



# FI-TMC

## Interface Description

### mySAP Financials – Travel Management, Credit Card Clearing

**Release R/3 Enterprise 4.7**



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## TABLE OF CONTENTS

<b>1. General Introduction</b>	<b>4</b>
<b>2. Graphic Presentation</b>	<b>4</b>
<b>3. Overview of Individual Data Records</b>	<b>5</b>
3.1 Header Data	5
3.2 Transaction Data	5
3.3 Totals Record	5
<b>4. Description of Data Records in Table Form</b>	<b>6</b>
4.1 Header Data	6
4.2 Transaction Data	6
4.3 Totals Record	6
<b>5. Field Descriptions</b>	<b>7</b>
5.1 Description of Individual Fields for Header Data	7
5.2 Description of Individual Fields for Transaction Data	8
5.3 Description of Individual Fields for Totals Record	10
<b>6. Overview of changes from the previous to the current version</b>	<b>11</b>
6.1 New fields	11
6.2 Fields with changed meaning	11

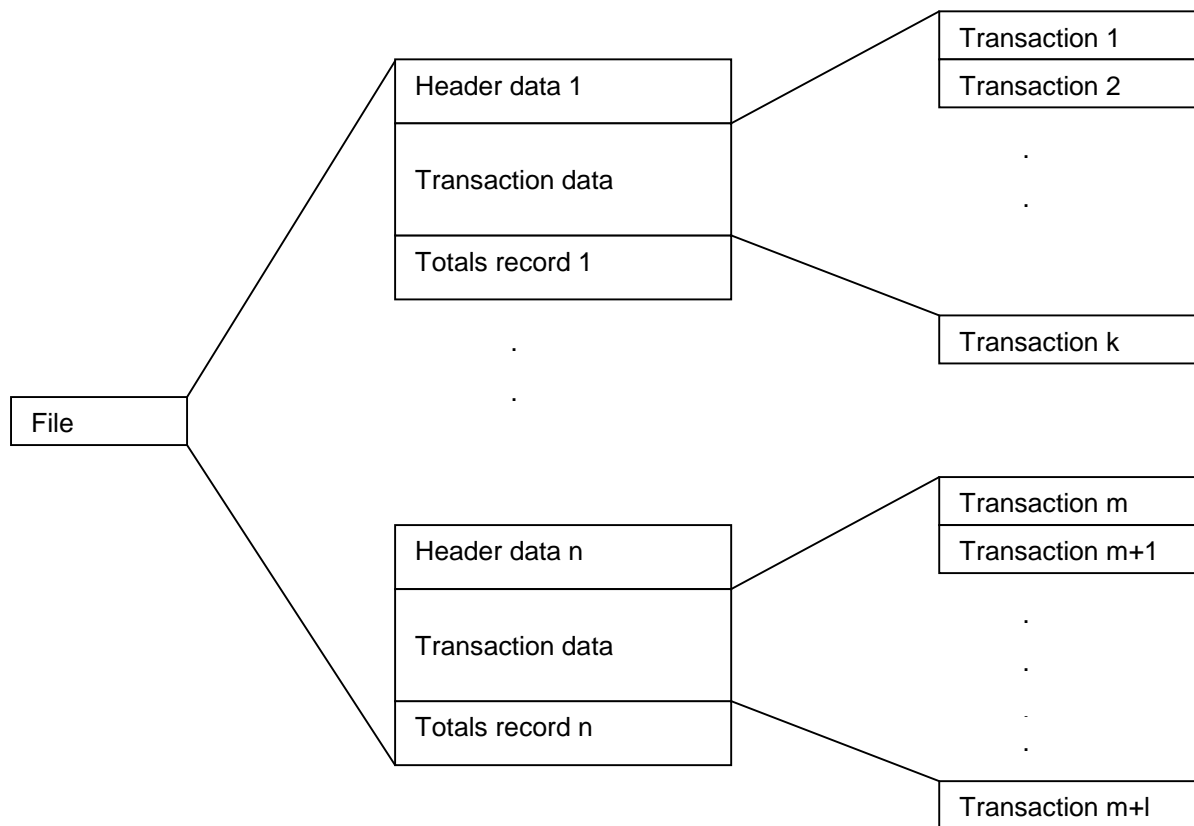
## 1. General Introduction

In order to use data from credit card companies in the SAP R/3 system and, at the same time, be independent of credit card providers, a certain data record structure is required.

All credit card companies, which agree to comply with this data record structure, will receive in return an interface certificate from SAP.

The data sets produced by the credit card companies and then delivered to their clients should be in ASCII format with line breaks. The names of these files can be freely defined, but should have the ending .CCD.

## 2. Graphic Presentation



### **3. Overview of Individual Data Records**

#### **3.1 Header Data**

The header data contains information which applies to all transactions. This includes, for example, the accounting number, company identifier, accounting currency and accounting date.

Each accounting run begins with such a header data record. The header data record can, however, be included several times on one data medium.

#### **3.2 Transaction Data**

Essential data, such as the credit card number, the employee's name and personnel number, date of purchase, expense group, expense indicator, expense key, currency used and the exchange rate, constitutes the transaction data.

This covers all information required in the SAP Travel Management to create expense reports and to ensure a fluid and safe processing of credit card billing information from Travel Management to accounting.

The transaction data is composed of the single line items (transactions) that represent each credit card payment process.

#### **3.3 Totals Record**

The totals record contains several totals fields in which all individual purchases are added together as a control measure. The number of totals records in a data file corresponds to the number of header data records.

## 4. Description of Data Records in Table Form

### 4.1 Header Data

No.	Description	From character	Length	Format
1	Line type, here: 'H' (for Header)	1	1	Character
2	Version number	2	10	String
3	Accounting date	12	8	YYYYMMDD
4	Accounting number	20	10	Number, leading zeros
5	Company identifier	30	10	String
6	Credit card company	40	2	String
7	Accounting currency	42	3	String
8	Decimal places for accounting currency	45	1	Number
9	VAT rate for additional charges	46	5	Number, 3 decimal places
10	Test parameter	51	1	Character
Total length of line: 51 characters				

### 4.2 Transaction Data

No.	Description	From character	Length	Format
1	Line type, here: 'M' (for Main data)	1	1	Character
2	Personnel number of employee	2	8	Number, leading zeros
3	Name of employee	10	50	String, left-justified
4	Credit card number	60	19	String, left-justified
5	Company-paid indicator	79	1	Character
6	Date of purchase or departure	80	8	YYYYMMDD
7	Time of purchase	88	6	HHMMSS
8	Expense category	94	1	Character
9	Expense key	95	10	String, left-justified
10	Debit / credit flag	105	1	'+' or '-'
11	Amount in purchasing currency	106	10	Number, leading zeros
12	Decimal places for amount	116	1	Number
13	Purchasing currency	117	3	String, left-justified
14	Country of purchase	120	3	String, left-justified
15	VAT rate for purchase	123	5	Number, 3 decimal places
16	Exchange rate	128	11	Number, leading zeros, 7 decimal places
17	Amount in accounting currency	139	10	Number, leading zeros
18	Additional charge in accounting currency	149	10	Number, leading zeros
19	Total amount of transaction in accounting currency	159	10	Number, leading zeros
20	Number of additional data items	169	2	Number, leading zeros
21	Description of service establishment	171	50	String, left-justified
22	Document number	221	20	String, left-justified
23	Trip number	241	10	Number, leading zeros
Total length of line: 250 characters				

### 4.3 Totals Record

No.	Description	From character	Length	Format
1	Line type, here: 'S' (for Sum)	1	1	Character
2	Accounting number	2	10	Number, leading zeros
3	Total purchases in accounting currency	12	15	Number, leading zeros
4	Total additional charges	27	15	Number, leading zeros
5	Total of all transactions	42	15	Number, leading zeros
6	Number of transaction data records	57	8	Number, leading zeros
Total length of line: 64 characters				

## 5. Field Descriptions

### 5.1 Description of Individual Fields for Header Data

#### Field 1, Line type

'H' for Header, in order to distinguish between the individual lines of a data file.

#### Field 2, Version number

Specification of version of sequential file: the version is designated 'SAPR3V0100'.

The version number is the same as for the previous interface document as both formats are almost compatible (see chapter 6 for details).

SAP will advise the credit card companies if the version changes.

#### Field 3, Accounting date

Date of accounting in format YYYYMMDD

This should be the date of the accounting run (creation of the data set).

#### Field 4, Accounting number

10-digit number for accounting run given by the credit card provider

This number needs to be different for each imported file per client (unique key). This field is required for recognizing and preventing repeated reading of data files.

#### Field 5, Company identifier

10-letter string for identifying your own company

This field is required for recognizing and preventing possible mailing errors (if, for example, a file is sent to the wrong company). The credit card company and their clients agree upon this field.

#### Field 6, Credit card company

2-letter identifier for the credit card company

Its use is essential if several different credit card systems are used within one company.

It might include, for example, AP for AirPlus, AX for American Express, DC for Diners Club, EC for Eurocard, TP UATP card company, or VI for Visa International.

Starting with release R/3 Enterprise, the values for these identifiers can be maintained in a customizing table (T706\_CCOMP); for previous releases they are defined in the R/3 Data Dictionary domain CCOMP.

The entry in the file is checked against these values.

#### Field 7, Accounting currency

3-letter ISO code for the currency in which all foreign currency amounts are converted (currency of the invoice)

It must be identical to the accounting currency of the trip provision variant in SAP Travel Management.

For example: 'EUR' for Euros, 'GBP' for British pounds, 'USD' for US dollars, etc.

#### Field 8, Decimal places for accounting currency

Value 0, 2 or 3, depending on the currency used for accounting.

#### Field 9, VAT rate for additional charges

5-digit numeric field with 3 fixed decimal places. '15000', for example, signifies 15.000 %.

Some credit card companies charge additional fees for certain transactions (field 18 in transaction data).

The VAT rate valid for all these fees in the accounting run is specified here, if the fees are VAT deductible.

Otherwise, 5\*SPACES (' ') should be entered here.

The field is optional because it is currently not used in SAP Travel Management.

#### Field 10, Test parameter

If the data is for testing purposes only, enter 'X' here, otherwise SPACE.

## 5.2 Description of Individual Fields for Transaction Data

### Field 1, Line type

'M' for Main data, in order to distinguish between the individual lines of a data file.

### Field 2, Personnel number of employee

8-digit personnel number of the employee in the SAP R/3 system

Stored as a number with leading zeros, for example '00017718'.

### Field 3, Name of employee

The name of the employee is used to verify that the personnel number, credit card number and name are all correct. If possible, the name should be entered in reverse, i.e. last name followed by the first name (or initials). For example: Miller P, Budgetkiller Martin.

### Field 4, Credit card number

The number of the credit card used as a left-justified string. If it is less than 19 characters long, the remainder is filled with SPACES. Please enter the full credit card number (including membership number and check digit).

### Field 5, Company-paid indicator

If the transaction is invoiced to the company, the field must contain 'X'. This concerns lodged cards (central travel department cards, BTA - business travel account or company account cards) or personnel corporate cards with central payment. In these cases, the transaction must be assigned to an expense type 'paid by company'. Company-paid transactions are posted differently and must not be reimbursed to the employee.

Otherwise, if the transaction is invoiced to the employee, the field must contain ' ' (SPACE). In this case, the transaction will be assigned to an expense type that triggers reimbursement to the employee.

### Field 6, Date of purchase or departure

The date on which the purchase was made with the format YYYYMMDD

If the date of purchase is not available, the transaction processing date of the current statement must be used.

In case of a flight or train ticket, the departure date should be provided or in general, a service date.

This field is used to support automatic assignment of the credit card receipt to an existing expense report of the employee (if no trip number – field 23 - is available) by checking if the date is between the trip beginning and the trip end date. Therefore, the date when the service took place should be in this field.

### Field 7, Time of purchase

The time at which the purchase was made with the format HHMMSS

If this data is not available, the value '000000' must be entered.

The value of this field is currently not used in SAP Travel Management therefore it is optional.

### Field 8, Expense category

One of the values in the following table:

Value	Significance
A	Accommodations
C	Car / transportation costs
M	Meals
P	Plane
T	Train
R	Rental car
K	Phone / communication
O	Other

The field is optional because it is currently not used in SAP Travel Management.

It is intended for possible future enhancements that may introduce supplementary data depending on this category.



### Field 9, Expense key

10-character string, left-justified.

For R/3 releases up to 4.6C, the interface is restricted to the following list of expenses keys (as they were defined as fixed values of the domain CEKEY in the R/3 Data Dictionary):

Expense key	Definition
HOTEL.....	Hotel costs common
MILEAGE...	Car / transportation costs common
MEALS.....	Meals common
FLIGHT....	Flights common
TRAIN.....	Train costs common
CAR.RENTAL	Car rental
COMMUNICAT	Communication costs
OTHERS....	Other costs

With the release R/3 Enterprise, any list of 10-character strings agreed upon between the credit card provider and the company can be used, since the company can now customize the assignment for any desired expense key to an expense type used in SAP Travel Management. So, more detailed information and additional keys like cash withdrawals can be provided.

The string may only contain upper-case letters 'A'-'Z' (no special characters), digits '0'-'9' as well as '.' and '\_' (the string must be a valid database table key for all platforms).

Customers on lower releases can use more detailed expense keys if they enhance the domain CEKEY.

### Field 10, Debit / credit flag

This field contains '-' if the transaction is charged from the account (the amount must be paid to the credit card provider) and '+' if the transaction is a credit (the amount is refunded from the credit card provider).

### Field 11, Amount in purchasing currency

10-digit numeric field with leading zeros but no decimal

The number of decimal places is specified in field 12; the currency is defined in field 13.

### Field 12, Decimal places for amount

Number of decimal places (0, 2 or 3) for the amount in purchasing currency in field 11

### Field 13, Purchasing currency

3-letter ISO code for the original currency of the purchase

For example, 'EUR' for Euros, 'GBP' for British pounds, 'USD' for US dollars, etc.

### Field 14, Country of purchase

2-letter ISO code designation of the country in which the purchase was made

For example, 'DE' for Germany, 'US' for United States of America, 'CH' for Switzerland, etc.

### Field 15, VAT rate for purchase

5-digit numeric field with 3 fixed decimal places. '15000', for example, signifies 15.000 %.

VAT rate for amount in purchasing currency (field 11).

If the VAT rate is not available, this field should contain 5 SPACES (' ').

The field is optional because it is currently not used in SAP Travel Management.

### Field 16, Exchange rate

11-digit specification of exchange rate

This value always has 4 places before and 7 places after the decimal point, which is why the decimal point does not have to be specified in this field. It always represents the value of the currency conversion from 1 unit of purchasing currency (field 13) to 1 unit of accounting currency (field 7 in header data).

If, for example, a purchase is made in Japanese Yen and the accounting currency is Euro, this field must contain the value '00000085278' (1 JPY = 0.0085278 EUR).

### Field 17, Amount in accounting currency

10-digit specification of the amount of the purchase converted into accounting currency. The decimal places (field 7) and currency (field 8) are as specified in the header data. The rule is as follows:

amount in purchasing currency (field 11) \* exchange rate (field 16) = amount in accounting currency.

#### Field 18, Additional charge in accounting currency

An additional charge for the transaction is specified in the accounting currency (the decimal places and currency are again as specified in the header data).

If the additional charge includes VAT, the rate is as in the header data (field 9). This field is reserved for additional charges from the credit card companies, e.g. for selling travel insurance. If there are no additional charges, this field contains zeros ('0000000000').

#### Field 19, Total amount of transaction in accounting currency

The decimal places and currency are as specified in the header data.

The rule is as follows: field 17 + field 18 = field 19.

#### Field 20, Number of additional data items

This field is intended for the number of additional data items of this transaction. Since there is no additional data defined in this version of the interface, the field must be filled with zeros ('00').

#### Field 21, Description of service establishment

Left-justified string that includes details on the service establishment's name and location

#### Field 22, Document number

Left-justified string. A unique identifier for each transaction must be provided here.

A unique transaction number (together with the credit card number) is needed as a reconciliation criterion for the automatic clearing of company paid expenses with the FI postings of the invoice. Therefore, this number must be the same as the one used in the credit card invoice file sent to the company.

#### Field 23, Trip number

Number with 10 digits, leading zeros (e.g. 0000130266)

Starting with release R/3 Enterprise, this field is used to automatically assign a credit card receipt to an employee's expense report (if this process is chosen by the administrator). If no trip number is available, the date of purchase (field 6) will be used for this purpose.

In case the trip number from SAP Travel Management is already known before the trip, it can be put in the Personal Name Record (PNR) of a travel service booking paid with a lodged card and should be retrieved from there for the creation of this file.

If a trip request is used and a travel agency makes the travel service bookings, the trip number can be added manually to the PNR by the travel agent with the following format:

RM \*/SAP / TN=0000130266

If a trip plan is created with SAP Travel Planning, this line is added to the PNR automatically.

In case the trip number is not available, this field must be filled with zeros ('0000000000').

### 5.3 Description of Individual Fields for Totals Record

#### Field 1, Line type

'S' for sum data in order to distinguish between the individual lines of a data file.

#### Field 2, Accounting number

Must be identical to the accounting number (field 4) in the header data.

#### Field 3, Total purchases in accounting currency

Sum of fields 17 of transaction data

#### Field 4, Total additional charges

Sum of fields 18 of transaction data

#### Field 5, Total of all transactions

Sum of fields 19 of transaction data. The rule is as follows: Field 5 = Field 3 + Field 4.

#### Field 6, Number of transaction data records

Number of transaction data records in this dataset (lines with line type 'M').

## **6. Overview of changes from the previous to the current version**

FI-TMC is first introduced as a new certifiable interface in SAP R/3 Release 3.0 and has not had any changes until SAP R/3 Release 4.6. In SAP R/3 Enterprise Release 4.7 the interface has been enhanced with new features and this new documentation. Recertification is not required for integrations certified on previous releases, but is recommended.

### **6.1 New fields**

#### **Transaction data, field 23, Trip number**

This is a change regarding the credit card provider producing this file.

This field is introduced to facilitate the automatic assignment of credit card receipts to existing trips in SAP Travel Management. Therefore, the trip number is transferred via the PNR of a booking made with a lodged card. If this data is available, it should be put in this field.

Starting with release R/3 Enterprise, the SAP system will evaluate this field; for previous releases it is ignored.

### **6.2 Fields with changed meaning**

#### **Header data, field 6: Credit card company**

This is a change regarding the client company.

With release R/3 Enterprise, the identifiers for credit card companies can be maintained in an own customizing table, where entries can be added for all credit card companies used for credit card clearing. For previous releases, the values are fixed in R/3 Data Dictionary domain CCOMP which has to be extended if the clearing will be made with a credit card company not contained there.

#### **Transaction data, field 5: Company-paid indicator (previously: Central / employee card indicator)**

This is a change regarding the credit card provider producing this file.

In the current version, it has been clarified that the identifier should be set to 'X' for all types of cards where the invoice is sent to the company, i.e. not only for central travel department cards, but also for personnel corporate cards with central payment. This is why also the label has been changed.

The field now serves to distinguish between cards where the company pays the invoice and cards where the employee will be reimbursed by his company, because he has to pay the invoice directly.

#### **Transaction data, field 6: Date of purchase or departure**

This is a change regarding the credit card provider producing this file.

In the previous version, this was always the date of purchase. Now the field should hold the date when the service paid with the credit card actually took place (e.g. for a flight ticket the departure date). The reason for this change is to improve the automatic assignment of credit card receipts to trips, based on the trip dates.

#### **Transaction data, field 9: Expense key**

This is a change regarding both the credit card provider and the client company.

In the previous version, the list of expense keys was fixed to 8 values. If a customer needs more detailed information, he can agree with the credit card provider to have more values delivered.

With release R/3 Enterprise, all values can be entered in a customizing table, for previous releases, additional values have to be added to the domain CEKEY in the R/3 Data Dictionary (see SAP note 102338 for details). In any case, an assignment of each expense key from the credit card provider to an expense type in the trip provision variant used by the company must be made.

#### **Transaction data, field 22: Document number**

This is a change regarding the credit card provider producing this file.



With this new version, a unique transaction number must be provided in this field to allow automatic reconciliation with data from the invoice.