

Transaction XML Reporting Guide

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For the latest technical documentation, see the [Developer Portal](#).

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Section 1: Getting Started

You should read this section if you are new to GPS XML reports and want to understand what types of reports are available how they are provided.

Topics covered in this section:

- [About this Guide](#)
- [Introduction](#)
- [Transactional Data Files](#)
- [Transactional Data Schema](#)

Tip: To find out what has changed, see the [Document History](#).

1.1 About this Guide

This guide is intended as a reference guide, to provide information on the available GPS XML reports. It describes the Transaction XML Data Schema elements, sub-elements and attributes.

Target Audience

Technical team(s) responsible for the handling and processing of the GPS transaction XML files. You should have reasonable knowledge of XML/XSD and of the Cards industry.

What's Changed?

If you want to find out what's changed since the previous release, see the [Document History](#) section.

How to use this Guide

If you are new to GPS and want to understand when and how XML files are provided to you, the types of XML files available and how they can be used, see the [Introduction](#) and [Transactional Data Files](#) topics. To view an example of a Transaction XML file, see [Transaction XML Example](#). To view the current data schema, see [Transaction XML Schema](#). For information about the record types and fields in the Transaction XML file, see [Primary Elements](#).

Other Documentation

Refer to the table below for a list of other relevant documents that should be used together with this guide.

Document	Description
Transaction Balance XML Guide	Describes the structure and content of the Transaction Balance XML report.
EHF Guide	Provides details of the GPS External Host Interface (EHF).
Smart Client Guide	Describes how to use the GPS Smart Client to manage your account.
Web Services Guide	Describes how to use the GPS web services API.

Tip: For the latest technical documentation, see the [Developer Portal](#).

1.2 Introduction

GPS provide a number of daily XML reports, containing details of transactions processed on the system during the past 24 hours.

This includes both authorisations and financial transactions.

Reports are provided by Secure File Transfer Protocol (SFTP).

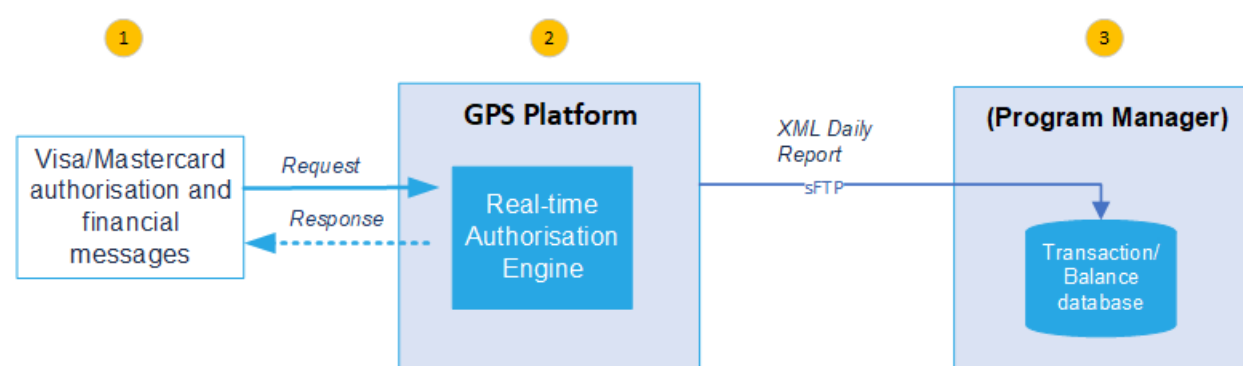


Figure: XML Reporting

Types of XML Reports

GPS provides the following daily reports to Program Managers:

- **Transaction XML Report** - containing details daily transactions
- **Balance XML Report** - provides details of the balance on each card

For Issuers and Self-Issuers, GPS provides two additional reports:

- **Fee Collection Report** - daily report which gives a summary of Scheme (VISA/Mastercard) Fees by ICA and currency
- **Quarterly Management Report (QMR)** - quarterly report which contains information needed to complete your regulatory Quarterly Management Report

Transaction XML Report

The Transaction XML report provides details of authorisation and financial advices and any other non-scheme transactions that take place, such as card loads/unloads, balance adjustments (via web services), cardholder fees generated by GPS (you have set up in your fee groups), network scheme fees.

You can use this report to reconcile against Mastercard or Visa settlement advises.

You can also use it to reconcile with data received from EHI.

The format and content of the transaction XML report is described in this guide.

Balance XML Report

Balance XML reports are relevant where GPS maintains details of card balances, such as in EHI modes 2,3,4 and 5 or where EHI is not being used.

The Balance XML report provides details of the balance on each card as at midnight UK time¹ or the time when the XML is run (configurable). You can use this report to confirm how much money is on the card according to GPS system's (where GPS maintain the balance). You can compare this to information you hold in your local card database. For more information, see the [Balance XML Reporting Guide](#).

Fee Collection Report

Fee Collection reports are provided to issuers and self-issuers.

The report is a daily summary of Scheme (Mastercard/Visa) fees by ICA and currency and can be used to reconcile against the Mastercard/Visa Settlement summary reports. It includes transaction categories such as Interregional non-financial ATM transaction fees, fees for ATM PIN management and ATM Balance Inquiry fees. For more information, contact your GPS Implementation Manager or Account Manager.

Quarterly Management Report (QMR)

Quarterly Management reports are provided to issuers and self-issuers.

The report provides details needed for quarterly reporting to the Scheme, and includes details such as the number of live cards, card issued, and information on card activity and status. For more information, contact your GPS Implementation Manager or Account Manager.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST); For details, see: <https://www.gov.uk/when-do-the-clocks-change>.

1. 3 Transactional Data Files

GPS can supply you with daily Transaction XML files. Transactional XML files are delivered to you via sFTP.

Note: sFTP files are deleted from the GPS sFTP server after two calendar days. They are stored on our archive server for a limited period.

Sending of Files

Transactional data files are created every day (excluding UK Public Holidays). When we have received the settlement information from the card scheme, we send this to you. For UK issuers, this is in the afternoon, between 2:30-5pm, UK time¹. For issuers in other regions, the timings may vary.

Mastercard Cycles

Mastercard have 6 cycles clearing cycles per day, excluding weekends². After each clearing cycle, Mastercard sends us clearing files, which contain the settlement data.

We wait until we process all 6 cycles before generating the transaction XML report. We send you a single daily file.

Data from cycles 5-6 from the night before and 1-4 from current day form a complete settlement day picture for most regions. These contain all the information you need to reconcile your settlements with Mastercard.

Asia-Pacific

For Asia-Pacific clients we process cycles 2-6 for the previous day and cycle 1 from the current day, and include them in the daily transaction XML report.

Visa Cycles

Visa only provide one file per day (per Visa reporting BIN) including weekends, which contains the batched files for that day.³

After processing, we will create the transaction XML file and send to you.

File Contents

The daily transaction XML file contains:

- All presentments that have a settlement date of this day (D)
- Any presentments that have a settlement date of day D-1 and arrived too late for the previous day's XML generation
- All non-presentment transactions for day D-1.

File Format and Encryption

For an example of a transaction XML file, see [Transaction XML Example](#).

File Naming Convention

The transaction XML files use the following naming convention:

GPS-PPPtXnexpYYYYMMDD.xml

Where:

- PPP= name of the Program Manager
- YYYY= year (4 digits)
- MM = month (2 digits)
- DD = day (2 digits)

For example:

GPS-NWCtxnexp20210130.xml

Encryption

XML files are encrypted using PGP, which requires sharing of keys. For details, contact your implementation manager.

Encoding / Type

Transaction XML data files are well-formed XML (UTF-8 encoded).

Note: XML is case-sensitive, ensure you follow the correct casing for all XML elements and attribute names when processing the message.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST). For details, see: <https://www.gov.uk/when-do-the-clocks-change>.

²From October 2021, Mastercard will be moving to 8 cycles per day, 7 days a week.

³Visa Domestic cycle at 9am and International cycle at mid-day, 7 days a week.

1. 4 Transaction Matching

All transactions reported to GPS via the card schemes (Visa and Mastercard) are included in both the EHI data feed and transaction XML reports. You can use the information in the XML reports to match and reconcile against data received via EHI, check for any duplicate records, and match authorisation records (e.g., authorisation advices and authorisation reversals) to financial records (e.g., presentments and chargebacks).

Matching Authorisations to Financial Records

Within the Transaction XML report, you can use the following fields to match records:

Field Type	CardAuthorisation Record	CardFinancial Record
Unique identifier of an authorisation transaction	AuthId	AuthId
Approval code generated by the issuer and printed on the receipt	ApprCode	ApprCode
Unique identifier of a financial record	-	FinId
Unique identifier of a presentment record	-	PresentmentId
Information used to uniquely identify the transaction	Trace	-

Matching Transaction XML Records to EHI Records

You can use the following fields to match Transaction XML records to EHI records:

Field Type	Transaction XML Record	EHI Record
Unique identifier of the card linked to the transaction	PAN	Token
Unique identifier of an authorisation transaction	AuthId	TXn_ID
Unique identifier of a financial record	FinId	TXn_ID
Information used to uniquely identify the transaction	Trace	traceid_lifecycle

For details of EHI fields, refer to the [External Host Interface \(EHI\) Guide](#).

1.5 Transactional Data Schema

The Transactional Data Schema (TDS) describes the structure and possible data values of the GPS Transactional XML file.

You can validate the transaction XML files you receive against the Schema (XSD file) to check it is in the correct format.

The TDS is an evolving standard and is subject to change as the standard evolves. When we make changes to the TDS, we will implement a new version and notify you.

Schema Versions

The schema is not publically available. GPS sends schema files when a new version of the XML is published. The schema filename indicates the schema version number. The schema file contains a comments section with details of version changes.

For an example of the current Transactional Data Schema, see [Transaction XML Schema](#).

For a history of changes to the Transactional Data Schema, see [Schema Changes](#).

Schema Elements

An XML file conforming to the schema consists of the following elements:

- [Primary elements](#)
- [Sub-elements and attributes](#)

Section 2: Primary Elements

2.1 Primary Elements

Primary Elements are listed within a **<Transactions>** parent element, which defines the top-level entities of the message. See the table below for details.

Element Name	Description	Data Type	Occurs
CardAuthorisation	Describes an Authorisation or Reversal.	<CardAuthorisation>	0 - n
CardFinancial	Describes a Financial Advice or Financial Reversal.	<CardFinancial>	0 - n
CardChrgBackRepRes	Describes a Chargeback, Chargeback Reversal, Representment or Representment Reversal.	<CardChrgBackRepRes>	0 - n
CardFee	Describes a fee (and commission).	<CardFee>	0 - n
MasterCardFee	Describes a MasterCard fee.	<MasterCardFee>	0 - n
CardLoadUnload	Described a Card Load, Card Load Reversal, Card Unload and Card Unload Reversal.	<CardLoadUnload>	0 - n
ApprovedAgencyBanking	Describes an approved Agency Banking transaction (relevant only if you are using the Agency Banking service)	<ApprovedAgencyBanking>	0 - n
DeclinedAgencyBanking	Describes declined Agency Banking transaction (relevant only if you are using the Agency Banking service)	<DeclinedAgencyBanking>	0 - n
AgencyBankingFee	describe any bank charges applied to Agency Banking transaction (relevant only if you are using the Agency Banking service)	<AgencyBankingFee>	0 - n
CardBalAdjust	Describes a card account Balance Adjustment or Reversal.	<CardBalAdjust>	0 - n
CardEvent	Describes a card status change event.	<CardEvent>	0 - n

Note: The presence of primary elements within an XML message depends on the card activity for the period being reported. For example, **<CardChrgBackRepRes>** elements are only present when a chargeback (or reversal) or Representment (or reversal) is reported.

Transactional XML Example showing all the Primary Elements

```
<?xmlversion="1.0"encoding="utf-8"?>
<Transactions>
<CardAuthorisation>...detail ommitted...</CardAuthorisation>
<CardBalAdjust>...detail ommitted...</CardBalAdjust>
<CardChrgBackRepRes>...detail ommitted...</CardChrgBackRepRes>
<CardFee>...detail ommitted...</CardFee>
<CardFinancial>...detail ommitted...</CardFinancial>
<CardLoadUnload>...detail ommitted...</CardLoadUnload>
<MasterCardFee>...detail ommitted...</MasterCardFee>
</Transactions>
```

2.2 CardAuthorisation

CardAuthorisation provide details of payment authorisation advices. There are two types of CardAuthorisation records:

- Authorisation Advice
- Authorisation Reversal

You can use the **RecType** element to determine the type of record.

You can use the **AuthId** element to uniquely identify the record and distinguish it from all other CardAuthorisation records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecType	Record type, indicates <i>Advice</i> or <i>Reversal</i> .	<RecType>	Yes	See the RecType sub-element
AuthId	Unique identifier for this CardAuthorisation record.	xs:unsignedLong	Yes	0 to 2 ⁶⁴
AuthTxnId	Alternative unique identifier of a CardAuthorisation record.	xs:unsignedInt	Yes	0 to 2 ³²
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The date the transaction was processed (in UK time).	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	Indicates the value of the transaction requested by the cardholder.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	Details of cashback requested by the cardholder.	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. This DOES NOT include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
ApprCode	The Approval Code generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction.	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the Merchant (also known as the <i>Card Acceptor Identifier</i>).	<MerchCode>	Yes	See the MerchCode sub-element
Term	Describes the terminal used for the transaction.	<Term>	Yes	See the Term sub-element
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
Txn	Describes the validation and authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource CardAuthorisation>	Yes	See the MsgSource sub-element
PaddingAmt	The amount of padding applied to the authorisation, whereby “padding” is defined as the amount by which the Authorisation is Greater than the corresponding Financial Transaction.	<BasicAmount>	Yes	See the PaddingAmt sub-element
Rate_Fee	The amount of any rate-based POS or ATM fee that was charged.	xs:decimal	Yes	

Child Element	Description	Data Type	Required	Constraints / Permitted Values
Fixed_Fee	The amount of any fixed POS or ATM fee that was charged.	xs:decimal	Yes	
CommissionAmt	The amount of commission applied to the authorisation, whereby “commission” is defined as an indication of the charges applicable to the corresponding Financial Transaction.	<BasicAmount>	Yes	See the CommissionAmt sub-element
Classification	Merchant classification.	<Classification>	Yes	See the Classification sub-element
Response	Indicates transaction approval.	<Response>	Yes	See the Response sub-element
OrigTxnAmt	The value of the original transaction amount requested by the cardholder; only used in CardAuthorisation reversals.	<PartialAmount>	If Applicable	Only applicable if the RecType is “REV”, See the OrigTxnAmt sub-element
ReversalReason	The reason for the reversal; only used in CardAuthorisation reversals.	<ReversalReason>	If Applicable	Only applicable if the RecType is “REV”. See the ReversalReason sub-element
Sender	Provides details of the sender of the payment, where there is a money transfer.	<Sender>	If Applicable	See the Sender sub-element
Receiver	Provides details of the receiver of the payment, where there is a money transfer.	<Receiver>	If Applicable	See the Receiver sub-element
FXConv	Provides details of the Foreign Exchange (FX) rate conversion in a CurrencyCloud transaction. This can be used to reconcile the POS transaction FX movements, if any was done.	<FXConv>	If Applicable	See the FXConv sub-element.

Example

```

<CardAuthorisation>
  <RecType>ADV</RecType>
  <AuthId>101455187</AuthId>
  <AuthTxnID>11606448</AuthTxnID>
  <LocalDate>20100824150003</LocalDate>
  <SettlementDate>20100825</SettlementDate>
  <Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
  <Account no="123456789"type="01"></Account>
  <TxnCode direction="debit"Type="pos"Group="pos"></TxnCode>
  <TxnAmt value="10.00"currency="826"></TxnAmt>
  <CashbackAmt value="0.00"currency="826"></CashbackAmt>
  <BillAmt value="10.00"currency="826"rate="1.000000"></BillAmt>
  <ApprCode></ApprCode>
  <Trace auditno="987654"origauditno=""Retrefno="112233445566"></Trace>
  <MerchCode>012345678912</MerchCode>
  <Term code="00012345"location="A Shop"street="A Street"city="A City"
country="GB"inputcapability="6"authcapability="7"></Term>
  <Schema>ECRD</Schema>
  <Txn cardholderpresent="5"cardpresent="0"cardinputmethod="V"
cardauthmethod="9"cardauthentity="8"TVR="0"></Txn>
  <MsgSource value="62"domesticMaestro="no"></MsgSource>
  <PaddingAmt value="0.00"currency="826"></PaddingAmt>
  <Rate_Fee value="0.00"></Rate_Fee>
  <Fixed_Fee value="0.20"></Fixed_Fee>
  <CommissionAmt value="0.00"currency="826"></CommissionAmt>
  <Classification MCC="5942"></Classification>
  <Response approved="no"actioncode="1"responsecode="21"></Response>
  <OrigTxnAmt value="0.00"currency="826"></OrigTxnAmt>
  <ReversalReason>0</ReversalReason>
  <Sender firstname="FRST" middlename="M" lastname="LST NME" streetaddress="RM R STREET S STREETI
" city="MAIN" provincecode="MD" country="MDA"
postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04" idnbr="2014011000399" idctrycode="MDA" nation-
ality="MDA"
phonenummer="2811131" idexpdate="102020" acctnbrtype="08" birthctry="MDA" fundssource="04" claimcode="TST"></Sender>
  <Receiver firstname="FRST" middlename="M" lastname="LST NME" streetaddress="RM R STREET S STREETI
" city="MAIN" provincecode="MD" country="MDA"
postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04" idnbr="2014011000399" idctrycode="MDA" nation-
ality="MDA"
phonenummer="2811131" idexpdate="102020" acctnbrtype="08" birthctry="MDA" fundssource="04" claimcode="TST"></Receiver>
</CardAuthorisation>

```

2.3 CardBalAdjust

CardBalAdjust records are used to indicate balance adjustments to a card’s account.

You can use the **AdjustId** element to uniquely identify the record and distinguish it from all other CardBalAdjust records.

Child Element	Description	Data Type	Required	Constraints/ Permitted Values
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-element
AdjustId	Identifier of this adjustment.	xs:unsignedLong	Yes	0 to 2^64
MessageId	Message identifier supplied in the request for this adjustment.	xs:unsignedInt	If Applicable	0 to 2^32
SettlementDate	The date the transaction has been processed.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
Amount	The amount, currency and direction (debit/credit) for the load and unload.	<DirectionAmount>	Yes	See the Amount sub-element
VoidedAdjustId	Identifier of the balance adjustment reversed/voided by this item. Only appears if there is a reversal.	xs:unsignedInt	If Applicable	0 to 2^32
MerchCode	A unique code identifying the Merchant (also known as the Card Acceptor Identifier)	<MerchCode>	Optional	See the MerchCode sub-element
Desc	A text description of the unload.	<Desc>	Yes	See the Desc sub-element
AdjustType	The type of adjustment: <i>Actual</i> or <i>Block</i> .	<AdjustType>	Yes	See the AdjustType sub-element

Example

```
<CardBalAdjust>
  <LocalDate>20100824200216</LocalDate>
  <AdjustId>123456789</AdjustId>
  <MessageId>123456789</MessageId>
  <SettlementDate>20100825</SettlementDate>
  <CardPAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
  <Accountno="123456789"type="01"></Account>
  <Amountdirection="credit"value="20.00"currency="826"></Amount>
  <VoidedAdjustId></VoidedAdjustId>
  <MerchCode></MerchCode>
  <Desc>CAP Settlement</Desc>
  <AdjustType>Block</AdjustType>
</CardBalAdjust>
```

2.4 CardChrgBackRepRes

The CardChrgBackRepRes describes the following record types:

- Chargeback Advice
- Chargeback Reversal
- Representment Advice
- Representment Reversal

You can use the [AdjustId](#) element to uniquely identify the record and distinguish it from all other CardChrgBackRepRes records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Indicates the type of CardChrgBackRepRes record.	xs:string	Yes	Valid values are: CB = Chargeback Advice CBREV = Chargeback Reversal REPRES = Representment Advice REPRESREV = Representment Reversal
ChgbackRepresId	Unique identifier for this CardChrgBackRepRes record.	xs:unsignedLong	Yes	0 to 2 ⁶⁴
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The date the transaction has been processed.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	Indicates the value of the transaction requested by the cardholder.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	Details of any cashback amount requested by cardholder, if no cashback is requested then populate with a zero value and the transaction currency code.	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. This DOES NOT include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
ApprCode	The <i>approval code</i> generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction.	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the Merchant (also known as the <i>Card Acceptor Identifier</i>).	<Merch Code>	Yes	See the MerchCode sub-element
Term	Describes the terminal used for the transaction.	<Term>	Yes	See the Term sub-element
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
Txn	Describes the validation / authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	Yes	See the MsgSource sub-element
Repeat	Information to show the number of the chargeback-/representment.	xs:unsigned Byte	Yes	Valid values are: 1 = First chargeback / representment

Child Element	Description	Data Type	Required	Constraints / Permitted Values
				2 = Second Chargeback / representment
SettlementAmt	The amount posted to the settlement account.	<SettlementAmt>	Yes	See the Settlement sub-element
Fee	Interchange or service fee amount posted to the settlement account.	<DirectionAmount>	Yes	See the Fee sub-element
ARN	Acquirer Reference Number.	<ARN>	Yes	See the ARN sub-element
FIID	Forward Institution Identification code.	<FIID>	Yes	See the FIID sub-element
RIID	Receiving Institution Identification code.	<RIID>	Yes	See the RIID sub-element
ReasonCode	Message reason code.	xs:string	Yes	See Message Reason Codes
Classification	Merchant classification for the transaction.	<Classification>	Yes	See the Classification sub-element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a partial chargeback/representment, chargeback reversals or representment reversals.	<PartialAmount>	If applicable	See the OrigTxnAmt sub-element
PartialReversal	Indicates if the amount reversed is a partial amount of the original chargeback.	Xs:boolean	If applicable	Valid values are: true = Partial Reversal; false = Full Reversal If not supplied, assumes "false".
SettlementCycle	Shows the settlement cycle for the chargeback.	<SettlementCycle>	Yes	See the SettlementCycle sub-element
ReconciliationDate	Shows the reconciliation date for the chargeback.	<ReconciliationDate>	Yes	See the ReconciliationDate sub-element
ReconciliationCycle	Shows the reconciliation cycle for the chargeback.	<ReconciliationCycle>	Yes	See the ReconciliationCycle sub-element
Usage	Indicates whether the chargeback is manually credited to the card.	<Usage>	Yes	See the Usage sub-element
Pending_Billing_Amount	Value of the chargeback billing amount.	< Pending_Billing_Amount>	Yes	See the Pending_Billing_Amount sub-element
SettlementIndicator	Indicator for <i>Domestic</i> or <i>International</i> settlement.	SettlementIndicator	If applicable	See the SettlementIndicator sub-element
Additional_Amt_DE54	Additional amounts field where additional fees such as card network fees are held.	<Additional_Amt_DE54>	If applicable	See the Additional_Amt_DE54 sub-element
ChargebackRefNum	Chargeback reference number, as displayed in Smart Client.	<ChargebackRefNum>	If applicable	See the Chargeback-RefNum sub-element

Example

```

<CardChrgBackRepRes>
<RecordType>REPRES</RecordType>
<ChgbckRepresId>101476320</ChgbckRepresId>
<LocalDate>20100805142639</LocalDate>
<SettlementDate>20100825</SettlementDate>
<Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
<Account no="123456789"type="01"></Account>
<TxnCode direction="debit"Type="pos"Group="pos"></TxnCode>
<TxnAmt value="24.95"currency="826"></TxnAmt>
<CashbackAmt value="0.00"currency="826"></CashbackAmt>
<BillAmt value="24.95"currency="826"rate="1.000000"></BillAmt>
<ApprCode>231290</ApprCode>

```

```
<Trace auditno="112233"origauditno="0"Retrefno="998877665544"></Trace>
<MerchCode>987654</MerchCode>
<Term code=""location="A Shop"street="A Street"city="A City"country="GB"
inputcapability="5"authcapability="1"></Term>
<Schema>ECRD</Schema>
<Txn cardholderpresent="0"cardpresent="1"cardinputmethod="5"
cardauthmethod="1"cardauthentity="1"TVR="0"></Txn>
<MsgSource value="67"domesticMaestro="no"></MsgSource>
<Repeat>2</Repeat>
<SettlementAmt value="24.8"currency="826"rate="1.000000"
date="20100825"></SettlementAmt>
<Fee direction="credit" value="3.330000" currency="826" value2="3.3300"></Fee>
<ARN>12345678901234567890123</ARN>
<FIID>000000000001</FIID>
<RIID>000000000002</RIID>
<ReasonCode></ReasonCode>
<Classification MCC="4812"></Classification>
<OrigTxnAmt value="0.00"currency="826" partial="no"
origItemId="12345"></OrigTxnAmt>
<PartialReversal>false</PartialReversal>
<SettlementIndicator>0</SettlementIndicator>
<SettlementCycle>01</SettlementCycle>
<ReconciliationDate>20100825</ReconciliationDate>
<ReconciliationCycle>06</ReconciliationCycle>
<Usage>M</Usage>
<Pending_Billing_Amount>500.50</Pending_Billing_Amount>
<Additional_Amt_DE54> 0058156D000000009450</Additional_Amt_DE54>
<ChargebackRefNum />
</CardChrgBackRepRes>
```

2.5 CardFee

The CardFee primary element is used to describe Card Fee records. Distinguishing between the permissible types is achieved using the FeeClass child element as described below.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CardFeeId	Identifier for this CardFee record. Not necessarily unique. If there is a non-domestic fee and an FX fee on the same transaction, they will share the same CardFeeId .	xs:unsignedLong	Yes	0 to 2 ⁶⁴
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The date when the transaction has been processed.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card to which the fee relates.	<Card>	Yes	See the Card sub-element
Account	Provides details of the cardholder account to which the fee relates.	<Account>	Yes	See the Account sub-element
TxId	If applicable, the <i>FinId</i> of the related <i>CardFinancial</i> (transaction) record for this CardFee record (foreign key). For Fee Collection records, it will show the <i>AuthId</i> of the related <i>CardAuthorisation</i> record, if one can be found. If no matching <i>CardAuthorisation</i> or <i>CardFinancial</i> record can be found, it will show 0.	xs:unsignedLong	Yes	0 to 2 ⁶⁴ If not applicable, use default value 0
TxnCode	Indicates the type of transaction.	<TxnCode>	No	See the TxnCode sub-element
MerchCode	A unique code identifying the Merchant (also known as the <i>Card Acceptor Identifier</i>)	<MerchCode>	No	See the MerchCode sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	No	See the MsgSource sub-element
FeeClass	Describes the derivation and nature of the fee.	<FeeClass>	Yes	See the FeeClass sub-element
LoadUnloadId	If applicable - the LoadUnloadId of the related CardLoadUnload record for this CardFee Record (foreign key).	xs:unsignedLong	Optional	0 to 2 ⁶⁴
Desc	Fee description.	<Desc>	Yes	See the Desc sub-element
FeeAmt	Only use when "FeeClass" "type" attribute is 0, and when this is the case the FeeAmt represents the fee in the currency as dictated by Mastercard charging.	<Direction Amount>	Optional	See the FeeAmt sub-element
Amt	This amount is described as follows: - For Settlements (see FeeClass: "type" = 0,2,4 and 5), this is the settlement amount posted to the settlement account. - When the fee is NOT a Settlement (see FeeClass: "type" = 1), this is the fee billed (posted) to the cardholder's account.	<Direction Amount>	Yes	See the Amt sub-element When a Fee is levied against the Cardholder, the normal direction is: "debit" for FeeClass type = 0,1,2 & 5 "credit" for FeeClass Type = 4
FIID	Forward Institution identification code.	<FIID>	Optional	See the FIID sub-element
ReasonCode	Message reason code.	xs:string	Yes	Only applicable for Settlement See Message Reason Codes.htm For Fees, see the FeeClass sub-element
Recon	Details of the reconciliation.	<Recon>	Optional	See the Recon sub-element

Example

```
<CardFee>
  <CardFeeId>123456789</CardFeeId>
  <LocalDate>20100824000000</LocalDate>
```

```
<SettlementDate>20100825</SettlementDate>
<Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
<Account no="123456789"type="01"></Account>
<TxId>123456789</TxId>
<TxnCode direction="debit"Type="fee"Group="pos"></TxnCode>
<MerchCode>0123456789</MerchCode>
<MsgSource value="19"domesticMaestro="no"></MsgSource>
<FeeClass interchangeTransaction="no"type="0"code="0"></FeeClass>
<LoadUnloadID>123456789</LoadUnloadID>
<Desc>012345</Desc>
<FeeAmt direction="debit"value="0.16"currency="826"></FeeAmt>
<Amt direction="debit"value="0.16"currency="826"></Amt>
<FIID>00000000001</FIID>
<ReasonCode>7621</ReasonCode>
<Recon date="20170909" cycle="01"/>
</CardFee>
```

2.6 CardFinancial

The CardFinancial primary element is used to describe the following records:

- Financial Advice, or
- Financial Reversal

You can use the [RecordType](#) element to determine the type of record.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Record type, indicates <i>Advice</i> or <i>Reversal</i> .	xs:string	Yes	Valid values are: ADV, REV
FinId	Unique identifier for this CardFinancial record.	xs:unsignedLong	Yes	0 to 2 ⁶⁴
AuthId	The AuthId of the related CardAuthorisation record for this CardFinancial Record (primary key). Only present if there was a card authorisation.	xs:unsignedLong	If Applicable	0 to 2 ⁶⁴
PresentmentId	Alternative unique identifier for this CardFinancial Record, primary key in GPS.	xs:unsignedInt	Yes	0 to 2 ³²
LocalDate	The local date/time of the transaction (where the transaction was done).	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The settlement date for the transaction (UK date or as supplied by Mastercard).	<SettlementDate>	Yes	See the SettlementDate sub-element
SchemeSettlementDate	Settlement date value for the transaction by Mastercard or GPS.	<SchemeSettlementDate>	Yes	See the SchemeSettlementDate sub-element
SchemeReconciliationDate	The Mastercard/Visa reconciliation date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
CycleNumber	Reconciliation cycle number (relevant to Mastercard only).	<CycleNumber>	Yes	See the CycleNumber sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Provides details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	The transaction amount.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	The Cashback amount (if applicable).	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. This DOES NOT include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
ApprCode	The <i>Approval Code</i> generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction. (Mastercard only; Visa will be empty)	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the Merchant (also known as the <i>Card Acceptor Identifier</i>)	<MerchCode>	Yes	See the MerchCode sub-element
Term	Details of the terminal on which the trans-	<Term>	Yes	See the Term sub-element

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	action was actioned.			
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
Txn	Describes the validation / authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	Yes	See the MsgSource sub-element
Fee	The interchange fee.	<DirectionAmount>	Yes	See the Fee sub-element
FeeAmt	The fee amount.	< DirectionAmount>	Yes	See the Settlement sub-element
FeeClass	Describes the derivation and nature of the fee.	<FeeClass>	Yes	See the FeeClass sub-element
SettlementAmt	The settlement amount (Mastercard only).	<SettlementAmt>	Yes	See the Settlement sub-element
ARN	The Acquirer Reference Number.	<ARN>	Yes	See the ARN sub-element
FIID	Forward Institution Identification code.	<FIID>	Yes	See the FIID sub-element
RIID	Receiving Institution Identification code.	<RIID>	Yes	See the RIID sub-element
ReasonCode	Message reason code.	xs:string	Yes	See Message Reason Codes
Classification	Merchant classification for the transaction.	<Classification>	Yes	See the Classification sub-element
Response	Indicates whether transaction was approved or not.	<ResponseFinancial>	Yes	See the Response sub-element
OrigTxnAmt	Original Transaction Amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element
CCAAmount	The Currency Conversion Assessment amount (Mastercard only; Visa will always be zero).	<CCAAmount>	Yes	See the CCAAmount sub-element
SettlementIndicator	Indicator for Domestic or International settlement.	<SettlementIndicator>	If Applicable	See the SettlementIndicator sub-element
Additional_Amt_DE54	Additional amounts field where additional fees like transport fees are held.	<Additional_Amt_DE54>	If applicable	See the Additional_Amt_DE54 sub-element
BSA	Business Service Arrangement type code (Mastercard only; Visa will always be empty).	<BSA>	If applicable	See the BSA sub-element
FXConv	Provides details of the Foreign Exchange (FX) rate conversion in a CurrencyCloud transaction. This can be used to reconcile the POS transaction FX movements, if any was done.	<FXConv>	If Applicable	See the FXConv sub-element.

Example (Advice)

```

<CardFinancial>
  <RecordType>ADV</RecordType>
  <FinId>101472047</FinId>
  <AuthId>101444814</AuthId>
  <PresentmentID>9081009</PresentmentID>
  <LocalDate>20100824155111</LocalDate>

```

```

<SettlementDate>20100825</SettlementDate>
<SchemeSettlementDate>20180215</SchemeSettlementDate>
  <SchemeReconciliationDate>20140613</SchemeReconciliationDate>
<CycleNumber>01</CycleNumber>
<Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
<Account no="123456789"type="01"></Account>
<TxnCode direction="debit"Type="atm"Group="atm"></TxnCode>
<TxnAmt value="20.00"currency="826"></TxnAmt>
<CashbackAmt value="0.00"currency="826"></CashbackAmt>
<BillAmt value="20.00"currency="826"rate="1.000000"></BillAmt>
<ApprCode>023545</ApprCode>
<Trace auditno="290592"origauditno=""Retrefno="231300704876"></Trace>
<MerchCode>0123456789</MerchCode>
<Term code="AB123456"location="A CASH MACHINE"street=""city="A CITY"
country="GB"inputcapability="5"authcapability="1"></Term>
  <Schema>MAES</Schema>
  <Txn cardholderpresent="0"cardpresent="1"cardinputmethod="5"
cardauthmethod="1"cardauthentity="3"></Txn>
    <MsgSource value="67"domesticMaestro="no"></MsgSource>
    <Fee direction="debit" value="3.330000" currency="826" value2="3.3300"></Fee>
    <FeeAmt direction="debit" value="1.00" currency="826"></FeeAmt>
    <FeeClass interchangeTransaction="no" type="1" code="1"></FeeClass>
    <SettlementAmt value="20.12"currency="826"rate="1.000000"></SettlementAmt>
    <ARN>12345678901234567890123</ARN>
    <FIID>00000000001</FIID>
    <RIID>00000000099</RIID>
    <ReasonCode>0</ReasonCode>
    <Classification MCC="6011"></Classification>
    <Response approved="yes"></Response>
    <OrigTxnAmt value="0.00"currency="826"></OrigTxnAmt>
    <SettlementIndicator>8</SettlementIndicator>
    <CCAAmount value="0.00" currency="978" included="no" />
    <Additional_Amt_DE54> 0040978D000000000000</Additional_Amt_DE54>
    <BSA>1</BSA>
  </CardFinancial>

```

2.7 CardLoadUnload

The CardLoadUnload primary element is used to describe the following records:

- Card Loads (Loading funds onto a card account) and Card Load Reversals, or
- Card Unloads (discharging funds from a card account) and Card Unload Reversals

You can use the **RecordType** element to determine the type of record.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Indicates whether this is a Card Load, Load Reversal, Unload or Unload reversal.	xs:string	Yes	Valid values are: • LOAD • LOADREV • UNLOAD • UNLOADREV
LoadUnloadId	A unique identifier for this CardLoadUnload record.	xs:unsignedLong	Yes	0 to 2 ⁶⁴
MessageId	Message identifier supplied in the request for this Card Load/Unload.	xs:unsignedInt	If Applicable	0 to 2 ³²
LocalDate	The local date/time of the Load/Unload.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The settlement date/time for the Load/Unload.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the attributes of the card.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
MerchCode	A unique code identifying the Merchant (also known as the Card Acceptor Identifier).	<MerchCode>	Optional	See the MerchCode sub-element
Amount	The value of the Load, Load Reversal, Unload or Unload Reversal.	<BasicAmount>	Yes	See the BasicAmount sub-element
VoidedLoadUnloadId	The <i>CardLoadUnload</i> \LoadUnloadId of the previous record which this voids. This element is only required on Load Reversal or Unload Reversal types.	xs:unsignedint	If Applicable	0 to 2 ³²
Desc	Description of the card load or unload, as supplied when the card was loaded or unloaded.	<Desc>	Yes	See the Desc sub-element
Load	Describes Load/Unload source and type.	<LoadSource>	Yes	See the LoadSource sub-element

Example (Load)

```

<CardLoadUnload>
  <RecordType>LOAD</RecordType>
  <LoadUnloadId>123456789</LoadUnloadId>
  <MessageId>123456789</MessageId>
  <LocalDate>20100824200003</LocalDate>
  <SettlementDate>20100825</SettlementDate>
  <Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
  <Account no="123456789"type="01"></Account>
  <MerchCode>0123456789</MerchCode>
  <Amount direction="debit"value="20.00"currency="826"></Amount>
  <VoidedLoadUnloadId>0123456789</VoidedLoadUnloadId>
  <Desc>Card Load</Desc>
  <Load Source="9"Type="1"FixedFee="0.00"Rate_Fee="0.00"/>
</CardLoadUnload>

```

2.8 MasterCardFee

MasterCardFee records are used to describe non-card specific Mastercard Fees. They only appear in the transaction XML if the Mastercard ICA is not shared between clients.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Record type, used to distinguish between data types.	xs:string	Yes	See the RecordType sub-element.
MastercardFeeId	Unique identifier for this Mastercard fee record.	xs:unsignedint	Yes	0 to 2^32.
MTID	Message Type Identifier. Takes values as supplied by Mastercard in the Chargeback Fee or Fee collection data	xs:unsignedint	Yes	Examples: 1442, 1644 and 1740. See Message Reason Codes
Function_Code_024	Function Code for the fee record.	<FunctionCode>	Yes	See the FunctionCode sub-element.
Conversion_Rate_Reconciliation	Factor used in converting transaction amount to reconciliation amount.	xs:unsignedint	Yes	0 to 2^32.
Additional_Data_048	The additional data received from Mastercard.	xs:string	Yes	String. Refer to the Mastercard IPM Clearing Formats manual .
LocalDate	The local date/time of the transaction.	<LocalDate>	Yes	See the LocalDate sub-element.
SettlementDate	The settlement date/time for the transaction.	<Settlement Date>	Optional	See the SettlementDate sub-element.
FeeClass	Describes the derivation and nature of the fee.	<MasterCard FeeClass>	Yes	Note: For MasterCardFee records the FeeClass type="0", code="0" and interchangeTransaction="no".
Desc	Fee description.	<Desc>	Optional	See the Desc sub-element.
FeeAmt	The fee amount as received from Mastercard. Note: for a chargeback, this field provides details of any chargeback fees. For details of the chargeback amount, see <BillAmt> in the CardChrgBackRepRes record.	<Direction Amount>	Yes	See the FeeAmt sub-element.
Amt	The net transaction amount expressed in the original transaction currency, as advised by Mastercard.	<Direction Amount>	Yes	See the Amt sub-element.
ReasonCode	Message reason code.	xs:string	Yes	See Message Reason Codes .
Data_Record_072	Free form text for Mastercard fee messages.	xs:string	Optional	String, Refer to Mastercard IPM Clearing Formats Manual.
DE93_Txn_Dest_ID	Identifies the transaction destination institution.	xs:string	Yes	Length 6 - 11 digits.
DE94_Txn_Orig_ID	Identifies the transaction originator institution.	xs:string	Optional	Length 6 - 11 digits.
File_ID_PDS0105	Identifies the logical data file exchanged between GPS and the clearing system.	xs:string	Yes	See the PDS0105 sub-element.
FileProcessDate	Date the Fee collection file was processed.	xs:string	Yes	In the format: YYYYMMDD HHMMSS.
Recon	Details of the reconciliation.	<Recon>	Optional	See the Recon sub-element.
Settlement	Details of the settlement.	<Settlement>	Optional	See the Settlement sub-element.

Example

```

<MasterCardFee>
  <RecordType>FC</RecordType>
  <MastercardFeeId>1234567</MastercardFeeId>
  <MTID>1740</MTID>
  <Function_Code_024>783</Function_Code_024>
  <Conversion_Rate_Reconciliation_009>0.825000</Conversion_Rate_Reconciliation_009>
  <Additional_Data_048>
0137017000328517251008510148008840297820158030MCC1010501      17090901      NNNNNN015906787894      0091585000      1EU0000000-

```

```
8M17090901170911010165001M01910012</Additional_Data_048>
  <LocalDate>20170908000000</LocalDate>
  <SettlementDate>20170911</SettlementDate>
  <FeeClass interchangeTransaction="no" type="0" code="0" memberID="014015"/>
  <Desc/>
  <FeeAmt direction="credit" value="0.4000" currency="840" />
  <Amt direction="credit" value="0.3300" currency="978"/>
  <ReasonCode>7802</ReasonCode>
  <Data_Record_072>INTERCHANGE COMPLIANCE ADJUSTMENT FOR : 09/08/17</Data_Record_072>
  <DE93_Txn_Dest_ID>014015</DE93_Txn_Dest_ID>
  <DE94_Txn_Orig_ID>003285</DE94_Txn_Orig_ID>
  <File_ID_PDS0105>T112.00117090900000001218101101    </File_ID_PDS0105>
  <FileProcessDate>20170909040640</FileProcessDate>
  <Recon date="20170909" cycle="01"/>
  <Settlement date="20170911" cycle="01"/>
</MasterCardFee>
```

2.9 CardEvent

CardEvent records are used to indicate status changes to a given card.

Child Element	Description	Data Type	Required	Constraints/ Permitted Values
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Event	Details of the event.	<Event>	Yes	See the Event sub-element

Example

```
<CardEvent>
  <Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
  <Event Type="StatusChange"Source="0"StatCode="62"OldStatCode="00"Date="20130307153523"></Event>
</CardEvent>
```

2.10 Approved Agency Banking Transaction

Note: This element is only relevant if you are using the Agency Banking service.

The ApprovedAgencyBanking primary element is used to describe the following accepted activity:

- BACS or Faster Payment Receipt and reversal
- Outbound Faster Payment or Direct Debit Payment and reversal
- Transfers between card holder's own accounts and reversals
- Inter-program payments between the Programme Manager's customers and reversals

You can use the **CashType** element to uniquely identify the record and distinguish it from all other CardEvent records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CashType	Cash type, indicates type of receipt, payment or cash transfer.	xs:string	Yes	Valid values are: • RCP (Receipt) • RCPREV (Reversal) • PAY (Payment) • PAYREV (Reversal) • TFR (Transfer) • P2P (Peer-to-Peer) • P2PREV (Peer-to-Peer reversal)
BankingId	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedLong	Yes	0 to 2 ⁶⁴
File	Provides details of the file within which notification of the receipt was received or the name of the file in which the outbound payment was submitted for settlement.	<File>	Optional	See the File sub-element
SettlementDate	The settlement date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details.	<AgencyAccount>	Yes	See the AgencyAccount sub-element
External	Provides details of the external bank account on the opposite end of the transaction (i.e., source of a receipt or destination of a payment).	<External>	Yes	See the External sub-element
CashCode	Provides details of the cash transaction.	<CashCode>	Yes	See the CashCode sub-element
Desc	The reference quoted on the receipt or payment.	<Desc>	Yes	See the Desc sub-element
CashAmt	The amount of the receipt or payment before deduction of any applicable bank charges	<RateAmount>	Yes	See the CashAmt sub-element
Fee	The fee applied to the cash receipt or payment.	<Fee>	Yes	See the Fee sub-element
BillAmt	The amount posted to the cardholder account.	<RateAmount>	Yes	See the BillAmt sub-element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element

Example

```
<ApprovedAgencyBanking>
  <CashType>RCP</CashType>
  <BankingId>101472047</BankingId>
  <File filedate=20100824155111 filename="ABC123xyz"></File>
  <SettlementDate>20100825</SettlementDate>
  <Card PAN="1234567812345678" product="" programid="" branchcode="" productid="" ></Card>
  <AgencyAccount no="123456789" type="01" sortcode="123456"
    bankacc="12345678" name="John Smith"></AgencyAccount>
```

```
<External sortcode="123456" bankacc="12345678"
  name="Joe Bloggs"></External>
<CashCode direction="credit" CashType="bac" CashGroup="rcp"></CashCode>
<Desc>Bank Reference</Desc>
<CashAmt value="20.00" currency="826"></CashAmt>
<Fee direction="debit" value="1.50" currency="826"></Fee>
<BillAmt value="18.50" currency="826" rate="1.000000"></BillAmt>
<OrigTxnAmt value="0.00" currency="826" partial="no"
  origItemId="12345"></OrigTxnAmt>
</ApprovedAgencyBanking>
```

2.11 Declined Agency Banking Transaction

Note: This element is only relevant if you are using the Agency Banking service.

The DeclinedAgencyBanking primary element is used to describe the following declined activity for which the cardholder did not receive or lose value:

- BACS or Faster Payment Receipt and reversal
- Outbound Faster Payment or Direct Debit Payment and reversal
- Transfers between card holder’s own accounts and reversals
- Inter program payments between the Programme Manager’s customers and reversals

You can use the **CashType** element to uniquely identify the record and distinguish it from all other DeclinedAgencyBanking records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CashType	Cash type, indicates type of receipt, payment or cash transfer.	xs:string	Yes	Valid values are: • RCP (Receipt) • RCPREV (Reversal) • PAY (Payment) • PAYREV (Reversal) • TFR (Transfer)
BankingId	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedLong	Yes	0 to 2^64
File	Provides details of the file within which notification of the receipt was received or the name of the file in which the outbound payment was submitted for settlement.	<File>	Optional	See the File sub-element
SettlementDate	The value date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details	<AgencyAccount>	Yes	See the AgencyAccount sub-element
External	Details of the external bank account on the opposite end of the transaction (i.e., source of a receipt or destination of a payment).	<External>	Yes	See the External sub-element
CashCode	Provides details of the cash transaction.	<CashCode>	Yes	See the CashCode sub-element
Desc	The reference quoted on the receipt or payment.	<Desc>	Yes	See the Desc sub-element
CashAmt	The amount of the receipt or payment before deduction of any applicable bank charges.	<RateAmount>	Yes	See the CashAmt sub-element
DeclineReason	The reason a receipt was declined and returned to source or a payment request was rejected and not processed.	<DeclineReason>	Yes	See the DeclineReason sub-element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element

Example

```
<DeclinedAgencyBanking>
  <CashType>RCP</CashType>
  <BankingId>101472047</BankingId>
  <File filedate=20100824155111 filename="ABC123xyz"></File>
  <SettlementDate>20100825</SettlementDate>
  <Card PAN="1234567812345678" product="" programid="" branchcode="" productid=""></Card>
  <AgencyAccount no="123456789" type="01" sortcode="123456"
    bankacc="12345678" name="John Smith"></AgencyAccount>
  <External sortcode="123456" bankacc="12345678"
    name="Joe Bloggs"></External>
  <CashCode direction="credit" CashType="bac" CashGroup="rcp"></CashCode>
  <Desc>Bank Reference</Desc>
  <CashAmt value="20.00" currency="826"></CashAmt>
  <DeclineReason>01</DeclineReason>
  <OrigTxnAmt value="0.00" currency="826" partial="no"></OrigTxnAmt>
</DeclinedAgencyBanking>
```

```
origItemId="12345"></OrigTxnAmt>  
</DeclinedAgencyBanking>
```

2.12 Agency Banking Fee

Note: This element is only relevant if you are using the Agency Banking service.

The AgencyBankingFee primary element is used to describe any bank charges applied to an Agency Banking transaction.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
BankingFeeld	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedInt	Yes	0 to 2^32
SettlementDate	The value date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details.	<AgencyAccount>	Yes	See the AgencyAccount sub-element
AbId	The BankingId of the related ApprovedAgencyBanking or DeclinedAgencyBanking record for this Agency Banking Fee Record (foreign key).	xs:string	Yes	0 to 2^64 If not applicable, use default value 0
Desc	The reference quoted on the bank charge.	<Desc>	Yes	See the Desc sub-element
Amt	The amount of the bank charge applied to the receipt or payment.	<Direction Amount>	Yes	See the Amt sub-element

Example

```
<AgencyBankingFee>
  <BankFeeId>123456789</BankFeeId>
  <SettlementDate>20100825</SettlementDate>
  <Card PAN="1234567812345678" product="" programid="" branchcode="" productid=""></Card>
  <AgencyAccount no="123456789" type="01" sortcode="123456"
    bankacc="12345678" name="John Smith"></AgencyAccount>
  <AbId>101472047</AbId>
  <Desc>012345</Desc>
  <Amt direction="debit" value="1.50" currency="826"></Amt>
</AgencyBankingFee>
```

Section 3: Sub-Elements and Attributes

3.1 Sub-elements and Attributes

This section describes the message [sub-elements](#) and [attributes](#).

Sub-elements

Sub-elements are listed below in alphabetical order.

Account	Card	External	LocalDate	RecordType	SettlementIndicator
Additional_Amt_DE54	CashAmt	Event	MastercardFeeClass	RecType	SchemeSettlementDate
AdjustType	CashbackAmt	Fee	MerchCode	Response	Term
AgencyAccount	CashCode	FeeAmt	MsgSource	ReversalReason	Trace
Amount	CCAAmount	FeeClass	OrigTxnAmt	RIID	Txn
Amt	ChargebackRefNum	FIID	PaddingAmt	Schema	TxnAmt
ApprCode	Classification	File	Pending_Billing_Amount	Sender	TxnCode
ARN	CommissionAmt	FunctionCode	Recon	Settlement	Usage
BasicAmount	CycleNumber	FXConv	Receiver	SettlementAmt (Mastercard only)	
BillAmt	DeclineReason	LoadSource	ReconciliationDate	SettlementCycle	
BSA	Desc	LoadType	ReconciliationCycle	SettlementDate	

Account

The **Account** element describes a card account.

Attribute	Description	Data Type	Required	Constraints / Permitted Values								
no	The 9 digit GPS public token linked to the card Primary Account Number (PAN).	xs:string	Yes	Alphanumeric, maximum 28 characters.								
type	Card type	xs:string	Yes	Numeric string, maximum 2 characters. Valid values are:<table><tr><th>Value</th><th>Description</th></tr><tr><td>00</td><td>Domestic Maestro</td></tr><tr><td>01</td><td>MasterCard</td></tr><tr><td>02</td><td>VisaCard</td></tr></table>	Value	Description	00	Domestic Maestro	01	MasterCard	02	VisaCard
Value	Description											
00	Domestic Maestro											
01	MasterCard											
02	VisaCard											

Example

```
<Account no="123456789"type="01"></Account>
```

Additional_Amt_DE54

The **Additional_Amt_DE54** element contains additional amount information about the transaction, if relevant. For example, for purchase with cashback transactions, the additional amounts field displays the cashback amount.

Description	Base Data Type	Constraints / Permitted Values
Additional fees data	xs:string	Alphanumeric, maximum 123 characters.

Example

```
<Additional_Amt_DE54>0040978D000000000000</Additional_Amt_DE54>
```

AdjustType

The **AdjustType** element shows the type of balance adjustment – either *Actual* (the money was deducted) or *Blocked* (the amount on the card has been blocked).

Description	Base Data Type	Constraints / Permitted Values
Type of balance adjustment	xs:string	Maximum length 6 characters.

Example

```
<AdjustType>Actual</AdjustType>
```

AgencyAccount

The **AgencyAccount** element describes a card account and the related agency bank account.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
no	Card Holder Account Number	xs:string	Yes	Alphanumeric, maximum 28 characters.
type	Account Type	xs:string	Yes	Numeric string, maximum 2 characters Valid values are: 00 = Domestic Maestro; 01 = MasterCard
sortcode	Agency sort code	xs:string		Numeric, 6 characters.
bankacc	Allocated agency bank account	xs:string		Numeric, 8 characters.
name	Cardholder name	xs:string		Alphanumeric, maximum 28 characters.

Example

```
<AgencyAccount no="123456789" type="01" sortcode="123456" bankacc="12345678" name="John Smith"></AgencyAccount>
```

Amount

The **Amount** element describes a monetary amount.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the cash movement	<Direction>	Yes	See direction .
value	The monetary amount.	xs:decimal	Yes	Decimal value.
currency	The 3 character ISO currency code.	xs:unsigned Short	Yes	See ISO Currency Codes .

Example

```
<Amount direction="debit" value="0.95" currency="826"></Amount>
```

Amt

The **Amt** element describes the net transaction amount of the original transaction, as reported by Mastercard.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the cash movement.	<Direction>	Yes	See direction .
value	The net transaction value	xs:decimal	Yes	Decimal value.
currency	The 3 character ISO currency code.	xs:unsigned short	Yes	See ISO Currency Codes .

Example

```
<Amt direction="debit" value="0.95" currency="826"></Amt>
```

ApprCode

The **ApprCode** element describes the approval or authorisation code from the Issuer (the 6 digit number printed on the customer's receipt, to indicate a successful payment).

Description	Base Data Type	Constraints / Permitted Values
Approval Code	xs:string	Alphanumeric, maximum 6 characters.

Example

```
<ApprCode>123456</ApprCode>
```

ARN

The **ARN** element indicates the Acquirer Reference Number as generated by the acquirer.

Description	Base Data Type	Constraints / Permitted Values
Acquirer Reference Number	xs:string	Alphanumeric, maximum 23 characters.

Example

```
<ARN>12345678901234567890123</ARN>
```

BasicAmount

The **BasicAmount** data type describes a monetary amount loaded or unloaded from a card.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The monetary value.	xs:decimal	Yes	Decimal value (6 decimal places).
value2	The 4-decimal place version of the value. (optional)	xs:decimal	Yes	Decimal value (4 decimal places)
currency	The ISO 3 character currency code.	xs:unsigned Short	Yes	See ISO Currency Codes .

Example

```
<BasicAmount value="0.95"currency="826"></BasicAmount>
```

BillAmt

The **BillAmt** element describes the amount billed; this does not include interchange.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the billing amount.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	See ISO Currency Codes .
rate	The conversion rate used to calculate the billing amount value.	<RateAmount>	Yes	Decimal value, maximum 9 decimal places, using conventional rounding down (1-4) and up (5-9).

Example

The **BillAmt** shown below represents 10 GBP at an exchange rate of 1:1.

```
<BillAmt value="10.00"currency="826"rate="1.000000000"></BillAmt>
```

BSA

The **BSA** element describes the Business Service Arrangement type (BSA) code, as provided by Mastercard. This field can have values of:

- 1 = Inter-regional ; 2 = Intra-regional
- 3 = Inter-country* (also called subregional)
- 4 = Intra-country (also called domestic)
- 8 = Member-to-member (also called bilateral)

Description	Base Data Type	Constraints / Permitted Values
Business Service Arrangement type code.	xs:string	Numeric, maximum 1 character.

Example

```
<BSA>4</BSA>
```

Card

The **Card** element describes the key attributes of a payment card.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
PAN	Primary Account Number if PCI DSS Compliant, else the GPS 16-digit public token.	<PAN>	Yes	See PAN .
product	The Card Scheme associated with the card. For example: MCRD - Mastercard; VISA - Visa; MAES - Maestro	xs:string	Optional	Alphanumeric, maximum 4 characters.
programid	Program identifier, the co-brand (i.e. GPS Sub-Scheme) that the Program Manager operates.	xs:string	Optional	Alphanumeric, maximum 50 characters.
branchcode	The branch code (or Agent Code) associated with the card.	xs:string	Optional	Alphanumeric, maximum 8 characters.
productID	The GPS product ID associated with the card.	numeric	Optional	Numeric, maximum 5 characters.

Example

```
<Card PAN="1234567812345678"product=""programid=""branchcode=""productID=""></Card>
```

CashAmt

The **CashAmt** element describes the cash amount of the receipt or payment before any bank charges are deducted.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the cash amount.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	See ISO Currency Codes .

Example

```
<CashAmt value="10.00" currency="826"></CashAmt>
```

CashbackAmt

The **CashbackAmt** element describes the cashback amount requested by the cardholder. If no cashback has been requested then the element is presented with the *value* attribute set at zero and the *currency* attribute value defaulted to the transaction currency.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The transaction value.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	See ISO Currency Codes .

Example

```
<CashbackAmt value="10.00"currency="826"></CashbackAmt>
```

CashCode

The **CashCode** element describes transaction type and direction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values														
direction	The direction of the transaction	<Direction>	Yes	See direction .														
CashType	The granular type of transaction	xs:string	Yes	Must be one of the following values: <table><tr><th>CashType</th><th>Description</th></tr><tr><td>bac</td><td>BACS</td></tr><tr><td>fpv</td><td>Faster Payment (Receipt or payment)</td></tr><tr><td>ddp</td><td>Direct Debit Payment</td></tr><tr><td>cbt</td><td>Cardholder initiated balance transfer between own accounts</td></tr><tr><td>ipp</td><td>Inter program payment between two customers within same agency sort code</td></tr><tr><td>p2p</td><td>Peer-to-peer payment between two card-holders</td></tr></table>	CashType	Description	bac	BACS	fpv	Faster Payment (Receipt or payment)	ddp	Direct Debit Payment	cbt	Cardholder initiated balance transfer between own accounts	ipp	Inter program payment between two customers within same agency sort code	p2p	Peer-to-peer payment between two card-holders
CashType	Description																	
bac	BACS																	
fpv	Faster Payment (Receipt or payment)																	
ddp	Direct Debit Payment																	
cbt	Cardholder initiated balance transfer between own accounts																	
ipp	Inter program payment between two customers within same agency sort code																	
p2p	Peer-to-peer payment between two card-holders																	
CashGroup	The summary group type of the transaction	xs:string	Yes	Must be one of the following values: <table><tr><th>CashType</th><th>Description</th></tr><tr><td>rcp</td><td>Receipt</td></tr><tr><td>pay</td><td>Payment</td></tr></table>	CashType	Description	rcp	Receipt	pay	Payment								
CashType	Description																	
rcp	Receipt																	
pay	Payment																	

Example

```
<CashCode direction="debit" CashType="fpv" CashGroup="pay"></CashCode>
```

CCAAmount (Mastercard only)

The **CCAAmount** element describes the Currency Conversion Assessment (CCA) amount as calculated by the network (Mastercard only). The **currency** attribute value defaults to the CardFinancial (Presentment) billing currency.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The Currency Conversion Assessment value.	xs:decimal	Yes	Decimal value.
currency	The Currency transaction described in ISO Standard Currency code.	xs:unsigned Short	Yes	See ISO Currency Codes .
included	Clarifies whether the CCA amount has been included in the FX fee, which is a product-level configuration option.	<YesNoString>	Yes	Valid values are: • yes • no

Example

```
<CCAAmount value="0.01"currency="826" included="no"></CCAAmount>
```

ChargebackRefNum

The **ChargebackRefNum** element holds the chargeback CycleID value and is shown as *Chargeback Ref Num* in Smart Client.

Description	Base Data Type	Constraints / Permitted Values
Unique for a Chargeback record. Normally 10 characters long.	xs:string	Numeric. Maximum 50 characters.

Example

```
<ChargebackRefNum>9034102149</ChargebackRefNum>
```

Classification

The **Classification** element describes the Merchant Category Code (MCC), which is used to classify the type of business service provided by the merchant.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
MCC	Merchant Category Code	<MCC>	Yes	See MCC .

Example

```
<Classification MCC="5659"></Classification>
```

CommissionAmt

The **CommissionAmt** element describes the value of the commission applied to a Card Authorisation only. The *commission* is the fees that GPS applies to the card, based on the Fee configuration for the card (combination of the rate fee and fixed fee). For more information, see the [GPS Fees Guide](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the commission amount.	xs:decimal	Yes	Decimal value.
currency	The three-digit ISO currency code.	xs:unsigned Short	Yes	See ISO Currency Codes .

Example

```
<CommissionAmt value="0.95"currency="826"></CommissionAmt>
```

CycleNumber

The **CycleNumber** element describes the Mastercard clearing cycle number and applies to a card financial transaction only.

Note: Not applicable to Visa transactions; Visa do not have the concept of settlement or reconciliation cycles.

Permitted Value	Description	Data Type
01	Cycle number 01	xs:string
02	Cycle number 02	xs:string
03	Cycle number 03	xs:string
04	Cycle number 04	xs:string
05	Cycle number 05	xs:string
06	Cycle number 06	xs:string

Example

```
<CycleNumber>03</CycleNumber>
```

DeclineReason

The **DeclineReason** element describes the reason a receipt was rejected and returned to source or a payment request was declined and not processed.

Description	Data Type	Constraints / Permitted Values	
The reason a receipt or payment was declined.	xs:string	Maximum length two characters:	
		Value	Description
		00	Not Specified
		01	Insufficient Funds

Description	Data Type	Constraints / Permitted Values	
		Value	Description
		02	Maximum number of transactions exceeded
		03	Transaction exceeds maximum permitted value
		04	Maximum account balance exceeded
		05	Black listed destination
		06	Not a valid account
		07	Account closed
		08	Cardholder deceased
		09	No valid Direct Debit Instruction

Example

```
<DeclineReason>01</DeclineReason>
```

Desc

The **Desc** element provides descriptive text that can be used to provide a comment on a transaction. You can supply this value when initiating a card load or unload via web services. Alternatively, GPS will provide the description when the load occurs as a result of a balance transfer between primary and secondary cards.

Description	Base Data Type	Constraints / Permitted Values
Descriptive Text/Reference	xs:string	Maximum length 127 characters.

Example

```
<Desc>Some Descriptive Text</Desc>
```

External

The **External** element describes the other bank account in a payment transfer transaction.

Attribute	Description	Data Type	Constraints / Permitted Values
sortcode	Source or destination sort code	xs:string	Numeric 6 characters.
bankacc	Source or destination bank account	xs:string	Numeric 8 characters.
name	Sender or recipient's name	xs:string	Alphanumeric, maximum 28 characters.

Example

```
<External sortcode="123456" bankacc="12345678" name="John Bloggs"></External>
```

Event

The **Event** element describes an event that has changed a card's status.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
Type	The type of event	xs:string	Yes	Valid values are: Upgraded, Renewed, Lost, Stolen, Cancelled, PINAttemptsExceeded, Voided, Expired Activation, UnBlocked, StatusChange
Source	The item source (ItemSrc) of a card activation. Only applies to card activations.	xs:unsignedbyte	If applicable	See ItemSrc in the Web Services Guide . Defaults to 0.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
ActivationDate	The Date of activation. Only applies to card activations.	xs:string	If applicable	
ConvertedDate	Dhe date of conversion from a virtual to a physical card,	xs:string	If applicable	
StatCode	Status code of the card after the event.	xs:string	Yes	See <i>Status Codes</i> in the Web Services Guide .
OldStatCode	Status code of the card before the event.	xs:string	Yes	See <i>Status Codes</i> in the Web Services Guide .
Date	Date and time of the event (UK daylight savings time)	xs:string	Yes	Format: YYYYMMDDHHMMSS

Example

```
<Event Type="StatusChange"Source="0"StatCode="62"OldStatCode="00"Date="20130307153523"></Event>
```

Fee

The **Fee** element describes a fee amount.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the fee.	<Direction>	Yes	See direction .
value	The value of the fee amount(PDS0147).	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO standard currency code.	xs:unsigned short	Yes	See ISO Currency Codes .
value2	The value of the fee amount(PDS0146). Only for Mastercard records.	xs:decimal	Optional	Decimal value.

Example

```
<Fee direction="debit" value="3.330000" currency="826" value2="3.3300" ></Fee>
```

FeeAmt

The **FeeAmt** element describes the fee amount as received from Mastercard.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the fee	<Direction>	Yes	See direction .
value	The value of the fee	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO standard currency code	xs:unsigned short	Yes	See ISO Currency Codes .

Example

```
<FeeAmt direction="debit"value="0.95"currency="826"></FeeAmt>
```

FeeClass

The **FeeClass** element describes the nature of a fee.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
interchangeTransaction	Valid values are “yes” and “no” Note: will be yes when FeeClass “type” is 4 or 5	<YesNoString>	Yes	Valid values are: • yes • no
type	Describes the type of the fee.	xs:string	Yes	Valid values are:

Attribute	Description	Data Type	Required	Constraints / Permitted Values		
				Value	Description	Fee Type
				0	Network fee: These are fees generated by Global Processing Services or Master-Card clearing. In this case the account number in the fee message refers to the fee account for Global Processing Services.	Settlement Fee
				1	Cardholder fee: In this case the account number in the fee message refers to the cardholder's account.	Cardholder Fee
				2	MasterCard funds transfer settlement fee	Settlement Fee
				4	MasterCard interchange received fee	Settlement Fee
				5	MasterCard interchange fee to be paid	Settlement Fee
				For a card Financial, FeeClass element record, the type attribute always has a value of 1.		
code	Specifies the type of cardholder fee.	xs:string	Yes	The value specified below depends upon the message code (fee identifier), see Fee Class Element Code Attribute Values Where the FeeClass type attribute is 0,2,4 or 5, then the code attribute will be 0. For a card Financial, FeeClass element record, the code attribute always has a value of 1.		
memberID	Specifies the ICA	xs:string	No	Only applicable to MastercardFee .		

Example

```
<FeeClass interchangeTransaction="no" type="1" code="1"></FeeClass>
```

FIID

The **FIID** element describes the Forwarding Institution Identification Code (FIID).

Description	Base Data Type	Constraints / Permitted Values
A code identifying the forwarding institution	xs:string	Alphanumeric, maximum 11 characters.

Example

```
<FIID>0123456</FIID>
```

File

The **File** element describes the file in which the receipt was notified or the outbound payment was submitted for processing. (Used for outbound file-based processing with Agency banking.)

Attribute	Description	Data Type	Required	Constraints / Permitted Values
filedate	Date and time of file containing receipt or date the payment file is generated.	xs:string	Yes	Maximum 14 characters, date and time in the format: YYYYMMDDHHMMSS
filename	Name of file containing receipt or payment.	xs:string	Yes	Alphanumeric, maximum 100 characters.

Example

```
<File filedate="20100824155111" filename="ABC123xyz"></File>
```

FXConv

The **FXConv** element provides details of the Foreign Exchange (FX) rate conversion in a CurrencyCloud transaction. This can be used to reconcile the POS transaction FX movements, if any was done.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
bookingstatus	Status of the booking	xs:string	Optional	Maximum length 1. Permitted values: B' - Booked, 'R' - Reversed, 'X' - Retries Exceeded
fxratebooked	FX rate for this transaction	xs:decimal	Yes	No constraints
providercode	FX provider source for the rate	xs:string	Yes	Maximum length 8
fixedamountflag	FX fixed amount charge for this transaction.	xs:string	Yes	Maximum length 1. Permitted values: S' - Source or 'D' - Destination'
settlementdate	The settlement date as returned by the FX provider	SettlementDate	Optional	No constraints

FunctionCode

The **FunctionCode** element is used by Mastercard to describe the transaction functions the clearing system performs.

Permitted Value	Description	Data Type
400	Denotes 'Full'. Used for Mastercom Chargebacks	integer
451	Denotes 'Partial'. Used for Mastercom Chargebacks	integer
603	Retrieval Request	integer
605	Retrieval Request Acknowledgement	integer
685	Financial Position Detail (Chargeback -Mastercom)	integer
700	Fee Collection (Member-generated)/ For Mastercom pre-arbitration or arbitration case filing	integer
780	Fee Collection Return (Member-generated)	integer
781	Fee Collection Resubmission (Member-generated)	integer
782	Fee Collection Arbitration Return (Member-generated)	integer
783	Fee Collection (Clearing System-generated)	integer
790	Fee Collection (Funds Transfer)—applies only in the IPM Pre-edit system to UK Domestic Maestro transactions	integer

LoadSource

The **LoadSource** element describes the source of the Card Load or Unload.

Attribute	Description	Data Type	Constraints / Permitted Values	
Source	The source of the Load / Unload request.	xs:string	Maximum length 3 characters.	
			Value	Description
			0	Not Specified
			1	Batch Load via CRI File
			2	Generic Web Service
			3	IVR
			4	Website
			5	PayPoint
			6	PayZone
			7	Post Office

Attribute	Description	Data Type	Constraints / Permitted Values	
			Value	Description
			8	Agent
			9	Head Office
			10	Call Centre
			11	In-Store
			12	Account breakage
			13	EPAY
			14	SMS
			15	RePower
			16	Prepaid topup
			50 to 100	Customer Specified
			102	In-store (no fee)
			209	Cashback
			210	Cashback bonus
			Type	The type of the Load/Unload request. Payment method of funds for the load
FixedFee	The amount of any Fixed Fee that was applied.	xs:decimal		
Rate_Fee	The amount of any Rate Fee that was applied.	xs:decimal		

Example

```
<LoadSource source="9"Type="1"FixedFee="0.00"Rate_Fee="0.00"/></LoadSource>
```

LoadType

The **LoadType** element describes the type of funds used in a Card Load or Unload transaction.

Description	Data Type	Constraints / Permitted Values																										
The type of fund used in the Card Load or Unload.	xs:string	Maximum length 2 characters.																										
		<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Not Specified</td></tr><tr><td>1</td><td>Cash</td></tr><tr><td>2</td><td>Debit card</td></tr><tr><td>3</td><td>Credit Card</td></tr><tr><td>4</td><td>Import</td></tr><tr><td>5</td><td>Savings Stamps</td></tr><tr><td>6</td><td>Cheque</td></tr><tr><td>7</td><td>Standing Order</td></tr><tr><td>8</td><td>Export</td></tr><tr><td>9</td><td>Transfer</td></tr><tr><td>10</td><td>Funding Card</td></tr><tr><td>11</td><td>From/To Offline Balance</td></tr></table>	Value	Description	0	Not Specified	1	Cash	2	Debit card	3	Credit Card	4	Import	5	Savings Stamps	6	Cheque	7	Standing Order	8	Export	9	Transfer	10	Funding Card	11	From/To Offline Balance
		Value	Description																									
		0	Not Specified																									
		1	Cash																									
		2	Debit card																									
		3	Credit Card																									
		4	Import																									
		5	Savings Stamps																									
		6	Cheque																									
		7	Standing Order																									
		8	Export																									
		9	Transfer																									
10	Funding Card																											
11	From/To Offline Balance																											

Example

```
<LoadType>6</LoadType>
```

LocalDate

The **LocalDate** element describes the date and time when the message was received from the card network in local UK time.

Description	BaseType	Constraints / Permitted Values
Date and time	xs:string	Maximum 14 characters, date and time in the format: YYYYMMDDHHMMSS

Example

The example below shows a date/time of 2:20.33pm on 25th Jan 2021.

```
<LocalDate>20210125142033</LocalDate>
```

MastercardFeeClass

The **MastercardFeeClass** data type describes the type of Mastercard fee.

Attribute	Description	Data Type	Required	Constraints / Permitted Values		
interchangeTransaction	Valid values are “yes” and “no” Note: will be yes when FeeClass “type” is 4 or 5.	<YesNoString>	Yes	Valid values are: • yes • no		
type	Describes the type of the fee.	xs:string	Yes	Valid values are:		
				Value	Description	Fee Type
				0	Network fee: These are fees generated by Global Processing Services or MasterCard clearing. In this case the account number in the fee message refers to the fee account for Global Processing Services.	Settlement Fee
				2	MasterCard funds transfer settlement fee	Settlement Fee
				4	MasterCard interchange received fee	Settlement Fee
				5	MasterCard interchange fee to be paid	Settlement Fee
code	Specifies the type of card-holder fee.	xs:string	Yes	0		
memberid	Specifies the Mastercard Member ID (i.e. ICA)	xs:string	Yes	Maximum 6 characters. Note: This element is only present when the container element of FeeClass is “MastercardFee”.		

Example

```
<MastercardFeeClass interchangeTransaction="no"type="0"code="0"memberid="012345"></MastercardFeeClass>
```

MerchCode

The **MerchCode** element is the Card Acceptor Merchant Identifier supplied by the acquirer. This a unique number that is used to identify the merchant or originator of the transaction.

Expected Value	BaseType	Constraints / Permitted Values
Merchant Code / Card Acceptor Identifier	xs:string	Alphanumeric, maximum 15 characters.

Example

```
<MerchCode>ABCD12345678</MerchCode>
```

MsgSource

The **MsgSource** element describes the source from which the message is derived.

Attribute	Description	Data Type	Required	Constraints / Permitted Values																
value	The source from which this message is derived.	xs:decimal	Yes	Maximum length two; must be one of the following values: <table><tr><th>Value</th><th>Description</th></tr><tr><td>12</td><td>Outgoing fees to Visa.</td></tr><tr><td>17</td><td>Outgoing fees to MasterCard. This must be applied to all outgoing settlement fees.</td></tr><tr><td>62</td><td>This value is applicable on CardAuthorisation records only.</td></tr><tr><td>66</td><td>ECCEDD or GCMS using the ECCF file format (MasterCard International).</td></tr><tr><td>67</td><td>GCMS using IPM file format (MasterCard International).</td></tr><tr><td>74</td><td>UK Domestic Maestro using the IPM file format.</td></tr><tr><td>54</td><td>Visa International.</td></tr></table>	Value	Description	12	Outgoing fees to Visa.	17	Outgoing fees to MasterCard. This must be applied to all outgoing settlement fees.	62	This value is applicable on CardAuthorisation records only.	66	ECCEDD or GCMS using the ECCF file format (MasterCard International).	67	GCMS using IPM file format (MasterCard International).	74	UK Domestic Maestro using the IPM file format.	54	Visa International.
Value	Description																			
12	Outgoing fees to Visa.																			
17	Outgoing fees to MasterCard. This must be applied to all outgoing settlement fees.																			
62	This value is applicable on CardAuthorisation records only.																			
66	ECCEDD or GCMS using the ECCF file format (MasterCard International).																			
67	GCMS using IPM file format (MasterCard International).																			
74	UK Domestic Maestro using the IPM file format.																			
54	Visa International.																			
domesticMaestro	Indicates Domestic Maestro	<domesticMaestro>	Yes	See domesticMaestro .																

Example

```
<MsgSource value="67"domesticMaestro="no"></MsgSource>
```

OrigTxnAmt

This **OrigTxnAmt** element describes the original transaction amount requested by the cardholder.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the original transaction.	xs:decimal	Yes	Decimal value.
currency	The currency code of the original transaction.	xs:unsignedShort	Yes	See ISO Currency Codes .
partial	Indicates a partial amount.	<YesNoString>	If applicable	Valid values are: • yes • no If not supplied, assumes “no”.
origItemId	The system trace audit number of the original authorisation, as assigned by the message originator. This can be used to link an authorisation reversal to the original authorisation.	xs:unsignedInt	If applicable	0 to 4,294,967,295

Example

```
<OrigTxnAmt value="0.95"currency="826" partial="yes"origItemId="123456"></OrigTxnAmt>
```

PaddingAmt

The **PaddingAmt** element describes the value of any padding amount applied to an authorisation. This is typically used to mitigate against FX rate fluctuations between the authorisation and the settlement.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the padding amount.	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO standard currency code	xs:unsignedShort	Yes	Short value.

Example

```
<PaddingAmt value="0.95"currency="826"></PaddingAmt>
```

Pending_Billing_Amount

The Pending_Billing_Amount element shows the value of the pending Chargeback amount.

Description	Data Type	Constraints / Permitted Values
Chargeback amount.	xs:decimal	Decimal value.

Example

```
<Pending_Billing_Amount>10.25</Pending_Billing_Amount>
```

Recon

The Recon element provides details of the reconciliation date and clearing cycle.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
date	Date the original transaction was reconciled.	xs:string	Optional	Maximum 8 characters. Date in the format: YYYYMMDD
cycle	Indicates which of the six Mastercard clearing cycles the transaction was processed in.	xs:string	Optional	Values 01 - 06.

Example

An example of a settlement which occurred in cycle 1 on 11th September 2021 is shown below.

```
<Recon date="20210911" cycle="01"/></recon>
```

Receiver

The Receiver element provides details of the receiver of the payment where there is a money transfer. See also [Sender](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values	
firstname	FirstName	xs:string	Optional	Alphanumeric, maximum 99 characters.	
middlename	Middle Name	xs:string	Optional	Alphanumeric, maximum 99 characters.	
lastname	Last Name	xs:string	Optional	Alphanumeric, maximum 99 characters.	
streetaddress	Street Address	xs:string	Optional	Alphanumeric, maximum 99 characters.	
city	City	xs:string	Optional	Alphanumeric, maximum 99 characters.	
provincecode	Province code	xs:string	Optional	Alphanumeric, maximum 99 characters.	
country	Country	xs:string	Optional	Normally 3-character alpha ISO code	
postcode	Postcode	xs:string	Optional	Alphanumeric, maximum 99 characters.	
dateofbirth	Date of birth	xs:string	Optional	Format: MMDDYYYY	
accountnumber	Account Number	xs:string	Optional	Alphanumeric, maximum 99 characters.	
idtype	Id type	xs:string	Optional	Value	Description
				00	Passport
				01	National Identification Card
				02	Driver's License
				03	Government Issued
				04	Other
				05-10	Reserved

Attribute	Description	Data Type	Required	Constraints / Permitted Values	
idnbr	Id number	xs:string	Optional	Alphanumeric, maximum 99 characters.	
idctrycode	ID Country Code	xs:string	Optional	Normally 3-character alpha ISO code	
nationality	Nationality	xs:string	Optional	Normally 3-character alpha ISO code	
phonenumbr	Phone Number	xs:string	Optional	Alphanumeric, maximum 99 characters.	
idexpdate	ID expiry Date	xs:string	Optional	Format: MMDDYYYY	
acctnbrtype	Account Number Type	xs:string	Optional	Values	Description
				00	Other
				01	RTN + Bank Account
				02	IBAN
				03	Card Account
				04	Email
				05	Phone Number
				06	Bank account number (BAN) + Bank Identification Code (BIC)
				07	Wallet ID
				08	Social Network ID
birthctry	Birth Country	xs:string	Optional	Normally 3-character alpha ISO code	
fundssource	Fund Source	xs:string	Optional	Code	Meaning
				01	Visa credit
				02	Visa debit
				03	Visa prepaid
				04	Cash
				05	Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)
				06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)
claimcode	Claim Code	xs:string	Optional	Alphanumeric, maximum 99 characters.	

Example

```
<Receiver firstname="FRST" middlename="M" lastname="LST NME" streetaddress="RM R STREET S STREETI " city="MAIN" provincecode="MD" country="MDA"
postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04" idnbr="2014011000399" idctrycode="MDA" nationality="MDA"
phonenumbr="2811131" idexpdate="102020" acctnbrtype="08" birthctry="MDA" fundssource="04" claimcode="TST"></Receiver>
```

ReconciliationDate

The **ReconciliationDate** element shows the reconciliation date of a Chargeback record.

Description	Data Type	Constraints / Per
Reconciliation date of Chargeback record.	xs:string	Maximum 8 characters, Date in the format: YYYYMMDD

Example

```
<ReconciliationDate>20200325</ReconciliationDate>
```

ReconciliationCycle

The **ReconciliationCycle** element shows the reconciliation cycle of the Chargeback record.

Description	Data Type	Constraints / Permitted Values
Reconciliation cycle of Chargeback record.	xs:string	Maximum 2 characters, Possible values are 01,02,03,04,05 and 06.

Example

```
<ReconciliationCycle>03</ReconciliationCycle>
```

RecordType

The **RecordType** element is used to distinguish between different fee types. (Relevant to Mastercard only)

Description	Base Data Type	Constraints / Permitted Values								
This can have different values depending on the primary element. For example: For a chargeback, where the value of RecordType is <i>MCB</i>, to find out the chargeback fee amount, refer to the fee amount (<FeeAmt>) of the MasterCardFee record. To view the original chargeback amount, refer to the <BillAmt> in the CardChrgBackRepRes record. For case filing, where the value of RecordType is <i>MCF</i>, refer to the MasterCardFee record for details of pre-aribtration and arbitration case filing fees.	xs:string	Maximum length 3. <table><tr><th>Value</th><th>Description</th></tr><tr><td>FC</td><td>From FeeCollection</td></tr><tr><td>MCB</td><td>Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.</td></tr><tr><td>MCF</td><td>Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.</td></tr></table>	Value	Description	FC	From FeeCollection	MCB	Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.	MCF	Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.
Value	Description									
FC	From FeeCollection									
MCB	Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.									
MCF	Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.									

Example

```
<RecordType>MCF</RecordType >
```

RecType

The **RecType** element describes whether this record is an advice or a reversal.

Permitted Value	Description	DataType
ADV	Advice Record	xs:string
REV	Reversal Record	xs:string

Example

```
<RecType>ADV</RecType>
```

Response

The **Response** element describes the approval status of a transaction request.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
approved	Approval component.	<approved>	Yes	See approved .
actioncode	Approval component.	xs:string	If applicable	For CardAuthorisation Advice Records action code of “0” and response code =”00” indicates the transaction was approved. For CardAuthorisation Reversal Records action code of “4” and response code of “00” indicates the acquirer/network-generated reversal was approved. However, action code of “0” and response code of “00” indicates an issuer timeout (system gen-

Attribute	Description	Data Type	Required	Constraints / Permitted Values
responsecode	Approval component.	xs:string	If applicable	erated) reversal was approved. Other value combinations indicate the transaction was rejected. Applies to CardAuthorisation and CardFinancial only.
additionaldesc	Extra information	xs:string	If applicable	Maximum 500 characters. Applies to CardAuthorisation only.

Example

```
<Response approved="yes"actioncode="0"responsecode="00"></Response>
```

ReversalReason

The ReversalReason element describes the reason for a reversal.

Permitted Value	Description	Data Type
0	Original authorisation was matched, i.e., cancel the original Authorisation value from the BLKAMT field (thereby increasing the AMTAVL balance) because a settlement transaction has been matched and processed. This code would be used if the CardAuthorisation's AuthId is populated in the matching CardFinancial's Child Element AuthId.	xs:string
1	Original authorisation has expired, i.e., Cancel the original Authorisation value from the BLKAMT field (thereby increasing the AMTAVL balance) even though a settlement transaction has not been identified before the expiry of the Authorisation time limit. This code would be used if the CardAuthorisation's AuthId is not present in any CardFinancial's Child Element AuthId.	xs:string
2	Manually deleted, i.e., merchant erroneously processed Authorisation and reversal is processed directly into the processor's system.	xs:string
3	Online reversal, i.e., merchant erroneously processed Authorisation and reversal is entered via the processor's online portal.	xs:string

Example

```
<ReversalReason>0</ReversalReason>
```

RIID

The RIID element describes the Receiving Institution Identification Code (RIID). This is the Program Manager's ICA as provided by Mastercard or the equivalent account code from Visa.

Description	Base Data Type	Constraints / Permitted Values
Receiving Institution Identification Code	xs:string	Alphanumeric, maximum 11 characters.

Example

```
<RIID>00000000123</RIID>
```

Schema

The Schema element describes the name of the card scheme processing the transaction. For example: Visa (VISA), Mastercard (MCRD).

Permitted Value	Description	Data Type
CIRR	Euro Cirrus	xs:string
ECRD	EuroCard	xs:string
MAES	Maestro	xs:string
CIMA	Cirrus Maestro	xs:string
MCRD	Mastercard	xs:string

Permitted Value	Description	Data Type
VISA	Visa	xs:string
PLUS	PLUS Card	xs:string

Example

```
<Schema>MCRD</Schema>
```

Sender

The **Sender** element provides details of the sender of the payment, where there is a money transfer. See also [Receiver](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values																					
firstname	FirstName	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
middlename	Middle Name	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
lastname	Last Name	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
streetaddress	Street Address	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
city	City	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
provincecode	Province code	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
country	Country	xs:string	Optional	Normally 3-character alpha ISO code.																					
postcode	Postcode	xs:string	Optional	Alphanumeric, maximum 99 characters..																					
dateofbirth	Date of birth	xs:string	Optional	Format: MMDDYYYY																					
accountnumber	Account Number	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
idtype	The type of identification provided by the user.	xs:string	Optional	Values are: <table><tr><th>Value</th><th>Description</th></tr><tr><td>00</td><td>Passport</td></tr><tr><td>01</td><td>National Identification Card</td></tr><tr><td>02</td><td>Driver's License</td></tr><tr><td>03</td><td>Government Issued</td></tr><tr><td>04</td><td>Other</td></tr><tr><td>05-10</td><td>Reserved</td></tr></table>		Value	Description	00	Passport	01	National Identification Card	02	Driver's License	03	Government Issued	04	Other	05-10	Reserved						
Value	Description																								
00	Passport																								
01	National Identification Card																								
02	Driver's License																								
03	Government Issued																								
04	Other																								
05-10	Reserved																								
idnbr	Identification number (e.g. passport or driver license number)	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
idctrycode	ID country code (e.g. 826)	xs:string	Optional	Normally 3-character alpha ISO code.																					
nationality	Nationality	xs:string	Optional	Normally 3-character alpha ISO code.																					
phonenumber	Phone number	xs:string	Optional	Alphanumeric, maximum 99 characters.																					
idexpdate	Identification expiry date	xs:string	Optional	Format: MMDDYYYY																					
acctnbrtype	The type of account number	xs:string	Optional	<table><tr><th>Values</th><th>Description</th></tr><tr><td>00</td><td>Other</td></tr><tr><td>01</td><td>RTN + Bank Account</td></tr><tr><td>02</td><td>IBAN</td></tr><tr><td>03</td><td>Card Account</td></tr><tr><td>04</td><td>Email</td></tr><tr><td>05</td><td>Phone Number</td></tr><tr><td>06</td><td>Bank account number (BAN) + Bank Identification Code (BIC)</td></tr><tr><td>07</td><td>Wallet ID</td></tr><tr><td>08</td><td>Social Network ID</td></tr></table>		Values	Description	00	Other	01	RTN + Bank Account	02	IBAN	03	Card Account	04	Email	05	Phone Number	06	Bank account number (BAN) + Bank Identification Code (BIC)	07	Wallet ID	08	Social Network ID
Values	Description																								
00	Other																								
01	RTN + Bank Account																								
02	IBAN																								
03	Card Account																								
04	Email																								
05	Phone Number																								
06	Bank account number (BAN) + Bank Identification Code (BIC)																								
07	Wallet ID																								
08	Social Network ID																								
birthctry	Country of birth	xs:string	Optional	Normally 3-character alpha ISO code.																					

Attribute	Description	Data Type	Required	Constraints / Permitted Values	
fundssource	Source of funds	xs:string	Optional	Code	Meaning
				01	Visa credit
				02	Visa debit
				03	Visa prepaid
				04	Cash
				05	Debit/deposit access accounts other than those linked to a Visa-card (includes checking/savings accounts and proprietary debit/ATM cards)
				06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)
claimcode	Claim code	xs:string	Optional	Alphanumeric, maximum 99 characters.	

Example

```
<Sender firstname="FRST" middlename="M" lastname="LST NME" streetaddress="RM R STREET S STREETI" city="MAIN" provincecode="MD" country="MDA" postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04" idnbr="2014011000399" idctrycode="MDA" nationality="MDA" phonenumber="2811131" idexpdate="102020" acctnbrtype="08" birthctry="MDA" fundssource="04" claimcode="TST"></Sender>
```

Settlement

The **Settlement** element describes the Settlement details.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
date	Date the original transaction was settled.	xs:string	Optional	Maximum 8 characters, Date in the format: YYYYMMDD
cycle	Indicates which of the six Mastercard clearing cycles the transaction was processed in.	xs:string	Optional	Values 01 - 06.

Example

An example of a Settlement which occurred in cycle 1 on 9th September 2017 is shown below.

```
<Settlement date="20170911" cycle="01"/></Settlement>
```

SettlementAmt (Mastercard only)

The **SettlementAmt** element describes the settlement amount.

Note: Only Mastercard send a Settlement Amount. For VISA, SettlementAmt will be the same as the Cardholder Billing amount (**BillAmt**).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the settlement amount.	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO code of currency that the transaction will be settled in.	xs:unsigned Short	Yes	See ISO Currency Codes .
rate	The conversion rate used to calculate the settlement amount value.	<Rate>	Yes	Decimal value, maximum 9 decimal places, using conventional rounding down (1-4) and up (5-9).
date	Date the original transaction was settled.	xs:string	If applicable	Maximum 8 characters, Date in the format: YYYYMMDD Only required for chargebacks and representments.

Example

The example below represents 10 GBP at an exchange rate of 1:1.

```
<SettlementAmt value="10.00" currency="826" rate="1.00000000"
date="20100825"></SettlementAmt>
```

SettlementCycle

The **SettlementCycle** element describes the settlement cycle of the Chargeback record.

Description	Data Type	Constraints / Permitted Values
Settlement cycle of a Chargeback record.	xs:string	Maximum length 2 characters. Possible value: 01.

Example

```
<SettlementCycle>01</SettlementCycle>
```

SettlementDate

The **SettlementDate** element describes the date when the transaction will be settled.

Note: in the **CardAuthorisation** element, this field only provides the GPS transaction date.

Description	BaseType	Constraints / Permitted Values
Date (UTC)	xs:string	Maximum 8 characters, date in the format: YYYYMMDD

Example

```
<SettlementDate>20210125</SettlementDate>
```

SettlementIndicator

The **SettlementIndicator** element describes the type of settlement service, for example whether this is International or clearing-only.

Description	Base Data Type	Constraints / Permitted Values												
The type of settlement service	xs:string	Maximum length 1. Values are:												
		<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>International settlement service.</td></tr><tr><td>3</td><td>Clearing-only (valid only for countries with defined service).</td></tr><tr><td>4</td><td>Bilateral Settlement. (Mastercard Only)</td></tr><tr><td>8</td><td>National Net settlement service (valid only for countries with defined service).</td></tr><tr><td>9</td><td>BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)</td></tr></table>	Value	Description	0	International settlement service.	3	Clearing-only (valid only for countries with defined service).	4	Bilateral Settlement. (Mastercard Only)	8	National Net settlement service (valid only for countries with defined service).	9	BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)
		Value	Description											
		0	International settlement service.											
		3	Clearing-only (valid only for countries with defined service).											
		4	Bilateral Settlement. (Mastercard Only)											
		8	National Net settlement service (valid only for countries with defined service).											
9	BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)													

Example

```
<SettlementIndicator>0</SettlementIndicator>
```

SchemeSettlementDate

The **SchemeSettlementDate** element describes the scheme first presentment settlement date in a financial advice or reversal. The data contained in this element is taken from the following data sources received from Mastercard and set by GPS for Visa:

- Mastercard - DE48 PDS0159 subfield 8
- Visa - GPS settlement date

Description	BaseType	Constraints / Permitted Values
Date (UTC)	xs:string	Maximum 8 characters, date in the format: YYYYMMDD.

Example

```
<SchemeSettlementDate>20210125</SchemeSettlementDate>
```

Term

The **Term** element provides details of the terminal used in a POS card transaction.

Attribute	Description	Data Type	Required	Constraints/Permitted Values.
code	Card acceptor terminal ID (Mastercard DE 41 field). This is a unique code identifying a terminal at the card acceptor location.	<code>	Yes	See code
location	Location - defines the site where the terminal is located. It can be a branch code or store name.	xs:string	Yes	Maximum 64 characters
street	Street - description of the terminal street location.	xs:string	Yes	Maximum 64 characters
city	City	xs:string	Yes	Maximum 64 characters
country	Country code - ISO code.	xs:string	Yes	Must be 2 Characters. See ISO Country Codes .
inputcapability	The primary capability of the terminal for entering card information.	<inputcapability>	Yes	see PDS0105
authcapability	This is the method available to verify the cardholder at this terminal.	<authcapability>	Optional	see authcapability

Example

```
<Term code="N376131"location="A BANK"street="A STREET"city="A CITY"
country="GB"inputcapability="5"authcapability="1"></Term>
```

Trace

The **Trace** element provides an audit number that can be used to uniquely identify a transaction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
auditno	Card scheme system Trace Audit Number. Contains a number that uniquely identifies a transaction. The audit number remains unchanged for all messages within the life of the transaction (i.e. original and reversal). For partial reversals, a new Audit Number is required.	xs:string	Yes	Alphanumeric, maximum 6 characters
origauditno	This is only populated if the containing record is a reversal, and represents information regarding the original transaction.	xs:string	Optional	Alphanumeric, maximum 6 characters
Retrefno	Retrieval Reference Number. Contains a document reference supplied by the system retaining the original source information (ATM acquirer) and is used to assist in locating that information or a copy thereof.	xs:string	Yes	Alphanumeric, maximum 12 characters

Example

```
<Trace auditno="1234"origauditno="345"Retrefno="AN1234"></Trace>
```

Txn

The **Txn** element describes how a transaction was validated and authenticated.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
cardholderpresent	Indicates whether the cardholder present during the transaction.	<cardholderpresent>	Yes	see cardholderpresent .
cardpresent	Indicates whether the card was present during the transaction.	<cardpresent>	Yes	See cardpresent .
cardinputmethod	The method used to input the information from the card to the terminal.	<cardinputmethod>	Yes	see cardinputmethod .
cardauthmethod	The cardholder authentication method used in a card transaction.	<cardauthmethod>	Yes	see cardauthmethod .
cardauthentity	The component or person who verified the cardholder identity as reported in the cardauthmethod field.	<cardauthentity>	Yes	see cardauthentity .
TVR	Terminal Verification Results. This is the 10 hexadecimal characters representing the TVR 5 binary bytes. This field should only be interpreted for EMV transactions (Cardauthentity and Cardinputmethod).	xs:unsigned Long	If applicable	This field is only present in financial advices if the acquirer systems provide Chip data Default value is zero.

Example

```
<Txn cardholderpresent="0"cardpresent="1"cardinputmethod="2"
cardauthmethod="3"cardauthentity="3"TVR="0"></Txn>
```

TxnAmt

The [TxnAmt](#) element describes a transaction amount (value and currency).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the transaction amount.	xs:decimal	Yes	Decimal value.
currency	The transacted currency code.	xs:unsignedShort	Yes	See ISO Currency Codes .

Example

```
<TxnAmt value="10.00"currency="826"></TxnAmt>
```

TxnCode

The [TxnCode](#) element describes the transaction type and direction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values														
direction	The direction of the transaction	<Direction>	Yes	See direction														
Type	Details of the type of transaction	xs:string	Yes	Must be one of the following values <table><tr><th>Value</th><th>Description</th></tr><tr><td>pos</td><td>Point of Sale transaction.</td></tr><tr><td>atm</td><td>Automated Teller Machine transaction (Cash Withdrawal/Advance)</td></tr><tr><td>pos_cb</td><td>Point of Sale transaction with cash-back.</td></tr><tr><td>pos_re</td><td>Purchase Refund</td></tr><tr><td>fee</td><td>Fee collection, If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.</td></tr><tr><td>tfr</td><td>Cardholder funds transfer.</td></tr></table>	Value	Description	pos	Point of Sale transaction.	atm	Automated Teller Machine transaction (Cash Withdrawal/Advance)	pos_cb	Point of Sale transaction with cash-back.	pos_re	Purchase Refund	fee	Fee collection, If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.	tfr	Cardholder funds transfer.
Value	Description																	
pos	Point of Sale transaction.																	
atm	Automated Teller Machine transaction (Cash Withdrawal/Advance)																	
pos_cb	Point of Sale transaction with cash-back.																	
pos_re	Purchase Refund																	
fee	Fee collection, If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.																	
tfr	Cardholder funds transfer.																	

Attribute	Description	Data Type	Required	Constraints / Permitted Values
Group	The summary group type of the transaction	<Group>	Yes	See FunctionCode
ProcCode	The first two digits of the Processing Code + the two digits of the AccountType + Two digits of the Destination Account	xs:string	If applicable	For example: "000000", "003000", "010000"
Partial	If a fee was charged, indicates whether the fee was partial.	xs:string	If applicable	Default:"NA"
FeeWaivedOff	If a fee was charged, and the fee was partial, shows the amount of the fee that was not charged.	xs:decimal	If applicable	Default:0

Example

```
<TxnCode direction="debit"Type="atm"Group="atm"ProcCode="000000"></TxnCode>
```

Usage

The **Usage** element indicates whether the Chargeback was credited to a card.

Description	Data Type	Constraints / Permitted Values										
Indicates whether the Chargeback is manually credited to card.	xs:string	Maximum 1-character. Possible values are:										
		<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Credit acknowledged, cleared and not credited to a card.</td></tr><tr><td>1</td><td>Credit acknowledged, cleared and credited to a card for arbitration Chargeback.</td></tr><tr><td>M</td><td>Mastercard, Credit acknowledged, cleared and credited to a card.</td></tr><tr><td>S</td><td>Related to a Visa card.</td></tr></table>	Value	Description	0	Credit acknowledged, cleared and not credited to a card.	1	Credit acknowledged, cleared and credited to a card for arbitration Chargeback.	M	Mastercard, Credit acknowledged, cleared and credited to a card.	S	Related to a Visa card.
		Value	Description									
		0	Credit acknowledged, cleared and not credited to a card.									
		1	Credit acknowledged, cleared and credited to a card for arbitration Chargeback.									
		M	Mastercard, Credit acknowledged, cleared and credited to a card.									
S	Related to a Visa card.											

Example

```
<Usage>1</Usage>
```

Attributes

Attributes are listed below in alphabetical order.

approved	cardauthenticity	cardpresent	domesticMaestro	PAN
authcapability	cardauthmethod	code	Group	PDS0105
cardholderpresent	cardinputmethod	direction	MCC	inputcapability

approved

The **approved** attribute describes whether a transaction was approved.

Permitted Value	Description	Data Type
yes	Approved	xs:string
no	Not Approved	xs:string

Example

```
approved="yes"
```

authcapability

The **authcapability** attribute describes the capabilities of the terminal.

Permitted Value	Description	Data Type
0	No electronic authentication	xs:string
1	PIN	xs:string
2	Electronic Signature Analysis	xs:string
3	Biometrics	xs:string
4	Biographs	xs:string
5	Manual signature verification	xs:string
6	Manual other	xs:string
7	Offline PIN	xs:string
8	Online PIN	xs:string
9	3D-Secure	xs:string
10	Account based digital signature	xs:string
11	Public key based digital signature	xs:string
12	Unknown	xs:string
13	RFU	xs:string
14	RFU	xs:string
15	RFU	xs:string
16	RFU	xs:string
17	RFU	xs:string
18	RFU	xs:string
19	RFU	xs:string

Example

```
authcapability="1"
```

cardholderpresent

The **cardholderpresent** attribute describes whether a cardholder was present during a transaction.

Permitted Value	Description	Data Type
0	Cardholder present	xs:string
1	Not present, unspecified	xs:string
2	Not present, mail order	xs:string
3	Not present, telephone	xs:string
4	Not present, standing authorisation	xs:string
5	Not present, electronic order	xs:string
6	Not present, instalment transaction	xs:string
9	Unknown	xs:string

Example

```
cardholderpresent="3"
```

cardauthentity

The **cardauthentity** attribute describes the entity that authenticated the cardholder.

Permitted Value	Description	Data Type
0	Not Authenticated	xs:string
1	Integrated Chip Card	xs:string
2	ISO10202 = Terminal	xs:string
3	Authorising Agent	xs:string
4	Merchant	xs:string
5	Other	xs:string
6	Cardholder device	xs:string
7	Wallet Provider / Token Requestor	xs:string
8	Unknown	xs:string

Example

```
cardauthentity="8"
```

cardauthmethod

The **cardauthmethod** attribute describes the authentication method used in a card transaction.

Permitted Value	Description	Data Type
0	Not authenticated	xs:string
1	PIN	xs:string
2	electronic signature analysis	xs:string
3	Biometrics	xs:string
4	Biographic	xs:string
5	Manual Signature Verification	xs:string
6	Manual Other (e.g. Licence)	xs:string
7	Other	xs:string
8	Unknown	xs:string
9	Passcode/Password (e.g mobile phone unlock code, or One-Time-Passcode sent to cardholder)	xs:string
A	Pattern (e.g. mobile phone device unlock pattern)	xs:string
B	Possession of hardware device (eg phone, number generating keyfob)	xs:string
C	As 'B' but additionally with user verification	xs:string
D	Possession of software application (e.g. passcode generating program)	xs:string
E	As 'D' but additionally with user verification	xs:string
S	3D-secure cardholder authentication	xs:string

Example

```
cardauthmethod="1"
```

cardinputmethod

The **cardinputmethod** attribute describes the method used to input the card data (e.g.,PAN) into the point of sale terminal.

Permitted Value	Description	Data Type
0	unspecified	xs:string

Permitted Value	Description	Data Type
1	manual, no terminal	xs:string
2	magnetic stripe read	xs:string
3	bar code	xs:string
4	OCR	xs:string
5	integrated circuit card (ICC)	xs:string
6	key entered	xs:string
7	contactless ICC	xs:string
C	E-Commerce with channel encryption and chip cryptogram used	xs:string
E	Contactless magnetic stripe	xs:string
F	Account Data on file	xs:string
G	Key entered by acquirer	xs:string
M	MICR reader	xs:string
P	Mobile banking application	xs:string
Q	QR code	xs:string
V	E-Commerce	xs:string
W	DPAN	xs:string

Example

```
cardinputmethod="5"
```

cardpresent

The **cardpresent** attribute indicates whether a card was present during a transaction.

Permitted Value	Description	Data Type
0	Card not present	xs:string
1	Card present	xs:string
9	Unknown	xs:string

Example

```
cardpresent="1"
```

code

The **Code** attribute describes the card acceptor terminal ID (Mastercard DE 41 field). This is a unique code identifying a terminal at the card acceptor location.

Description	Base Data Type	Constraints / Permitted Values
Terminal Code	xs:string	Maximum 8 Characters

Example

```
code="12345678"
```

direction

The **Direction** attribute describes the direction of a cash movement.

Permitted Value	Description	Data Type
credit	Describes a credit transaction	xs:string
debit	Describes a debit transaction	xs:string

Example

```
direction="debit"
```

domesticMaestro

The **domesticMaestro** attribute indicates whether a transaction originates from a Domestic Maestro card.

Permitted Value	Description	Data Type
yes	Used to indicate transaction originates from a domestic Maestro card	xs:string
no	Used to indicate transaction does not originate from a domestic Maestro card	xs:string

Example

```
domesticMaestro="yes"
```

Group

The **Group** attribute describes the high-level transaction type.

Permitted Value	Description	Data Type
pos	Point of Sale Transactions (including reversals)	xs:string
atm	Automated Teller Machine (ATM) transactions (including reversals)	xs:string
fee	Fees	xs:string

Example

```
Group="atm"
```

MCC

The **MCC** attribute describes the Merchant Category Code (MCC).

Description	Base Data Type	Constraints / Permitted Values
Merchant category code	xs:string	Maximum 4 characters. Permissible values as per Mastercard Global Rules for Merchant Classification Codes.

Example

```
MCC="5921"
```

PAN

The **PAN** attribute contains the Primary Account Number if you are PCI DSS Compliant or otherwise the GPS 16-digit public token.

Description	Base Data Type	Constraints / Permitted Values
PAN (Primary Account Number)	xs:string	Minimum 12 characters, maximum 19 characters

Example

```
PAN="1234567812345678"
```

PDS0105

The **PDS0105** attribute describes the name of the financial advice file received from Mastercard.

Description	Base Data Type	Constraints / Permitted Values
File_ID_PDS0105	xs:string	Format as follows : “T112.001” + “YYMMDD” + “00000012181” + XXYZZ Where XX = Clearing cycle indicator Y = delivery cycle ZZ = file number in the given clearing cycle

inputcapability

The **inputcapability** attribute describes the card input capability.

0	Unknown	xs:string
1	Manual - no Location	xs:string
2	Magnetic Stripe Read	xs:string
3	Bar Code	xs:string
4	OCR	xs:string
5	EMV contact	xs:string
6	Key Entered	xs:string
7	Contactless Magnetic Stripe	xs:string
8	EMV contactless	xs:string
9	Account Data on file	xs:string
10	QR code	xs:string
11	E-Commerce	xs:string
12	E-Commerce with EMV cryptogram	xs:string
13	MICR reader	xs:string
14	Mobile Banking	xs:string
15	RFU	xs:string
16	RFU	xs:string
17	RFU	xs:string
18	RFU	xs:string
19	RFU	xs:string

Example

```
inputcapability="6"
```

Section 4: Appendices

4.1 Appendices

Refer to the table below for details of available appendices:

Appendix	Description
FeeClass Element	Details of the FeeClass element.
ISO Country Codes	List of ISO country codes.
ISO Currency Codes	List of ISO currency codes.
Message Reason Codes	List of message reason codes.
Transaction XML Example	Provides an example of a transaction XML file.
Transaction XML Schema.	Provides a description of the transaction XML schema.

4.2 “FeeClass” Element “Code” Attribute Values

Code	Description	Fee Category
0	This value must be used when the FeeClass “type” attribute is 0, 2, 4 or 5 , i.e. when it is a settlement fee	Settlement Fee
1	For Card Financial Fee Class element record, The “code” attribute will always have value “1”	Settlement Fee
1000	Cash	Card transaction
1010	Sale/sale with tip	Card transaction
1020	Sale with cashback	Card transaction
1030	Declined transaction	Card transaction
1040	Other transaction (e.g. PIN change)	Card transaction
1060	Currency exchange mark-up percentage	Card transaction
1061	Foreign exchange due to markup on network rate	Card transaction
1062	Currency exchange rate mark-up percentage for authorisation padding	Card transaction
1063	Currency Conversion Assessment(CCA)	Card transaction
1100	Retail club out-of-club fee	Card transaction
2010	Card issue	Card production
2011	Card reissue (renewal)	Card production
2012	Damaged card replacement	Card production
2013	Lost/stolen card replacement	Card production
2014	Card restriction	Card production
2015	Changing card limit	Card production
2016	Authorisation override	Card production
2110	PIN issue	Card production
2111	PIN reissue (new PIN)	Card production
2112	PIN reminder (same PIN)	Card production
2300	Card value load	Card operation
2301	Card activation	Card operation
2302	Status change	Card operation
2303	Balance enquiry	Card operation
2304	Account enquiry	Card operation
2306	Card transfer	Card operation
2307	Card value unload	Card operation
2308	Cardholder registration	Card operation
2309	Card value unload and status change	Card operation
2310	Cardholder details update	Card operation
2311	Set PIN real-time	Card operation
2312	Get PIN real-time	Card operation
2313	Change PIN real-time	Card operation
2314	Generate and Get PIN real-time	Card operation
2320	SMS miscellaneous service fee	Card operation

Code	Description	Fee Category
2401	Card dormancy	Card management
2402	Card management	Card management
2441	Card expiry breakage	Card management
2442	Card lost/stolen breakage	Card management
2443	Account end-of-life breakage	Card management
6000	Non-Domestic Fee	Card transaction

4.3 ISO Country Codes

The table below provides details of ISO country codes.

Value	Country names	Value	Country names	Value	Country names
AD	Andorra	GL	Greenland	NP	Nepal
AE	United Arab Emirates	GM	Gambia	NR	Nauru
AF	Afghanistan	GN	Guinea	NU	Niue
AG	Antigua and Barbuda	GP	Guadeloupe	NZ	New Zealand
AI	Anguilla	GQ	Equatorial Guinea	OM	Oman
AL	Albania	GR	Greece	PA	Panama
AM	Armenia	GS	South Georgia and the South Sandwich Islands	PE	Peru
AN	Netherlands Antilles			PF	French Polynesia
AO	Angola	GT	Guatemala	PG	Papua New Guinea
AQ	Antarctica	GU	Guam	PH	Philippines
AR	Argentina	GW	Guinea-Bissau	PK	Pakistan
AS	American Samoa	GY	Guyana	PL	Poland
AT	Austria	HK	Hong Kong	PM	Saint Pierre and Miquelon
AU	Australia	HM	Heard Island and McDonald Islands	PN	Pitcairn
AW	Aruba	HN	Honduras	PR	Puerto Rico
AX	Åland Islands	HR	Croatia	PS	Palestinian Territory, Occupied
AZ	Azerbaijan	HT	Haiti	PT	Portugal
BA	Bosnia and Herzegovina	HU	Hungary	PW	Palau
BB	Barbados	ID	Indonesia	PY	Paraguay
BD	Bangladesh	IE	Ireland	QA	Qatar
BE	Belgium	IL	Israel	QZ	UNMI Kosovo
BF	Burkina Faso	IM	Isle of Man	RE	Réunion
BG	Bulgaria	IN	India	RO	Romania
BH	Bahrain	IO	British Indian Ocean Territory	RS	Serbia
BI	Burundi	IQ	Iraq	RU	Russian Federation
BJ	Benin	IR	Iran, Islamic Republic of	RW	Rwanda
BL	Saint Barthélemy	IS	Iceland	SA	Saudi Arabia
BM	Bermuda	IT	Italy	SB	Solomon Islands
BN	Brunei Darussalam	JE	Jersey	SC	Seychelles
BO	Bolivia, Plurinational State of	JM	Jamaica	SD	Sudan
BQ	Bonaire, Sint Eustatius and Saba	JO	Jordan	SE	Sweden
BR	Brazil	JP	Japan	SG	Singapore
BS	Bahamas	KE	Kenya	SH	Saint Helena, Ascension and Tristan da Cunha
BT	Bhutan	KG	Kyrgyzstan		
BV	Bouvet Island	KH	Cambodia	SI	Slovenia
BW	Botswana	KI	Kiribati	SJ	Svalbard and Jan Mayen
				SK	Slovakia

Value	Country names	Value	Country names	Value	Country names
BY	Belarus	KM	Comoros	SL	Sierra Leone
BZ	Belize	KN	Saint Kitts and Nevis	SM	San Marino
CA	Canada	KP	Korea, Democratic People's Republic of	SN	Senegal
CC	Cocos (Keeling) Islands			SO	Somalia
CD	Congo, the Democratic Republic of the			SR	Suriname
CF	Central African Republic	KR	Korea, Republic of	SS	South Sudan
CG	Congo	KW	Kuwait	ST	Sao Tome and Principe
CH	Switzerland	KY	Cayman Islands	SV	El Salvador
CI	Côte d'Ivoire	KZ	Kazakhstan	SX	Sint Maarten(D)
CK	Cook Islands	LA	Lao People's Democratic Republic	SY	Syrian Arab Republic
CL	Chile			SZ	Swaziland
CM	Cameroon			TC	Turks and Caicos Islands
CN	China	LB	Lebanon	TD	Chad
CO	Colombia	LC	Saint Lucia	TF	French Southern Territories
CR	Costa Rica	LI	Liechtenstein	TG	Togo
CU	Cuba	LK	Sri Lanka	TH	Thailand
CV	Cape Verde	LR	Liberia	TJ	Tajikistan
CW	Curaçao	LS	Lesotho	TK	Tokelau
CX	Christmas Island	LT	Lithuania	TL	Timor-Leste
CY	Cyprus	LU	Luxembourg	TM	Turkmenistan
CZ	Czech Republic	LV	Latvia	TN	Tunisia
DD	Federal Republic of Germany	LY	Libyan Arab Jamahiriya	TO	Tonga
DE	Germany	MA	Morocco	TR	Turkey
DJ	Djibouti	MC	Monaco	TT	Trinidad and Tobago
DK	Denmark	MD	Moldova, Republic of	TV	Tuvalu
DM	Dominica	ME	Montenegro	TW	Taiwan, Province of China
DO	Dominican Republic	MF	Saint Martin (French part)	TZ	Tanzania, United Republic of
DZ	Algeria	MG	Madagascar	UA	Ukraine
EC	Ecuador	MH	Marshall Islands	UG	Uganda
EE	Estonia	MK	Macedonia, the former Yugoslav Republic of	UM	United States Minor Outlying Islands
EG	Egypt	ML	Mali	US	United States
EH	Western Sahara	MM	Myanmar	UY	Uruguay
ER	Eritrea	MN	Mongolia	UZ	Uzbekistan
ES	Spain	MO	Macao	VA	Holy See (Vatican City State)
ET	Ethiopia	MP	Northern Mariana Islands	VC	Saint Vincent and the Grenadines
FI	Finland	MQ	Martinique	VE	Venezuela, Bolivarian Republic of
FJ	Fiji	MR	Mauritania	VG	Virgin Islands, British
FK	Falkland Islands (Malvinas)	MS	Montserrat	VI	Virgin Islands, U.S.
		MT	Malta		
		MU	Mauritius		
		MV	Maldives		

Value	Country names	Value	Country names	Value	Country names
FM	Micronesia, Federated States of	MW	Malawi	VN	Viet Nam
FO	Faroe Islands	MX	Mexico	VU	Vanuatu
FR	France	MY	Malaysia	WF	Wallis and Futuna
GA	Gabon	MZ	Mozambique	WS	Samoa
GB	United Kingdom	NA	Namibia	YE	Yemen
GD	Grenada	NC	New Caledonia	YT	Mayotte
GE	Georgia	NE	Niger	ZA	South Africa
GF	French Guiana	NF	Norfolk Island	ZM	Zambia
GG	Guernsey	NG	Nigeria	ZW	Zimbabwe
GH	Ghana	NI	Nicaragua		
GI	Gibraltar	NL	Netherlands		
		NO	Norway		

4.4 ISO Currency Codes

The table below lists the ISO and Visa/Mastercard currency codes.

ISO Code	Description	ISO Code	Description	ISO Code	Description
008	Lek	398	Tenge	760	Syrian Pound
012	Algerian Dinar	400	Jordanian Dinar	764	Baht
032	Argentine Peso	404	Kenyan Shilling	776	Tonga Paanga
036	Australian Dollar	408	North Korean Won	780	Trinidad and Tobago Dollar
044	Bahamian Dollar	410	South Korean Won	784	UAE Dirham
048	Bahraini Dinar	414	Kuwaiti Dinar	788	Tunisian Dinar
050	Taka	417	Som	800	Uganda Shilling
051	Armenian Dram	418	Kip	807	Denar
052	Barbados Dollar	422	Lebanese Pound	818	Egyptian Pound
060	Bermudian Dollar	426	Loti	826	Great British Pound
064	Ngultrum	428	Latvian Lats	834	Tanzanian Shilling
068	Boliviano	430	Liberian Dollar	840	US\$
072	Pula	434	Libyan Dinar	858	Peso Uruguayo
084	Belize Dollar	440	Lithuanian Litas	860	Uzbekistan Sum
090	Solomon Islands Dol- lar	446	Pataca	882	Tala
096	Brunei Dollar	454	Kwacha	886	Yemeni Rial
104	Kyat	458	Malaysian Ringgit	894	Kwacha
108	Burundi Franc	462	Rufiyaa	901	New Taiwan Dollar
116	Riel	478	Ouguiya	929	Mauritania
124	Canadian \$	480	Mauritius Rupee	931	Peso Convertible
132	Cape Verde Escudo	484	Mexican Peso	932	Zimbabwe Dollar
136	Cayman Islands Dol- lar	496	Tugrik	934	Manat
144	Sri Lanka Rupee	498	Moldovan Leu	936	Ghana Cedi
152	Chilean Peso	504	Moroccan Dirham	937	Bolivar Fuerte
156	Yuan Renminbi	512	Rial Omani	938	Sudanese Pound
170	Colombian Peso	320	Quetzal	941	Serbian Dinar
174	Comoro Franc	524	Nepalese Rupee	943	Metical
188	Costa Rican Colon	532	Antillian Guilder	944	Azerbaijani Manat
191	Croatian Kuna	533	Aruban Guilder	946	New Leu
192	Cuban Peso	548	Vatu	947	WIR Euro
203	Czech Koruna	554	New Zealand Dollar	948	WIR Franc
208	Danish Krone	558	NICARAGUA Cor- doba Oro	949	New Turkish Lira
214	Dominican Peso	566	Naira	950	CFA Franc BCEAO
230	Ethiopian Birr	578	Norwegian Krone	951	East Caribbean Dol- lar
		586	Pakistan Rupee		

ISO Code	Description	ISO Code	Description	ISO Code	Description
232	Nakfa	590	Balboa	952	CFA Franc BCEAO
238	Falkland Islands Pound	598	Kina	953	CFP Franc
242	Fiji Dollar	600	Guarani	968	Surinam Dollar
262	Djibouti Franc	604	Nuevo Sol	969	Malagasy Ariary
270	Dalasi	608	Philippine Peso	970	Unidad de Valor Real
292	Gibraltar Pound	634	Qatari Rial	971	Afghani
320	Quetzal	643	Russian Ruble	972	Somoni
324	Guinea Franc	646	Rwanda Franc	973	Kwanza
328	Guyana Dollar	654	Saint Helena Pound	974	Belarussian Ruble
332	Gourde	678	Dobra	975	Bulgarian Lev
340	Lempira	682	Saudi Riyal	976	Congolese Franc
344	Hong Kong Dollar	690	Seychelles Rupee	977	Convertible Marks
348	Florint	694	Leone	978	Euro
352	Iceland Krona	702	Singapore Dollar	979	Mexican Unidad de Inversion (UDI)
356	Indian Rupee	704	Dong	980	Hryvnia
360	Rupiah	706	Somali Shilling	981	Lari
364	Iranian Rial	710	Rand	984	Mvdol
368	Iraqi Dinar	748	Lilangeni	985	Zloty
376	New Israeli Sheqel	752	Swedish Krona	986	Brazilian Real
388	Jamaican Dollar	756	Swiss Franc	990	Unidades de fomento
392	Yen				

4.5 Message Reason Codes

Reason Codes vary depending upon the transaction type (Domestic Maestro/MasterCard International), and the record type involved. The following tables describe all available values.

4.5.1 Domestic Maestro Reason Codes

The table below defines the Message Reason Codes (<ReasonCode>) for the UK Domestic Maestro.

Record Type	Code	Meaning
<CardFinancial>	1400	Not previously authorised
<CardFinancial>	1401	Previously approved authorization - amount same
<CardFinancial>	1402	Previously approved authorization - amount differs
<CardFee>	7601	Recovered card award fee; for collection of reward for a card acceptor or financial institution employee when a card has been recovered
<CardFee>	7604	Emergency card replacement fee; for collection of fees associated with the Emergency Card Replacement
<CardFee>	7777	Merchant Funds Transfer; for a transfer of funds between an acquirer and a merchant’s bank, on behalf of a merchant

4.5.2 MasterCard International Reason Codes

The table below defines the Message Reason Codes (<ReasonCode>) for MasterCard International.

Record Type	Code	Meaning
<CardFinancial>	1400	Not previously authorised
<CardFinancial>	1401	Previously approved authorization - amount same
<CardFinancial>	1402	Previously approved authorization - amount differs
Representments/Reversals	2000	General; invalid chargeback
Representments/Reversals	2001	Invalid Acquirer Reference Data on chargeback; no documentation required or provided
Representments/Reversals	2002	Non receipt of required documentation to support chargeback
Representments/Reversals	2003	Correct transaction date provided
Representments/Reversals	2004	Invalid Acquirer Reference Data on chargeback; documentation was received
Representments/Reversals	2005	Correct card acceptor location/description provided
Representments/Reversals	2008	Issuer authorised transaction
Representments/Reversals	2011	Credit previously issued
Representments/Reversals	2700	Chargeback remedied - see corresponding documentation
Representments/Reversals	2701	Duplicate chargeback
Representments/Reversals	2702	Past chargeback time limit
Representments/Reversals	2703	Requested transaction document provided (requires hardship variance)
Representments/Reversals	2704	Invalid merchant message text
Representments/Reversals	2705	Correct MCC provided
Representments/Reversals	2706	Authorisation advised suspicious
Representments/Reversals	2707	No authorization request required nor attempted
Representments/Reversals	2708	Account was not listed on the applicable warning bulletin as of the transaction date
Representments/Reversals	2709	Documentation received was illegible

Record Type	Code	Meaning
Representments/Reversals	2710	Documentation received was invalid/incomplete
Representments/Reversals	2711	Missing documentation is being supplied Reserved for UK domestic use
Representments/Reversals	2712	Other than required/requested documentation provided Reserved for UK domestic use
Representments/Reversals	2713	Invalid Chargeback
Representments/Reversals	2870	Chip Liability Shift Reserved for intra-European use only
Chargebacks / Reversals	4515	Cardholder Denies
Chargebacks / Reversals	4522	Authorisation Declined
Chargebacks / Reversals	4801	Requested transaction data was not received
Chargebacks / Reversals	4802	Requested information illegible or missing
Chargebacks / Reversals	4804	Multiple Processing, Duplicate
Chargebacks / Reversals	4807	Warning bulletin
Chargebacks / Reversals	4808	Requested/required authorization not obtained
Chargebacks / Reversals	4809	Transaction Not Reconciled
Chargebacks / Reversals	4812	Account number was not on file
Chargebacks / Reversals	4831	Transaction amount differs
Chargebacks / Reversals	4834	Duplicate processing
Chargebacks / Reversals	4835	Card not valid or expired
Chargebacks / Reversals	4837	Fraudulent transaction; no cardholder authorization
Chargebacks / Reversals	4840	Fraudulent processing of transaction
Chargebacks / Reversals	4841	Canceled recurring transaction
Chargebacks / Reversals	4842	Late presentment
Chargebacks / Reversals	4846	Correct transaction currency code was not provided
Chargebacks / Reversals	4847	Fraudulent transaction; exceeds floor limit and not authorized
Chargebacks / Reversals	4849	Questionable card acceptor activity
Chargebacks / Reversals	4850	Credit posted as purchase
Chargebacks / Reversals	4853	Cardholder Dispute Defective/Not as Described
Chargebacks / Reversals	4854	Cardholder dispute not elsewhere classified (U.S. only)
Chargebacks / Reversals	4855	Non receipt of merchandise
Chargebacks / Reversals	4857	Card-activated phone transaction
Chargebacks / Reversals	4859	Services not rendered
Chargebacks / Reversals	4860	Credit not processed
Chargebacks / Reversals	4862	Counterfeit transaction; magnetic strip POI fraud
Chargebacks / Reversals	4863	Cardholder does not recognize - Potential fraud Not valid for domestic UK transactions
Chargebacks / Reversals	4870	Chip Liability Shift Reserved for intra-European use
Chargebacks / Reversals	4900	General; invalid second presentment; Second Presentment did not remedy First Chargeback
Chargebacks / Reversals	4901	Required documentation not received to support prior Second Presentment
Chargebacks / Reversals	4902	Documentation received was illegible

Record Type	Code	Meaning
Chargebacks / Reversals	4903	Documentation received was invalid/incomplete
Chargebacks / Reversals	4905	Invalid Acquirer Reference Data in Second Presentment; documentation was received or was not required
Chargebacks / Reversals	4906	Missing documentation is being supplied
Chargebacks / Reversals	4907	Other than required/requested documentation provided Reserved for UK Domestic use
Chargebacks / Reversals	4908	Invalid Acquirer Reference Data in Second Presentment; documentation was received
Chargebacks / Reversals	4999	Domestic Chargeback Dispute Reserved for intra-European use
<CardFee>	7600	Lost/stolen telex/phone fee; for collection of stolen report fee and phone or telex costs incurred for taking a lost or stolen card report
<CardFee>	7601	Recovered card award fee; for collection of reward for a card acceptor or financial institution employee when a card has been recovered
<CardFee>	7602	Emergency cash disbursement fee; for collection of fees associated with the handling of emergency cash disbursements to cardholders. Not valid for intra-European transactions
<CardFee>	7603	Compliance ruling settlement; for collection of a compliance ruling settlement amount
<CardFee>	7604	Emergency card replacement fee; for collection of fees associated with the Emergency Card Replacement Service (ECR)
<CardFee>	7605	Warning bulletin handling fee- issuer originated; for settlement of warning bulletin handling fees in accordance with MasterCard operating rules
<CardFee>	7606	Good faith acceptance settlement; for settlement of the amount of a good faith acceptance
<CardFee>	7607	Collection letter handling fee; for settlement of the amount of a collection letter acceptance
<CardFee>	7608	Telex authorization fee; for collection of fees associated with an international telex authorisation
<CardFee>	7610	Investigation fee; for fee collection when an investigation report has been completed by an investigating member on behalf of the requesting member.
<CardFee>	7611	Retrieval fee reversal; issuer-originated; used to reverse a retrieval request fulfillment fee for documents never received or invalid documents. Note: An issuer would use this code in response to receiving an invalid message from an acquirer containing code 7614,
<CardFee>	7612	Retrieval handling fee; issuer-originated; used to penalize an acquirer for incorrect information verified by the retrieval request document.
<CardFee>	7614	Non-MasterCom fulfillment fee settlement; for settlement of retrieval request fulfillment not processed through the MasterCom system
<CardFee>	7616	Warning bulletin handling fee - acquirer originated; for settlement of warning bulletin handling fees in accordance with MasterCard operating rules. OR Handling fee for second presentment of reason codes 4812 and 4835 for chip transactions where transaction certificate and DE 55 are present in the clearing message. Acquirer originated.
<CardFee>	7617	Adjustment for promotional transactions
<CardFee>	7618	Reversal of previously reimbursed State Fuel Tax. Refer to the MasterCard Government Card Service Guide. Not valid for intra-European transactions
<CardFee>	7619	Emergency card replacement center, cash advance lockbox fee Not valid for intra-European transactions
<CardFee>	7621	ATM Balance Inquiry Fee
<CardFee>	7622	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847); for issuer use in a Fee Collection (Handling Fee) message after sending First Chargeback for one of the specified authorization related chargebacks. Not valid for intra-European transactions
<CardFee>	7623	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847); for issuer use in a Fee Col-

Record Type	Code	Meaning
		lection (Handling Fee) message after sending Second Presentment, which indicates that the transaction was authorized. Not valid for intra-European transactions
<CardFee>	7624	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847); for issuer use in a Fee Collection (Handling Fee) message after sending Arbitration Chargeback for one of the specified authorization related chargebacks. Not valid for intra-European transactions
<CardFee>	7625	PIN management Service at ATM For intra-European use only.
<CardFee>	7626	Authorisation reversal; for acquirer use to advise the issuer of an authorization that needs to be reversed
<CardFee>	7627	Failure to provide a merchant advice code in a Fee Collection (Handling Fee) message.
<CardFee>	7628	Reclaim surcharge. This is restricted to intra-European and European transaction-related services.
<CardFee>	7700	Intracurrency agreement settlement; for settlement of amounts in accordance with an intracurrency agreement between transaction originator and transaction destination parties. Not valid for intra-European transactions
<CardFee>	7500 to 7779	Bilateral agreement settlement; for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7780 to 7781	Bilateral agreement settlement; for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7782 to 7789	Bilateral agreement settlement; for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7790 to 7799	Bilateral agreement settlement; for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7800	MCBS member settlement; for collection or payment of such things as member assessments, processed through the MasterCard Consolidated Billing System (MCSB). Not valid for intra-European transactions.
<CardFee>	7801	MasterCard compliance case filling fee; for collection of a member arbitration or compliance case filling fee.
<CardFee>	7802	Interchange compliance adjustment; for settlement of financial amounts related to interchange compliance.
<CardFee>	7803	Interchange compliance adjustment reversal; for settlement of financial amounts related to the reversal of a previous interchange compliance adjustment.
<CardFee>	7804	ATM transaction settlement; for settlement of daily ATM transaction amounts.
<CardFee>	7805	ATM intracountry switch fee settlement; for settlement of daily ATM transaction intracountry switch fees. Not valid for intra-European transactions.
<CardFee>	7806	ATM Network Information Control System (NICS) switch fee settlement; for settlement of MDS NICS Switch fees. Not valid for intra-European transactions
<CardFee>	7807	ATM intracountry first chargeback settlement; for settlement of daily ATM transaction intracountry first chargeback amounts. Not valid for intra-European transactions
<CardFee>	7811	Reimbursement of State Fuel Tax. Refer to the MasterCard Government Card Services Guided. Not valid for intra-European transactions
<CardFee>	7812	Collection of return of collateral for security arrangement. Not valid for intra-European transactions
<CardFee>	7813	Mexico IVA fees Not valid for intra-European transactions
<CardFee>	7814	Mexico IVA Fees Not valid for intra-European transactions
<CardFee>	7815	Mexico IVA fees. Not valid for intra-European transactions
<CardFee>	7820	Disaster Relief Fund Not valid for intra-European transactions

Record Type	Code	Meaning
<CardFee>	7821	MCBS Emergency Borrowing Collection. Not valid for intra-European transactions
<CardFee>	7822	Settlement Adjustment. Not valid for intra-European transactions
<CardFee>	7823	MDS Offline Debit Settlement Not valid for intra-European transactions MDS feed via Settlement Account Management system (S.A.M.)

4.6 Transaction XML Example

Below is an example of a transaction XML report. For a description of the XML schema, see [Transaction XML Schema](#).

```
<?xml version="1.0" encoding="utf-8"?>
<Transactions>
  <!-- Mastercard Accepted Auth -->
  <CardAuthorisation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecType>ADV</RecType>
    <AuthId>6335025042</AuthId>
    <AuthTxnID>2226502581</AuthTxnID>
    <LocalDate>20200901000029</LocalDate>
    <SettlementDate>20200901</SettlementDate>
    <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" branchcode="" productid="2345"/>
    <Account no="567890123" type="01"/>
    <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0"/>
    <TxnAmt value="0.9900" currency="826"/>
    <CashbackAmt value="0.00" currency="826"/>
    <BillAmt value="0.99" currency="826" rate="1.000000" clientfxrate="0.00000000"/>
    <ApprCode>118703</ApprCode>
    <Trace auditno="123456" origauditno="123456" Retrefno="024469694632"/>
    <MerchCode>987654321234</MerchCode>
    <Term code="00206996" location="APPLE.COM/BILL APPLE.COM/BIL
IRL" street="" city="" country="IE" inputcapability="6" authcapability="12"/>
    <Schema>MCRD</Schema>
    <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="F" cardauthmethod="8" cardauthentity="8"/>
    <MsgSource value="67" domesticMaestro="no"/>
    <PaddingAmt value="0.00" currency="826"/>
    <Rate_Fee value="0.00"/>
    <Fixed_Fee value="0.00"/>
    <CommissionAmt value="0.00" currency="826"/>
    <Classification MCC="5735"/>
    <Response approved="yes" actioncode="0" responsecode="00" additionaldesc=" Accepted by
EHI APPLE.COM/BILL APPLE.COM/BIL IRL"/>
    <OrigTxnAmt value="0.99" currency="826"/>
    <ReversalReason/>
  </CardAuthorisation>
  <!-- Visa Accepted Auth -->
  <CardAuthorisation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecType>ADV</RecType>
    <AuthId>6458932430</AuthId>
    <AuthTxnID>2289985142</AuthTxnID>
    <LocalDate>20200901001051</LocalDate>
    <SettlementDate>20200901</SettlementDate>
    <Card PAN="4567891234567890" product="VISA" programid="VTEST1" branchcode="" productid="6432"/>
    <Account no="789123456" type="02"/>
    <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0"/>
    <TxnAmt value="500.0000" currency="826"/>
    <CashbackAmt value="0.00" currency="826"/>
    <BillAmt value="500.00" currency="826" rate="1.000000" clientfxrate="0.00000000"/>
    <ApprCode>129513</ApprCode>
    <Trace auditno="146889" origauditno="146889" Retrefno="025923146889"/>
    <MerchCode>498750002308287</MerchCode>
    <Term
code
="99999999" location="GOOGLE ADS2157005349 Dublin IE" street="" city="" country="IE" inputcapability="1" authcapability="12"/>
    <Schema>VISA</Schema>
    <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="54" domesticMaestro="no"/>
    <PaddingAmt value="0.00" currency="826"/>
    <Rate_Fee value="0.00"/>
    <Fixed_Fee value="0.00"/>
    <CommissionAmt value="0.00" currency="826"/>
    <Classification MCC="7311"/>
    <Response approved="yes" actioncode="0" responsecode="00" additionaldesc=" Accepted by
EHI GOOGLE ADS2157005349 Dublin IE"/>
    <OrigTxnAmt value="500.00" currency="826"/>
    <ReversalReason/>
    <FXConv bookingstatus="B" fxratebooked="1.000000" providercode="CCI" fixedamountflag="B" settlementdate="20200902"/>
  </CardAuthorisation>
  <!-- VISA automatic auth removal -->
  <CardAuthorisation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecType>REV</RecType>
    <AuthId>6459161818</AuthId>
    <AuthTxnID>2256936860</AuthTxnID>
    <LocalDate>20200901012804</LocalDate>
    <SettlementDate>20200901</SettlementDate>
    <Card PAN="4567891234567890" product="VISA" programid="VTEST1" branchcode="" productid="6432"/>
    <Account no="789123456" type="02"/>
    <TxnCode direction="credit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0"/>
    <TxnAmt value="1.0000" currency="840"/>
    <CashbackAmt value="0.00" currency="978"/>
    <BillAmt value="0.85" currency="978" rate="0.850000" clientfxrate="0.00000000"/>
    <ApprCode>178695</ApprCode>
    <Trace auditno="550886" origauditno="550886" Retrefno="025264550886"/>
    <MerchCode>216010000067204</MerchCode>
    <Term code="99999999" location="FACEBOOK.COM 650-543-7818
IE" street="" city="" country="IE" inputcapability="0" authcapability="12"/>
    <Schema>VISA</Schema>
    <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="54" domesticMaestro="no"/>
    <PaddingAmt value="0.03" currency="978"/>
    <Rate_Fee value="0.00"/>
    <Fixed_Fee value="0.00"/>
  </CardAuthorisation>
</Transactions>
```

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    <CommissionAmt value="0.00" currency="978"/>
    <Classification MCC="7311"/>
    <Response approved="yes" actioncode="0" responsecode="00" additionaldesc="AUTOMATIC AUTHORISATION REMOVAL BillAmt - 0.85 Loca-
tion - FACEBOOK.COM 650-543-7818 IE FACEBOOK.COM 650-543-7818 IE"/>
    <OrigTxnAmt value="1.00" currency="840"/>
    <ReversalReason>1</ReversalReason>
    <FXConv bookingstatus="R" fxratebooked="1.2345670" providercode="CCI" fixedamountflag="S" settlementdate="20200902"/>
  </CardAuthorisation>
  <CardFinancial xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecordType>ADV</RecordType>
    <FinId>123456789</FinId>
    <AuthId xsi:nil="true"/>
    <PresentmentID>123456789</PresentmentID>
    <LocalDate>20200831000000</LocalDate>
    <SettlementDate>20200902</SettlementDate>
    <SchemeSettlementDate>20200902</SchemeSettlementDate>
    <SchemeReconciliationDate>20200901</SchemeReconciliationDate>
    <CycleNumber>06</CycleNumber>
    <Card PAN="1234567890123456" product="MCRD" programid="SAMPLE" branchcode="MAES" productid="1234"/>
    <Account no="456789012" type="01"/>
    <TxnCode direction="credit" Type="pos_re" Group="pos"/>
    <TxnAmt value="109.9400" currency="978"/>
    <CashbackAmt value="0.00" currency="978"/>
    <BillAmt value="109.9400" currency="978" rate="1.000000"/>
    <ApprCode></ApprCode>
    <Trace auditno="" origauditno="" Retrefno="123456789012"/>
    <MerchCode>8042632</MerchCode>
    <Term code="" location="NORWEGIAN123456789012345" street="OKSENOYVEIEN
3" city="LYSAKER" country="NO" inputcapability="1" authcapability="0"/>
    <Schema>MCRD</Schema>
    <Txn cardholderpresent="0" cardpresent="1" cardinputmethod="1" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="67" domesticMaestro="no"/>
    <Fee direction="debit" value="0.005300" currency="978" value2="0.0000"/>
    <FeeAmt direction="debit" value="0.00" currency="978"/>
    <FeeClass interchangeTransaction="no" type="1" code="1"/>
    <SettlementAmt value="109.9400" currency="978" rate="1.000000"/>
    <ARN>5518422024123456789012</ARN>
    <FIID>010495</FIID>
    <RIID>012181</RIID>
    <ReasonCode>1401</ReasonCode>
    <Classification MCC="3211"/>
    <Response approved="yes"/>
    <OrigTxnAmt value="109.9400" currency="978"/>
    <CCAAmount value="0.00" currency="978" included="no"/>
    <SettlementIndicator>0</SettlementIndicator>
    <Additional_Amt_DE54/>
    <FXConv bookingstatus="B" fxratebooked="1.2345000" providercode="CCI" fixedamountflag="B" settlementdate="20200902"/>
  </CardFinancial>
  <CardFinancial xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecordType>ADV</RecordType>
    <FinId>6470438861</FinId>
    <AuthId>6458867997</AuthId>
    <PresentmentID>1829291639</PresentmentID>
    <LocalDate>20200901000000</LocalDate>
    <SettlementDate>20200902</SettlementDate>
    <SchemeSettlementDate>20200902</SchemeSettlementDate>
    <SchemeReconciliationDate>20200902</SchemeReconciliationDate>
    <CycleNumber>05</CycleNumber>
    <Card PAN="4567891234567890" product="VISA" programid="VTEST1" branchcode="MAES" productid="1234"/>
    <Account no="789123456" type="02"/>
    <TxnCode direction="debit" Type="pos" Group="pos"/>
    <TxnAmt value="1.8500" currency="978"/>
    <CashbackAmt value="0.00" currency="978"/>
    <BillAmt value="1.8500" currency="978" rate="1.000000"/>
    <ApprCode>156965</ApprCode>
    <Trace auditno="149116" origauditno="149116" Retrefno="">
    <MerchCode>498750000011107</MerchCode>
    <Term code="" location="FACEBK
M9TZVUJ592" street="" city="fb.me/ads" country="IE" inputcapability="1" authcapability="0"/>
    <Schema>VISA</Schema>
    <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="54" domesticMaestro="no"/>
    <Fee direction="credit" value="0.350000" currency="978"/>
    <FeeAmt direction="debit" value="0.00" currency="978"/>
    <FeeClass interchangeTransaction="no" type="1" code="1"/>
    <SettlementAmt value="1.8500" currency="978" rate="1.000000"/>
    <ARN>74987500259000648873528</ARN>
    <FIID/>
    <RIID/>
    <ReasonCode>1401</ReasonCode>
    <Classification MCC="7311"/>
    <Response approved="yes"/>
    <OrigTxnAmt value="1.8500" currency="978"/>
    <CCAAmount value="0.00" currency="978" included="no"/>
    <SettlementIndicator>0</SettlementIndicator>
    <Additional_Amt_DE54>0040978D000000000000</Additional_Amt_DE54>
  </CardFinancial>
  <CardChrgBackRepRes xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecordType>CB</RecordType>
    <ChgbackRepresId>6468581823</ChgbackRepresId>
    <LocalDate>20200901011841</LocalDate>
    <SettlementDate>20200901</SettlementDate>
    <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" productid="2345" branchcode="">
    <Account no="567890123" type="01"/>
    <TxnCode direction="debit" Type="atm" Group="atm"/>

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<TxnAmt value="0.0000" currency="826"/>
<CashbackAmt value="0.00" currency="826"/>
<BillAmt value="0.00" currency="826" rate="1.000000"/>
<ApprCode>152827</ApprCode>
<Trace auditno="007635" origauditno="007635" Retrefno="091200007635"/>
<MerchCode>
</MerchCode>
<Term code="MID7Z61" location="ROYAL BK OF SCOTLAND" street="TESCO OAK VALE EXP" city="OAKLEY VALE" country="GB" input-
capability="5" authcapability="1"/>
<Schema>MCRD</Schema>
<Txn cardholderpresent="0" cardpresent="1" cardinputmethod="5" cardauthmethod="1" cardauthentity="3" TVR="0"/>
<MsgSource value="67" domesticMaestro="no"/>
<Repeat>1</Repeat>
<SettlementAmt value="0.00" currency="826" rate="1.000000" date="20200915"/>
<Fee direction="debit" value="0.0000" currency="826"/>
<ARN>85433250256007635076354</ARN>
<FIID>003325</FIID>
<RIID>017962</RIID>
<ReasonCode>4834</ReasonCode>
<Classification MCC="" />
<OrigTxnAmt value="30.0000" currency="826"/>
<PartialReversal>false</PartialReversal>
<SettlementCycle>
</SettlementCycle>
<ReconciliationDate xsi:nil="true"/>
<ReconciliationCycle>
</ReconciliationCycle>
<Usage>0</Usage>
<Pending_Billing_Amount>5.00</Pending_Billing_Amount>
<SettlementIndicator>0</SettlementIndicator>
<Additional_Amt_DE54/>
<ChargebackRefNum>9034102149</ChargebackRefNum>
</CardChrgBackRepRes>
<!-- SecondPresentment -->
<CardChrgBackRepRes xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>REPRES</RecordType>
  <ChgbackRepresId>6475787598</ChgbackRepresId>
  <LocalDate>20200918005649</LocalDate>
  <SettlementDate>20200918</SettlementDate>
  <Card PAN="3456789012345678" product="MCRD" programid="SAMPLE2" productid="123" branchcode="" />
  <Account no="678901234" type="01" />
  <TxnCode direction="debit" Type="pos" Group="pos" />
  <TxnAmt value="336.8600" currency="840" />
  <CashbackAmt value="0.00" currency="826" />
  <BillAmt value="260.48" currency="826" rate="0.773259" />
  <ApprCode>172526</ApprCode>
  <Trace auditno="" origauditno="" Retrefno="" />
  <MerchCode>002401002167
</MerchCode>
  <Term code="60019389" location="BANGKOK AIRWAYS" street="99 M.14 VIPHAWADEE-RANGSIT
RD." city="BANGKOK" country="TH" inputcapability="0"
authcapability="12" />
  <Schema>MCRD</Schema>
  <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="8" cardauthentity="8" TVR="0" />
  <MsgSource value="67" domesticMaestro="no" />
  <Repeat>2</Repeat>
  <SettlementAmt value="260.48" currency="826" rate="0.773259" date="20200918" />
  <Fee direction="credit" value="5.2100" currency="826" value2="0.0000"/>
  <ARN>05444829345002900600375</ARN>
  <FIID>005698</FIID>
  <RIID>012181</RIID>
  <ReasonCode>2700</ReasonCode>
  <Classification MCC="" />
  <OrigTxnAmt value="336.8600" currency="840" />
  <PartialReversal>false</PartialReversal>
  <SettlementCycle>01</SettlementCycle>
  <ReconciliationDate>20200918</ReconciliationDate>
  <ReconciliationCycle>01</ReconciliationCycle>
  <Usage>S</Usage>
  <Pending_Billing_Amount>0.00</Pending_Billing_Amount>
  <SettlementIndicator>0</SettlementIndicator>
  <Additional_Amt_DE54 />
  <ChargebackRefNum />
</CardChrgBackRepRes>
<!-- CardFee matches CardFinancial -->
<CardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CardFeeId>1234567890</CardFeeId>
  <LocalDate>20200831000000</LocalDate>
  <SettlementDate>20200902</SettlementDate>
  <Card PAN="1234567890123456" product="MCRD" programid="SAMPLE" branchcode="00000000" productid="1234"/>
  <Account no="456789012" type="01"/>
  <TxId>123456789</TxId>
  <FeeClass interchangeTransaction="yes" type="5" code="0"/>
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>Interchange Fee</Desc>
  <FeeAmt direction="debit" value="2.200000" currency="978"/>
  <Amt direction="debit" value="2.200000" currency="978"/>
  <ReasonCode>7802</ReasonCode>
</CardFee>
<!-- CardFee matches REPRES -->
<CardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CardFeeId>1880771152</CardFeeId>
  <LocalDate>20191210025400</LocalDate>
  <SettlementDate>20200918</SettlementDate>
  <Card PAN="3456789012345678" product="MCRD" programid="SAMPLE2" branchcode="00000000" productid="123" />
  <Account no="678901234" type="01" />
  <TxId>6475787598</TxId>
  <FeeClass interchangeTransaction="yes" type="4" code="0" />
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>Interchange Fee</Desc>
  <FeeAmt direction="credit" value="6.740000" currency="840" />
  <Amt direction="credit" value="5.210000" currency="826" />

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        <ReasonCode>7802</ReasonCode>
    </CardFee>
    <MasterCardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <RecordType>FC</RecordType>
        <MastercardFeeId>1234567</MastercardFeeId>
        <MTID>1644</MTID>
        <Function_Code_024>685</Function_Code_024>
        <Conversion_Rate_Reconciliation_009>1.000000</Conversion_Rate_Reconciliation_009>
        <Additional_Data_048>
014800484020165001M0300025906200831000000190660177903720071442450037400200037800100390017D000000000000000000391017C0000000000013949039201-
800D000000000000279039301800C0000000000000000394017C00000000000139490395016D000000000002790396017C000000000001367004000100000000000401-
010000000000204020100000000002</Additional_Data_048>
        <LocalDate>20200901004727</LocalDate>
        <SettlementDate/>
        <FeeClass interchangeTransaction="no" type="0" code="0" memberID="012345"/>
        <Desc/>
        <FeeAmt direction="debit" value="2.7900" currency="840"/>
        <Amt direction="debit" value="2.7900" currency="840"/>
        <ReasonCode>6861</ReasonCode>
        <Data_Record_072/>
        <DE93_Txn_Dest_ID>012345</DE93_Txn_Dest_ID>
        <DE94_Txn_Orig_ID/>
        <File_ID_PDS0105>T112.0012009010000001218101101    </File_ID_PDS0105>
        <FileProcessDate>20200901004727</FileProcessDate>
        <Recon date="" cycle=""/>
        <Settlement date="" cycle=""/>
    </MasterCardFee>
    <CardLoadUnload xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <RecordType>LOAD</RecordType>
        <LoadUnloadId>6474876238</LoadUnloadId>
        <LocalDate>20200901195810</LocalDate>
        <SettlementDate>20200901</SettlementDate>
        <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" productid="2345" branchcode="00000000"/>
        <Account no="567890123" type="01"/>
        <MerchCode/>
        <Amount direction="credit" value="18.00" currency="826"/>
        <Desc>Transfer from Vladyslav Testes </Desc>
        <Load Source="48" Type="0" FixedFee="0.00" Rate_Fee="0.00"/>
    </CardLoadUnload>
    <ApprovedAgencyBanking xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <CashType>RCP</CashType>
        <BankingId>6467146394</BankingId>
        <SettlementDate>20200901</SettlementDate>
        <Card PAN="2345678901234567" productid="2345" product="MCRD" programid="SAMPLE1" branchcode=""/>
        <AgencyAccount no="567890123" type="01" sortcode="040083" bankacc="01234567" name="FRANK TESTES"/>
        <External sortcode="110150" bankacc="12345678" name="M Sample"/>
        <CashCode direction="credit" CashType="fpy" CashGroup="rcp"/>
        <Desc> </Desc>
        <CashAmt value="315.00" currency="826"/>
        <Fee direction="credit" value="1.50" currency="826"/>
        <BillAmt value="315.00" currency="826" rate="0"/>
    </ApprovedAgencyBanking>
    <DeclinedAgencyBanking xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <CashType>RCP</CashType>
        <BankingId>6468106650</BankingId>
        <SettlementDate>20200901</SettlementDate>
        <Card PAN="2345678901234567" productid="1234" product="MCRD" programid="SAMPLE1" branchcode=""/>
        <AgencyAccount no="77665544" type="01" sortcode="040083" bankacc="03344556" name="DUMITRU TESTER"/>
        <External sortcode="201147" bankacc="22334455" name="HMRC SA"/>
        <CashCode direction="credit" CashType="bac" CashGroup="rcp"/>
        <Desc> </Desc>
        <CashAmt value="4296.00" currency="826"/>
        <DeclineReason>03</DeclineReason>
    </DeclinedAgencyBanking>
    <AgencyBankingFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <BankingFeeId>95010465</BankingFeeId>
        <SettlementDate>20200901</SettlementDate>
        <Card PAN="2345678901234567" productid="1234" product="MCRD" programid="SAMPLE1" branchcode=""/>
        <AgencyAccount no="11223344" type="01" sortcode="040083" bankacc="01234567" name="FRANK PERSON"/>
        <AbId>6467146394</AbId>
        <Desc>PT:FPIN : ;SC:110150;Acc:11884567;Name:M Sample;Ref:Payment from M Sample:
MONEY
        <Amt direction="debit" value="1.50" currency="826"/>
    </AgencyBankingFee>
    <CardBalAdjust xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <LocalDate>20200901085036</LocalDate>
        <AdjustId>6470167587</AdjustId>
        <SettlementDate>20200901</SettlementDate>
        <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" branchcode="00000000" productid="2345"/>
        <Account no="567890123" type="01"/>
        <Amount direction="credit" value="165.40" currency="826"/>
        <MerchCode/>
        <Desc>ADJ - Cheque</Desc>
        <AdjustType>Actual</AdjustType>
    </CardBalAdjust>
    <CardEvent xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <Card PAN="2345678901234567" productid="2345"/>
        <Event Type="Lost" Source="0" ActivationDate="" ConvertedDate="" StatCode="41" OldStatCode="00" Date="20200901192324"/>
    </CardEvent>
    <CardEvent xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <Card PAN="2345678901234567" productid="2345"/>
        <Event Type="StatusChange" Source="0" ActivationDate="" ConvertedDate="" StatCode="00" OldStatCode="57" Date="20200901190835"/>
    </CardEvent>
</Transactions>

```

4.7 Transaction XML Schema

Below is a copy of the latest GPS transaction XML schema.

```
<!--GPS Transaction XML data schema version 1.39-->

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" attributeFormDefault="unqualified" elementFormDefault="qualified" version="0.4">
  <xs:complexType name="BasicAmount">
    <xs:attribute name="value" type="xs:decimal" use="required"/>
    <xs:attribute name="value2" type="xs:decimal" use="optional"/>
    <xs:attribute name="currency" type="ISOCurrencyCode" use="required"/>
  </xs:complexType>
  <xs:complexType name="RateAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="rate" type="Rate" use="required"/>
        <xs:attribute name="clientfxrate" type="Rate" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="DirectionAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="direction" type="Direction" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="PartialAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="partial" type="YesNoString" use="optional"/>
        <xs:attribute name="origItemId" type="xs:unsignedInt" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="SettlementAmt">
    <xs:attribute name="value" type="xs:decimal" use="required"/>
    <xs:attribute name="currency" type="ISOCurrencyCode" use="required"/>
    <xs:attribute name="rate" type="Rate" use="required"/>
    <xs:attribute name="date" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="8"/>
          <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)(0[48]|1[2468][048]|1[3579][26])|(((2[468][048]|1[3579][26])00)0229))"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
  <xs:complexType name="CCAAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="included" type="YesNoString" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="FeeClass">
    <xs:attribute name="interchangeTransaction" type="YesNoString" use="required"/>
    <xs:attribute name="type" use="required">
      <xs:simpleType>
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          <xs:enumeration value="0"/>
          <xs:enumeration value="1"/>
          <xs:enumeration value="2"/>
          <xs:enumeration value="4"/>
          <xs:enumeration value="5"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="code" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="0"/>
          <xs:enumeration value="1"/>
          <xs:enumeration value="1000"/>
          <xs:enumeration value="1010"/>
          <xs:enumeration value="1020"/>
          <xs:enumeration value="1030"/>
          <xs:enumeration value="1040"/>
          <xs:enumeration value="1060"/>
          <xs:enumeration value="1061"/>
          <xs:enumeration value="1062"/>
          <xs:enumeration value="1063"/>
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          <xs:enumeration value="2010"/>
          <xs:enumeration value="2011"/>
          <xs:enumeration value="2012"/>
          <xs:enumeration value="2013"/>
          <xs:enumeration value="2014"/>
          <xs:enumeration value="2015"/>
          <xs:enumeration value="2016"/>
          <xs:enumeration value="2110"/>
          <xs:enumeration value="2111"/>
          <xs:enumeration value="2112"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>

```

```

        <xs:enumeration value="2300"/>
        <xs:enumeration value="2301"/>
        <xs:enumeration value="2302"/>
        <xs:enumeration value="2303"/>
        <xs:enumeration value="2304"/>
        <xs:enumeration value="2306"/>
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        <xs:enumeration value="2314"/>
        <xs:enumeration value="2320"/>
        <xs:enumeration value="2401"/>
        <xs:enumeration value="2402"/>
        <xs:enumeration value="2441"/>
        <xs:enumeration value="2442"/>
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        <xs:enumeration value="6000"/>
    </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="MasterCardFeeClass">
    <xs:attribute name="interchangeTransaction" use="required">
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                <xs:enumeration value="no"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="type" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="0"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="code" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="0"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
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        <xs:simpleType>
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                <xs:maxLength value="11"/>
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        </xs:simpleType>
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</xs:complexType>
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    <xs:attribute name="actioncode" type="xs:string" use="optional"/>
    <xs:attribute name="responsecode" type="xs:string" use="optional"/>
    <xs:attribute name="additionaldesc" use="optional">
        <xs:simpleType>
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                <xs:maxLength value="500"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="Classification">
    <xs:attribute name="MCC" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="4"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="MsgSource">
    <xs:attribute name="value" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:decimal">
                <xs:enumeration value="12"/>
                <xs:enumeration value="17"/>
                <xs:enumeration value="54"/>
                <xs:enumeration value="66"/>
                <xs:enumeration value="67"/>
                <xs:enumeration value="74"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="domesticMaestro" type="YesNoString" use="required"/>
</xs:complexType>
<xs:complexType name="MsgSourceCardAuthorisation">
    <xs:attribute name="value" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:decimal">

```

```

        <xs:enumeration value="12"/>
        <xs:enumeration value="17"/>
        <xs:enumeration value="54"/>
        <xs:enumeration value="62"/>
        <xs:enumeration value="66"/>
        <xs:enumeration value="67"/>
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</xs:attribute>
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    <xs:attribute name="cardholderpresent" use="required">
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                <xs:enumeration value="6"/>
                <xs:enumeration value="9"/>
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        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="cardpresent" use="required">
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            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
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                <xs:enumeration value="2"/>
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                <xs:enumeration value="4"/>
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                <xs:enumeration value="6"/>
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                <xs:enumeration value="E"/>
                <xs:enumeration value="F"/>
                <xs:enumeration value="G"/>
                <xs:enumeration value="M"/>
                <xs:enumeration value="P"/>
                <xs:enumeration value="Q"/>
                <xs:enumeration value="V"/>
                <xs:enumeration value="W"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="cardauthmethod" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
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                <xs:enumeration value="5"/>
                <xs:enumeration value="6"/>
                <xs:enumeration value="8"/>
                <xs:enumeration value="S"/>
            </xs:restriction>
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    </xs:attribute>
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                <xs:enumeration value="3"/>
                <xs:enumeration value="4"/>
                <xs:enumeration value="5"/>
                <xs:enumeration value="6"/>
                <xs:enumeration value="8"/>
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    </xs:attribute>
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</xs:complexType>
<xs:complexType name="Term">
    <xs:attribute name="code" use="required">
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                <xs:maxLength value="8"/>
            </xs:restriction>
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    </xs:attribute>

```

```

        </xs:restriction>
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    </xs:attribute>
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      </xs:simpleType>
    </xs:attribute>
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        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="city" use="required">
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    </xs:attribute>
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    <xs:attribute name="inputcapability" use="required">
      <xs:simpleType>
        <xs:restriction base="xs:string">
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          <xs:enumeration value="2"/>
          <xs:enumeration value="3"/>
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          <xs:enumeration value="14"/>
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          <xs:enumeration value="17"/>
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      </xs:simpleType>
    </xs:attribute>
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          <xs:enumeration value="3"/>
          <xs:enumeration value="4"/>
          <xs:enumeration value="5"/>
          <xs:enumeration value="6"/>
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          <xs:enumeration value="13"/>
          <xs:enumeration value="14"/>
          <xs:enumeration value="15"/>
          <xs:enumeration value="16"/>
          <xs:enumeration value="17"/>
          <xs:enumeration value="18"/>
          <xs:enumeration value="19"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
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          <xs:maxLength value="6"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="origauditno" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="6"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>

```

```

<xs:attribute name="Retrefno" use="required">
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      <xs:maxLength value="12"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="TxnCode">
  <xs:attribute name="direction" type="Direction" use="required"/>
  <xs:attribute name="Type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
        <xs:enumeration value="pos"/>
        <xs:enumeration value="atm"/>
        <xs:enumeration value="pos_cb"/>
        <xs:enumeration value="pos_re"/>
        <xs:enumeration value="fee"/>
        <xs:enumeration value="tfr"/>
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    </xs:simpleType>
  </xs:attribute>
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        <xs:enumeration value="pos"/>
        <xs:enumeration value="atm"/>
        <xs:enumeration value="fee"/>
      </xs:restriction>
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    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Partial" use="optional">
    <xs:simpleType>
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        <xs:maxLength value="3"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="FeeWaivedOff" type="xs:decimal" use="optional"/>
</xs:complexType>
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  <xs:attribute name="PAN" use="required">
    <xs:simpleType>
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        <xs:maxLength value="19"/>
        <xs:pattern value="\d+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
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    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="4"/>
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    </xs:simpleType>
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      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="branchcode" use="optional">
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        <xs:maxLength value="8"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="productid" use="optional">
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        <xs:maxLength value="5"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
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  <xs:attribute name="no" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="28"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="type" use="required">
    <xs:simpleType>

```

```

        <xs:restriction base="xs:string">
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            <xs:enumeration value="01"/>
            <xs:enumeration value="02"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="AccountChrgBack">
    <xs:attribute name="no" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="28"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="type" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="00"/>
                <xs:enumeration value="01"/>
                <xs:enumeration value="02"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:simpleType name="Rate">
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        <xs:minInclusive value="0"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:restriction base="xs:string">
        <xs:maxLength value="30"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="RecType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ADV"/>
        <xs:enumeration value="REV"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ReversalReason">
    <xs:restriction base="xs:string">
        <xs:enumeration value=""/>
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
        <xs:enumeration value="3"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Direction">
    <xs:restriction base="xs:string">
        <xs:enumeration value="debit"/>
        <xs:enumeration value="credit"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LocalDate">
    <xs:restriction base="xs:string">
        <xs:pattern value=""/>
        <xs:maxLength value="14"/>
        <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|((([2-9]\d)(0[48]|[2468][048]|[13579][26])|((([2468][048]|[3579][26])00))0229)([0-1][0-9]|2[0-3])([0-5][0-9])([0-5][0-9]))"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SettlementDate">
    <xs:restriction base="xs:string">
        <xs:pattern value="\s*([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|((([2-9]\d)(0[48]|[2468][048]|[13579][26])|((([2468][048]|[3579][26])00))0229))"/>
        <xs:maxLength value="8"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Schema">
    <xs:restriction base="xs:string">
        <xs:minLength value="4"/>
        <xs:maxLength value="4"/>
        <xs:enumeration value="CIRR"/>
        <xs:enumeration value="ECRD"/>
        <xs:enumeration value="MAES"/>
        <xs:enumeration value="CIMA"/>
        <xs:enumeration value="MCRD"/>
        <xs:enumeration value="VISA"/>
        <xs:enumeration value="PLUS"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ARN">
    <xs:restriction base="xs:string">
        <xs:maxLength value="23"/>
    </xs:restriction>

```

```

</xs:simpleType>
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    <xs:maxLength value="11"/>
  </xs:restriction>
</xs:simpleType>
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    <xs:maxLength value="11"/>
  </xs:restriction>
</xs:simpleType>
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    <xs:maxLength value="500"/>
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  <xs:restriction base="xs:string">
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    <xs:enumeration value="Block"/>
  </xs:restriction>
</xs:simpleType>
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      <xs:restriction base="xs:string">
        <xs:maxLength value="3"/>
        <!-- <xs:pattern value="([0-9]|1[0-9]|2[0-9]|3[0-9]|4[0-9]|5[0-9]|6[0-9]|7[0-9]|8[0-9]|9[0-9]|100|102|209|210)"/> -->
        <xs:pattern value="[0-9]{1,3}"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Type">
    <xs:simpleType>
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        <xs:enumeration value="2"/>
        <xs:enumeration value="3"/>
        <xs:enumeration value="4"/>
        <xs:enumeration value="5"/>
        <xs:enumeration value="6"/>
        <xs:enumeration value="7"/>
        <xs:enumeration value="8"/>
        <xs:enumeration value="9"/>
        <xs:enumeration value="10"/>
        <xs:enumeration value="11"/>
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  <xs:attribute name="Rate_Fee" type="xs:decimal" use="optional"/>
</xs:complexType>
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  <xs:restriction base="xs:unsignedShort">
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    <xs:enumeration value="032"/>
    <xs:enumeration value="036"/>
    <xs:enumeration value="044"/>
    <xs:enumeration value="048"/>
    <xs:enumeration value="050"/>
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    <xs:enumeration value="052"/>
    <xs:enumeration value="060"/>
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    <xs:enumeration value="068"/>
    <xs:enumeration value="072"/>
    <xs:enumeration value="084"/>
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    <xs:enumeration value="170"/>
    <xs:enumeration value="174"/>
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    <xs:enumeration value="192"/>
    <xs:enumeration value="203"/>
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    <xs:enumeration value="214"/>
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    <xs:enumeration value="232"/>
    <xs:enumeration value="238"/>
    <xs:enumeration value="242"/>
    <xs:enumeration value="262"/>
    <xs:enumeration value="270"/>
    <xs:enumeration value="292"/>
  </xs:restriction>
</xs:simpleType>

```

[illegible]

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<xs:enumeration value="990"/>
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    <xs:enumeration value="AE"/>
    <xs:enumeration value="AF"/>
    <xs:enumeration value="AG"/>
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    <xs:enumeration value="AR"/>
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    <xs:enumeration value="AT"/>
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    <xs:enumeration value="AW"/>
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    <xs:enumeration value="AZ"/>
    <xs:enumeration value="BA"/>
    <xs:enumeration value="BB"/>
    <xs:enumeration value="BD"/>
    <xs:enumeration value="BE"/>
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    <xs:enumeration value="BT"/>
    <xs:enumeration value="BV"/>
    <xs:enumeration value="BW"/>
    <xs:enumeration value="BY"/>
    <xs:enumeration value="BZ"/>
    <xs:enumeration value="CA"/>
    <xs:enumeration value="CC"/>
    <xs:enumeration value="CD"/>
    <xs:enumeration value="CF"/>
    <xs:enumeration value="CG"/>
    <xs:enumeration value="CH"/>
    <xs:enumeration value="CI"/>
    <xs:enumeration value="CK"/>
    <xs:enumeration value="CL"/>
    <xs:enumeration value="CM"/>
    <xs:enumeration value="CN"/>
    <xs:enumeration value="CO"/>
    <xs:enumeration value="CR"/>
    <xs:enumeration value="CU"/>
    <xs:enumeration value="CV"/>
    <xs:enumeration value="CW"/>
    <xs:enumeration value="CX"/>
    <xs:enumeration value="CY"/>
  </xs:restriction>
</xs:simpleType>

```

[illegible]

[illegible]

```

        <xs:enumeration value="WK"/>
        <xs:enumeration value="WS"/>
        <xs:enumeration value="YE"/>
        <xs:enumeration value="YT"/>
        <xs:enumeration value="ZA"/>
        <xs:enumeration value="ZM"/>
        <xs:enumeration value="ZW"/>
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    <xs:restriction base="xs:string">
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        <xs:enumeration value="no"/>
        <xs:enumeration value="YES"/>
        <xs:enumeration value="NO"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CycleNumber">
    <xs:restriction base="xs:string">
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        <xs:enumeration value="04"/>
        <xs:enumeration value="05"/>
        <xs:enumeration value="06"/>
    </xs:restriction>
</xs:simpleType>
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        <xs:enumeration value="Renewed"/>
        <xs:enumeration value="Lost"/>
        <xs:enumeration value="Stolen"/>
        <xs:enumeration value="Cancelled"/>
        <xs:enumeration value="PINtriesExceeded"/>
        <xs:enumeration value="Voided"/>
        <xs:enumeration value="Expired"/>
        <xs:enumeration value="Activation"/>
        <xs:enumeration value="UnBlocked"/>
        <xs:enumeration value="StatusChange"/>
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        <xs:maxLength value="3"/>
    </xs:restriction>
</xs:simpleType>
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    </xs:restriction>
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    </xs:restriction>
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    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DE94_Txn_Orig_ID">
    <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
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</xs:simpleType>
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    <xs:restriction base="xs:string">
        <xs:maxLength value="50"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FileProcessDate">
    <xs:restriction base="xs:string">
        <xs:pattern value=""/>
        <xs:maxLength value="14"/>
        <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|((([2-9]\d)(0[48]|1[2468]|13579][26])|((([2468][048]|13579][26])00))0229)([0-1][0-9]|2[0-3])([0-5][0-9])([0-5][0-9]))"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="Recon">
    <xs:attribute name="date" use="optional">
    </xs:simpleType>

```

```

        <xs:restriction base="xs:string">
            <xs:pattern value="\s*|([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229)))/>
            <xs:maxLength value="8"/>
        </xs:restriction>
    </xs:simpleType>
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    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="2"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
</xs:complexType>
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    <xs:attribute name="date" use="optional">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\s*|([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229)))/>
                <xs:maxLength value="8"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="cycle" use="optional">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="2"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
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    <xs:restriction base="xs:string">
        <xs:pattern value="[0-9]{6}"/>
        <xs:pattern value = "\s*" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="accountno">
    <xs:restriction base="xs:string">
        <xs:pattern value="[0-9]{8}"/>
        <xs:pattern value = "\s*" />
    </xs:restriction>
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    <xs:attribute name="filename" use="required">
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        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
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        </xs:simpleType>
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                <xs:enumeration value="00"/>
                <xs:enumeration value="01"/>
                <xs:enumeration value="02"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="sortcode" type="sortcode" use="required"/>
    <xs:attribute name="bankacc" type="accountno" use="required"/>
    <xs:attribute name="name" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="50"/>
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        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="ABExternal">
    <xs:attribute name="sortcode" type="sortcode" use="required"/>
    <xs:attribute name="bankacc" type="accountno" use="required"/>
    <xs:attribute name="name" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="50"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="ABCashCode">
    <xs:attribute name="direction" type="Direction" use="required"/>
    <xs:attribute name="CashType" use="required">
        <xs:simpleType>

```

```

        <xs:restriction base="xs:string">
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            <xs:enumeration value="fpy"/>
            <xs:enumeration value="ddp"/>
            <xs:enumeration value="cbt"/>
            <xs:enumeration value="ipp"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute name="CashGroup" use="required">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:enumeration value="rcp"/>
            <xs:enumeration value="pay"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:simpleType name="ABDeclineReason">
    <xs:restriction base="xs:string">
        <xs:enumeration value="00"/>
        <xs:enumeration value="01"/>
        <xs:enumeration value="02"/>
        <xs:enumeration value="03"/>
        <xs:enumeration value="04"/>
        <xs:enumeration value="05"/>
        <xs:enumeration value="06"/>
        <xs:enumeration value="07"/>
        <xs:enumeration value="08"/>
        <xs:enumeration value="9"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ABDirection">
    <xs:restriction base="xs:string">
        <xs:enumeration value="debit"/>
        <xs:enumeration value="credit"/>
        <xs:enumeration value="shared"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:complexContent>
        <xs:extension base="BasicAmount">
            <xs:attribute name="direction" type="ABDirection" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
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    <xs:restriction base="xs:string">
        <xs:pattern value="\d*|\s{0}" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="SenderReceiver">
    <xs:attribute name="firstname" type="xs:string" use="optional"/>
    <xs:attribute name="middlename" type="xs:string" use="optional"/>
    <xs:attribute name="lastname" type="xs:string" use="optional"/>
    <xs:attribute name="streetaddress" type="xs:string" use="optional"/>
    <xs:attribute name="city" type="xs:string" use="optional"/>
    <xs:attribute name="provincecode" type="xs:string" use="optional"/>
    <xs:attribute name="country" type="xs:string" use="optional"/>
    <xs:attribute name="postcode" type="xs:string" use="optional"/>
    <xs:attribute name="phonenumbr" type="xs:string" use="optional"/>
    <xs:attribute name="dateofbirth" type="xs:string" use="optional"/>
    <xs:attribute name="accountnumber" type="xs:string" use="optional"/>
    <xs:attribute name="idtype" type="xs:string" use="optional"/>
    <xs:attribute name="idnbr" type="xs:string" use="optional"/>
    <xs:attribute name="idctrycode" type="xs:string" use="optional"/>
    <xs:attribute name="idexpdate" type="xs:string" use="optional"/>
    <xs:attribute name="nationality" type="xs:string" use="optional"/>
    <xs:attribute name="birthctry" type="xs:string" use="optional"/>
    <xs:attribute name="acctnbrtype" type="xs:string" use="optional"/>
    <xs:attribute name="fundssource" type="xs:string" use="optional"/>
    <xs:attribute name="claimcode" type="xs:string" use="optional"/>
</xs:complexType>
<xs:complexType name="FXConv">
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    <xs:attribute name="fxratebooked" type="xs:decimal" use="required"/>
    <xs:attribute name="providercode" type="xs:string" use="required" maxLength="8"/>
    <xs:attribute name="fixedamountflag" type="xs:string" use="required" maxLength="1"/>
    <xs:attribute name="settlementdate" type="SettlementDate" use="optional"/>
</xs:complexType>
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    <xs:complexType>
        <xs:sequence>
            <xs:choice maxOccurs="unbounded">
                <xs:element minOccurs="0" maxOccurs="unbounded" name="CardAuthorisation">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="RecType" type="RecType" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="AuthId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="AuthTxnID" type="xs:unsignedInt" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="SettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="Card" type="Card" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="Account" type="Account" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="TxnCode" type="TxnCode" minOccurs="1" maxOccurs="1" nillable="false"/>
                        </xs:sequence>
                    </xs:complexType>
                </xs:element>
            </xs:choice>
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

<xs:element name="TxnAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="CashbackAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="BillAmt" type="RateAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="ApprCode" type="ApprCode" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Trace" type="Trace" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="MerchCode" type="MerchCode" minOccurs="1" maxOccurs="1" nillable="true"/>
<xs:element name="Term" type="Term" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Schema" type="Schema" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Txn" type="Txn" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="MsgSource" type="MsgSourceCardAuthorisation" minOccurs="1" maxOccurs="1" nillable="false"/>
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    <xs:attribute name="value" type="xs:decimal" use="required"/>
  </xs:complexType>
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  <xs:complexType>
    <xs:attribute name="value" type="xs:decimal" use="required"/>
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<xs:element name="Response" type="Response" minOccurs="1" maxOccurs="1" nillable="false"/>
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            <xs:enumeration value="ADV"/>
            <xs:enumeration value="REV"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
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      <xs:element name="PresentmentID" type="xs:unsignedInt" minOccurs="1" maxOccurs="1" nillable="false"/>
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      <xs:element name="SchemeSettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
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      <xs:element name="CycleNumber" type="CycleNumber" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Card" type="Card" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Account" type="Account" minOccurs="1" maxOccurs="1" nillable="false"/>
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      <xs:element name="TxnAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="CashbackAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
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Schema Changes

Refer to the list of changes below.

Version	Description
V1.39	Added new element : FXConv in CardAuthorisation and CardFinancial primary elements.
V1.38	Added new elements : Sender and Reciever.
V1.37	Added new element - RecordType. Increased length of affected MastercardFee elements
V1.36	Added new element - BSA. Updated cardauth method and cardauthentity
V1.35	ProductID can be 5 digits long
V1.34	Removed IssuerReferenceNumber element. Added ChargebackRefNum element
V1.33.1	Banking File element not mandatory
V1.33	DEV_REPORTING-422. Added IssuerReferenceNumber element
V1.32	DEV_REPORTING-413. Added value2 attribute
V1.31	DEV_REPORTING-396. Added one more ISOCurrencyCode - 929. Added two new ABDeclineReason - 00,9. AbId changed from Int to Long. Removing ProductID from MastercardFee
V1.30	DEV_REPORTING-327. Added Additional_Amt_DE54 in Financial and Chargebacks. DEV_WEBSERVICES-302. Multiple patterns in a Restriction was found not to validate when checking online XML validators. Substituted with \s* in regular expression.
V1.29	DEV_REPORTING-350. Included ProductID in MastercardFee. Increased length of Additional_Data_048 in MastercardFee. Settlementdate can be blank in Mastercardfee. Recon Date can be blank in Mastercardfee. Settlement Date can be blank in Mastercardfee
V1.28	DEV_REPORTING-350. Corrected SettlementIndicator in Fin and Chargeback. Corrected MerchCode in Auth and Chargeback. Added recon in Cardfee. Added CardChrgBackRepRes Account type 02. Added Currency 928. Added Nullable AuthID in CardFinancial. Made CardChrgBackRepRes FIID and RIID optional. Changed sequence location of CardChrgBackRepRes SettlementIndicator. Corrected CardBalAdjust AdjustId sequence and removed Rectype.
V1.27	DEV_REPORTING-343. Added SettlementCycle,ReconciliationDate, ReconciliationCycle,Usage and Pending_Billing_Amount.
V1.25	DEV_REPORTING-154. Added SettlementIndicator.
V1.24	DEV_REPORTING-318. Updated CardFinancial AuthId
V1.23	DEV_REPORTING-319. Updated cardholderpresent and cardpresent
V1.22	DEV_REPORTING-142. Updated inputcapability, authcapability, cardholderpresent,cardpresent, cardinputmethod, cardauthmethod and cardauthentity.
V1.18	DEV_MT_API-1520. Removed Programid attribute. Changed MarchCode to 30 length. Changed Desc to 500 length
V1.11	Removed reference to ResponseFinancial element (DEV_MT_API-537)

Document History

This section provides details of what has changed since the previous document release.

Version	Date	Reason	Who
2.0.1	16-06-2021	Updates to include clarification around transaction reporting times and cycle times. See Transactional Data Files . Information on XML reports available for issuers. See Introduction . New details of fields to use for matching transaction XML records to EHI records and matching financials to authorisations. See Transaction Matching . The BillAmt rate and the SettlementAmt rate has been updated to show 9 decimal places. See GPSPRN-44.	WS
2.0	25-04-2021	Major revamp to look and feel and organisation of the guide. Rewrite of content to simplify and make the guide easier to use. Updates to description of the <Amt> field. Added new element : FXConv in CardAuthorisation and CardFinancial primary elements. See GPSPRN-37. Change to the values of the TxId field in the CardFee record. See GPSPRN-41.	WS
1.41	29-12-2020	Added new elements Sender and Receiver in CardAuthorisation .	Deepu Mathew
1.40	24-12-2020	Added new RecordType element and other data changes in MastercardFee.	Deepu Mathew
1.39	08-12-2020	Added new BSA element in CardFinancial .	Deepu Mathew
1.38	23-10-2020 18-02-2021	Corrected value of 'Repeat' in example provided. Updated list of cardauthmethods and cardauthentity	Deepu Mathew Ian Flinders
1.37	22-10-2020	Removed IssuerReferenceNumber, added ChargebackRefNum	Deepu Mathew
1.36.1	29-09-2020	Banking File data not mandatory.	Deepu Mathew
1.36	21-08-2020	Added new IssuerReferenceNumber element in Chargeback.	Deepu Mathew
1.35	19-08-2020	Added new value2 attribute in Financial and Chargeback.	Deepu Mathew
1.34	27-07-2020	Corrected PAN (Primary Account Number) length description.	Vishnu Sugathan
1.33	24-07-2020	DEV_REPORTING-396 changes added	Deepu Mathew
1.32	15-05-2020	SettlementIndicator available for MC too.	Deepu Mathew
1.31	06-05-2020	Added new element Additional_Amt_DE54	Deepu Mathew
1.30	04-05-2020	Corrected CardFianncial/AuthID description	Deepu Mathew
1.29	09-04-2020	Added new element SettlementIndicator	Deepu Mathew
1.28	09-04-2020	Added recon field in CardFee, productid in MasterCardFee.	Deepu Mathew
1.27	25-03-2020	New 5 fields added in Chargeback section: SettlementCycle, ReconciliationDate, ReconciliationCycle, Usage and Pending_Billing_Amount	Deepu Mathew
1.26	02-03-2020	Some fields in MasterCardFee that shows Chargeback data can be blank. Updated those details in this revision.	Deepu Mathew
1.25	17-12-2019	Updated inputcapability, authcapability, cardholderpresent, cardpresent, cardinputmethod, cardauthmethod and cardauthentity.	Deepu Mathew

Version	Date	Reason	Who
1.24	5-11-2019	Updated Function_Code_024 of MastercardFee	Deepu Mathew
1.23	24-10-2019	Updated datatypes for AuthID, AdjustId, ChgbackRepresId, CardFeeld, TxId, FinID and LoadUnloadId, BankingId	Harry Carr
1.22	23-11-2018	Documented Agency Banking-related elements and attributes. Formatting.	Ian Flinders
1.21	19-10-2018	Clarified Mastercard-only elements CCAAmount and SettlementAmount	Ian Flinders
1.20	19-09-2018	Added 4.2.59 - AdjustType	Deepu Mathew
1.19	31-05-2018	Added 4.2.58 - SchemeSettlementDate	Sreekumar Nair
1.18	16-04-2018	Updated 4.1.4 - CardFeeld description	Ian Flinders
1.17	06-03-2018	Updated 3.1.2 - Reporting Content.	Ian Flinders
1.16	27-02-2018	Removed RCC attribute from Classification. Altered proccode attribute in TxnCode	Sam Burville
1.15	26-09-2017	Updated the Account attribute “no” description Many different elements added to the MasterCard Fee section so that it matches the current file output. Added Recon, Settlement, PDS0105, and FunctionCode sub elements for the MasterCard Fee change above. Changed description of CardFee TxId element.	Sam Burville Ian Flinders
1.14	16-08-2017	Added new Fee Class Code value 1. Updated permitted values of Fee Class element “type” and “code” attributes for Card Financials. Corrected the schedule to daily not Mon - Fri	Sreekumar Nair Sam Burville
1.11	21-07-2016	Case of XML Element “Account”, attributes “No” and “Type” changed to “no” and “type”, in all recordtypes (“CardAuthorisation”, “CardFinancial” etc..) Case of XML Element “Response”, attributes “Approved”, “ActionCode”, “ResponseCode” and “AdditionalDesc” are changed to: “approved”, “actioncode”, “responsecode” and “additionaldesc” respectively, in the “CardAuthorisation” record only. Removed ResponseFinancial element description Documented memberID attribute of FeeClass Added CCAAmount to CardFinancial	IF
1.10	26-05-2016	Changed Max Length of CardLoadUnload.MerchCode from 15 to 30.	IF
1.09	28-04-2016	Various minor corrections	IF
1.08	19-10-2015	Documented Mastercard.FeeClass element, including new membered sub-element	IF
1.07	01-06-2014	Updated description of CardFee TxId	IF
1.06	01-03-2014	Added new CardFee FeeClass Code value 6000	IF
1.05	05-04-2013	Clarified use of CardEvent Type element Added VisaCard to Account Element Clarified requirement of actioncode, responsecode and AdditionalDesc attributes of Response element. Clarified Load Type attribute	IF
1.04	22-03-2013	Amended data type of Load Type element	IF
1.03	15-03-2013	Updated SettlementDate definition in CardChrgBackRepRes	IF

Version	Date	Reason	Who
1.02	14-03-2013	Moved LoadUnloadId in CardFee. Added CardEvent documentation. Changed ProgramID definition.	IF
1.01	13-03-2013	Added CycleNumber, FeeAmt, FeeClass to CardFinancial Element.	IF
1.00	12-10-2012	First draft	IF

General FAQs

This section provides answers to frequently asked questions.

XML Reports

What type of XML reports does GPS provide?

GPS provides the following reports to Program Managers:

- Transaction XML report
- Balance XML report

Note:

For Issuers and Self-Issuers, GPS provides two additional reports:

- Fee Collection Report
- Quarterly Management Report (QMR)

For details, please contact your implementation manager or account manager.

Can I configure the details provided in each report?

No, the GPS reports are standard. If you require bespoke reports, please speak to your account manager.

How often are reports provided? Can I change this?

The GPS reports are provided daily. If you require a bespoke report frequency, please speak to your account manager.

For more frequent transaction information, we recommend you use the External Host Interface (EHI) which provides transaction reporting in real-time.

How are reports provided to customers?

The daily XML reports are provided via sFTP. This is on a push only basis.

How often do you change the fields in the report?

GPS will add new fields to the report in line with updates from the card schemes (Visa and Mastercard) or to reflect other changes relevant to the payments industry or our service.

When we make changes to the XML reports, we will update the technical documentation and notify you of the change.

Are reports encrypted?

Yes. Reports are encrypted using the PGP standard.

How do I identify the version of the XML report?

The XML schema version is listed in the comments section of the schema, together with details of what has changed. See [Transaction XML Schema](#). We currently do not provide the XML version within the XML report.

How large is a typical report?

This is based on the number of your transactions and can be anything from 1Kb to 2GB. We will split up anything larger than 2GB into smaller files: eg., *filename.001*, *filenename.002* and so on.

Do you store reports and if so, for how long?

Reports are stored for up to 2 calendar days on the sFTP server, after which they are deleted from the sFTP server. We keep an archive of historical files for a limited period . For access to historical files, please raise a JIRA request.

How can I use the XML reports?

You can use them to do the following:

- Update to your transactions database
- For transaction reconciliation purposes

Contact Us

Please contact us if you have queries relating to this document. Our contact details are provided below.

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Technical Publications

If you want to contact our technical publications team directly, for queries or feedback related to this guide, you can email us at: docs@globalprocessing.com.

Glossary

This page provides a list of glossary terms used in this guide.

A

Acquirer

The merchant acquirer or bank that offers the merchant a trading account, to enable the merchant to take payments in store or online from cardholders.

Authentication

This includes checks to confirm the cardholder identity, such as PIN, CVV2 and CAVV.

Authorisation

Stage where a merchant requests approval for a card payment by sending a request to the card issuer to check that the card is valid, and that the requested authorisation amount is available on the card. At this stage the funds are not deducted from the card.

C

Card Scheme

Card network, such as MasterCard or Visa, responsible for managing transactions over the network and for arbitration of any disputes.

Chargeback

Where a cardholder disputes a transaction on their account and is unable to resolve directly with the merchant, they can raise a chargeback with their card issuer. The chargeback must be for a legitimate reason, such as goods and services not received, faulty goods, or a fraudulent transaction.

Clearing File/Clearing Transaction

GPS receive batch clearing files from the card networks, containing clearing transactions, such as presentments and network fees. The card issuer transfers the requested settlement amount to the acquirer and 'clears' the amount on the card, reducing the available card balance accordingly.

CurrencyCloud

CurrencyCloud is a multicurrency Foreign exchange (FX) service used by GPS for currency conversions. The service is expected to go live in Q4 2021.

E

External Host Interface (EHI)

The External Host Interface provides a facility to enable exchange of data between GPS and external systems via our web services. All transaction data processed by GPS is transferred to the External Host side via EHI in real time. For certain types of transactions, such as Authorisations, the External Host can participate in payment transaction authorisation.

I

ICA

The Interbank Card Association Number (ICA) is a five-digit number assigned by MasterCard to a financial institution, third-party processor or other member to identify the member in the transaction.

Issuer

The card issuer, typically a financial organisation authorised to issue cards. The issuer has a direct relationship with the relevant card scheme.

M

Mastercard clearing cycle

Mastercard provides 6-8 clearing updates during each day, with details of financial transactions that are due for settlement.

Merchant

The shop or store providing a product or service that the cardholder is purchasing. A merchant must have a merchant account, provided by their acquirer, in order to trade. Physical stores use a terminal or card reader to request authorisation for transactions. Online sites provide an online shopping basket and use a payment service provider to process their payments.

Merchant Category Code (MCC)

A unique identifier of the merchant, to identify the type of account provided to them by their acquirer.

P

PGP

Pretty Good Privacy (PGP) is an encryption system used for both sending encrypted emails and encrypting sensitive files.

Presentments

Stage in a transaction where the funds authorised on a card are captured (deducted from the cardholder's account). Also known as Clearing.

Program Manager

A GPS customer who manages a card program. The program manager can create branded cards, load funds and provide other card or banking services to their end customers.

R**reconciliation cycle**

GPS receive six cycles of settlement data from Mastercard.

reconciliation date

The system processing date associated with the settlement of funds, as provided by Mastercard.

S**sFTP**

Secure File Transfer Protocol. File Transfer Protocol (FTP) is a popular unencrypted method of transferring files between two remote systems. SFTP (SSH File Transfer Protocol, or Secure File Transfer Protocol) is a separate protocol packaged with SSH that works in a similar way but over a secure connection.

Smart Client

Smart Client is GPS's user interface for managing your account on the GPS Apex system. It is also called Smart Processor GPS. Smart Client is installed as a desktop application and requires a VPN connection to GPS systems in order to be able to access your account.

SSL Certification

An SSL certificate displays important information for verifying the owner of a website and encrypting web traffic with SSL/TLS, including the public key, the issuer of the certificate, and the associated subdomains.

T**TLS**

Transport Layer Security (TLS) is a security protocol that provides privacy and data integrity for Internet communications. Implementing TLS is a standard practice for building secure web apps.