified with spaces on right positions.

## **Field No 43**

### **Card acceptor name and address**

Attribute : LLVAR ans. 40

Description : Name and address of the card acceptor as known by the card holder. Last two characters refers to the country code (ISO Alpha).

Usage : 1100, 1120, 1200, 1220, 1221.

## Field No 45

### Track 1

Attribute : LLVAR z..76.

Description : Data encoded on magnetic strip track 1 based on ISO7813, including element separators but excluding start and end sentinels and LRC.

Usage : 1100, 1200.

## Field No 46

### Fees amount

Attribute : ans..204

Description : Fees amount associated to the transaction.

#### **Positions 1-2: Fees type**

**00:** transaction fee

**01:** transaction processing fee

**02:** fee collection fee

**03:** file action fees

#### **Positions 3-5: Currency code**

#### **Position 6:**

**'C':** Credit

**'D':** Debit

#### **Positions 7-18: Amount**

#### **Positions 19-24: Conversion rate**



**Position 25:****'C':** Credit**'D':** Debit**Positions 26-37: Amount, reconciliation****Positions 38-40: Currency code, reconciliation**

This field can contain up to 6 different fees

Usage : 1100, 1200,17XX.

**Field No 48****Additional private data**

Attribute : LLLVAR ans..999

Description : Reserved for private data.

Valeurs valides: (cf table below)

Usage 11XX, 12XX.

Type (3 digits)	Lenght (3 digits)	Value
'P01'	2	File Update Error Code
'P02'	up to 256	Message text
'P10'	..32	ZPK /TAK
'P16'	..18	New PIN Data :  Position 01-02 : PIN format : PV: PVV value OV: Offset value 01: Format 01

		Positin 03-18; New PIN Data
'P17'	18	Reference number / Invoice number
'P18'	29	Payment Account Reference
'P19'	010	VISA Merchant Verification Value
'P20'	1	External iCVV result
'P21'	..70	TLV encoded subfields: TTLL Subfield 001: Paymen facilitator ID  Subfield 002: Independent sales organization ID  Subfield 003: Sub merchant ID
'P25'	001	Result of card authentication. ' ' : ARQC not checked 1 : ARQC incorrect 2 : ARQC correct
'P27'	1	External PIN verification result
'P30'	Up to 255	Chip authorization additional information : <b>Position 01:</b> Application selection indicator <ul style="list-style-type: none"> <li>▪ '0': Unspecified</li> <li>▪ '1': Cardholder choice</li> <li>▪ '2': Default choice</li> </ul> <b>Position 02-03:</b> Application Brand <ul style="list-style-type: none"> <li>▪ 00: LOCAL NETWORK</li> <li>▪ 01: VISA</li> <li>▪ 02: MASTERCARD</li> <li>▪ 03: VPAY</li> <li>▪ 04: AMEX</li> <li>▪ 05: DINERS</li> <li>▪ 06: JCB</li> <li>▪ 08: CUP</li> <li>▪ 09: CB</li> <li>▪ 10: Maestro</li> <li>▪ 99: Unspecified</li> </ul> <b>Position 04:</b> Chip Transaction indicator <ul style="list-style-type: none"> <li>▪ 0: Unspecified</li> <li>▪ 1: Card chip data included</li> <li>▪ 2: Card chip data dropped</li> <li>▪ 3: Generated chip data</li> </ul>
'P32'	15	Merchant ID assigned by Mastercard
'P35'	15	Mastercard trace ID
'P41'	Up to 38	Merchant acronym
'P43'	28	MasterCARD UCAF
'P47'	1	Routing network code : <b>D:</b> Debit <b>C:</b> Credit

'P49'	3	DUKPT KSN description
'P50'	12-20	KSN
'P51'	40	Account authentication value
'P54'	1	External e-com crypto result (*)
'P55'	...151	Token data (*)
'P56'	..52	DCC Data Position 01: DCC result 0: No DCC performed 1: DCC request approved by cardholder 2: DCC request declined by cardholder Position 02-52: RFU
'P57'	..32	AFD Reference number.
'P58'	3	Acceptor point card product id
'P60'	3	Watch list scoring result
'P61'	..12	Additional POS Data <b>Position 1: Partial Approval Terminal Support Indicator</b> '0': partial approval not supported '1': partial approval supported  <b>Position 2: Purchase Amount Only Terminal Support Indicator</b> '0': Purchase Amount Only not supported '1': Purchase Amount Only supported  <b>Position 21: mPOS Acceptance Device Type</b> '1' : Dedicated mPOS Terminal with PCI compliant dongle [with or without keypad]. '2' : Off the Shelf Mobile Device.
'P64'	4	<b>Position 01: TCC</b> <b>Position 02-04: RFU</b>
'P66'	5	Ecommerce authorization information <b>Position 01: RFU</b> <b>Position 02: Program Protocol:</b> <ul style="list-style-type: none"> <li>'1': 3DS 1.0</li> <li>'2': 3DS 2.0</li> </ul> <b>Position 03-04: RFU</b> <b>Position 05: Downgrade reason:</b> <ul style="list-style-type: none"> <li>'0': Missing AAV</li> <li>'1': Invalid AAV</li> </ul>

'P67'	Up to 32	Authorization ID
'P68'	..32	Transaction identifier
'P70'	1..45	<p>Terminal information :</p> <p>Position 01: format, '1'</p> <p>Position 02-07: Institution ID</p> <p>Position 08-13: Branch ID</p> <p>Position 14-16: Country code</p> <p>Position 17-19: State code</p> <p>Position 20-29: Zip code</p> <p>Position 30-41: City name</p> <p>Position 42-45: MCC</p>
'P71'	001	<p>Recurring payment indicator:</p> <p><b>'R':</b> (Recurring) Indicates that the cardholder and merchant have agreed to periodic billing for goods and services, such as utility bills and magazines</p> <p>The first authorization should contain the following information:</p> <ul style="list-style-type: none"> <li>➤ Authorization without fees : <ul style="list-style-type: none"> <li>✓ F004 = 0</li> <li>✓ F022.7 != F</li> <li>✓ F024 = 181</li> <li>✓ F048.P71 = R</li> <li>✓ F048.P92 (CVV2) (optional)</li> </ul> </li> <li>➤ Authorization with fees : <ul style="list-style-type: none"> <li>✓ F004 != 0</li> <li>✓ F022.7 != F</li> <li>✓ F024 = 100</li> <li>✓ F048.P71 = R</li> <li>✓ F048.P92 (CVV2) (optional)</li> </ul> </li> </ul> <p>And the sub-sequent recurring authorization should contain the following information:</p> <ul style="list-style-type: none"> <li>✓ F004 != 0</li> <li>✓ F022.7 = F</li> <li>✓ F024 = 100</li> <li>✓ F048.P71 = R</li> <li>✓ F048.P92 (CVV2) (not allowed)</li> </ul> <p><b>I':</b> (Installment) Indicates that the message is for an installment payment</p> <p><b>'C':</b> (Credential on file) Indicates one of the following scenarios:</p> <ul style="list-style-type: none"> <li>- The merchant is storing the payment credential for the first time for:</li> </ul>

		<p>** subsequent use in cardholder-initiated transactions;</p> <p>** or subsequent use in unscheduled credential-on-file transactions;</p> <p>- The merchant is submitting an unscheduled credential-on-file transaction that is initiated based on standing instructions with the cardholder.</p> <p><b>N.B:</b> Transactions initiated by the cardholder with stored credentials are considered stored credential transactions, but are not unscheduled credential-on-file transactions, and must therefore only use the value of F in F022 and not the value C in F048.P71.</p> <p>The first authorization should contain the following information:</p> <ul style="list-style-type: none"> <li>✓ F004 != 0</li> <li>✓ F022.7 != F</li> <li>✓ F024 = 100</li> <li>✓ F048.P71 = C</li> <li>✓ F048.P92 (CVV2) (optional)</li> </ul> <p>And the sub-sequent authorizations should contain the following information:</p> <ul style="list-style-type: none"> <li>➤ If the authorization is initiated by the merchant: <ul style="list-style-type: none"> <li>✓ F004 != 0</li> <li>✓ F022.7 = F</li> <li>✓ F024 = 100</li> <li>✓ F048.P71 = C</li> <li>✓ F048.P92 (CVV2) (not allowed)</li> </ul> </li> <li>➤ If the authorization is initiated by the cardholder: <ul style="list-style-type: none"> <li>✓ F004 != 0</li> <li>✓ F022.7 = F</li> <li>✓ F024 = 100</li> <li>✓ F048.P71 not present</li> <li>✓ F048.P92 (CVV2) (optional)</li> </ul> </li> </ul>
'P77'	40	Transaction ID (XID)
'P80'	15	Diners network reference ID
'P82'	001	R: Address Verification Request
'P83'	001	<p>Address Verification Response</p> <p><b>A:</b> Address matches, postal code does not.</p> <p><b>N:</b> Neither address nor postal code matches.</p> <p><b>R:</b> Retry, system unable to process.</p> <p><b>S:</b> AVS currently not supported.</p> <p><b>U:</b> No data from issuer/Authorization Platform</p> <p><b>W:</b> For U.S. addresses, nine-digit postal code matches, address does not; for address outside the U.S., postal code matches, address does not.</p>

		<p><b>X:</b> For U.S. addresses, nine-digit postal code and address matches; for addresses outside the U.S., postal code and address match.</p> <p><b>Y:</b> For U.S. addresses, five-digit postal code and address matches.</p> <p><b>Z:</b> For U.S. addresses, five-digit postal code matches, address does not.</p> <p><b>L:</b> CM Name and Postal Code match</p> <p><b>M:</b> CM Name, Address and Postal Code match</p> <p><b>O:</b> CM Name and Address match</p> <p><b>K:</b> CM Name matches</p> <p><b>D:</b> CM Name incorrect, Postal Code matches</p> <p><b>E:</b> CM Name incorrect, Address and Postal Code match</p> <p><b>F:</b> CM Name incorrect, Address matches</p> <p><b>W:</b> No, CM Name, Address and Postal Code are all incorrect</p>
'P87'	001	<p>Result of external check regarding CVV/CVV2.</p> <p>' ' : CVV/CVV2 not checked</p> <p>1 : CVV/CVV2 incorrect</p> <p>2 : CVV/CVV2 correct</p>
'P88'	1	External response source
'P90'	3	Fraud score
'P91'	..48	Amex transaction id
'P92'	3..4	<p>CVC2</p> <p>Element containing the CVC2 for manual authorisation requests</p>
'P95'	002	<p>Network code</p> <p>'01'=Visa</p> <p>'02'=MasterCard</p> <p>'04'=American Express</p> <p>'05'=Diners Club</p> <p>'06'=JCB</p> <p>'07'=Discover</p>
'S20'	...999	Money transfer data (*)
'S21'	..60	<p>Address Data</p> <p>Position 1: Format(always 1)</p> <p>Positions 2–11: Postal Code</p> <p>Positions 12–51: Street address, right padded with spaces</p>
S22	...474	Sale information (*)

S23	...196	Sale items info data (*)
		<p>SMS chargeback data :</p> <p><b>Position 01:</b> Code usage</p> <ul style="list-style-type: none"> <li>▪ <b>0:</b> No documentation provided</li> <li>▪ <b>1:</b> Supporting documentation to follow</li> <li>▪ Invalid acquirer's reference number used in prior chargeback record; no supporting documentation was required or received.</li> <li>▪ <b>2:</b> Invalid acquirer's reference number used in prior chargeback record; no supporting documentation was required or received.</li> <li>▪ <b>3:</b> Invalid acquirer's reference number used in prior chargeback record and supporting documentation was received.</li> <li>▪ <b>4:</b> No supporting documentation received for prior chargeback.</li> </ul> <p><b>Position 02:</b> Code indicator</p> <ul style="list-style-type: none"> <li>▪ <b>Space:</b> Not applicable</li> <li>▪ <b>0:</b> No documentation provided</li> <li>▪ <b>1:</b> Supporting documentation to follow</li> <li>▪ <b>2:</b> Invalid acquirer's reference number used in prior chargeback record; no supporting documentation was required or received.</li> <li>▪ <b>3:</b> Invalid acquirer's reference number used in prior chargeback record and supporting documentation was received.</li> <li>▪ <b>4:</b> No supporting documentation received for prior chargeback.</li> </ul> <p><b>Position 03-08:</b> Chargeback Reference Number (6 digits)</p> <p><b>Position 09-58:</b> Sms message text</p>
'K01'	..58	
'K06'	36	Directory Server Transaction ID

(\*): → see the following 'Tags description' section for more details.

## Field No 48: Tags description

Tag 'P54'

EXTERNAL E-COM CRYPTO RESULT

Length : 1

Description : Indicates the result of the e-com cryptogramme

Valid values : **0:** CAVV invalid or F022.P7 is 'S' or 'T' and CAVV is not present

- 1:** CAVV failed validation-authentication  
**2:** CAVV passed validation-authentication  
**3:** CAVV passed validation-attempt  
**4:** CAVV failed validation-attempt  
**7:** CAVV Failed - Attempt, Issuer not participating, Network Key  
**8:** CAVV Passed - Attempt, Issuer not participating, Network Key  
**9:** CAVV Failed - Attempt, Participating, Access Control Server (ACS) not available, Network Key  
**A:** CAVV Passed - Attempt, Participating, Access Control Server (ACS) not available, Network Key  
**B:** CAVV passed validation—information only, no liability shift (Only from VISA network)  
**N:** CAVV not verified-authenticated. Unable to verify or issuer did not provide the CAVV result. F022.P7 is 'T' and AAV is present  
**O:** CAVV not verified-attempt. Unable to verify or issuer did not provide the CAVV result. F022.P7 is 'S' and AAV is present  
**P:** CAVV not verified, issuer not participating in CAVV verification  
**V:** CAVV not verified. Non-secure submissions

<b>Tag 'P55'</b>	<b>TOKEN DATA</b>
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Length : ...151

Description : Contains the Token informations

Subfields :

Subfield	Name	Length	Description
T01	Token	13..19	Token that is used to replace the cardholder PAN
T02	Token reference ID	..32	The reference id of the token
T03	Token requestor ID	...11	The requestor id of the token
T04	Token assurance level	2	The assurance level of the token
T05	Token status	1	<b>A:</b> Active for payment <b>I:</b> Inactive for payment (not yet active) <b>S:</b> Temporarily suspended for payments <b>D:</b> Permanently deactivated for payments
T06	Token expiry date	4	Format ('YYMM')
T07	Token type	2	<b>01:</b> Card-on-file <b>02:</b> Secure Element <b>03:</b> HCE <b>04:</b> TEE <b>05:</b> Remote Secure location



T08	Token device type	2	Same value as F55.9F6E
T10	Token PAN	..19	PAN or last 4 digits
T11	Token PAN sequence number	3	The sequence number of the PAN
T12	Token PAN status	1	The status of the PAN : <b>N</b> : Normal <b>S</b> : Suspended <b>C</b> : Canceled <b>R</b> : Replaced
T13	Token PAN Expiry date	4	The expiry date of the PAN (YYMM)
T14	Token PAN reference ID	..32	The reference id of the PAN
T30	Token PAN issuer ID	..6	ID assigned by the TSP to the PAN issuer

Tag 'S20'

MONEY TRANSFER DATA

Length : ...999Description : InformationSubfields :

Subfield	Name	Length	Description
001	Payment type	2	<b>AA</b> : Account to account <b>PP</b> : Person to person <b>PL</b> : Prepaid initial load <b>PR</b> : Prepaid reload <b>GR</b> : Gambling repay <b>BP</b> : Bill payment <b>PD</b> : Payroll/pension disbursement <b>OC</b> : Government/Non-Government Organization Disbursement <b>MR</b> : Merchant rebate <b>GC</b> : Consumer to government <b>BD</b> : Business Disbursement <b>MS</b> : Acquirer to merchant settlement <b>OP</b> : Other Payment
002	Funds source	2	<b>00</b> : Unspecified <b>01</b> : Credit <b>02</b> : Debit <b>03</b> : Prepaid <b>04</b> : Deposit Account <b>05</b> : Mobile Money Account <b>06</b> : Cash

003	Sender Reference Number	..32	Transaction reference number that is provided by the originator or acquirer and can be used to uniquely identify the entity funding the transaction.
004	Sender Account Number	..36	The account number of the entity funding the transaction.
005	Sender name	..48	The name of the entity funding the transaction.
006	Sender street address	..60	The address of the entity funding the transaction.
007	Sender city name	..32	The city of the entity funding the transaction.
008	Sender state	3	The geographical state or province of the entity funding the transaction.
009	Sender country	3	The country of the entity funding the transaction.
010	Sender phone number	..20	The phone number of the sender
011	Sender DOB	8	The date of birth of the sender
012	Message	..64	The message sent
013	Recipient name	..48	The name of the entity receiving the funds.
014	Sender first name	..35	The first name of the sender
015	Sender middle name	1	The middle name initial of the sender
016	Sender last name	..35	The last name of the sender
017	Sender postal code	..10	The postal code of the sender
018	Recipient first name	..35	This tag contains the name of the entity receiving the funds.
019	Recipient middle name	1	The middle name initial of the Recipient/Receiver
020	Recipient last name	..35	The last name of the Recipient/Receiver
021	Recipient street address	..50	The Street Address of the Recipient/Receiver
022	Recipient city name	..25	The city of the Receiver/Recipient
023	Recipient state	3	The state of the Receiver/Recipient
024	Recipient country	3	The country of the Receiver/Recipient
025	Recipient postal code	..10	The postal code of the Receiver/Recipient
026	Recipient phone number	..20	The phone number of the Receiver/Recipient
027	Recipient DOB	8	The date of birth of the Receiver/Recipient
028	Recipient account number	..20	The account number of the Receiver/Recipient
029	Sender ID	..25	The identification number of the Sender

030	Language ID	3	The information about the language selected by the customer.
031	Additional sender data	...322	The sender name, address, phone number, date of birth, and account details.

**Tag 'S22'****SALE INFORMATION**

Length : ...474

Description : Contains sale Information data

Subfields :

Subfield	Name	Length	Description
001	Billing Postal Code	..10	The postal code of the cardmember
002	Billing address	..40	The address of the cardmember
003	Billing first name	..32	The first name of the cardmember
004	Billing last name	..32	The last name of the cardmember
005	Billing phone number	..10	The phone number of the cardmember
006	Billing country code	3	The country code of the cardmember
007	Shipping method	2	<b>01:</b> Same Day <b>02:</b> Overnight / Next Day <b>03:</b> Priority, 2-3 days <b>04:</b> Ground, 4 or more days <b>05:</b> Electronic Delivery <b>06:</b> Ship-to Store
008	Shipping to postal code	..10	The postal code of the shipping
009	Shipping to address	..50	The address of the shipping
010	Shipping to first name	..32	The first name of the person receiving the shipping
011	Shipping to last name	..32	The last name of the person receiving the shipping
012	Shipping phone number	..10	The phone number of the person receiving the shipping
013	Shipping to country code	3	The country code of the shipping
014	Customer email	..60	The email of the customer

015	Customer ip	..15	The ip address of the customer
016	Customer http browser type	..60	The http browser type of the customer
020	Merchant hostname	..60	The hostname to wich the customer is connected to make the purchase order
021	Merchant ANI	..10	ANI (Automatic Number Identification) specified the phone number that customer used to place order with merchant
022	Merchant II Digits	2..3	Telephone company-provided ANI Information Identifier (II) digits associated with CUSTOMER ANI. II digits indicate call type. For example, cellular (61-63), payphone (27), toll free (24, 25)

**Tag 'S23'****SALE ITEMS INFO DATA**Length : ...196Description : Contains items Information dataSubfields :

Subfield	Name	Length	Description
001	Item identification	..32	The identification of the item
002	Product code	..16	The code of the product
003	Additional product code	..16	Additional product code related to the product
004	Internal product code	5	Internal product code <b>01000:</b> Gift card <b>02001:</b> Music track
005	Unit of measure	..4	The unit of measure
006	Product quantity	..6	The quantity of the product
007	Unit price	..12	The unit price
009	Product amount	..12	The amount of the product
011	Value added tax	..12	The tax value
012	Tax type	..32	The tax type
013	Product description	..32	The description of the product
014	Delivery location	..16	The location of the delivery

015	Delivery service	1	The delivery service
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**Field No 49****Transaction currency code**

Attribute : n 3.

Description : Either the code for the Local currency of the Acquirer or for the original transaction location. Currency used in the transaction amount.

Usage : 11XX, 12XX, 14XX.

**Field No 50****Reconciliation currency code**

Attribute : n 3.

Description : Reconciliation currency code.

Usage : 11XX, 12XX, 14XX, 15XX.

**Field No 51****Cardholder billing currency code**

Attribute : n 3.

Description : Cardholder billing and billing fees currency code.

Usage : 11XX, 12XX, 14XX.

## **Field No 52 PIN**

Attribute : b 8

Description : Customer Pin Block, encrypted under a transport key. The Pin Block should be in format 01 (ANSI X9.8 or ISO 95641 – format 0)

Usage : 1100, 1200.

## **Field No 53 Security data**

Attribute : LLVAR n..99

Description : Security check information.

Valeurs valides : **Positions 1-2: Security format (Pin Block encryption method)**  
**00:** No encryption  
**02:** ZPK

### **Positions 3-4: PIN block format**

**01:** Format 01/Ansi Format

**25:** Pre-validated PIN

**99:** Pin not present in message

**Positions 5-7: PIN encryption key index**

**000:** Reserved

**Positions 8-10: MAC key index**

**000:** Reserved

Usage : All request messages

**Field No 54**

**Extra amounts**

Attribute : LLLVAR an..120.

Description : Relevant information on the amounts and the account data.

Valid values: **Positions 1-2: Account type**

**10 :** Saving account

**20 :** Checking account

**30 :** Credit card account

**38 :** Loan account

**40 :** Universal account

**50 :** Investment account

**Positions 3-4: Amount type**

**01:** Account balance

**02:** Available balance

**40:** Cash back amount

- 43:** Total cumulative amount
- 44:** Amount, Gratuity
- 57:** Original amount
- 99:** Not Applicable / Not Specified

**Positions 5-7: Currency code**

**Position 8:**

- 'C':** Credit
- 'D':** Debit

**Positions 9-20:** Amount in format 9(10)V2

This field can contain up to 6 different accounts.

Usage : 12XX, 14XX, 15XX.

**Field No 55**

**Smart Card Information**

Attribute : LLLVAR b..255

Description : Contains data related to ICC card. The structure of this data element is described in ISO 10202.

Usage : 11XX, 12XX.

Valid values: (cf table below)



Tag	Name	Format	Comment	Presence
71	Issuer Script Template 1	b..128	It contains proprietary data of the issuer data to be transmitted to the ICC before the second cryptogram is generated.	Optional 1110 1210
72	Issuer Script Template 2	b..128	It contains proprietary data of the issuer to be transmitted to the ICC after the second cryptogram is generated.	Optional 1110 1210
82	Application Interchange Profile	b 2	Indicates the capabilities of the ICC to support specific functions.	Mandatory 1100 1120 1200 1220
84	Dedicated File Name	b..16	Contains the name of the dedicated file as described in ISO/IEC 7816-4	Mandatory 1100 1120 1200 1220
86	Issuer script command	b..21	Script sent by the issuer in response to the authorization request or transaction request.	Optional 1110 1210
8A	Authorization response code	An..2	Code generated by the issuer.	Mandatory 1110 1210
91	Issuer Authentication Data	b..16	Contains the data to send to the ICC for issuer authentication.	Mandatory 1110 1210
95	Terminal Verification Results	b 5	Contains the status of the terminal functions.	Mandatory 1100 1120 1200 1220
9A	Transaction Date	b 3	Contains the date on which the transaction was authorized (format YYMMDD).	Mandatory 1100 1120 1200 1220
9C	Transaction Type	b 1	Indicates the transaction type.	Mandatory 1100 1120 1200 1220
5F2A	Transaction Currency Code	b 2	Contains the code of the currency in which the authorised transaction amount is expressed. The currency code which must comply with ISO4217 is carried as three hexadecimal digits over two bytes.	Mandatory 1100 1120 1200 1220

Tag	Name	Format	Comment	Presence
5F34	PAN sequence number	b 2	Identifies and differentiates cards with the same PAN	Optional
9F0A	Application selection registered Prop. Data	-	Application Selection Registered Proprietary Data	Optional
9F02	Transaction Amount	b 6	Transaction amount.	Mandatory 1100 1120 1200 1220
9F03	Other Amount	b 6	Contains a cashback amount associated with the transaction, carried as 12 hexadecimal digits, over six bytes.	Mandatory <sup>1</sup> 1100 1120 1200 1220
9F06	Application selected	b 16	Identifies the selected application	Optional
9F09	Terminal Application Version Number	b 2	Contains the version number assigned by the payment system to the application.	Optional
9F10	Issuer Application Data	b..32	Contains proprietary application data to be transmitted to the issuer in an online mode.	Mandatory <sup>2</sup> 1100 1120 1200 1220
9F1A	Terminal Country Code	b 2	Contains the country code where the terminal is located.	Mandatory 1100 1120 1200 1220
9F1E	Interface Device (IFD) Serial number	b 8	Interface Device (IFD) Serial number.	Optional
9F6E	Form Factor Indicator (FFI)	b 32	Indicates the form factor of the consumer payment device and the type of contactless interface over which the transaction was conducted.	Optional
9F26	Application cryptogram	b 8	Contains the cryptogram computed by the ICC.	Mandatory 1100 1120 1200 1220
9F27	Cryptogram Information Data	b 1	Indicates the type of cryptogram and the actions to be performed by the terminal.	Mandatory 1100 1120

<sup>1</sup> Required for cash back transaction.<sup>2</sup> Required if provided by the ICC

Tag	Name	Format	Comment	Presence
				1200 1220
9F33	Terminal Capabilities	b 3	Indicates the card data input, customer verification method and security capabilities of the terminal.	Optional
9F34	Cardholder Verification Method Results	b..4	Indicates the result of the last cardholder verification performed.	Optional
9F35	Terminal Type	b 1	Indicates the environment of the terminal, its communications capabilities and its operational controls.	Optional
9F36	Application Transaction Counter (ATC)	b 2	Contains the value of a counter maintained by the ICC, used to generate the cryptogram.	Mandatory 1100 1120 1200 1220
9F37	Unpredictable Number	b 4	Contains a value which is included in the generation of the cryptogram to provide variability and uniqueness.	Mandatory 1100 1120 1200 1220
9F41	Transaction Sequence Number	b..4	It is a counter maintained by the terminal, which is incremented by one for each transaction.	Optional
9F5B	Issuer script result	b 5	Indicates the result of the terminal script processing	Optional
9F53	Transaction Category Code	b 1	Transaction Category Code - TCC	Optional

## Field No 56

### Initial data elements

Attribute : LLVAR n..35.

Description : This field contains data used to retrieve a transaction.

Valid values :

- Positions **1-4** : Original message type
- Positions **5-10** : Original audit number
- Positions **11-22** : Original transaction date and time (Format : YYMMDDhhmmss)
- Positions **22-32** : Original acquirer identification

Usage : 142X.

## Field No 60

### Reserved for national use

Attribute : LLLVAR ans..999

Description : Additional data required by international networks.

Valid values :

**Position 1: Authentication Reliability Indicator**

- 0:** Reliable.
- 1:** Acquirer processor indicates that card authentication is not reliable.
- 2:** VisaNet indicates that the acquirer did not authenticate the card.
- 3:** VisaNet indicates that the issuer did not authenticate the card.

**Position 2: Chip Condition Code**

**0:** Service code does not begin with 2 or 6

**1:** Service code begins with 2 or 6, last read at the chip capable terminal was successful, or was not a chip transaction, or unknown

**2:** Service code begins with 2 or 6 last read at the chip capable terminal was an unsuccessful chip read

**Position 3: VSDC Transaction Indicator**

**0 :** Non VSDC transaction

**1 :** VSDC transaction

Usage : 11XX, 12XX, 14XX

**Field No 61**

**Reserved for private use**

Attribute : LLLVAR ans..999

Description : POS Data

Valid values : Cf table below.

Usage : 11XX, 12XX, 14XX

Type (3 digits)	Lenght (3 digits)	Value
'039'	002	Response code received from Issuer before being converted in PowerCARD response code.

**Field No 62****CPS Data**

Attribute : LLLVAR ans..999

Description : CPS data

Valid values : Cf. table below.

Usage 1110, 1210.

Tag (3 digits)	Lenght (3 digits)	Value
'F01'	001	Authorisation Characteristic Indicator (ACI).  <b>A</b> - Qualification successful: Card present, Track read done, CVV requested  <b>E</b> - Qualification successful: Merchant of class A compliant (name and business location data available)  <b>N</b> – Qualification unsuccessful  This element is sent in the authorization message response to inform the Acquirer about the qualification of its transaction.
'F02'	015	Transaction identifier.  This element contains an unique identifier by transaction in case of pre-authorisation. It allows an Issuer to match many authorization requests with one transaction (incremental authorisation).
'F03'	004	CPS validation Code. This element must be reproduced in the compensation messages.
'F04'	001	Identifier of specific data for a market Allows the Issuer to validate the presence of a duration into the pre-authorization message.

		<b>A</b> : Car rent <b>H</b> : Hotel <b>N</b> : Other
'F05'	002	Duration of pre-authorisation, expressed in number of days. This element is significant if the previous element is set to A or H.
'F06'	001	Indicator of prestige propriety, it allows the Issuer to be informed that the merchant benefits from special limits during card validation requests (with 1USD amount). D : Limit to 500 USD B : Limit to 1000 USD S : Limit to 1.500 USD

**Field No 72****Record Data**

Attribute : LLLVAR ans...999

Description : **For Mini-statement Data Usage** :

Position **1-2** : Number of records(length 2)  
Position **3-8** : Transaction Date MMDDRR (length 6)  
Position **9-28** : Transaction Description (length 20)  
Position **29-43** : Transaction Amount (length 15).  
Position **44** : Transaction Amount Sign (length 1)  
(D : Debit, C: Credit).  
Position **45-59** : Balance (length 15)  
Position **60** : Balance Sign(length 1)  
(D : Debit, C: Credit)  
Position **61-63** : Transaction Currency Code (length 3)

This field is repeated as many as operations number.

Usage : 1110, 1210.

**Field No 73**

**Action date**

Attribute : an 6

Description : Date for a future action or specific date like a birth date. This date represents the purge date of opposition file. The format is DDMMYY.

Usage : 13XX.

**Field No 74**

**Credit number**

Attribute : n 10

Description : Number of all the financial transactions where the positions 1-2 of the processing code in the financial transaction indicated a credit.

Usage : 15XX.

**Field No 75**

**Credit reversal number**

Attribute : n 10

Description : Number of all the reversal transactions where the positions 1-2 of the processing code in the reversal transaction indicated a debit.

Usage : 15XX.



**Field No 76**

**Debit number**

Attribute : n 10

Description : Number of all the financial transactions where the positions 1-2 of the processing code in the financial transaction indicated a debit.

Usage : 15XX.

**Field No 77**

**Debit reversal number**

Attribute : n 10

Description : Number of all the reversal transactions where the positions 1-2 of the processing code in the reversal transaction indicated a credit.

Usage : 15XX.

**Field No 83**

**Payment number**

Attribute : n 10

Description : Number of all the financial transactions where the positions 1-2 of the processing code in the financial transaction indicated a payment.

Usage : 15XX.

#### **Field No 84**

##### **Payment reversal number**

Attribute : n 10

Description : Number of all reversal transactions where the positions 1-2 of the processing code in the reversal transaction indicated a payment.

Usage : 15XX.

#### **Field No 86**

##### **Credit amount**

Attribute : n 16

Description : Total amount of all the financial transactions excluding fees where the positions 1-2 of the processing code in the financial transaction indicated a credit.

Usage : 15XX.

#### **Field No 87**

##### **Reversal credits amount**

Attribute : n 16

Description : Total amount of all the reversal transactions excluding fees where the positions 1-2 of the processing code in the reversal transaction indicated a debit.

Usage : 15XX.

## Field No 88

### Debit amount

Attribute : n 16

Description : Total amount of all the financial transactions excluding fees where the positions 1-2 of the processing code in the financial transaction indicated a debit.

Usage : 15XX.

## Field No 89

### Reversal debits amount

Attribute : n 16

Description : Total amount of all the reversal transactions excluding fees where the positions 1-2 of the processing code in the reversal transaction indicated a credit.

Usage : 15XX.

## Field No 93

### Transaction receiving institution identification code

Attribute : LLVAR n..11

Description : Identification code for the institution which is receiving the transaction.

Usage : 13XX, 18XX.

#### **Field No 94**

##### **Transaction sending institution identification code**

Attribute : LLVAR n..11

Description : Identification code for the institution which is sending the transaction.

Usage : 13XX, 18XX.

#### **Field No 97**

##### **Reconciliation net amount**

Attribute : x+n 16

Description : Net value corresponding to the gross amounts

Usage : 15XX.

#### **Field No 99**

##### **Settlement Institution Identification Code**

Attribute : LLVAR n..11

Description : Identifies the settlement institution or its agent.

Usage : 15XX

## Field No 100

### Receiving institution

Attribute : LLVAR n..11

Description : Identifies the institution receiving the message.

Usage : 16XX

## Field No 101

### File name

Attribute : LLVAR ans..17

Description : Real or abbreviated name of the selected file.

Usage : 13XX

## Field No 102

### Account identification 1

Attribute : LLVAR ans..28

Description : Series of digits and/or characters to identify an account or a commercial relationship with a customer.

Usage : 11XX, 12XX, 13XX, 14XX.

### **Field No 103**

#### **Account identification 2**

Attribute : LLVAR ans..28

Description : Series of digits and/or characters to identify an account or a commercial relationship with a customer.

Usage : 11XX, 12XX, 13XX, 14XX.

### **Field No 105**

#### **Rejected credits amount**

Attribute : n 16

Description : Total amount of rejected transactions excluding fees where positions 1-2 of the processing code in the chargeback transaction indicated a debit.

Usage : 15XX.

### **Field No 106**

#### **Rejected debits amount**

Attribute : n 16

Description : Total amount of rejected transactions excluding fees where positions 1-2 of the processing code in the chargeback transaction indicated a credit.

Usage : 15XX.

### Field No 107

#### Number of rejected credits

Attribute : n 16

Description : Number of all the rejected transactions where positions 1-2 of the processing code in the chargeback transaction indicated a debit.

Usage : 15XX.

### Field No 108

#### Number of rejected debits

Attribute : n 16

Description : Number of all the rejected transactions where positions 1-2 of the processing code in the chargeback transaction indicated a credit.

Usage : 15XX.

### Field No 128

#### Message Authentication Code

Attribute : b 8

Description : To validate the message source between the issuer and the acquirer. This code is calculated according to « Standard on Computer Data Authentication (FIPS PUB 113)».

Usage : All messages

### 3. Messages protocol

This section presents a description of all messages handled by the Switch.  
It includes a detailed description of all data elements in use in each message.

Following messages are detailed :

**1100** : Authorization request

**1110** : Authorization request response

**1120** : Authorization advice

**1121** : Authorization advice repeat

**1130** : Authorization advice response

**1200** : Financial transaction request

**1210** : Financial transaction request response

**1220** : Financial transaction advice

**1221** : Financial transaction advice repeat

**1230** : Financial transaction advice response.

**1400** : Acquirer reversal request

**1410** : Acquirer reversal response

**1420** : Acquirer reversal advice

**1421** : Acquirer reversal advice repeat

**1430** : Acquirer reversal advice response.

**1422** : Issuer reversal advice,

**1423** : Issuer reversal advice repeat,

**1432** : Issuer reversal advice response.

**1520** : Acquirer reconciliation advice,



**1521** : Acquirer reversal advice repeat,  
**1530** : Acquirer reconciliation advice response.

**1522** : Issuer reconciliation advice,  
**1523** : Issuer reconciliation advice repeat,  
**1532** : Issuer reconciliation advice response.

**1304** : File management request,  
**1314** : File management request response

**1324** : File management advice,  
**1334** : File management advice response.

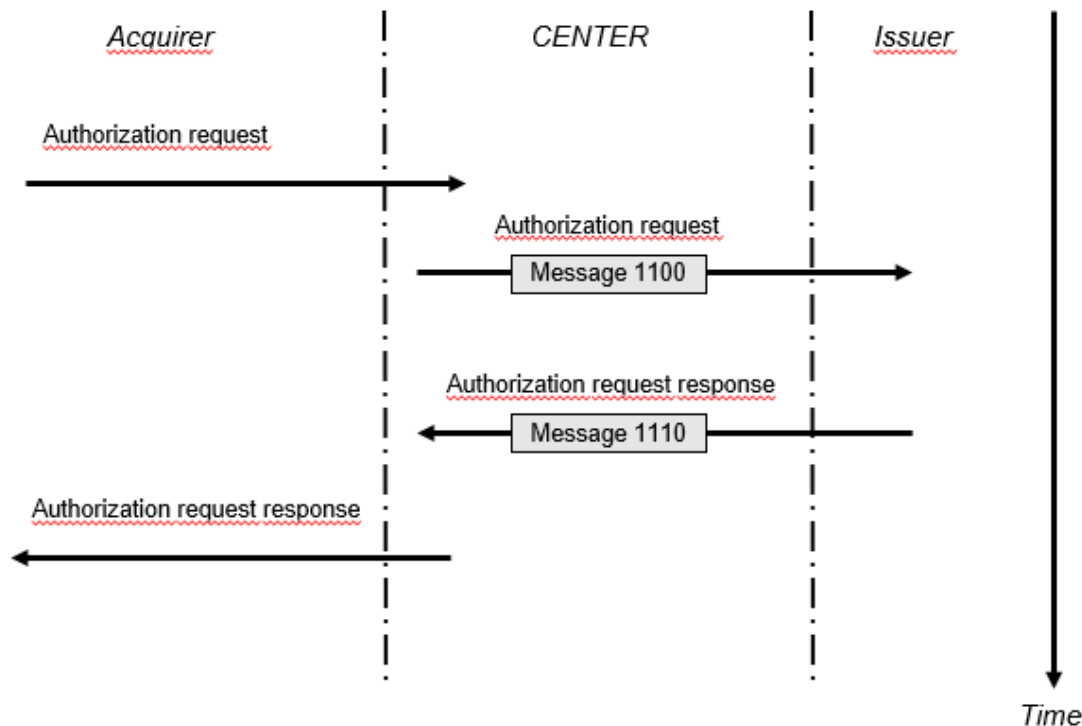
**1604** : Administrative message: text message  
**1614** : Administrative message response

**1720** : Fee collection request (acquirer)  
**1722** : Fee collection request (issuer)  
**1730** : Fee collection request response (acquirer)  
**1732** : Fee collection request response (issuer)

**1804** : Network management request,  
**1814** : Network management request response.

## 3.1 Authorization Request

### 3.1.1 Messages synopsis



### 3.1.2 Messages content

<b>Type</b>	1100
<b>Flow</b>	From acquirer to issuer.
<b>Description</b>	Request for an authorization transaction.
<b>Response</b>	A response to the authorization request (1110) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

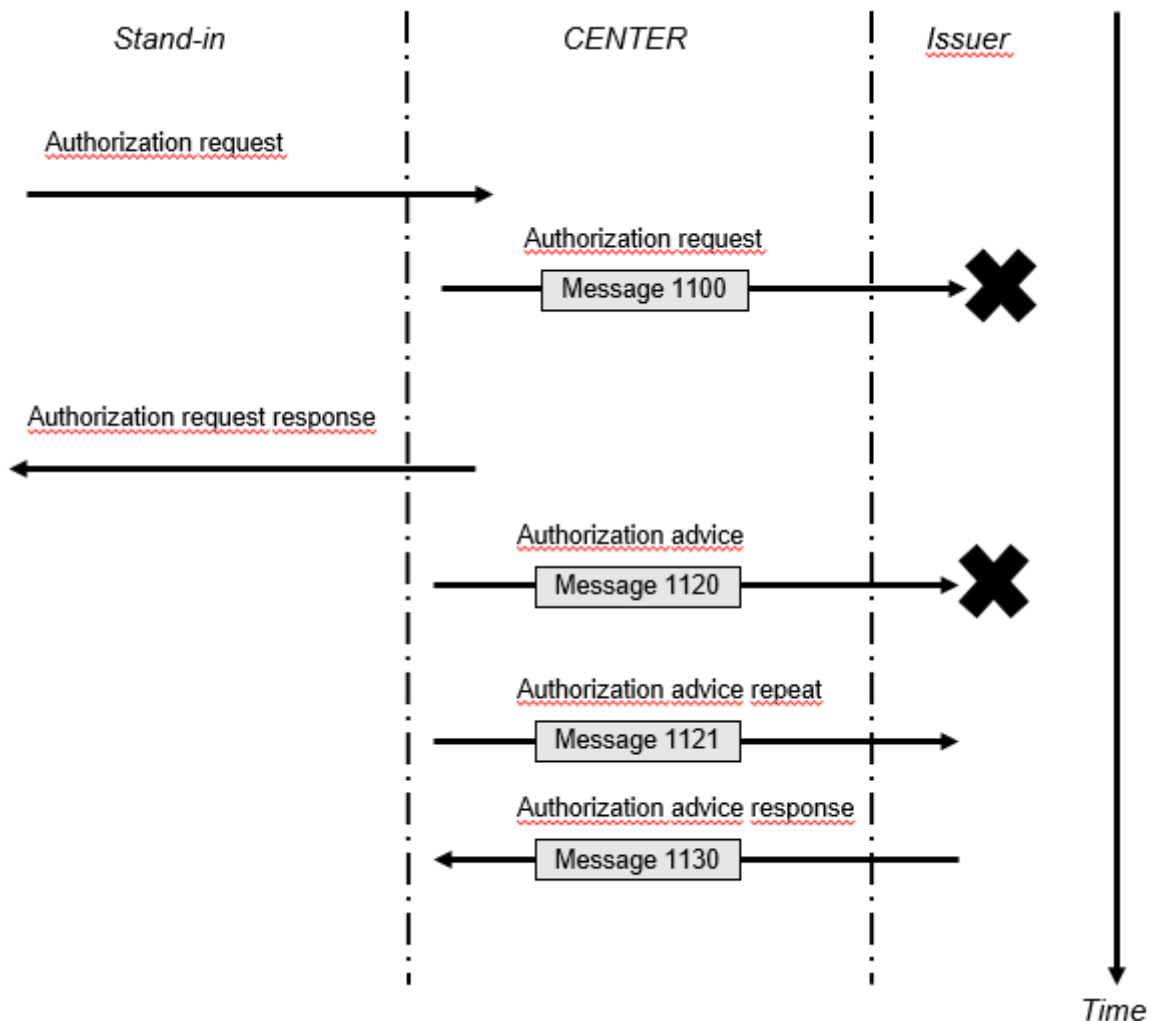
<b>Type</b>	1110
<b>Flow</b>	From issuer to acquirer.
<b>Description</b>	Sends the response to an authorization request.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1100</u>	<u>1110</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	M	
3	Processing code	M	R	
4	Transaction amount	M	R	
5	Settlement amount	C	R	If present in the request initiated by Visa and MasterCard networks
6	Cardholder billing amount	M	R	
7	Transmission date and time	M	R	
9	Reconciliation exchange rate	C	R	If element 5 is present.
10	Cardholder billing exchange rate	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	Transaction local date and time.
14	Expiry date	M		
15	Settlement date	M	R	
16	Exchange date	M	R	
18	Merchant type	M		
19	Acquirer institution country code	M		
21	Forwarding institution country code	M		
22	POS data	M		
23	Card sequential number	C		
24	Function code	M		
27	Authorisation code length		M	
32	Acquirer institution identification code	M	R	
33	Forwarding institution identification code	M	R	
35	Track 2	C		
37	Reference number	M	R	
38	Authorization number		M	Authorization number in case of reject.
39	Action code		M	<u>See list of action codes</u>
41	Card acceptor terminal identification	M	R	
42	Card acceptor identification	M	R	
43	Card acceptor name / address	M		
45	Track 1	C		
46	Fees amount	C	R	

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1100</u>	<u>1110</u>	<u>COMMENT</u>
<b>48</b>	Additional data	C	C	
<b>49</b>	Transaction currency code	M	R	
<b>50</b>	Reconciliation currency code	C	R	
<b>51</b>	Cardholder billing currency code	M	R	
<b>52</b>	PIN data	C		Mandatory if PIN is captured on the terminal.
<b>53</b>	Security check data	M		
<b>54</b>	Additional amounts		C	Mandatory for the responses to local authorisation requests
<b>55</b>	Chip card related data	C	C	Required for EMV compliant transactions.
<b>60</b>	Reserved for national use	C		
<b>61</b>	Reserved for national use		M	
<b>62</b>	Reserved for national use		C	
<b>72</b>	Record Data		C	For Mini-statement Data Usage
<b>102</b>	Account identification	C	R	Mandatory when the card is linked to several accounts.
<b>128</b>	Message authentication code	M	M	

## 3.2 Authorization advice

### 3.2.1 Messages synopsis



### 3.2.2 Messages content

<b>Type</b>	1120
<b>Flow</b>	From stand-in to issuer
<b>Description</b>	Informs that an authorization was given on behalf of the issuer.
<b>Response</b>	An authorization advice response (1130) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

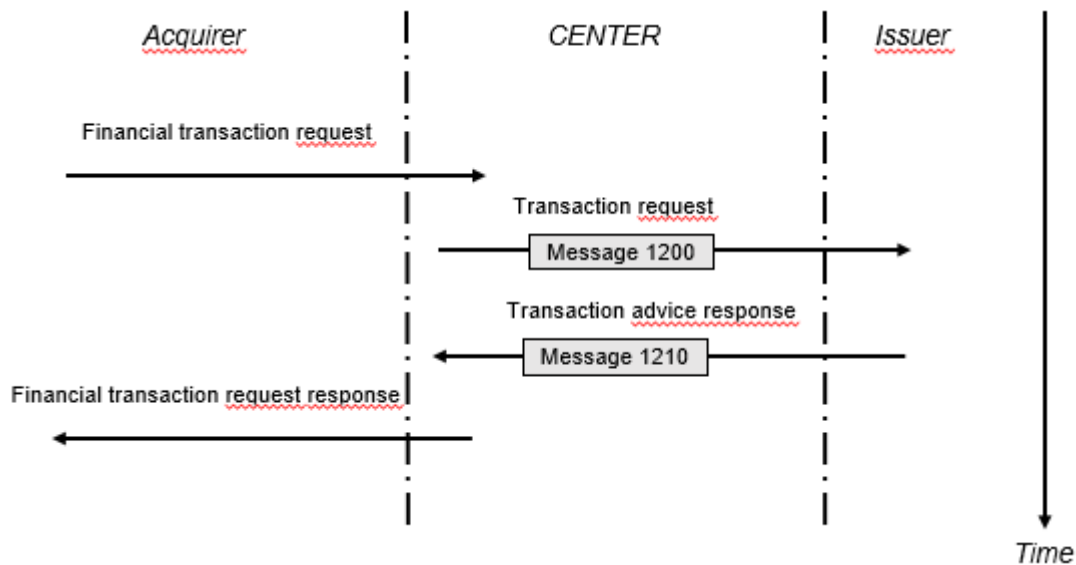
<b>Type</b>	1130
<b>Flow</b>	From issuer to stand-in
<b>Description</b>	Sends the response to an authorization advice.
<b>Element</b>	<p><b>M</b> This element is mandatory in the message.</p> <p><b>C</b> The presence of this element is conditionnal in the message.</p> <p><b>R</b> The value of this element is returned unchanged in the response message.</p>

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1120</u> <u>1121</u>	<u>1130</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	M	
3	Processing code	M	R	
4	Transaction amount	M	R	
5	Settlement amount	C	R	If present in the request initiated by Visa and MasterCard networks
7	Transmission date and time	M	R	
9	Exchange rate, settlement	C	R	if element 5 is present.
10	Cardholder billing exchange rate	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
14	Expiry date	M		
15	Settlement date	M	R	
16	Exchange date	M	R	
19	Acquirer institution country code	M		
21	Forwarding institution country code	M		
22	POS data	M		
23	Card sequential number	C		
24	Function code	M		
25	Message reason code	M		
27	Authorization code lenght		M	
32	Acquirer institution identification code	M	R	
33	Forwarding institution identification code	C	R	
37	Reference number	M	R	
38	Authorization code	M	M	
39	Action code	M	M	<u>See list of action codes</u>
41	Card acceptor terminal identification	C	R	

<b>ELEMENT</b>	<b>DESCRIPTION</b>	<b><u>1120</u> <u>1121</u></b>	<b><u>1130</u></b>	<b><u>COMMENT</u></b>
<b>42</b>	Card acceptor identification code	M	R	
<b>43</b>	Card acceptor name / addresss	M		
<b>46</b>	Fees amount	C	R	
<b>48</b>	Additional data	C	C	
<b>49</b>	Transaction currency code	M	R	
<b>50</b>	Reconciliation currency code	C	R	
<b>51</b>	Cardholder billing currency code	M	R	
<b>53</b>	Security check data	M		
<b>55</b>	Chip card related data	C		Required for EMV compliant transactions.
<b>60</b>	Reserved for national use	C		
<b>102</b>	Account identification	C	R	Mandatory when the card is linked to several accounts.
<b>128</b>	Message authentication code	M	M	

### 3.3 Financial Transaction Request

#### 3.3.1 Messages synopsis



#### 3.3.2 Messages content

<b>Type</b>	1200
<b>Flow</b>	From acquirer to issuer
<b>Description</b>	Request for approval for a financial transaction
<b>Response</b>	A financial transaction request response (1210) is required.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1210
<b>Flow</b>	From issuer to acquirer
<b>Description</b>	Sends the response to a financial transaction request (1200).
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

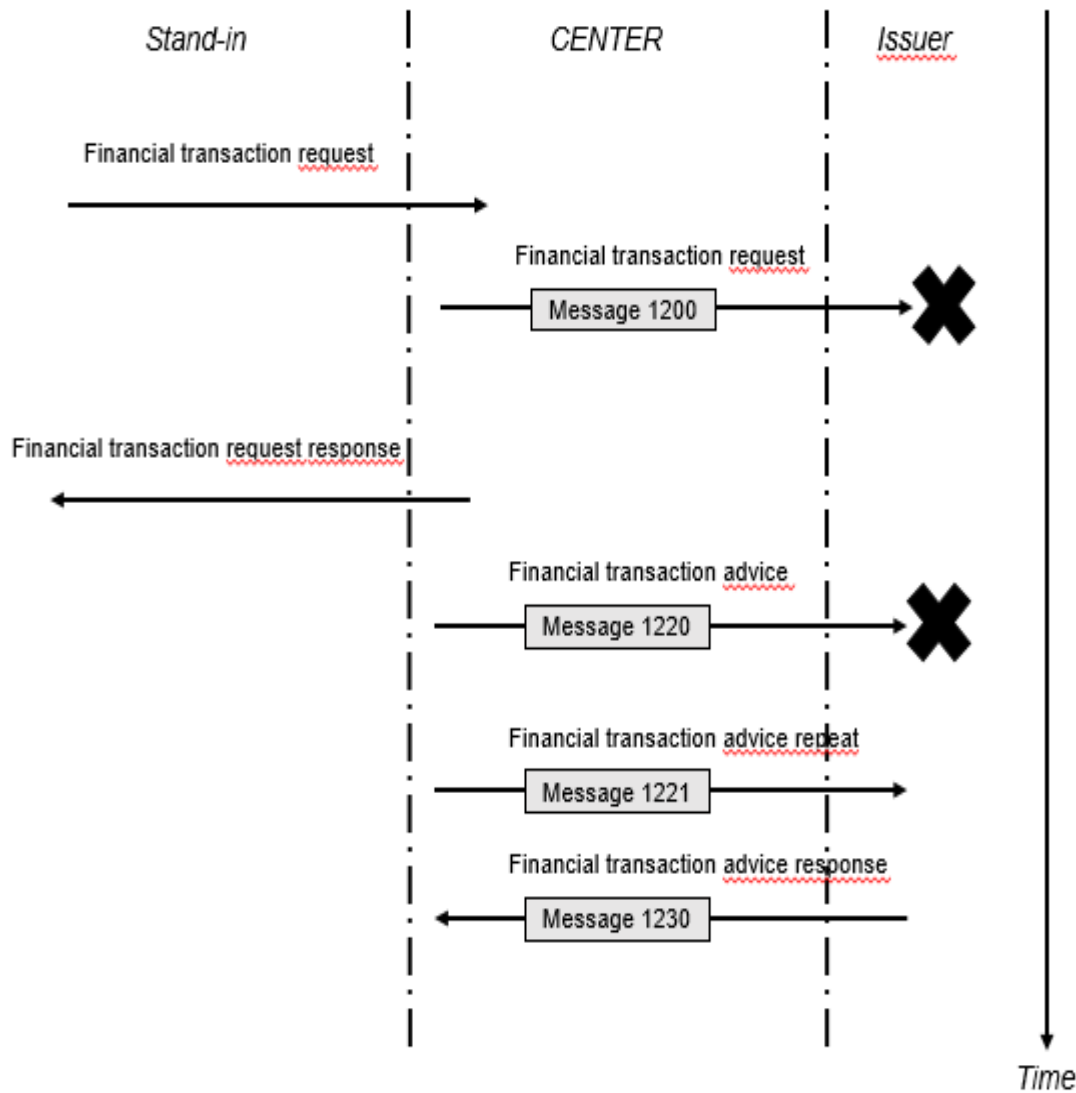


<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1200</u>	<u>1210</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	R	
3	Processing code	M	R	
4	Transaction amount	M	R	Equals to '0' in case of a balance request.
5	Settlement amount	M	R	Equals to '0' in case of a balance request.
6	Cardholder billing amount	M	R	Equals to '0' in case of a balance request.
7	Transmission date and time	M	R	
9	Exchange rate, settlement	M	R	
10	Cardholder billing exchange rate	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
14	Expiry date	M		
15	Settlement date	M	R	
16	Exchange date	M	R	
18	Merchant type	M		
19	Acquirer institution country code	M		
21	Forwarding institution country code	M		
22	POS data	M		
23	Card sequential number	C		
24	Function code	M		
27	Authorization code lenght		M	
32	Acquirer institution identification code	M	R	
33	Forwarding institution identification code	M	R	
35	Track 2	C		
37	Reference number	M	R	
38	Authorization code		M	Mandatory even in case of reject.
39	Action code		M	<u>See list of action codes</u>
41	Card acceptor terminal identification	M	R	
42	Card acceptor identification code	M	R	
43	Card acceptor name / addresss	M		
45	Track 1	C		
46	Fees amount	C	R	This field is defined by the CENTER.
48	Additional data	C	C	

<b>ELEMENT</b>	<b>DESCRIPTION</b>	<b>1200</b>	<b>1210</b>	<b>COMMENT</b>
<b>49</b>	Transaction currency code	M	R	
<b>50</b>	Reconciliation currency code	M	R	This field is defined by the CENTER for the SMS and MDS transactions.
<b>51</b>	Cardholder billing currency code	M	R	
<b>52</b>	PIN data	C		
<b>53</b>	Security check data	M		
<b>54</b>	Extra amounts		C	
<b>55</b>	Chip card related data	C	C	Required for EMV compliant transactions.
<b>60</b>	Reserved for national use	C		
<b>61</b>	Reserved for national use		M	
<b>72</b>	Record Data		C	For Mini-statement Data Usage
<b>62</b>	Reserved for private use		C	CPS data must be sent back to the member in case of SMS transaction.
<b>102</b>	Account I identification	C	R	Mandatory when the card is linked to several accounts.
<b>103</b>	Account II identification	C	R	Used in case of funds transfer.
<b>128</b>	Authentication message code	M	M	

## 3.4 Financial Transaction Advice

### 3.4.1 Messages synopsis



### 3.4.2 Messages content

<b>Type</b>	1220
<b>Flow</b>	From stand-in to issuer
<b>Description</b>	Informs that a financial transaction was performed on behalf of the issuer
<b>Response</b>	A Financial Transaction Advice Response (1230) is mandatory.

<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.
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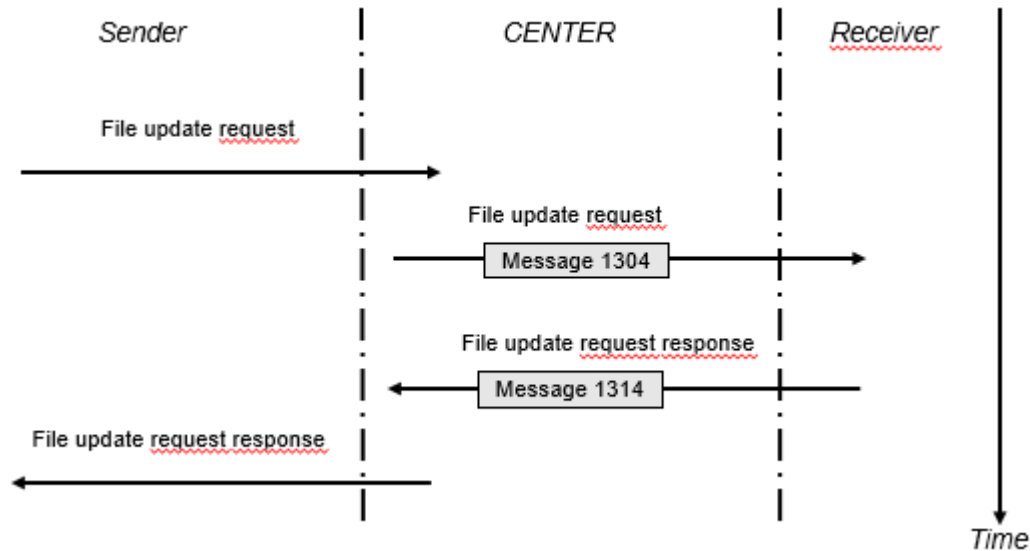
<b>Type</b>	1230
<b>Flow</b>	From issuer to stand-in
<b>Description</b>	Sends the response to a Financial Transaction Advice (1220).
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1220</u> <u>1221</u>	<u>1230</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	R	
3	Processing code	M	R	
4	Transaction amount	M	R	
5	Settlement amount	M	R	
6	Cardholder billing amount	M	R	
7	Transmission date and time	M	R	
9	Exchange rate, settlement	M	R	
10	Cardholder billing exchange rates	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
14	Expiry date	M		
15	Settlement date	M	R	
16	Exchange date	M	R	
18	Merchant type	M		
19	Acquirer institution country code	M		
21	Forwarding institution country code	M		
22	POS data	M		
23	Card sequential number	C		
24	Function code	M		
25	Message reason code	M		

<b>ELEMENT</b>	<b>DESCRIPTION</b>	<b><u>1220</u> <u>1221</u></b>	<b><u>1230</u></b>	<b>COMMENT</b>
<b>32</b>	Acquirer institution identification code	M	R	
<b>33</b>	Forwarding institution identification code	C	R	
<b>37</b>	Retrieval reference number	M	R	
<b>38</b>	Authorization code	M	R	
<b>39</b>	Action code	M	R	<u>See list of action codes</u>
<b>41</b>	Card acceptor terminal identification	M	R	Must be the same value as in the initial request message.
<b>42</b>	Card acceptor identification code	M	R	Must be the same value as in the initial request message.
<b>43</b>	Card acceptor name / addresss	M		
<b>46</b>	Fees amount	C	R	
<b>48</b>	Additional data	C	C	
<b>49</b>	Transaction currency code	M	R	
<b>50</b>	Reconciliation currency code	C		
<b>51</b>	Cardholder billing currency code	M		
<b>53</b>	Security check data	C		
<b>54</b>	Extra amounts	C		
<b>55</b>	Chip card related data	C		Chip card data if available.
<b>56</b>	Original data elements	M		
<b>60</b>	Reserved for national use	C	R	
<b>62</b>	Reserved for private use	C	C	
<b>128</b>	Authentication message code	M	M	

## 3.5 File update request

### 3.5.1 Messages synopsis



### 3.5.2 Messages content

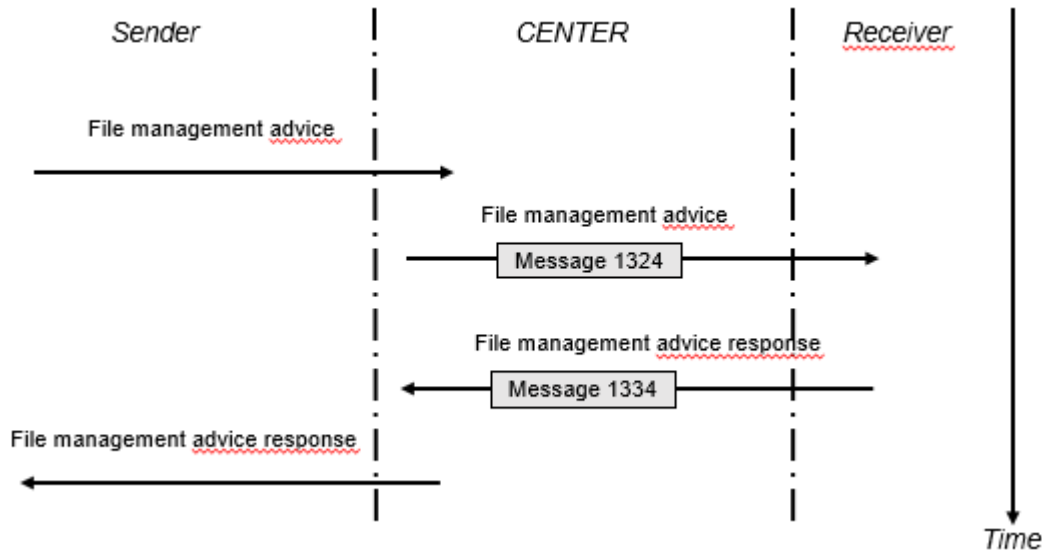
<b>Type</b>	1304
<b>Flow</b>	From sender to receiver
<b>Description</b>	File update request
<b>Response</b>	A file update request response message (1314) must be sent.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1314
<b>Flow</b>	From receiver to sender
<b>Description</b>	Sent in response to a file update request message (1304)
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1304</u>	<u>1314</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	R	
7	Transmission date and time	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
14	Expiry date	C		
24	Function code	M		
25	Message reason code	M		
27	Authorization code lenght		M	
37	Retrieval reference number	M	R	
39	Action code		M	<u>See list of action codes</u>
46	Fees amount	C	R	This field is defined by the CENTER.
73	Action date	C	C	
93	Identification code of the Institution receiving the transaction	M	M	
94	Identification code of the Institution sending the transaction	M	M	
101	File name	M	R	
128	Authentication message code	M	M	

### 3.6 File management advice

#### 3.6.1 Messages synopsis



#### 3.6.2 Messages content

<b>Type</b>	1324
<b>Flow</b>	From Sender to Receiver.
<b>Description</b>	Informs an issuer that a file or record was added, deleted, or replaced.
<b>Response</b>	A message of file update advice request (1334) must be sent.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1334
<b>Flow</b>	From Receiver to Sender.
<b>Description</b>	Sends a response to a file management advice.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

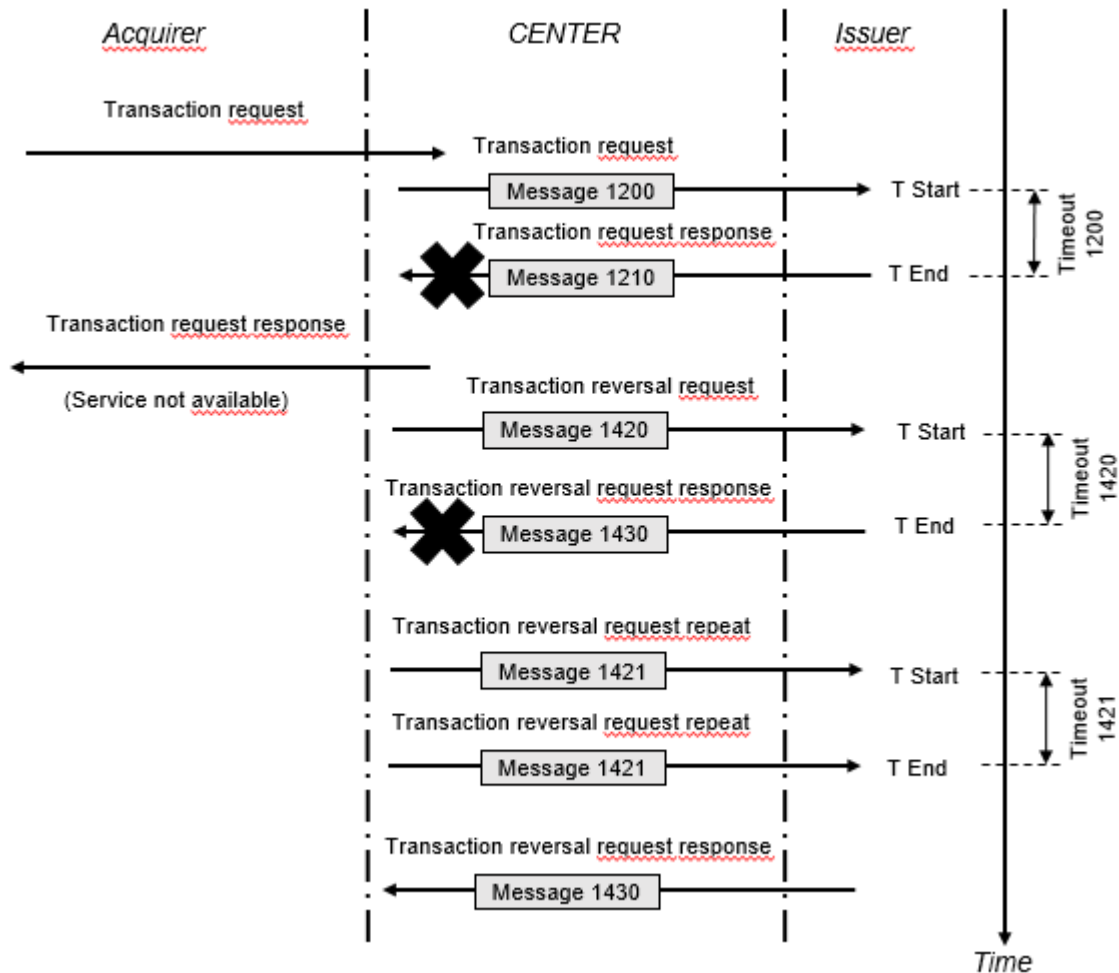


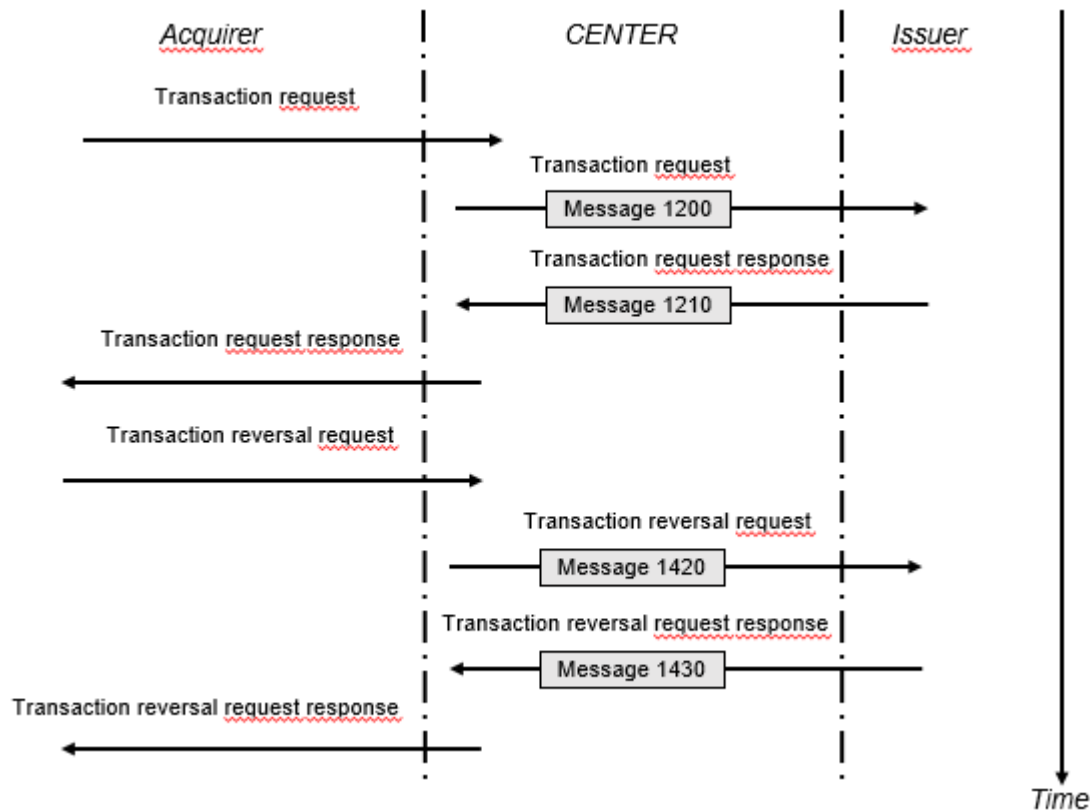
<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1324</u>	<u>1334</u>	<u>COMMENT</u>
<b>1</b>	Secondary bitmap	M	M	
<b>2</b>	Primary account number	M	R	
<b>7</b>	Transmission date and time	M	R	
<b>11</b>	System Trace Audit Number	M	R	
<b>12</b>	Transaction date and time	M	R	
<b>24</b>	Function code	M		
<b>25</b>	Message reason code	M		
<b>27</b>	Authorization code lenght		M	
<b>37</b>	Retrieval reference number	M	R	
<b>39</b>	Action code		M	<u>See list of action codes</u>
<b>46</b>	Fees amount	C	R	This field is defined by the CENTER.
<b>73</b>	Action date	C	C	
<b>93</b>	Identification code of the Institution receiving the transaction	M	M	
<b>94</b>	Identification code of the Institution sending the transaction	M	M	
<b>101</b>	File name	M	R	
<b>128</b>	Authentication message code	M	M	

## 3.7 Reversal advice

### 3.7.1 Messages synopsis

#### First case : Reversal following a timeout on issuer side



**Second case : Reversal following a timeout on acquirer side****3.7.2 Messages content**

<b>Type</b>	1400/1420
<b>Flow</b>	From acquirer to issuer
<b>Description</b>	Adjusts a previous authorization or financial transaction message.
<b>Response</b>	An acquirer reversal advice response message (1410/1430) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1410/1430
<b>Flow</b>	From issuer to acquirer

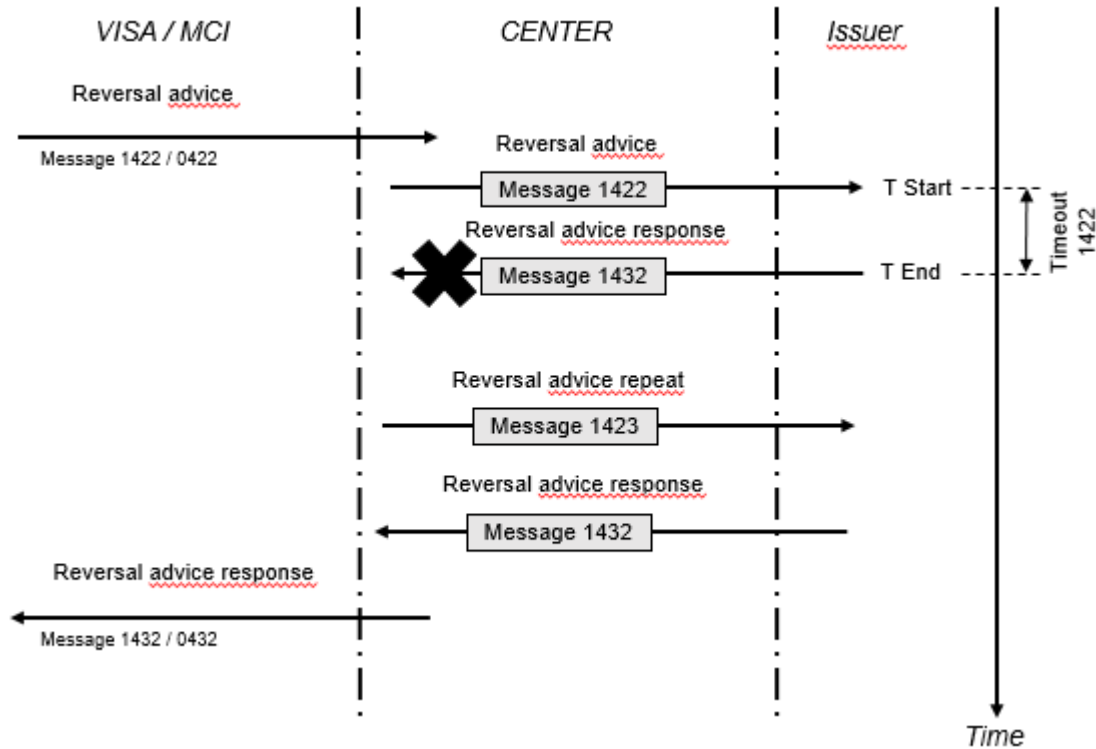
<b>Description</b>	Sends a response to an reversal advice.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1400</u> <u>1420</u> <u>1421</u>	<u>1410</u> <u>1430</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	R	
3	Processing code	M	R	
4	Transaction amount	M	R	Must be the same value as in the initial request message being reversed.
5	Settlement amount	C	R	
6	Cardholder billing amount	M	R	Must be the same value as in the initial request message being reversed.
7	Transmission date and time	M	R	Reversal date and time.
9	Exchange rate, settlement	C		Must be the same value as in the initial request message being reversed.
10	Cardholder billing exchange rates	M		Must be the same value as in the initial request message being reversed.
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	Reversal local date and time. Format : YYMMDDhhmmss.
15	Settlement date	M	R	
16	Exchange date	M	R	
19	Acquirer institution country code	M		Must be the same value as in the initial request message being reversed.
21	Forwarding institution country code	M		Must be the same value as in the initial request message being reversed.
23	Card sequential number	C		
24	Function code	M		Message code fonction: <b>400</b> = total reversal, <b>402</b> = partiel reversal.
25	Message reason code	M		Reversal reason.

<b><u>ELEMENT</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>1400</u> <u>1420</u> <u>1421</u></b>	<b><u>1410</u> <u>1430</u></b>	<b><u>COMMENT</u></b>
<b>30</b>	Replacement amounts	C		Mandatory if reversal is partial.
<b>32</b>	Acquirer institution identification code	M	R	Must be the same value as in the initial request message being reversed.
<b>33</b>	Forwarding institution identification code	M	R	Must be the same value as in the initial request message being reversed.
<b>37</b>	Retrieval reference number	M	R	
<b>38</b>	Authorization code	C	M	Must be the same value as in the initial request message being reversed.
<b>39</b>	Action code	M	M	Response code for the initial request message.
<b>41</b>	Card acceptor terminal identification	M	R	Must be the same value as in the initial request message being reversed.
<b>42</b>	Card acceptor identification code	M	R	Must be the same value as in the initial request message being reversed.
<b>43</b>	Card acceptor name / addresss	M	R	
<b>46</b>	Fees amount	C	R	
<b>48</b>	Additional data	C	C	
<b>49</b>	Transaction currency code	M	R	Must be the same value as in the initial request message being reversed.
<b>50</b>	Reconciliation currency code	M	R	Must be the same value as in the initial request message being reversed.
<b>51</b>	Cardholder billing currency code	M	R	Must be the same value as in the initial request message being reversed.
<b>53</b>	Security check data	M	M	
<b>56</b>	Original data elements	M		
<b>60</b>	Reserved for national use	C		
<b>61</b>	Reserved for national use	C		
<b>62</b>	Reserved for private use	C		
<b>128</b>	Authentication message code	M	M	

### 3.8 Issuer reversal advice

#### 3.8.1 Messages synopsis



#### 3.8.2 Messages content

<b>Type</b>	1422/1423
<b>Flow</b>	From issuer to acquirer.
<b>Description</b>	To issue a reversal for the financial transactions previously accepted but that are disputed by cardholders or considered as not valid by the Issuer.
<b>Response</b>	A response to chargeback (1432) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1432
<b>Flow</b>	From acquirer to issuer.

<b>Description</b>	Response to an Issuer reversal message advice (1422/1423). Indicates a positive response to an Issuer reversal message advice (1422/1423).
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

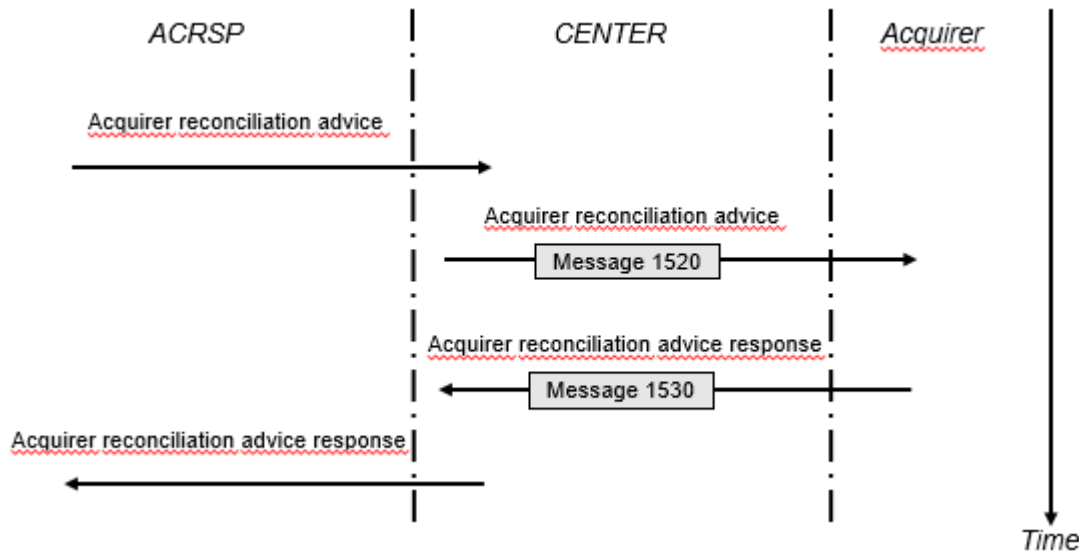
<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1422 1423</u>	<u>1432</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	M	R	
3	Processing code	M	R	
4	Transaction amount	M	R	
5	Settlement amount	M	R	
7	Transmission date and time	M	R	
9	Exchange rate, settlement	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
15	Settlement date	M	R	
16	Exchange date	M	R	
18	Merchant type	M		
19	Acquirer institution country code	M	R	
21	Forwarding institution country code	M	R	
23	Card sequential number	C		
24	Function code	M		
25	Message reason code	M	R	
27	Authorization code lenght		M	
32	Acquirer institution identification code	M	R	
37	Retrieval reference number	M	R	
38	Authorization code		M	
39	Action code		M	<u>See list of action codes</u>
41	Card acceptor terminal identification	M	R	
42	Card acceptor identification code	M	R	
46	Fees amount	C	R	This field is defined by the CENTER.
48	Additional data	C	C	
49	Transaction currency code	M	R	

<b>50</b>	Reconciliation currency code	M	R	
<b>53</b>	Security check data	M	M	
<b>62</b>	Reserved for private use	C	C	
<b>56</b>	Original data elements	M	R	
<b>128</b>	Authentication message code	M	M	



### 3.9 Acquirer Reconciliation Advice

#### 3.9.1 Messages synopsis



#### 3.9.2 Messages content

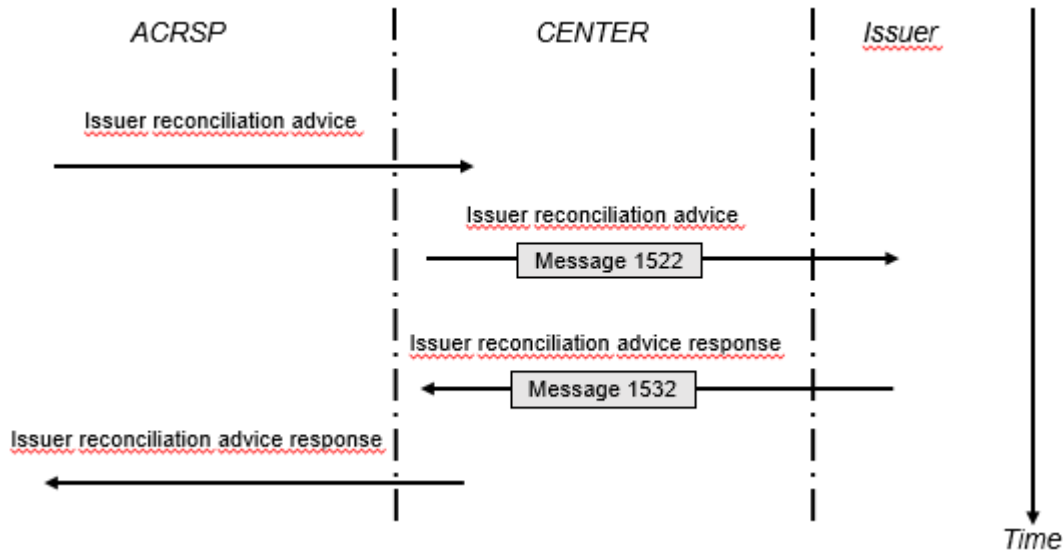
<b>Type</b>	1520/1521
<b>Flow</b>	From ACRSP to acquirer
<b>Description</b>	Informs on the Acquirer totals (number and value) for the last period of reconciliation.
<b>Response</b>	A reconciliation advice response message (1530) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1530
<b>Flow</b>	From acquirer to ACRSP
<b>Description</b>	Must be sent in response to an Acquirer Reconciliation message (1520) to acknowledge receipt of that message.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1520</u> <u>1521</u>	<u>1530</u>	<u>COMMENT</u>
<b>1</b>	Secondary bitmap	M	M	
<b>7</b>	Transmission date and time	M	R	
<b>11</b>	System Trace Audit Number	M	R	
<b>12</b>	Transaction date and time	M	R	
<b>15</b>	Settlement date	M	R	
<b>24</b>	Function code	M		
<b>37</b>	Retrieval reference number	M	R	
<b>39</b>	Action code		M	<a href="#">See list of action codes</a>
<b>50</b>	Reconciliation currency code	M	R	
<b>53</b>	Security check data	M		
<b>74</b>	Credit number	M	M	
<b>75</b>	Credit reversal number	M	M	
<b>76</b>	Debit number	M	M	
<b>77</b>	Debit reversal number	M	M	
<b>80</b>	Inquiries number	M	M	
<b>81</b>	Authorization number	M	M	
<b>86</b>	Credit amount	M	M	
<b>87</b>	Credit reversal amount	M	M	
<b>88</b>	Debit amount	M	M	
<b>89</b>	Debit reversal amount	M	M	
<b>97</b>	Net reconciliation amount	M	M	
<b>99</b>	Settlement agent identification code	M	M	
<b>128</b>	Authentication message code	M	M	

## 3.10 Issuer Reconciliation Advice

### 3.10.1 Messages synopsis



### 3.10.2 Messages content

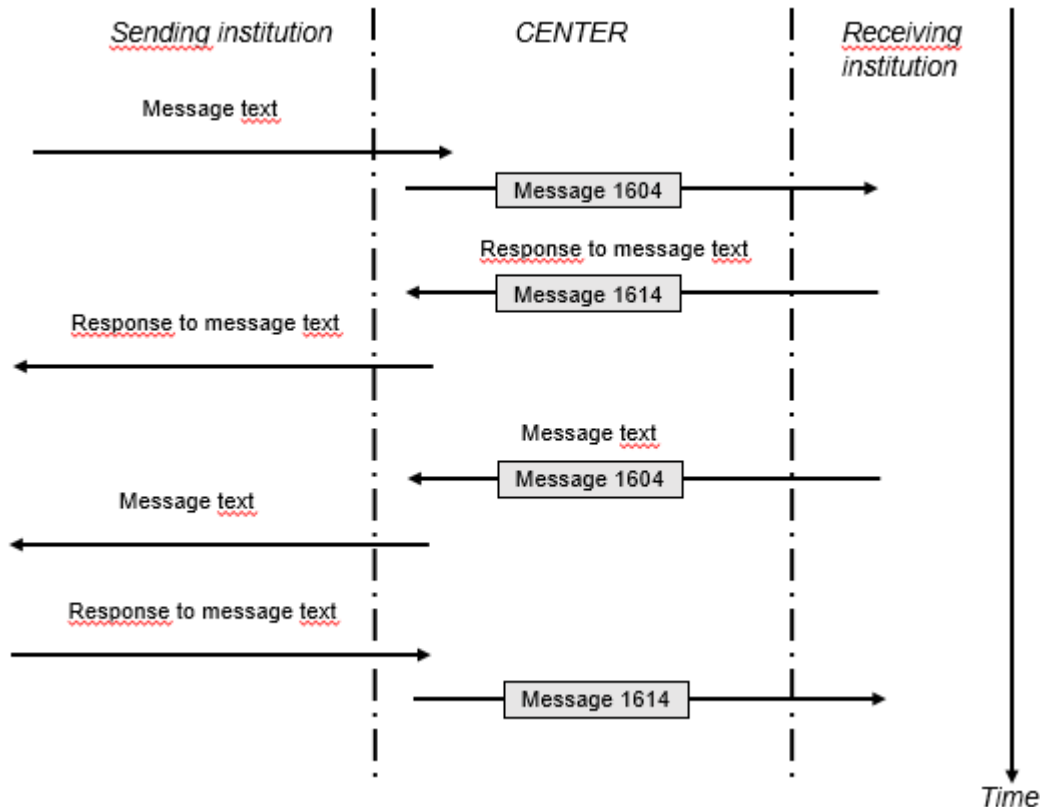
<b>Type</b>	1522/1523
<b>Flow</b>	From ACRSP to issuer
<b>Description</b>	Informs about issuer totals (number and value) for the last period of reconciliation.
<b>Response</b>	A reconciliation advice response message (1532) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1532
<b>Flow</b>	From issuer to ACRSP
<b>Description</b>	Sends the response to a reconciliation advice.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1522</u> <u>1523</u>	<u>1532</u>	<u>COMMENT</u>
<b>1</b>	Secondary bitmap	M	M	
<b>7</b>	Transmission date and time	M	R	
<b>11</b>	System Trace Audit Number	M	R	
<b>12</b>	Transaction date and time	M	R	
<b>15</b>	Settlement date	M	R	
<b>24</b>	Function code	M		
<b>37</b>	Retrieval reference number	M	R	
<b>39</b>	Action code		M	<u>See list of action codes</u>
<b>50</b>	Reconciliation currency code	M	R	
<b>53</b>	Security check data	M		
<b>74</b>	Credit number	M	M	
<b>75</b>	Credit reversal number	M	M	
<b>76</b>	Debit number	M	M	
<b>77</b>	Debit reversal number	M	M	
<b>80</b>	Inquiries number	M	M	
<b>81</b>	Authorization number	M	M	
<b>86</b>	Credit amount	M	M	
<b>87</b>	Credit reversal amount	M	M	
<b>88</b>	Debit amount	M	M	
<b>89</b>	Debit reversal amount	M	M	
<b>97</b>	Net reconciliation amount	M	M	
<b>99</b>	Settlement agent identification code	M	M	
<b>128</b>	Authentication message code	M	M	

### 3.11 Administrative message: Message text

#### 3.11.1 Messages synopsis



#### 3.11.2 Messages content

<b>Type</b>	1604
<b>Flow</b>	From sender to receiver
<b>Description</b>	Allows the exchange of text message (VISA only)
<b>Response</b>	A response to a message text request (1614) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

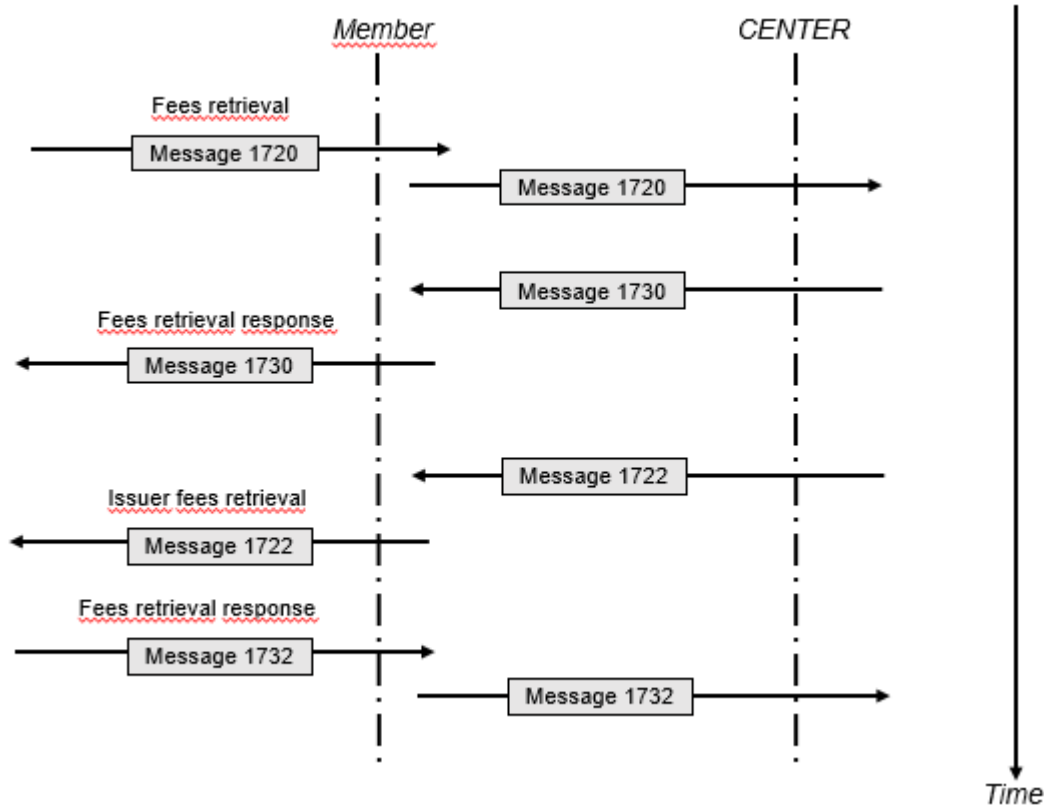
<b>Type</b>	1614
<b>Flow</b>	From receiver to sender
<b>Description</b>	Sends the response to message text request.
<b>Element</b>	<b>M</b> This element is mandatory in the message.

**C** The presence of this element is conditionnal in the message.  
**R** The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1604</u>	<u>1614</u>	<u>COMMENT</u>
<b>1</b>	Secondary bitmap	M	M	
<b>7</b>	Transmission date and time	M	R	
<b>11</b>	System Trace Audit Number	M	R	
<b>12</b>	Transaction date and time	M	R	
<b>33</b>	Forwarding institution identification code	M	R	
<b>37</b>	Numéro de référence de recouvrement	M	R	
<b>39</b>	Action code		M	<u>See list of action codes</u>
<b>48</b>	Additional data	C	C	P35 including # at beginning
<b>100</b>	Receiving institution ID	M	R	
<b>128</b>	Authentication message code	M	M	

### 3.12 Funds and Fees request - Visa

#### 3.12.1 Messages synopsis



#### 3.12.2 Messages content

<b>Type</b>	1720 --1722
<b>Flow</b>	From acquirer to issuer – From issuer to acquirer.
<b>Description</b>	Allows the fees collection from acquirer to issuer. Allows the fees collection from issuer to acquirer.
<b>Response</b>	A response to fees collection message (1730-1732) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.
<b>Type</b>	1730 –1732
<b>Flow</b>	From acquirer to issuer. From issuer to acquirer.
<b>Description</b>	Response to a fees or funds message.

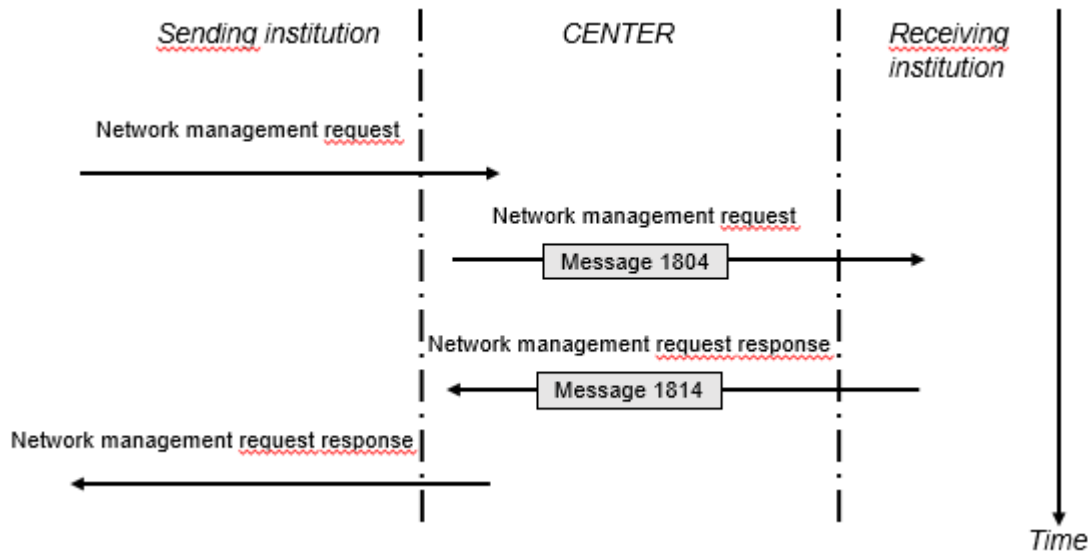
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.
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<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1720</u> <u>1722</u>	<u>1730</u> <u>1732</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
2	Primary account number	C	R	
3	Processing code	M	R	
4	Transaction amount	M	R	
5	Settlement amount	M	R	
7	Transmission date and time	M	R	
9	Exchange rate, settlement	M	R	Present if the message is 1722
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
15	Settlement date		C	
16	Exchange date	M	R	Present if the message is 1722
19	Acquirer institution country code	M	R	
32	Acquirer institution identification code	M	R	
37	Retrieval reference number		R	
38	Authorization code		M	
39	Action code		M	<u>See list of action codes</u>
48	Additional data	C	C	
49	Transaction currency code	M	R	
50	Reconciliation currency code	M	R	
128	Code d'authentification du message	M	M	



### 3.13 Network management request

#### 3.13.1 Messages synopsis



#### 3.13.2 Messages content

<b>Type</b>	1804
<b>Flow</b>	From sender to receiver
<b>Description</b>	Request for network management action
<b>Response</b>	A network management request response (1814) is mandatory.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<b>Type</b>	1814
<b>Flow</b>	From receiver to sender
<b>Description</b>	Sends the response to a network management request.
<b>Element</b>	<b>M</b> This element is mandatory in the message. <b>C</b> The presence of this element is conditionnal in the message. <b>R</b> The value of this element is returned unchanged in the response message.

<u>ELEMENT</u>	<u>DESCRIPTION</u>	<u>1804</u>	<u>1814</u>	<u>COMMENT</u>
1	Secondary bitmap	M	M	
7	Transmission date and time	M	R	
11	System Trace Audit Number	M	R	
12	Transaction date and time	M	R	
24	Function code	M		
25	Message reason code	M		
33	Forwarding institution identification code	M	R	
37	Retrieval reference number	M	R	
39	Action code		M	<u>See list of action codes</u>
48	Additional data	C	C	
128	Authentication message code	M	M	

### 3.14 AFD authorization with partial approval support

#### 3.14.1 Pre-authorization

An AFD pre-authorization request or advice is characterized with the below fields:

- Message type is 1100, 1120, 1200 or 1220
- Function code “101” (Preauthorization) in field 24
- Merchant type “5542” (Automated Fuel Dispenser) in field 18
- An AFD reference number in field 48, tag P57
- Partial approval terminal support indicator (‘1’) in field 48, tag P61 if applicable

The AFD pre-authorization response 1110/1210 contains in case the authorization is partially approved

- The partial approved amount in transaction amount (or billing amount depending on the requested amount type)
- The value “002” in field 39 if the authorization is partially approved
- The original amount with amount type “57” in field 54 if the authorization is partially approved(optional)

#### 3.14.2 Completion

The AFD Completion 1120/1220 advice contains:

- The final transaction amount (or billing amount depending on the requested amount type)
- Merchant type “5542” (Automated Fuel Dispenser) in field 18

- Function code “202” (Authorized previously - Amount differs) in field 24
- The authorization code (field 38) previously sent in the original preauthorization response
- the AFD reference number previously sent in the preauthorization request (field 48, tag P57)

### 3.15 Support incremental authorization

The following data elements are required to identify incremental

- Field No 11 **System Trace Audit Number**: Use the value from the original authorization request message.
- Field No 37 **Retrieval Reference Number**: Use the value from the original authorization request message.
- Field No 48 Tag P68 **Transaction identifier**: Use the value from the original authorization response message

## Link between PowerCARD-Switch and the partners servers

This section introduces the procedures related to the management of the link between the CENTER and the electronic payment server of the Member. These procedures are based mainly on the network management messages **1804/1814**.

### 3.16 Network connection

At network level, the link between the CENTER server and the electronic payment server is established by this latter. A network connection request is sent by the Bank electronic payment server (Member). The CENTER responds to this request by a connection request confirmation. If the CENTER server is unavailable when the connection request is sent by the Bank electronic payment server (Member), this latter should automatically<sup>3</sup> retry to establish the connection.

The same process should apply in case the network connection is lost after being successfully established.

The link between both servers is declared as **OFF-LINE** as long as the network connection is not established. It will be declared as **SIGN-OFF** once the connection is established successfully.

For network connection, **Hightech Payment Systems** recommends using TCP/IP protocol.

### 3.17 Session logon

Once the network connection is established, the member's electronic payment server initiates a session logon request. This server sends a network management request message (**1804**) with the value **801** for the « function code » element (**element ISO 24**). The CENTER responds to this request by a message **1814** with the « action code » element (**element ISO 39**) set to **800**. Once the response is sent, the link between both servers is considered as **SIGN-ON** by the CENTER. It will be considered as such by the electronic payment server when receiving the corresponding response.

The link between both servers remains in status **SIGN-OFF** if the CENTER could not respond or if the **element ISO 39** of the CENTER response is different than **800**. In this case, the electronic payment server should retry to establish a session<sup>4</sup>.

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<sup>3</sup> : This setting should be configurable.

<sup>4</sup> : This setting should be configurable.

### 3.18 Session status checking

At regular time intervals<sup>5</sup>, the electronic payment server will send a session verification message (**ECHO-TEST**) using a network management message (**1804**) with **803** as value for the element « function code » (**element ISO 24**). The CENTER must respond with a message **1814** with **800** as value of the element « action code » (**element ISO 39**).

If the member's electronic payment server does not receive the response to an **ECHO-TEST** message or if the **element ISO 39** of the CENTER response is different than **800**, it should retry to send another message for a given number of times<sup>6</sup> and for reduced times intervals<sup>7</sup>. After these attempts, if no response was received, the electronic payment server declares the link as **SIGN-OFF**.

A session verification message can be initiated by the CENTER. The same rules apply except the last one : if the electronic payment server does not respond to **ECHO-TEST** message, the link won't be declared as **SIGN-OFF** by the CENTER. However, the CENTER will generate an alert for the Systems Operators.

### 3.19 Session logout

The electronic banking server can initiate a session logout request.

To do so, it will send a network management message with the element « function code » set to **802**. The CENTER will respond with a message **1814** with the element « action code » set to **800**. Once the response is received, the electronic banking server considers the link to be in status **SIGN-OFF**. The Center will do the same as soon as it replied.

If the electronic banking server would not receive any response to its request, it should retry to send the request for a given number of attempts<sup>8</sup>.

The CENTER can also initiate a session logout request. The same rules must apply.

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<sup>5</sup> : This setting should be configurable.

<sup>6</sup> : This setting should be configurable.

<sup>7</sup> : This setting should be configurable.

<sup>8</sup> : This setting should be configurable.

## 3.20 General rules

If the link status is different than '**OFF-LINE**', both servers can exchanged session logon requests, session verification requests and session logout requests.

Authorization requests (**11XX**), transaction requests (message **12XX**), reversal requests (message **14XX**), file management requests (**13XX**) as well as reconciliation requests (message 15XX) can be exchanged only when the link status is '**SIGN-ON**'.

## 4. Appendix A – Action codes

Code	Description
000	Approved
001	Approved with ID
002	Partial Approval
003	Approved VIP
007	Approved, chip update
100	Rejected
101	Expired card
102	Suspected fraud
104	Private card
106	Limit of PIN entry attempts exceeded
107	Refer to card issuer
108	Refer to card issuer special conditions
109	Invalid merchant
110	Invalid amount
111	Invalid card number
112	PIN element required for this transaction type
114	No account matching the type requested
115	Function not available
116	No sufficient funds
117	Incorrect PIN
118	No such card
119	Cardholder transaction not permitted
120	Terminal transaction not permitted
121	Withdrawal limit exceeded
122	Security violation
123	Withdrawal frequency limit exceeded
125	Card not in service
126	Wrong PIN format
127	PIN length error
128	Cryptographic error
129	Suspected fraud
180	No credit account
181	No checking account
182	No saving Account

183	Invalid CVV
184	Invalid date
200	Rejected, Pick up card
201	Expired card, Pick up card
202	Fraud suspected , Pick up card
204	Reserved usage, Pick up card
205	Card issuer calls for acquirer security service, Pick up card
206	Number of PIN validation attempts exceeded
207	Special conditions, Pick up card
208	Card lost, Pick up card
209	Card stolen, Pick up card
210	Fraud suspected, Pick up card
280	Alternative amount reversed
299	Pick up card
300	Successfully processed
301	Not supported by receiver
302	Unable to find the record in the file
303	Duplicate record. Old record replaced.
304	Zone control error
305	File locked
306	Unsuccessful
307	Format error
308	Duplicate record. New record rejected
309	File unknown
381	Record not found
382	Balance record cleared
383	Balance request
480	Reversal accepted
481	Invalid reversal amount
503	Counters not available
581	Reconciliation done
582	Reconciliation process not available
800	Cut-off in progress
880	Connection not accepted
902	Invalid transaction
908	Transaction receiver not referenced for switch
909	System fault
911	Timeout



<b>912</b>	Card issuer not available
<b>992</b>	Issuer not found
<b>993</b>	PIN verification fault
<b>994</b>	Transaction processing error
<b>995</b>	Server processing error