

# Interfaces to Accounting (AC)



HELP.CAGTFACINT

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## Interfaces to Accounting (AC)

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## BAPIs for Data Transfer to the FI/CO Interface

## BAPIs for Data Transfer to the FI/CO Interface

### Use

The FI/CO interface (RWIN) is the central interface for transferring postings from other application components in the SAP R/3 System to Accounting. The FI/CO interface controls updates of actual data in Accounting and carries out checks from the Accounting standpoint.

Actual data relevant to Accounting from other SAP R/3 application components is first transferred to the FI/CO interface. The FI/CO interface then sends the data to the appropriate Accounting application component (such as Asset Management, Financial Accounting, Cost Center Accounting, Profit Center Accounting, Profitability Analysis, and so on).



Billing data from the *Sales and Distribution* (SD) application component is transferred to the FI/CO interface. The interface then creates the relevant Accounting documents (CO document, FI document, and so on).

You can use **Business Application Programming Interfaces** (BAPIs) to transfer postings from other application components to Accounting. A BAPI is a standard interface that facilitates the integration of the SAP R/3 System with the processes and data of other business application systems.

For more information about BAPIs, see the SAP Library under Cross-Application Components → *Business Framework Architecture (CA-BFA)* → *Desktop Development (CA-BFA-INT)* → *SAP Automation*.

### Features

The BAPIs transfer actual data to Accounting via the FI/CO interface. You can use the following methods (BAPIs) to transfer data from specific business transactions to Accounting:

- **AccountingGoodsMovement.Check**

- **AccountingGoodsMovement.Post**

- Goods movements are triggered by transactions in the *Production* (PP) and *Sales and Distribution* (SD) application components, or by inventory postings. In Logistics, they lead to adjustments in warehouse stock in the *Inventory Management* (MM-IM) application component. This also results in a posting to Accounting. Therefore, Accounting receives the relevant data from Logistics.



- Consumption of raw materials results in an inventory change posted to Inventory Management. The posting is also transferred to Accounting.

- The above check method checks whether the goods movement data relevant to accounting can be posted in Accounting.

- The above posting method posts the goods movement data relevant to accounting in Accounting.

- **AccountingBilling.Check**

- **AccountingBilling.Post**

**BAPIs for Data Transfer to the FI/CO Interface**

Billing transactions in the *Sales and Distribution* (SD) application component result in billing data being sent to Accounting.



Goods sold on credit result in revenues, which are posted to billing and then transferred to Accounting.

The above check method checks whether the billing data relevant to accounting can be posted in Accounting.

The above posting method posts the billing data relevant to accounting in Accounting.

Posted revenues and sales deductions are updated to the *Profitability Analysis* (CO-PA) application component.

- **AccountingInvoiceReceipt.Check**

- **AccountingInvoiceReceipt.Post**

- The SAP R/3 Accounting components can accept data from invoice receipts posted in logistic systems.



- Raw materials are sold on credit and the invoice receipt is posted in a logistic system. The FI/CO interface transfers the relevant data to the Accounting application components.

- The above check method checks whether the invoice receipt data relevant to accounting can be posted in Accounting.

- The above posting method posts the invoice receipt data relevant to accounting in Accounting.

- **AccountingPurchaseRequisition.Check**

- **AccountingPurchaseRequisition.Post**

- A purchase requisition created in Logistics represents a formal request to Purchasing to supply a specific quantity of material or perform a specific service at a specific date.

- The expected costs from the purchase requisition have to be transferred to Accounting as purchase requisition commitments.

- The purchase requisition commitments can update to the following components in Accounting:

- Controlling (for example, a cost center, project, or an internal order)
        - Cash Management and Forecast
        - Cash Budget Management
        - Funds Management
        - Project Cash Management

- The above check method checks whether the purchase requisition data relevant to accounting can be posted in Accounting.

- The above posting method posts the purchase requisition data relevant to accounting in Accounting.

**BAPIs for Data Transfer to the FI/CO Interface****• AccountingPurchaseOrder.Check****AccountingPurchaseOrder.Post**

A purchase order created in Logistics represents a formal request from a purchasing organization to a vendor to supply a specific quantity of material or perform a specific service at a specific date.

When a purchase order is made for a material that is consumed immediately (that is, the material is not taken into stock), the expected costs have to be transferred to Accounting as purchase order commitments.

The purchase order commitments can update to the following components in Accounting:

- Controlling (for example, a cost center, project, or an internal order)
- Cash Management and Forecast
- Cash Budget Management
- Funds Management
- Project Cash Management

The above check method checks whether the purchase order data relevant to accounting can be posted in Accounting.

The above posting method posts the purchase order data relevant to accounting in Accounting.

**• AccountingEmployeeExpenses.Check****AccountingEmployeeExpenses.Post**

G/L account postings made in Payroll and Travel Expenses update to Accounting. Examples of such G/L account postings include:

- Expenses for wages/salary
- Employee receivables
- Employee payables
- Trip repostings

In this scenario, Accounting does not use accounts receivable or accounts payable accounting.

The above check method checks whether the G/L account postings made in Payroll and Travel Expenses can be posted in Accounting.

The above posting method posts the G/L account postings made in Payroll and Travel Expenses in Accounting.

**• AccountingEmployeeReceivables.Check****AccountingEmployeeReceivables.Post**

Accounts receivable postings made in Payroll update to Accounting. Examples of such postings include:

- Advances
- Employee loans



**BAPIs for Data Transfer to the FI/CO Interface**

The above check method checks whether the accounts receivable postings made in Payroll can be posted in Accounting.

The above post method posts the accounts receivable postings made in Payroll in Accounting. The general ledger is also updated.

- **AccountingEmployeePayables.Check**

**AccountingEmployeePayables.Post**

Accounts payable postings made in Payroll and Travel Expenses update to Accounting. Examples of such postings include:

- Advances
- Employee loans
- Trip expenses

The above check method checks whether the accounts payable postings made in Payroll and Travel Expenses can be posted in Accounting.

The above posting method posts the accounts payable postings made in Payroll and Travel Expenses in Accounting. The general ledger is also updated.

## IDoc Interfaces for Data Transfer to Accounting

# IDoc Interfaces for Data Transfer to Accounting

## FI/CO Interface in the SAP R/3 System

The FI/CO interface (RWIN) is the central interface for transferring postings from other application components in the SAP R/3 System to Accounting. The FI/CO interface controls updates of actual data in Accounting and carries out checks from the Accounting standpoint.

Actual data relevant to Accounting from other SAP R/3 application components is first transferred to the FI/CO interface. The FI/CO interface then sends the data to the appropriate Accounting application component (such as Asset Management, Financial Accounting, Cost Center Accounting, Profit Center Accounting, Profitability Analysis, and so on).



Billing data from the *Sales and Distribution* (SD) application component is transferred to the FI/CO interface. The interface then creates the relevant Accounting documents (CO document, FI document, and so on).

## IDoc Interfaces to Other SAP R/3 Systems

If you use distributed systems (Application Link Enabling = ALE), the FI/CO interface takes all actual data relevant to Accounting from other SAP R/3 Systems, but **not** data from the Accounting application components of the other SAP R/3 Systems.



Billing data from the *Sales and Distribution* (SD) application component in another SAP R/3 System is transferred to the FI/CO interface.

## IDoc Interfaces to External Systems

The FI/CO interface uses an intermediate document (IDoc) interface, which supports transfers of data based on business transactions from external systems to the Accounting application component in the SAP R/3 System.

The IDoc interface for the FI/CO interface can transfer data from the following business transactions:

- Goods movement
- Billing
- Invoice receipt

Billing data can update to the *Profitability Analysis* (CO-PA) application component.

The IDoc interface fulfills the Open Application Group (OAG) communication structure for the following Business Object Documents (BODs):

- *Post Journal* (goods movement)  
Communication between logistics and accounting systems
- *Load Receivable* (billing)  
Import of a billing document from an external system. Along with billing information, the IDoc includes segments with characteristics and value fields for Profitability Analysis.

**IDoc Interfaces for Data Transfer to Accounting**

- *Load Payable* (invoice receipt)
  - Transfer of an invoice receipt from an external system or transfer of an invoice receipt to an external system
- *Confirm BOD*
  - Confirmation of the successful processing of a received Business Object Document or sending of error messages

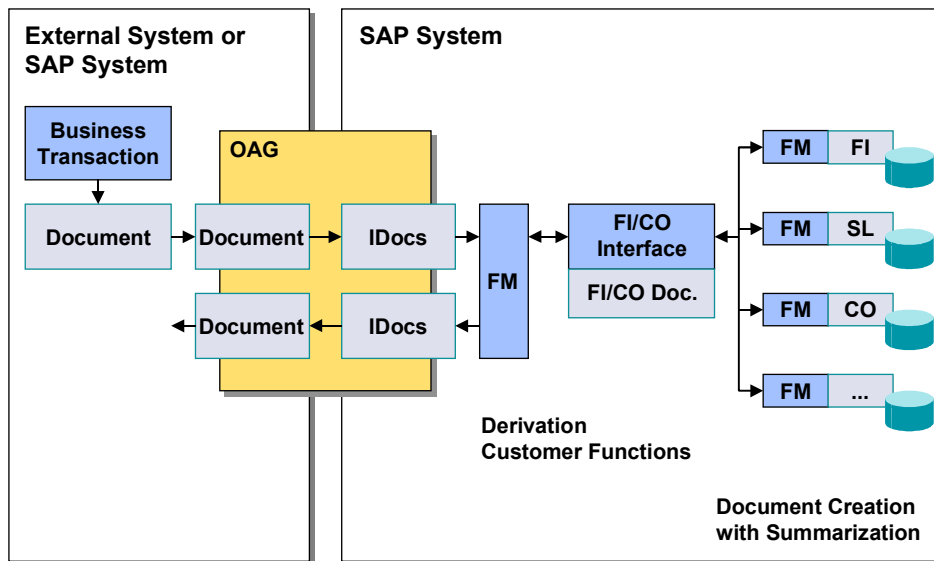
The IDocs for the business transactions can be provided with data via the BODs.

The data, once prepared for the FI/CO interface, generally results in general ledger (G/L) postings and postings in the subsidiary ledgers for customers and vendors in the *Financial Accounting* (FI) application component. The integration of the SAP R/3 System ensures that other Accounting components have access to this data.

The IDoc serves as the source document for all other documents created in the SAP R/3 System. The connection between the IDoc and the follow-on documents is the document number in the external system or in the other, distributed, SAP R/3 System. You can also display the IDoc from the line item display.

**Transferring Data to the FI/CO Interface**

The following graphic illustrates the data transfer procedure to the FI/CO interface in the SAP R/3 System.



**Outbound System**

The outbound system (either an external system or another SAP R/3 System) writes documents on the basis of business transactions made. The data is transferred to the IDoc interface of the outbound system, whereupon the outbound IDoc moves to the BOD structure.

**Inbound System**

The inbound system (an SAP R/3 System) also possesses an IDoc interface. Inbound IDocs are provided with data via the BODs.

**IDoc Interfaces for Data Transfer to Accounting**

The following table shows the IDocs and message types that exist in the SAP R/3 System.

<b>Business Transaction</b>	<b>IDoc</b>	<b>Message type</b>
Goods movement	ACPJOU01	ACPJMM
Billing	ACLREC01	ACLREC
Invoice receipt	ACLPAY01	ACLPAY

The individual business transactions have the following check modules, which verify the corresponding coding block. These check modules belong to function group ACC3.

<b>Business Transaction</b>	<b>Check module</b>
Goods movement	ACC_CODINGBLOCK_CHECK_PJMM
Billing	ACC_CODINGBLOCK_CHECK_LREC
Invoice receipt	ACC_CODINGBLOCK_CHECK_LPAY

An IDoc contains the mandatory and optional fields for the BODs along with SAP-specific fields, which are all optional fields. If, during data transfer via the IDoc interface, only mandatory fields are filled, the SAP R/3 System functions cannot be used to their maximum capacity.

The data is transferred to one of the following function modules (FM) according to the business transaction:

- IDOC\_INPUT\_ACPJOU (goods movement)
- IDOC\_INPUT\_ACLREC (billing)
- IDOC\_INPUT\_ACLPAY (invoice receipt)

The function modules prepare the data for the FI/CO interface and create the appropriate FI/CO document. When preparing the IDocs, the function modules also check whether all mandatory fields are filled and convert ISO-normed units of measure, currencies, and currency units, as well as other fields, into SAP standard fields.

The FI/CO interface function modules include customer functions for modifying a line before it is included in the FI/CO document (for example, to insert additional data).

If no errors occur when the function modules process the data, it is transferred to the FI/CO interface for further processing.

Errors during data processing in the function module result in status messages documented by the IDocs and their inclusion in an error log. The outbound system can be informed of error messages or the successful processing of the IDoc via a response IDoc (*confirm*). The response IDoc is transferred via the IDoc interface of the SAP R/3 System to the outbound system and can be converted into a BOD.

The following errors can occur during IDoc processing:

- Error during checks of the transferred mandatory fields
- Error during the conversion of the unit of measure from the ISO norm to the SAP standard

### IDoc Interfaces for Data Transfer to Accounting

- Error during the conversion of the currency from the ISO norm to the SAP standard
- Error during the conversion of other fields to the SAP standard
- Error during checks of the FI/CO document by the FI/CO interface

## Preconditions and Requirements

Synchronization of the outbound and inbound systems is mandatory; the same account assignment objects must exist in both systems during the data transfer.

In the inbound system, ensure before transferring data that the required account assignment objects exist. During the transfer, the FI/CO interface checks whether the account assignment objects used in the IDoc actually exist.

## Limitations in Comparison with an Integrated System

You cannot make real reverse postings, which only use the document number to be reversed. The document number of the document to be reversed can, however, be given to the inbound system as part of a reverse posting. The number updates to the individual SAP R/3 application components together with the document. The document to be reversed is thereby flagged.

## IDoc Structure

The structure of the IDocs and their documentation is defined in the SAP R/3 System. To display these, proceed as described in [Displaying IDoc Type and Segment Documentation \[Page 18\]](#)

## IDoc Interface: Inventory Management to Accounting

### IDoc Interface: Inventory Management to Accounting

Goods movements are triggered by transactions in the *Production* (PP) and *Sales and Distribution* (SD) application components, or by inventory postings. In Logistics, they lead to adjustments in warehouse stock in the *Inventory Management* (MM-IM) application component. This also results in a posting to Accounting. Therefore, Accounting receives the relevant data from Logistics.



Consumption of raw materials results in an inventory change posted to Inventory Management. The posting is transferred to Accounting.

400000 Raw Material Consumption to 300000 Raw Materials \$ 40000

The posting updates to Controlling (CO).

### Transferring Data from Inventory Management of an External System

The SAP R/3 Accounting components can import data from goods movements posted in external logistic systems. The FI/CO interface inbound IDoc ACPJOU01 is used for this ([IDoc Interfaces for Data Transfer to Accounting \[Page 10\]](#)).

### Communication with ALE

If you use distributed systems (Application Link Enabling = ALE), the inbound IDoc for goods movements in Accounting communicates with the outbound IDoc for Inventory Management in the SAP R/3 System.

### Transferring Data to Accounting of an External System

To transfer goods movement data from the SAP R/3 System to the Accounting components in an external system, you use outbound IDoc ACPJOU01 for Inventory Management (MM-IM).

### Transferring Data to Accounting

Each goods movement in the Logistics components of the SAP R/3 System transfers data to outbound IDoc ACPJOU01, depending on the Customizing settings.

First, function module IDOC-OUTPUT\_CHECK conducts general data consistency checks. Then, function module IDOC\_OUTPUT\_ACPJOU\_PROJECT projects the FI/CO document onto an IDoc-specific internal structure and converts quantities and currencies to the ISO standard. Finally, processing branches to function module IDOC\_OUTPUT\_ACPJOU\_POST, where the initial field values of type NUMC reset to SPACE and those fields change for which defined conversions exist in the user interface.

A customer function is provided for the IDoc header and items. An IDoc extension fills several segments with additional lines. However, you cannot change the existing data in the IDoc, that is, you cannot modify existing lines.

If errors appear in Accounting during processing, corresponding messages appear and are registered in Logistics. IDoc ACCONF01 supports the confirmation of IDoc processing from Accounting.

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**IDoc Interface: Inventory Management to Accounting****BODs**

IDoc ACPJOU01 fulfills the Open Application Group (OAG) communication structure for the Business Object Documents (BODs) *Post Journal* (goods movement) and *Confirm* for the communication between the logistics and accounting systems.

- The outbound IDoc for inventory management can be transferred to the BOD structure. SAP does not convert IDocs into BODs; certified EDI and ALE partners provide this service.
- The inbound IDoc in Accounting can be provided with data via the BODs.

**Preconditions and Requirements**

Synchronization of the outbound and inbound systems is mandatory; the same account assignment objects must exist in both systems during the data transfer.

The outbound system does not check whether the account assignment objects exist in the inbound system. Before transferring data, you should ensure that the required account assignment objects exist.

**Structure of IDoc ACPJOU01**

The structure of the IDoc **ACPJOU01** and its documentation is defined in the SAP R/3 System. To display these, proceed as described in [Displaying IDoc Type and Segment Documentation \[Page 18\]](#)

## IDoc Interface: Billing to Accounting

### IDoc Interface: Billing to Accounting

Billing transactions in the *Sales and Distribution* (SD) application component result in billing data being transferred to Accounting.



Goods sold on credit result in revenues, which are posted to billing and transferred to Accounting.

140000 Customer Receivables to 800000 Revenue \$100,000

140000 Customer Receivables to 175000 Output Tax \$15,000

889000 Sales Deduction to 140000 Customer Receivables \$6000

175000 Output Tax to 140000 Customer Receivables \$900

Posted revenues and sales deductions update to the *Profitability Analysis* (CO-PA) application component.

### Data Transfer from Billing in an External System

The SAP R/3 Accounting components can import data from billing transactions made in external sales and distribution systems. The FI/CO interface inbound IDoc ACLREC01 is used for this ([IDoc Interfaces for Data Transfer to Accounting \[Page 10\]](#)).

You can update billing data to the *Profitability Analysis* (CO-PA) application component. For more information, see the SAP Library under *Controlling* → *Profitability Analysis (CO-PA)* → *Tools* → *IDoc Interface between an External Billing System and Accounting with Update in Profitability Analysis*.

### BODs

IDoc ACLREC01 fulfills the Open Application Group (OAG) communication structure for the Business Object Documents (BODs) *Load Receivable* (billing) and *Confirm* for importing a billing document from an external system. The inbound IDoc in Accounting can be provided with data via the BODs.

### Preconditions and Requirements

Synchronization of the outbound and inbound systems is mandatory; the same account assignment objects must exist in both systems during the data transfer.

### Structure of IDoc ACLREC01

The structure of the IDoc **ACLREC01** and its documentation is defined in the SAP R/3 System. To display these, proceed as described in [Displaying IDoc Type and Segment Documentation \[Page 18\]](#)



## IDoc Interface: Invoice Receipt to Accounting

### Transferring Data from Logistics of an External System

The SAP R/3 Accounting components can import data from invoice receipts posted in external logistic systems. The FI/CO interface inbound IDoc ACLPAY01 is used for this ([IDoc Interfaces for Data Transfer to Accounting \[Page 10\]](#)).



Raw materials are sold on credit and the invoice receipt is posted in an external logistic system. The FI/CO interface transfers the data relevant to accounting to the Accounting application components.

400100 Raw Material Purchase to 160000 Vendor Payables \$100,000

154000 Input Tax to 160000 Vendor Payables \$15,000

### Transferring Data to Accounting of an External System

To transfer invoice receipt data from an SAP R/3 Logistics system to an external Accounting system, you use outbound IDoc ACLPAY01.

### BODs

IDoc ACLPAY01 fulfills the Open Application Group (OAG) communication structure for the Business Object Documents (BODs) *Load Payable* (invoice receipt) and *Confirm* for the transfer of an invoice receipt to an accounting system.

- The outbound IDoc for Logistics can be transferred to the BOD structure. SAP does not convert IDocs into BODs; certified EDI and ALE partners provide this service.
- The inbound IDoc in Accounting can be provided with data via the BODs.

### Preconditions and Requirements

Synchronization of the outbound and inbound systems is mandatory; the same account assignment objects must exist in both systems during the data transfer.

### Structure of IDoc ACLPAY01

The structure of the IDoc **ACLPAY01** and its documentation is defined in the SAP R/3 System. To display these, proceed as described in [Displaying IDoc Type and Segment Documentation \[Page 18\]](#)

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**Displaying IDoc Type and Segment Documentation**

## Displaying IDoc Type and Segment Documentation

The description of the IDoc interfaces in this documentation does not include the IDoc segments or the fields making up the segments. This information is found in the SAP R/3 System in the tools for the IDoc documentation.

### Procedure

1. On the SAP R/3 System screen, choose *Tools* → *Business Communication* → *IDoc* → *IDoc Basis*.
2. To display the structure of an IDoc type and the component documentation, choose *Documentation* → *IDoc types*.
3. Enter the IDoc type in the *Obj. name* field, using the name given in the interface display (such as **ACPJOU01**), accept the other default settings, and choose *Display tree*.

The illustration includes:

- All segments making up the IDoc and their names
- All fields making up the segment and their names

You can reduce the display to the application view or the technical view using the corresponding functions:

- The standard setting of the application view displays the documentation for the segments and segment fields. The documentation describes the segments and lists the fields to which data must be transferred.
- The standard setting of the technical view displays the attributes of the IDoc, the segments and segment fields, along with the field values allowed.

4. To change the display based on user-defined entries, choose *Goto* → *User settings...*

You can print or save any screen display.

For more information about IDoc type documentation, see the SAP Library under *Cross-Application Components* → *IDoc Interface / Electronic Data Interchange* → *Structure, Documentation and Definition of IDoc Types*.