



Common Data Format 3 Overview

XML Data Format

13 July 2012

Notices

Following are policies pertaining to proprietary rights, trademarks, translations, and details about the availability of additional information online.

Proprietary Rights

The information contained in this document is proprietary and confidential to MasterCard International Incorporated, one or more of its affiliated entities (collectively “MasterCard”), or both.

This material may not be duplicated, published, or disclosed, in whole or in part, without the prior written permission of MasterCard.

Trademarks

Trademark notices and symbols used in this document reflect the registration status of MasterCard trademarks in the United States. Please consult with the Customer Operations Services team or the MasterCard Law Department for the registration status of particular product, program, or service names outside the United States.

All third-party product and service names are trademarks or registered trademarks of their respective owners.

Translation

A translation of any MasterCard manual, bulletin, release, or other MasterCard document into a language other than English is intended solely as a convenience to MasterCard customers. MasterCard provides any translated document to its customers “AS IS” and makes no representations or warranties of any kind with respect to the translated document, including, but not limited to, its accuracy or reliability. In no event shall MasterCard be liable for any damages resulting from reliance on any translated document. The English version of any MasterCard document will take precedence over any translated version in any legal proceeding.

Information Available Online

MasterCard provides details about the standards used for this document—including times expressed, language use, and contact information—on the Publications Support page available on MasterCard OnLine®. Go to Publications [Support](#) for centralized information.

Table of Contents

Chapter 1 Introduction to the Common Data Format	1-i
Common Data Format 3 Layout.....	1-1
Common Data Format 3 Layout Documents.....	1-1
Chapter 2 Common Data Format Overview	2-i
Common Data Format 3 Overview	2-1
Understanding the XML Schema Specifications	2-1
Special Character Handling.....	2-5
Sending Common Data Format 3 Files to the Global Data Repository	2-5
Common Schema Error Messages.....	2-5
Receiving Common Data Format 3 Files from myProvider.....	2-6
Unique MasterCard Transaction Identifier in Outbound Files.....	2-7
Updating Financial Transactions	2-7
Initial Setup.....	2-7
General Inbound Common Data Format 3 Formatting Rules	2-8
Transmission File Layout	2-8
Relationships Between Records in a Transmission File	2-8
Record Types.....	2-8
Transmission Records	2-9
Organization Records.....	2-9
Financial and Transaction Records	2-10
Dun and Bradstreet Supplier Records.....	2-12
Appendix A Frequently Asked Questions	A-i
Frequently Asked Questions.....	A-1
Appendix B Glossary	B-i
Glossary	B-1

Chapter 1 Introduction to the Common Data Format

This section introduces the common data format 3 layout and the layout documents.

Common Data Format 3 Layout.....	1-1
Common Data Format 3 Layout Documents.....	1-1

Common Data Format 3 Layout

The common data format 3 (CDF3) layout is the default layout used both for files coming into the Global Data Repository and for files being shipped out of the Global Data Repository. If you are a processor or issuer sending files TO MasterCard, then you are an INBOUND customer. If you are a corporation or a third-party host for corporations, receiving files FROM MasterCard, then you are an OUTBOUND customer.

The Global Data Repository processes data 20 hours per day, 6 days per week. Typically all inbound files are queued for processing immediately. Outbound files are queued for processing based upon the File Delivery schedule.

File processing expectations set forth herein may change as products and programs change. MasterCard reserves the right to change file processing time frames at any time and provide issuers with any new standards.

Common Data Format 3 Layout Documents

The following documents describe the CDF 3 Layout: the XSD file, the html file, the inbound sample CDF 3 file, and the outbound samples.

If you send or receive files from MasterCard you must review the following documents describing the CDF 3 Layout:

NOTE

Thoroughly review all documents to gain an understanding of the CDF 3 XML file.

- **The XSD file**—The XML schema definition for the CDF file you will either send to or receive from MasterCard. This file completely describes the XML file.
- **The html file**—A more user friendly version of the CDF XSD (schema) document.
- **The inbound sample file (a sample CDF 3 file)**—MasterCard recommends that the sample file be used as a reference in your analysis and development process.

NOTE

The content of the sample file is for demonstration purposes only and is not representative of actual data.

- **Outbound Samples**—Outbound Cycle demonstrates the record types anticipated after statementing, or the account has cycled. Outbound Mid Cycle contains the daily portfolio information.

NOTE

Please visit the **Global Commercial Product Information Center on MasterCard OnLine** to ensure you are using the most current specifications. Enter an e-mail address to be notified of changes to the specifications. If you are a Third Party vendor or a new customer without MasterCard OnLine access, contact smartdatahelp@mastercard.com.

Chapter 2 Common Data Format Overview

This section describes the common data format, sending and receiving Common Data Format 3 files, initial setup, general inbound Common Data Format 3 formatting rules, and record types.

Common Data Format 3 Overview	2-1
Understanding the XML Schema Specifications	2-1
Special Character Handling.....	2-5
Sending Common Data Format 3 Files to the Global Data Repository	2-5
Common Schema Error Messages.....	2-5
Receiving Common Data Format 3 Files from myProvider.....	2-6
Unique MasterCard Transaction Identifier in Outbound Files.....	2-7
Updating Financial Transactions	2-7
Initial Setup.....	2-7
General Inbound Common Data Format 3 Formatting Rules	2-8
Transmission File Layout.....	2-8
Relationships Between Records in a Transmission File	2-8
Record Types.....	2-8
Transmission Records	2-9
Organization Records.....	2-9
Financial and Transaction Records	2-10
Dun and Bradstreet Supplier Records.....	2-12

Common Data Format 3 Overview

The Common Data Format serves as both a description of corporate card activity and as the transport medium for that information. The exchange of this information requires that the relationships between records are maintained during transmission.

More than 35 record types are defined in the CDF3 specification. Not all of these record types must be used, but the full complement of records facilitates a very complete specification of a corporate card user, that user's organization, and the transactions against that user's account. Depending on your needs for detailed specification of your organization and the transaction types you make on your corporate cards, you may use only a very few record types or the entire complement of records available.

There are a limited number of required fields in CDF3. This is not a justification for sending just those required fields. Any file comprising just the required data elements will be of almost no use to our mutual customers.

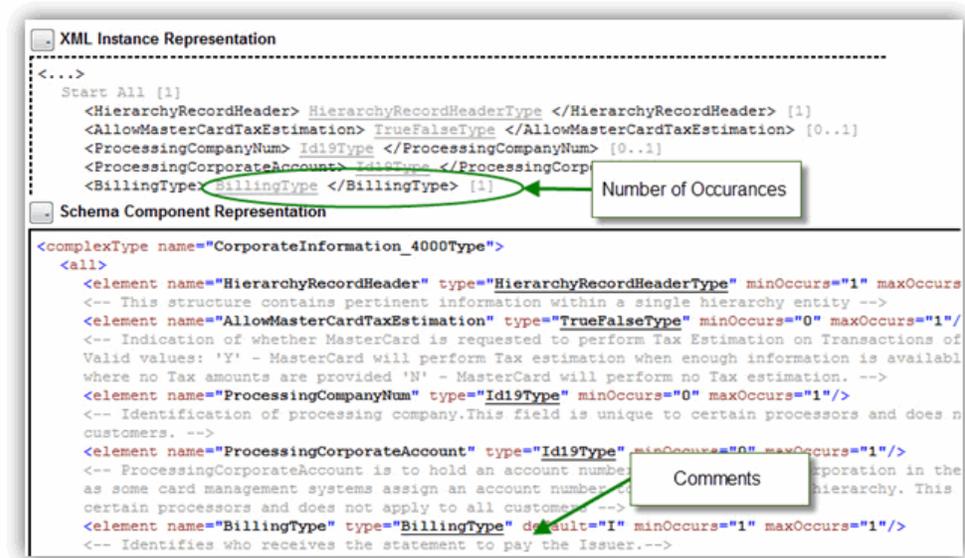
Not every field on every record must be populated, but every field for which data can be obtained by the issuer/processor must be populated.

The CDF layout provides records to specify organizational entities and to transmit transactions. Transactions require that the organization be specified before they can be processed.

Understanding the XML Schema Specifications

The XML Schema Definition for the CDF file describes the requirements for the CDF3 file.

The example demonstrates the attributes of the elements.



```
<xs:element name="BillingType" type="BillingType" minOccurs="1"
maxOccurs="1"></xs:element>
```

name= The name of the tag in the XML file. In this instance, the name of the tag is BillingType.

type= The data type restrictions placed on this field. In other words, the acceptable types and values for this tag. In this instance the data type is BillingType.

minOccurs= The minimum number of times a tag can occur.

maxOccurs= The maximum number of times a tag can occur.

minOccurs and maxOccurs Attributes

Each tag in the XML Schema Document (CDFFileTransmission.xsd) contains minOccurs and maxOccurs attributes. The minOccurs tells you the minimum number of tags that must be contained in the file. The maxOccurs tell you the maximum number of tags that can be contained in the file.

Example 1

```
<xs:element name="BillingType" type="BillingType" minOccurs="1"
maxOccurs="1"></xs:element>
```

This notation implies that the tag BillingType is required. There can be one and only one entry for this tag.

Example 2

```
<xs:element name="ProcessingCorporateAccount" type="Id19Type" minOccurs="0"
maxOccurs="1"></xs:element>
```

This notation implies that the tag ProcessingCorporateAccount is not required. There can be zero to one entry for this tag.

type = Attribute

Each tag in the XML Schema Document (CDFFileTransmission.xsd) contains a `type=` attribute. This attribute is used to determine not only the data type and size, but in some instances, acceptable values.

Example 1

```
<xs:element name="AccountNumber" type="Id19Type" minOccurs="0"
maxOccurs="1"></xs:element>
```

The `AccountNumber` tag has a type of `Id19Type`. Find the definition of this type in the `CDFFileTransmission.xsd` file.

```
<xs:simpleType name="Id19Type">
<xs:restriction base="xs:token">
<xs:minLength value="1"></xs:minLength>
<xs:maxLength value="19"></xs:maxLength>
</xs:restriction>
</xs:simpleType>
```

This `Id19Type` is a simple data type. In this example, the `AccountNumber` can have a length between 1 and 19 characters inclusive.

Valid Example: `<AccountNumber>549900000000000</AccountNumber>`

Example 2

```
<xs:element name="TransactionDate" type="MasterCardDateType" minOccurs="1"
maxOccurs="1"></xs:element>
```

The `TransactionDate` tag has a type of `MasterCardDateType`. Find the definition of this type in the `CDFFileTransmission.xsd` file.

```
<xs:simpleType name="MasterCardDateType">
<xs:restriction base="xs:date"></xs:restriction>
</xs:simpleType>
```

This `MasterCardDateType` is a simple data type. In this example, the `TransactionDate` can be a valid date in the `CCYY-MM-DD` format.

Valid Example: `<TransactionDate>2003-01-31</TransactionDate>`

Example 3

```
<xs:element name="DebitOrCreditIndicator" type="SignCodeType" minOccurs="1"
maxOccurs="1"></xs:element>
```

The DebitOrCreditIndicator tag has a type of SignCodeType. Find the definition of this type in the CDFFileTransmission.xsd file.

```
<xs:simpleType name="SignCodeType">
<xs:restriction base="xs:token">
<xs:enumeration value="C"></xs:enumeration>
<xs:enumeration value="D"></xs:enumeration>
</xs:restriction>
</xs:simpleType>
```

This SignCodeType is a simple data type with a restriction (list of acceptable values). In this example, the DebitOrCreditIndicator tag can only contain either a C or a D. Any other values will be rejected.

Valid Example: <DebitOrCreditIndicator>D</DebitOrCreditIndicator>

Example 4

```
<xs:element name="AmountInOriginalCurrency" type="CurrencyAmountType"
minOccurs="1" maxOccurs="1"></xs:element>
```

The AmountInOriginalCurrency tag has a type of CurrencyAmountType. Find the definition of this type in the CDFFileTransmission.xsd file.

```
<xs:complexType name="CurrencyAmountType">
<xs:simpleContent>
<xs:extension base="CurrencyType">
<xs:attribute name="CurrencyCode" type="CurrencyCodeType" use="re-
quired"></xs:attribute>
<xs:attribute name="CurrencyExponent" type="CurrencyExponentType"
use="required"></xs:attribute>
<xs:attribute name="CurrencySign" type="SignCodeType" use="required"></xs:at-
tribute>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
```

This CurrencyAmountType is a complex data type that consists of many tags. This field consists of a CurrencyCode, CurrencyExponent and CurrencySign. Each one of these tags has their own type= that you must look up to determine the appropriate values.

Valid Example: <AmountInOriginalCurrency CurrencySign="D" CurrencyExponent="2" CurrencyCode="840">10938</AmountInOriginalCurrency>

The above example represents a debit amount in the 840 currency of 109.38.

NOTE

The CDF v3.0 XML Schema Document (CDFFileTransmission.xsd) states that no decimals are to be placed in amount fields. The concept of an exponent is used in the CDF v3.0 document.

Special Character Handling

XML control characters need to be sent as indicated in the table below. For example, for a merchant named “Steve & Jose Bookstore” enter this in the XML file as “Steve & Jose Bookstore.”

Character	Reference
&	&
<	<
>	>
"	"
'	'

Sending Common Data Format 3 Files to the Global Data Repository

Every CDF v3.0 file that is sent to MasterCard is validated against the schema before it is loaded to Global Data Repository. During schema validation MasterCard will check your input file and ensure all the data conforms to the file specifications.

The following items will not pass validation:

- Missing required fields
- Incorrect data length
- Incorrect data type
- Incorrect data format (invalid date format)
- Tags that are misspelled or have incorrect character case

Common Schema Error Messages

Common schema error messages include invalid characters or content errors.

The table describes common schema error messages and the reasons for the messages.

Common Data Format Overview

Receiving Common Data Format 3 Files from myProvider

Message	Reason
Message: Invalid character (Unicode: 0x0)	This error can occur if the files are being sent in ASCII rather than UTF-8. Extended ASCII characters are not recognized in UTF-8.
Message: Data type error: Type: InvalidDatatypeValueException, Message:Value 'ON' is not in enumeration.	When checking the error location in the file, it is determined that the field is a country code and customer populated State/Province in the location instead.
Message: Not enough elements to match content model	Indicates missing mandatory fields.
Message: Not valid for content model	Nesting or sequence issue.
Message: Invalid document structure	The file may have been sent in EBCDIC and not ASCII/UTF-8.

Schema failure notices will be sent by e-mail to the issuing processor, with the error log attached.

MasterCard strongly recommends all issuing processors or enhanced data sources perform schema validation against their files before sending the files to MasterCard. This process ensures prompt and efficient resolution of any data errors and eliminates delays in the corporate customer data being available in SmartData.

Upon successful schema validation, the MasterCard Global Data Repository will produce a confirmation report that contains key information to confirm the successful arrival and processing of the file as well as informing the Processor of any record(s) that were rejected as invalid, and the reason why the record(s) failed to load successfully. The issuer can also request a copy of the confirmation report.

Receiving Common Data Format 3 Files from myProvider

Consistent with XML coding standards, MasterCard will only export data element tags to which a valid value has been assigned. If an element tag is not distributed, then no value was supplied to MasterCard for that element.

Since all processors do not supply data in CDF3 format (MasterCard accepts legacy formats), outbound CDF3 files may not pass schema validation. MasterCard makes every effort to standardize stored data, but it is not always possible based on the data supplied by the processor.

Unique MasterCard Transaction Identifier in Outbound Files

MasterCard creates a tag, <MasterCardFinancialTransactionId>, for each transaction in a file. This field is a unique identifier for the transaction within the Global Data Repository and can be used to match updates provided in subsequent files.

Updating Financial Transactions

With the CDF3 format, inbound CDF3 customers can provide updates to transactions and addendum records that have already been sent to MasterCard. Enhanced transaction and addendum information received at a later date can flow through to applications that support updates.

The only requirement for this is that a unique identifier is maintained for a transaction between the original and each update. To update a specific transaction, the financial and each addendum record should contain the same Processor Transaction ID that was received with the transaction originally and the Financial Transactions Maintenance Code should be “U.” An update transaction must always contain the transaction and all addendum records which belong to the transaction. All previous addenda will be dropped so it is required that each addendum be resent with the transaction.

The following Financial Transaction record fields are not available for update:

- ICA Number
- Issuer Number
- Corporation Number
- Account Number
- Processor Transaction ID
- Transaction Date
- Posting Date
- Amount in Posting Currency
- Amount in Original Currency
- Credit/Debit Indicator

Initial Setup

When a new issuer is implemented in the Global Data Repository, the issuer information will be provided and manually entered in the system. The CDF3 Issuer Information Type can be used to update issuer information, but not to create a new issuer. A hierarchy address record can be used to add or change address information for an issuer.

NOTE

For every issuer, one hierarchy address record with the “Primary Address Flag” set to ‘Y’ must be sent in. Other hierarchy addresses should have the “Primary Address Flag” set to ‘N’.

All companies and accounts must be sent in CFD3 and created in the Global Data Repository prior to transmission of transactional data.

General Inbound Common Data Format 3 Formatting Rules

Indicators with the option of Yes (Y) or No (N) will default to No, if not supplied.

All addendum amounts will be in original currency, with the exception of Portfolio (record 4420) and Authorization Limit (record 4430). The amounts supplied for these records will be in the currency agreed upon by the Processor and the Issuer.

Dates and times must follow the formatting supplied. Partial date, dates formatted incorrectly or zeros, except when specifically allowed, are invalid.

If an amount is supplied, the associated fields of currency, exponent and debit/credit indicator must also be supplied when these fields are present in the record layout.

The file has been specified as an XML document. If a data supplier is unable to supply a non-mandatory data element populated with a valid value, then there is no need to send a default value, or a blank, a zero, or a null value. Simply, do not send the XML field tag.

Transmission File Layout

CDF3 files are exchanged as XML between processors, MasterCard, and customers. The CDF Transmission File element in CDF3 XML consists of an ordered nesting of records. The order and nesting of these records is established by the CDF3 schema file (“CDF Transmission File.xsd”).

Relationships Between Records in a Transmission File

The nesting of records in a transmission file determines their relationship. Records can be thought of as describing the organization or describing transactions of that organization. This categorization will help in describing different requirements on the particular elements of a transmission file.

Record Types

The records that comprise the CDF3 Layout specification have been broken into sections that describe the general purpose of these records.

They fall into the following categories:

- **Transmission Record Elements**—Header and Trailer (1000 and 9999)
- **Organizational Record Elements** —Hierarchy (3000 through 4xxx)
 - IssuerEntity for Issuing Processors
 - EnhancedDataEntity for Third Party Global Data providers
- **Transaction Record Elements**—Financials and Adjustments (5xxx series and 8xxx on outbounds with unmatched data)
- **Dun and Bradstreet Supplier Elements**—Demographic and socioeconomic merchant information available based on transactional history. (6xxx)

Please view the sample CDF 3 XML file that was provided for more detailed information on how the different records relate to each other.

Transmission Records

Each exchange of information in the CDF format must be encapsulated between two Record Types: the Transmission Header Record and the Transmission Trailer Record.

Record Type

TransmissionHeader_1000

TransmissionTrailer_9999Type

A transmission file will always contain one Transmission Header and one Transmission Trailer bounding the organizational, transaction, and/or the summary records. The Transmission Header record and Transmission Trailer Record maintain information significant to the exchange of data into myProvider and out of it. This information includes the IDentification of the source of the data, version of the data format, period covered by the data as well as count and summary information used to validate the contents of a received transmission file.

Organization Records

To successfully represent the significance of corporate card activity, information over and above any particular transaction is required. CDF provides element definitions that allow for the initial population of this information and for the ongoing maintenance of this information. We can call this information “Maintenance Driven” in that we do not expect it to change each cycle we process transaction data.

CDF imposes minimum requirements for basic organizational information. There are also additional Record Types to represent more detailed organizational data. Organizational information describes the issuer, corporation, organizational points within the corporation, corporate card accounts, fleets, drivers, and attributes of these entities.

Specific Record Types

- **IssuerInformation_3000Type**—This record can be used to modify Issuer information, but cannot be used to create a new issuer. Creation of Issuers for a client is performed at certification time.
- **CorporateInformation_4000Type**—The issuer for this corporation must have been established before the submission of this record. A Corporation may have zero or more Organizational points defined within it. Accounts can exist at the corporation level or the Organizational Point level—either is considered to be an account within the corporate organization.
- **OrganizationPointInformation_4100**—This record mirrors a corporate information record but includes reports-to information.
- **AccountInformation_4300Type**—An account record is required before transactions against that account can be processed.
- **HierarchyAddress_4410Type**—This record is not mandatory within each file, yet is required to be supported. It is expected that a minimum of one address should be provided for every level of hierarchy supported.
- **Portfolio_4420Type**—This information should be sent only once a month, following statementing or account cycle.
- **DailyPortfolio_4450Type**—This entity represents the daily status of the account and may be supplied during an accounts cycle period.
- **Custom Hierarchy**—This record supplies a location to provide client specific information that does not have another XML entity or tag defined.

Financial and Transaction Records

Transaction elements represent individual financial transactions against accounts. Each account against which a transaction occurs must already have been transmitted to the Global Data Repository. Merchant initiated transactions (financials) and issuer initiated transactions (adjustments) apply only to cardholder accounts. All monetary amounts in all addenda records are to be in posted currency.

There are several types of additional detail depending on the particular transaction. CDF facilitates the transmission and representation of this information by supplying several Record Types designed to embody the significance of a particular account or transaction type. The Financial Transaction can stand on its own, but also serves as the root for all additional addendum information.

Specific Record Types

- **PassengerTransportDetailGeneralTicketInformation_5020Type**—The first 5020 Passenger Transport Addendum record for the transaction must be related to the preceding 5000 Financial Transaction.
- **PassengerTransportDetailTripLegData_5021Type**—The first 5021 Passenger Transport Detail Trip Leg Addendum record for the transaction must be immediately preceded by a Passenger Transport Detail Addendum record.
- **TemporaryServicesDetailAddendum_5080Type**—The CorporateCardLineItemDetail_5010 Corporate Card Line Item Detail Addendum record should be sent in conjunction with the Temporary Services Detail Addendum record.
- **GlobalInvoice_5100Type**—The line items of a global Invoice are represented by Corporate Card Line Items linked to a transaction having the Invoice number as the Unique Invoice Number.
- **TaxAddendum_5300Type**—A Tax addendum element can be associated at varying levels of a transaction, from the transaction, to the summary addendum, to the Line Item detail. There may be zero, one, or many Tax records related to a specific bankcard transaction. Each Tax record is linked to a transaction by the Unique processor Reference Number. If a Detail Line Addendum is present then the Tax Record will follow that record and have the next Addendum Sequence Number.
- **Custom Financial Data Record**—The Custom Financial Addendum Record carries details about a financial transaction for which the issuers have defined fields to be carried that are not included in a specific addendum record. It is generally used when new detail is needed for which a specific addendum record has not yet been created. The first Custom Financial Addendum record for the transaction must be preceded by a 5000 Financial Transaction record. These records are frequently seen in outbound file deliveries for customers who participate in one of the MasterCard Enhanced Data Programs.
- **FinancialAdjustmentRecord_5900Type**—The financial adjustment element is associated to an account just as a financial transaction, and is to be used for all Issuer related amounts. While the record is not mandatory in each file, it is required for the card program, to fully reflect payments and other non merchant amounts.
- **AuthorizationTransactionEntity - AuthorizationTransaction_5910**—Represents a declined transaction, and while not used by most Third Party expense systems, issuers may use this record for other reporting purposes.
- **UnmatchedLodgingSummaryAddendumEntity (8003 and 8031)**—The Unmatched Lodging Summary Addendum Record provides the summary information about a financial transaction associated with lodging accommodations. The record format is identical to the 5030 Lodging Summary Addendum Record. The 8031 format is identical to the 5010 Line Item Summary Record. An Unmatched Lodging Summary Addendum Record will not be preceded by a corresponding 5000 Financial Transaction record. These records are only available to a few custom programs, and are outbound only.

- **UnmatchedPassengerTransportEntity (8002 and 8021)**—The Unmatched Passenger Transport Entity provides summary and trip leg information about a financial transaction associated with passenger travel. The record format is identical to the 5020 Passenger Transport Detail General Ticket Information. The 8021 format is identical to the 5021 Passenger Transport Detail Trip Leg Data record. An Unmatched Passenger Transport Entity will not be preceded by a corresponding 5000 Financial Transaction record. These records are only available to a few custom programs, and are outbound only.

Dun and Bradstreet Supplier Records

Dun and Bradstreet supplier records represent supplier demographic and socio-economic information provided by Dun and Bradstreet, most frequently used by North American customers. This data is available by requesting enrollment in the Supplier data program. Only data for a merchant that a customer has frequented will be provided in these records.

Appendix A Frequently Asked Questions

This appendix provides frequently asked questions and answers about common data format 3.

Frequently Asked Questions	A-1
----------------------------------	-----

Frequently Asked Questions

The answers to these frequently asked questions may help you understand Common Data Format 3 (CDF3).

Why is CDF3 an XML file?

The decision to go with an XML format was based on the following factors:

- The fast-growing, broad acceptance of XML as a standard data format
- The flexibility for adding new data elements to an XML Schema, in a fast-changing business environment
- The removal of the need for issuers/processors to populate every field in the layout, whether it is relevant or not. While XML files are inherently larger than untagged formats, there is a great savings in the development and certification costs of an XML format file as well as the removal of the redundancy of providing blank, zero, null and defaulted field values
- The human readability of XML will help expedite transmission trouble shooting

At first glance, the specifications can appear very intimidating. 3500 plus data elements is a significantly greater number of elements than is seen in most file formats in the credit card industry.

The best place to begin is to identify which data elements are applicable to the system which is sending data to MasterCard. If single data elements or whole groups of data elements cannot be supplied then they may simply be ignored. Because the XML tags will not be sent for elements that cannot be supplied, there is no need for default values in those fields.

What does the data look like?

Where applicable, ISO standards apply to fields in this file. Many acceptable values for fields are listed in the schema field definitions section of the layout document.

Is the CDF v3.0 file case sensitive?

Yes, both the open and close tags (fields) must match exactly to the XML Schema Document (CDFFileTransmission.xsd).

Example

If the schema states the following:

```
<xs:element name="TotalNumOfAccounts" type="Numeric10Type" minOccurs="0" maxOccurs="1"></xs:element>
```

The following would be rejected (reasons in parentheses)

```
<TotalnumofAccounts>10</TotalnumofAccounts> (lower case "n" in num)
```

```
<TotalNumofAccounts>10</TotalNumofAccount> (missing "s" in closing tag)
```

ProcessorNumber is an 11 digit number. Our processor number contains less positions. What exact data should we send?

The ID11Type field is a minimum length of 1 and a maximum length of 11. If your Processor Number is 1111, you may send 1111 or you may send 00000001111, so long as you meet the minimum and maximum limitations.

May we change the XML version or encoding format in the CDF 3 file?

No, the first two lines of the CDF 3 file must be sent as identified in the Sample File, as below.

```
<?xml version="1.0" encoding="utf-8" ?>  
<CDFTransmissionFile xmlns:xsi=" http://www.w3.org/2001/XMLSchema-instance"
```

The sequence numbering in the sample file does not look sequential. Does it need to be?

Sequencing is used for error reporting and each instance should be unique throughout the file. The sequence number of the hierarchyrecordheader may be a continuation of the Sequence Number in the Financial Record Header.

Is the data in DebitOrCreditIndicator disregarded in a reversal or adjustment? Is a Retail Sale and Retail Sales Reversal both debit, or is the first one debit and the other one is credit?

If the transaction increases the amount the cardholder will owe, it is a debit. If the transaction decreases the amount the cardholder will owe, it is a credit, regardless of the transaction type.

May we use the AcquirerReferenceData as the ProcessorTransactionID?

No, it is not recommended. AcquirerReferenceData is assigned by the Acquirer when the transaction is processed by the Merchant's bank, and is not guaranteed to be unique among all Acquirers. It is recommended that the Processor Transaction ID contain enough data to segregate it from all other MasterCard Transactions in their system, perhaps by incorporating the ICA, processing date and a timestamp.

In the TelephonyBillingDetail_5121, the tags CallToCountryCode and CallFromCountryCode are defined as 3 character ISO Country Codes, but IPM message PDS 0638s3 and 0644s3 are both 40 position fields. Also, CallToStateProvince and CallFromStateProvince do not match IPM mapping. Is there a conversion table or should it be consistent with the IPM definitions?

No, there is no conversion chart. As these are not mandatory tags, if the data (or a way to convert it) is not available, do not provide the fields.

How do I reverse a transaction?

Edit the reversal flag in the 5000 financial to an "R". Change the debit/credit indicator to the reverse of the original transaction. Also change the TransactionAmount debit/credit indicators to the reverse. Resubmit transaction.

How do I handle fields, such as the Account Number, that expanded from a 16 position numeric field to a 19 position alphanumeric field?

If the field was established in GDR prior to CDFv3, the field was decimal aligned and zero filled. The field is now defined as alphanumeric, meaning that it can handle both numeric and alpha characters, so, to match the field in the database, the first 16 position must be numeric and the remaining three characters must be spaces.

If the field is new to the database, configure the field any way you wish, but, consistency is the key ingredient.

Are there default values for any of the tags?

Many fields have default values identified if not provided. If the data is available in the card management system, it should be provided in CDF3. Default values cannot be suggested for processor specific fields such as ICA, IssuerNumber, AccountNumber and CorporationNumber.

Default values are identified in the schema in the following manner.

```
<element name="StateProvince" type="StateProvinceType" default="-"
```

What is the FileReferenceNum?

FileReferenceNum is a unique number used to identify the inbound file. One suggested way to populate is ICA + ProductCode + CCYYMMDD + HH:MM:SS.

What type of data is to be populated in alternate name line 1 and similar fields?

Alternate Name Lines and Name Locale Codes are used for customers who wish to supply the data in two languages.

My vendor does not accept full account numbers, so my files are masked. How can my vendor identify which account to relate the transaction back to?

Beginning with CDF Schema Version 10.01.00.00, MasterCard will append the EmployeeID to all financial and adjustment transactions. Vendors will need to store the hierarchy records that contain the employee id for future reference.

Appendix B Glossary

This appendix contains the terms related to the Common Data Format 3 Overview and their definitions.

Glossary	B-1
----------------	-----

Glossary

The table contains the terms related to the Common Data Format 3 Overview and their definitions.

Term	Definition
Adjustment	A financial charge applied to a credit card that did not occur at a merchant. For example, a yearly maintenance fee.
Cardholder	A Corporate credit card holder
Common Data Format (CDF)	The standard file format that is sent from the processors/customer to the Global Data Repository and ultimately to downstream applications such as the Smart Data suite or other applications. This file contains both hierarchy information as well as financial transaction information.
Company	An entity that contracts with an issuer to receive corporate cards for its employees. A company is uniquely identified by its Issuer and Company number.
Company Group	A grouping of separate companies to look like a single company. Often these companies have separate issuers and are part of a multinational company.
Financial (or Financial Transaction)	An actual charge (or adjustment) that occurs against a credit-card.
Global Data Repository (GDR)	The Corporate Products data repository. The Global Data Repository (GDR) receives data from processors and determines which downstream application to send the data to.
Hierarchy	A term for a company's organizational chart. This includes Org Points and Cardholders (credit cards).
Issuer	An entity that issues cards to companies that use corporate cards. An issuer is uniquely identified by the combination of ICA and Bank Number.
Org Point	An organizational point in a company's hierarchy (organization chart). For example, Account Payables, GTO, Corporate Products
myProvider	The interface (GUI) to the Global Data Repository. See Global Data Repository (GDR)
Smart Data	A product suite where corporate card holders can view and analyze their spending.

Glossary
Glossary

Term	Definition
XML	Extensible Markup Language, an industry standard for data exchange between systems
XML Schema	Defines an implementation of XML for representing specific data elements