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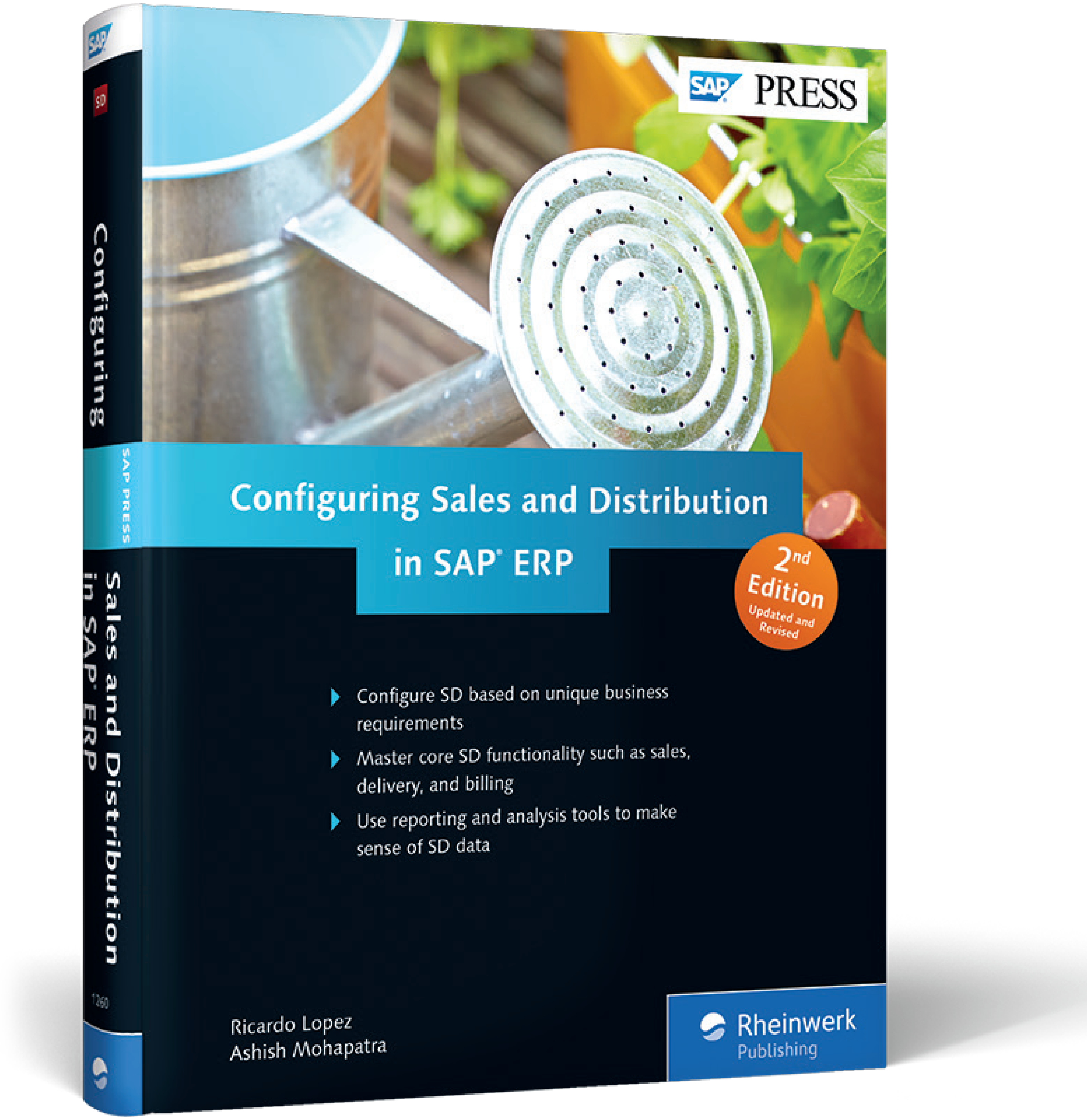

Reading Sample

"Billing," teaches you how to configure billing types, billing plans, and revenue account determination, and how to manage the SD interface with SAP ERP Financials for accounting purposes.

"Billing"

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Because we've already covered pricing and copy control, this chapter focuses on integration with SAP ERP Financials, especially as relates to billing and accounts receivable.

7 Billing

A bill, also called an invoice, is a legal commercial document sent to a customer in order to collect the payment for goods and/or services that he received or will receive.

Upon receiving an invoice, the customer verifies its accuracy with respect to the quantity of material received, prices committed, and other commitments (e.g., commitments for quality parameters or incoterm). Your customer expects an accurate, clear, and self-explanatory invoice from you. Various prices, taxes, discounts, and surcharges that you've included in the invoice should not surprise your customer. In addition to price, the invoice should also spell out when you expect payment, whether there is any cash discount if the customer pays before the due date, and which rate of interest he has to pay if he does not make payment on or before the due date. Your customer expects the same level of details for rebates, credit memos, debit memos, and returns. We'll discuss these as we move through this chapter.

Billing is the last stage in the Sales and Distribution functionality in SAP ERP. It primarily consists of the following functions:

- Creation of the invoice with reference to a sales order or delivery, or with a general billing interface using external data
- Creation of documents for complaint handling (e.g., credit memo, debit memo, and return)
- Creation of a pro forma invoice
- Creating of a billing plan
- Rebate settlement
- Cancellation of billing documents

- Copy control and pricing functions
- Issuing of different types of outputs (e.g., printed, EDI, or mail)
- Transfer of data to an accounting document (SAP ERP Financials)

In this chapter, we'll start with a discussion of the principles of billing, and then move on to the configuration of billing types. We'll discuss the customization steps for billing plans and the transfer of data to accounting, with a focus on revenue account determination using condition techniques. Finally, we'll discuss some errors encountered during billing processes and their solutions before summarizing the chapter.

7.1 Bill Processing

Billing, or bill processing, is how you process individual bills. This involves how you create an invoice, what actions to take if the bill is incorrect, and whether reference documents (delivery/order) are processed individually or collectively (that is, with multiple documents combined). We'll now describe the following processes to help you understand how SAP ERP processes a bill:

- How to create individual invoices with reference to an order or delivery
- How to combine different orders or deliveries into a single invoice
- How to split a single order or delivery into several invoices
- How to process billing due list
- How to create an invoice list
- How to cancel an invoice
- How to use a general billing interface for creating an invoice using external data

7.1.1 Creating Individual Invoices

You create invoices using Transaction VF01 or following the menu path SAP Easy Access • Logistics • Sales and Distribution • Billing Document • Create.

The initial screen looks similar to the screen shown in Figure 1.1. In the Documents column, you can enter one or more deliveries (relevant for billing) or the orders (relevant for billing). You select the invoice type and enter the billing, pricing, and service rendered dates, and then press `Enter` for processing. This data, if not entered, fills in from the default values maintained in the document types

being processed and the referenced document. The deliveries (or orders) will create one or more invoices depending on the customization settings and the differences in important data in the referenced deliveries (or orders).

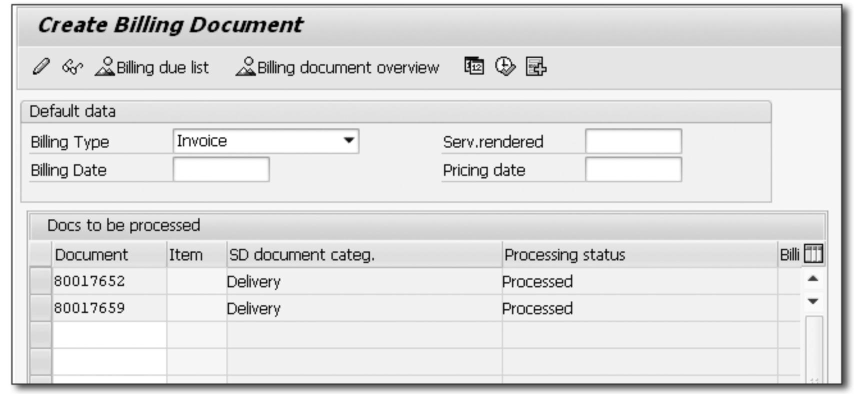


Figure 7.1 Creating Billing Document

You maintain the customization setting in the data transfer routine, as shown in Figure 7.2. For the Data field, `VBRK/VBRP` has routine `001` assigned to it. You can change this to `003` (Single Invoice) if you want each reference document to only have one invoice.

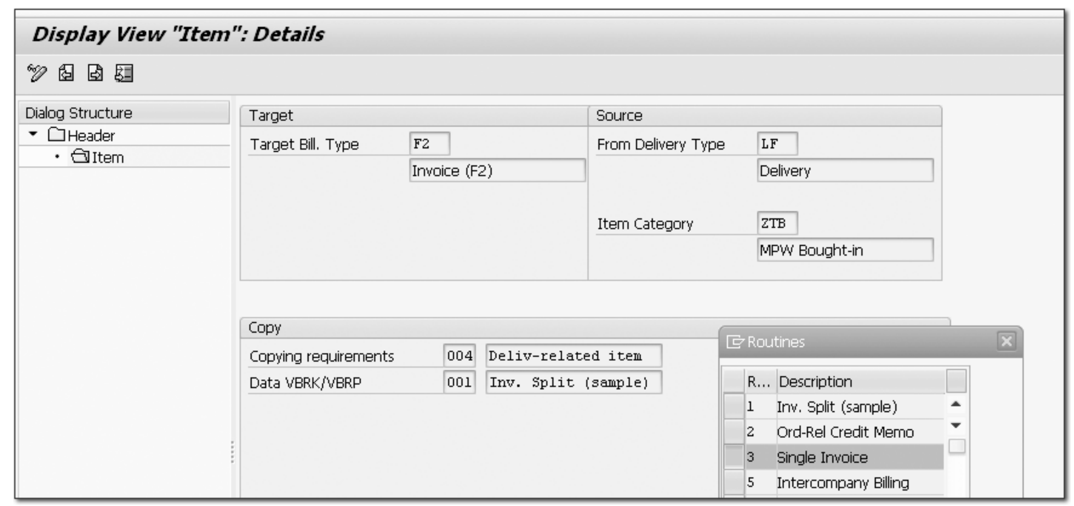


Figure 7.2 Data Transfer Routines for VBRK/VBRP

Data transfer routine `010` is the same as `003`, with Do Not Allow Splitting enabled even when a billing plan is involved. Routine `006` is also similar but is mainly used to restrict the maximum number of items in an invoice, due to company policy or legal requirements. Note that we also used these routines in copy control settings in Chapter 3. Other than this routine, there's no restriction on the number of line items an invoice can have. However, an accounting document cannot have more than 999 line items, so an invoice that creates more than 999 line items in its accounting document cannot be released to accounting. To avoid this error, you have no option but to delete part of the delivery and/or order and then process the invoice.

Invoice Maximums

One line item in an invoice can have more than one line item in an accounting document, depending upon your pricing procedure. Therefore, the maximum possible number of items possible in an invoice has to be less than 999 and will vary from document to document.

Copy control for billing is an important functionality that SAP ERP offers. It reduces the effort and errors involved in creating an invoice with reference to a delivery or order. It is done using Transaction VTFL (delivery related) and Transaction VTFA (order related). To reach the screen shown in Figure 7.2, execute the following steps:

1. Enter Transaction VTFL or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Documents • Maintain Copying Control For Billing Documents • Copying Control: Delivery Document to Billing Document.
2. Select the row with `F2` in the target column and `LF` in the source column.
3. Double-click on the Item folder.
4. Double click on the item category that you intend to customize. In Figure 7.2 we've done this for the customized item category `ZTB`.

Repeat the procedure for all of the combinations of billing type, delivery type, and item category for individual billings with a reference to delivery. For individual billings with a reference to an order, instead of Transaction VTFL, you should use Transaction VTFA, or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Documents • Maintain Copying Control For Billing Documents • Copying Control: Sales Document to Billing Document.

7.1.2 Collective Billing Document

By default, if the sold-to party, sales organization, and billing dates are the same, when you process several deliveries (or orders) using either Transaction VF01 or Transaction VF04 (billing due list), they combine to create a collective billing document.

Certain fields, such as the net value or date of creation, should not cause any invoice split. The billing due list is a work list in which all of the documents due for billing appear that can then be processed (billed). The list of such fields can be found in the include program `MV60ATOP` (shown in Figure 7.3). Other than the fields listed in Table 7.1, the difference in any fields for table `VBRK` (billing header) during bill processing will cause the invoice to split.

Table Field	Description
VBRK-NETWR	Net value
VBRK-KNUMV	Document condition number
VBRK-VBELN	Billing document
VBRK-ERNAM	Created by
VBRK-ERDAT	Created on
VBRK-ERZET	Time
VBRK-AEDAT	Changed on
VBRK-BELNR	Document number
VBRK-RFBSK	Posting status
VBRK-SFAKN	Cancelled billing document
VBRK-MWSBK	Tax amount
VBRK-FKTYP	Billing category

Table 7.1 Fields That Don't Cause Invoice Splitting

The customization for copy control also determines whether invoices should be combined or split during processing. Copy control routines `003`, `006`, and `010` will not allow different reference documents to create a collective billing document. In addition to the standard splitting rules, routine `007` will split if the division, distribution channel, department, or receiving points differ.

To avoid unnecessary splitting during collective processing, you can use Transaction VF04 or Transaction VF06 to enter a date for the billing document. To manually enter a billing date in Transaction VF04, follow the menu path SETTINGS • DEFAULT DATA when you're at the selection screen. A dialog box appears where you can enter the billing date. You can enter the billing date in the DEFAULT DATA field and then move on to create a new `VOFM` data transfer routine for the billing document by copying any standard routine (e.g., `007`) and modifying it. Then you can assign the new routine in the copy control setting in the DATA VBRK/VBRP field.

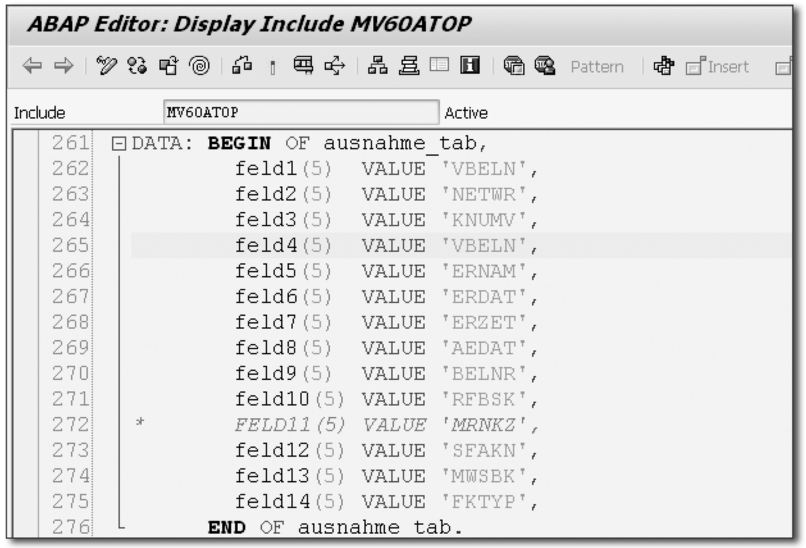


Figure 7.3 Fields Ignored During Invoice Split

In the next section, we'll discuss invoice splitting, including how to avoid unnecessary splitting and how to induce it when required.

7.1.3 Invoice Split

As we've touched on earlier, invoices split based on the following reasons:

- The customization done for copy control
- The difference in the billing header (`VBRK`) fields other than those specified in Table 7.1

During invoice processing, if the invoice split takes place, all invoices with their values will be available as a list in the billing document overview screen. You can reach this screen by pressing [F5] or clicking on the BILLING DOCUMENT OVERVIEW

button, as shown in Figure 7.1. In the billing document overview screen, you can select any two proposed invoices at a time and click on the SPLIT ANALYSIS button in the application toolbar. You can see the cause of the invoice split, as shown in Figure 7.4. If you find the reason for splitting unnecessary, you can take corrective measures. You can use either a user exit or customize the routines used in copy control.

Now that you understand what invoice splitting does, let's discuss the billing due list.

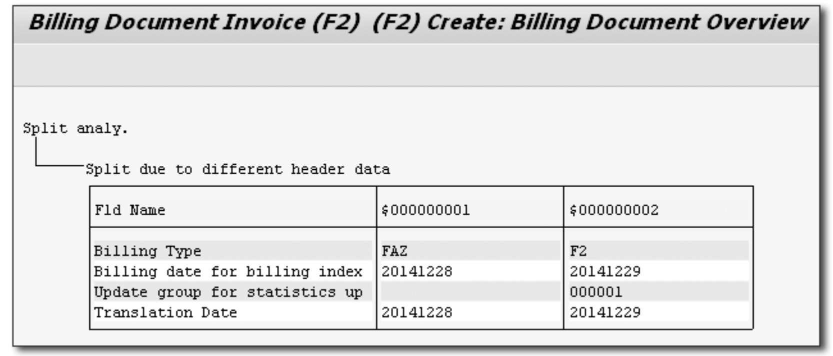


Figure 7.4 Split Analysis

7.1.4 Billing Due List

The billing due list is a generated list of orders, deliveries, or both that are due for invoicing based on certain selection criteria you specify in the selection screen.

Once the list is generated, you have the option of using it as a report or performing further processing. You can generate invoices for the documents due for billing by selecting all or some of the documents and clicking on the any of the following three buttons to create the invoices:

- INDIVIDUAL BILLING DOCUMENT
- COLLECTIVE BILLING DOCUMENT
- COLLECTIVE BILLING DOCUMENT/ONLINE

Before creating invoices, it's possible to simulate them. You can mass process invoices in the background using Transaction VF06. You can also schedule this processing for a time when the server is idle in order to optimize system performance and prevent manual intervention.

7.1.5 Invoice List

The invoice list functionality is another optimizing tool that SAP ERP offers. You combine different invoices (and debit memos) into a single invoice list and send it to the payer for payment. Similarly, you can group all credit memos together.

Invoice lists are created either periodically (e.g., monthly) or on a fixed date (e.g., the first day of every month). All of the individual billing documents become the items in an invoice list. You have the option of giving special discounts to take care of factoring services, for example.

A factoring service is a service rendered by a collecting agency or organization to collect payment, and involves factoring costs. For example, the service could make reminder phone calls on behalf of the client. Standard available output types exist for invoice lists.

7.1.6 Cancellation Invoice

While defining the billing type (Transaction VOFA), you can assign a cancellation billing type that can only be used for that billing type. You can also specify the copying requirement routine, if any, that must be satisfied in order to create a cancellation invoice with reference to the original invoice. You also specify the rule for the reference number and allocation number here. We'll discuss the importance of these fields later in this chapter.

It's important to note that the customization done in the copy control transaction from billing document to billing document (Transaction VTFF) is not relevant when you create a cancellation invoice with reference to an invoice. You can cancel one or several invoices using Transaction VF11 or by going to SAP IMG • Logistics • Sales and Distribution • Billing • Billing Document • Cancel.

SAP Notes

SAP Notes 1259505 (FAQ: New Cancellation Procedure in SD) and 400000 (FAQ: Transaction VF11: Cancellation of SD Billing Documents) are quite useful for learning more about the cancellation functionality.

Having discussed the cancellation invoice, let's move to the general billing interface. Here we'll explain how to create an invoice without a reference.

7.1.7 General Billing Interface

You use the general billing interface to create invoices in SAP ERP with external data. This is like creating an invoice without a reference (to an order or delivery). Program RVAFSS00 imports the data to the interface tables of the function module GN_INVOICE_CREATE. Function module GN_INVOICE_CREATE generates invoices when you use the general billing interface, as opposed to function module RV_INVOICE_CREATE. The fields specified in Table 7.2 must be present in the flat sequential file for creating an invoice (using the general billing interface). The data supplied should adhere to the length and the data type (e.g., numeric or character) requirement for the field.

Field Name	Field Length	Description
MANDT	3	Client
AUART	4	Sales document type
VKORG	4	Sales organization
VTWEG	2	Distribution channel
SPART	2	Division
FKDAT	8	Billing data
KUNAG	10	Sold-to party
MATNR and WERKS or LAND1	18 and 4 or 3	Material number and plant or country
PSTYV	4	Item category
KWMENG	8	Cumulative order quantity

Table 7.2 Mandatory Fields for Creating an Invoice with the General Billing Interface

The record type of the data in the sequential flat file determines the intended table for it. Table 7.3 lists some record types and the interface tables they populate.

Record Type	Interface Table	Purpose
A	XKOMFKGN	Item data
B	XKOMFKKO	Condition data
C	XKOMFKTX	Text data

Table 7.3 Important Interface Tables for Function Module GN_INVOICE_CREATE

When using the general billing interface you should ensure the following:

- Use standard billing type FX, or a copy of it, as the billing type.
- In the copy control transaction for billing (VTFA), maintain the Pricing Type Field in the item folder as C, D, or G. Pricing should remain unchanged. Use copy requirement routine 013 to ensure that the blocked customers are not billed. The system also removes items with no quantity.
- If pricing is to be transferred from an external system to SAP ERP, set the condition type as modifiable during customization. In other words, the Manual Entries field should have the value A, C, or blank.
- Item categories used for external billing should be relevant for pricing and billing.
- Relevant customer and material master records should exist in the system. If the material master record is not expected to exist, then the external data should also contain the information on the material short text, sales unit, currency, and material tax indicator. Be sure the NO_MARA field in the primary record of the sequential file is marked. If you do not expect the customer master record to exist, use the one-time customer master record and transfer additional information such as name, partner functions, and components of address.

Now that you understand the principles of bill processing, let's move on to billing types.

SAP Fiori for Billing

At the time of writing, there are four key SAP Fiori apps applicable for billing to keep in mind.

Description	Requirements
The *Customer Billing Document* fact sheet app displays contextual information on the billing document business objects, such as header/item, business data, and billing document status.	SAP EHP 7 for SAP ERP 6.0 SP 02
Using the *Customer Invoice* transactional app you can display invoices and their status; break invoice amount, shipment, and taxes at the item level; search by customer, document number, purchase order, and sales orders; and sort and filter invoice data.	SAP ERP 6.0 SP 15 or higher
The *Analyze Unbilled Items* transactional app gives you access to follow-on tasks for items past their billing date and still not considered during billing. You can total or filter the amount and number of unbilled items by various criteria.	SAP ERP 6.0 SP 15 or higher
The *Customer Accounting Document* fact sheet app gives information about the customer accounting document and allows you to navigate to related business objects.	SAP EHP 7 for SAP ERP 6.0

7.2 Billing Types

A bill can be an invoice, a credit memo, or a debit memo.

In accounting, these three types of bills differ significantly in terms of how they are treated. They also differ with respect to the reference documents they need for pricing, output, and various other aspects.

Customizing billing types broadly includes the following steps:

- Customizing the standard billing types or creating new billing types
- Defining number ranges for billing types
- Checking customized billing types

We'll discuss these three broad steps in the following subsections.

7.2.1 Customizing Billing Types

Use Transaction VOFA for customization of billing types or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Documents • Define Billing Types • Define Billing Types. After pressing Enter or clicking on the IMG – Activity icon (clock), you'll see the list of all existing billing document types. To create a new one, select any existing billing type and click on the Copy As (F6) icon. In Figure 7.5, we've selected F2 and clicked on the Copy As icon to get to the screen shown.

To create a new billing type, give an alphanumeric key of a maximum of four characters, starting with Y or Z. We'll cover this more in Section 7.2.2, but first, we'll discuss the following:

- General control
- Cancellation
- Account assignment/pricing
- Output/partner/texts determination

These are also the headings for different frames in the screen, as shown Figure 7.5.

The General Control area contains the following fields:

- Document Category
  This field groups different document types of the Sales and Distribution functionality in SAP ERP. A few examples of document categories for invoices are:
  - M (invoice)
  - N (invoice cancellation)
  - O (credit memo)
  - P (debit memo)
  - U (pro forma invoice)
- Posting Block
  Select this checkbox when you don't want the billing document automatically post to accounts. However, you can execute a manual transfer to accounts by executing Transaction VF02 and clicking on the Release To Accounting icon (green flag). A posting block gives you the opportunity to verify the invoice before posting.
- Transaction Group
  Enter transaction group 7 (billing document) or 8 (pro forma invoices) here, depending on whether posting to accounts is required.
- Statistics
  When this checkbox is selected, the statistics in sales information system (which we'll discuss in Chapter 9) is updated for the billing documents of this type of billing.
- Billing Category
  You can use this field to group the billing document types for printing (selection criteria), creation (selection criteria), and transfer to accounting.
- Document Type
  In this field, you specify the accounting document type for the billing document. The standard accounting document type for a sales invoice (e.g., F2) is RV (billing document transfer).
- Negative Posting
  Leave this checkbox blank if you don't allow negative posting. If the company code allows negative posting, it should be allowed for the same posting period (option A) or without any restriction (option B). It's important to note that when a negative posting is not allowed, the invoice can still have a negative value. When the invoice has a negative value, the value posts to the offsetting account as a positive value. The following example will help clarify this concept. Notice that in both cases, there is no negative figure in the accounting document. Only the GLs to be debited (Dr) or credited (Cr) are interchanged.

Example of No Negative Posting

Case 1: Invoice amount: 100 USD

Accounting document: Cr Sale Revenue Account 100 USD

Dr Customer Account 100 USD

Case 2: Invoice amount: -100 USD (negative invoice)

Accounting document: Dr Sales revenue account 100 USD

Cr Customer account 100 USD

- Branch/Head Office
  This field determines the partner function transferred to the accounting document. There are three possible values for this field. When the field is left blank, the payer becomes the customer; the sold-to party becomes the branch in the accounting document when the payer and sold-to party are different in the invoice, irrespective of customization in accounting. This rule is the only option when credit management is active in the system. When credit management is not active, you can either transfer the sold-to party (option A) or payer (option B) to the accounting document as a customer, and the system determines the branch as per the setting in SAP ERP Financials.
- Credit Memo with Value Date
  If you leave this checkbox unselected, the credit memo becomes due immediately. When you select it, the fixed value date (VBRK-VALDT) field in the credit memo fills with the baseline date of the invoice for which the memo is issued. The invoice reference field (BSEG-REBZG) of the accounting document line items fills with the accounting document number of the referenced billing document.
- Invoice List Type
  You specify the invoice list type for the billing document type here. Examples of invoice list types are:
  - LG (credit memo list)
  - LGS (cancel credit memo list)

- LR (invoice list)
- LRS (cancel invoice list)

- Rebate Settlement
Leave this field blank if your rebate settlement does not use this billing type. However, if it is to be used for rebate processing, depending upon its usage, it can have any of the following indicators:
  - A (final rebate settlement)
  - B (rebate correction document)
  - C (partial settlement for a rebate agreement)
  - D (manual accruals for a rebate agreement)
- Relevant for Rebate
Select this checkbox for the billing types for rebate processing (as specified above) or for the billing type for which the rebate must accrue.
- Standard Text
No longer used.

The Cancellation area has the following fields:

- Cancellation Billing Type
In this field, you can specify the billing type used for cancelling the billing type that you're customizing. Some invoice types (for example, pro forma invoices), however, don't require a cancellation billing type and are never cancelled.
- Copying Requirements
Enter the copying requirement type routine that must be fulfilled to create a cancellation invoice with reference to the invoice in this field. The copy control setting, maintained for billing document to billing document using Transaction VTFF, does not apply for copy control from invoice to cancellation invoice. This is true even though both the invoice and cancellation invoice are essentially billing documents.
- Reference Number
This field defines the value of the reference key field (BKPF-XBLNR) in the accounting document that the billing document creates. You can enter any of the six figures, listed in Table 7.4, from the billing document to the accounting document (header level). This becomes important for joining tables VBRK and BKPF.

- Allocation Number
This field defines the value of the assignment field for the items of the accounting document (BSEG-ZUONR). You can customize the billing type to pass any of the six permitted document numbers. This, along with the reference number, becomes important for reporting purposes, especially cross-component reports where information from Sales and Distribution, as well as the accounting components, will be extracted.

Code	Description
A	Purchase order number
B	Sales order number
C	Delivery number
D	External delivery number
E	Current billing document number
F	External delivery number if available; otherwise delivery number

Table 7.4 Options for Reference Number and Allocation Number

The Account Assignment/Pricing area contains the following fields:

- Account Determination Procedure
Assign the revenue account determination procedure for the billing document type here.
- Document Pricing Procedure
In the condition technique for pricing, the document pricing procedure, customer pricing procedure, and sales area determine the pricing procedure. You assign the document pricing procedure for the billing type here.
- Account Determination Reconciliation Account
Assign the reconciliation account determination procedure for the billing document type here.
- Account Determination Cash Settlement
You can assign the cash account determination procedure for the billing document type here.
- Account Determination Payment Cards
Assign the payment card account determination procedure for the billing document type in this field.

You can customize the fields found in Output/Partner/Texts Determination in other sections of customization, and depending upon the customization done in those sections, you'll find the value here. You do have the option of specifying the determination procedures for output, partner, and texts for a billing type in the screen shown in Figure 7.5. Normally, you perform the customization step of assigning determination procedures to billing types using Transactions NACE, VOPAN, and VOTXN, respectively, for output, partner, and texts.

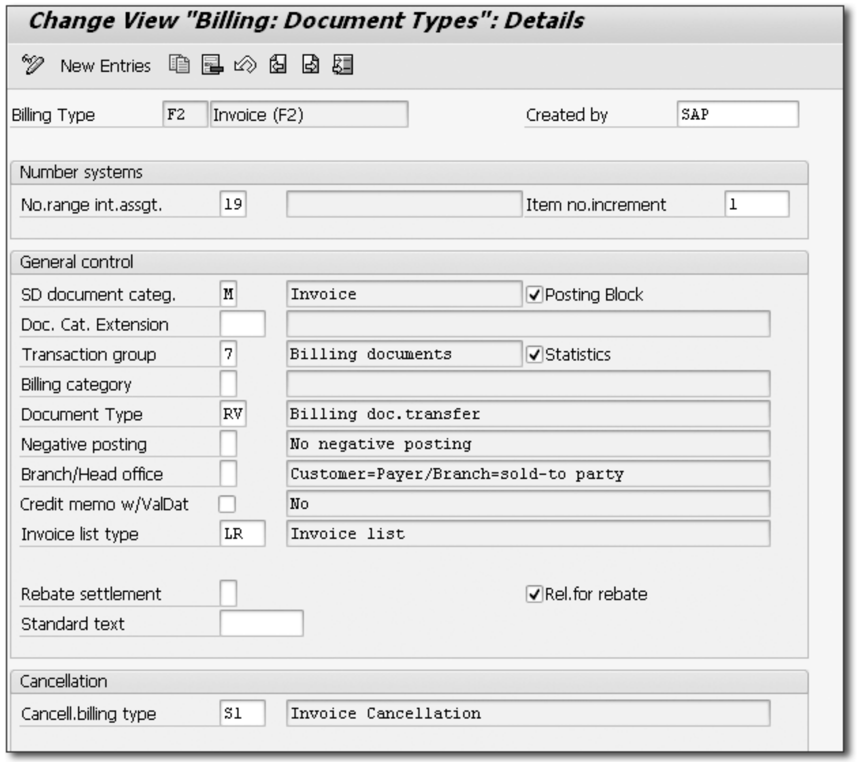


Figure 7.5 Defining Billing Type

7.2.2 Number Ranges for Billing Types

It isn't possible to have an external number range for the billing document. You can have a different or the same number range for different document types. You can maintain the document number ranges created or available by default in the RV_BELEG numbering object in the Number Range for Internal Assignment

Customizing field. You can add new number range intervals to the RV_BELEG numbering object by using Transaction SNRO.

Different Number Ranges for Different Plants

You may require multiple number ranges for the same invoice type (e.g., F2) based on the delivery plant or the geographical location of the delivery plants.

The standard SAP system does not provide a solution to such a requirement—but there is a requirement for a user exit in such a case. The ABAP coding takes place in the include program RV60AFZZ at form USEREXIT_NUMBER_RANGE, using US_RANGE_INTERN for this purpose.

Before coding RV60AFZZ, ensure that the following activities are complete:

1. Create a Z-table with the name ZINVNRANGE with the Client (MANDT), Document Category (VBTYP), Billing Type (FKART), Plant (WERKS), and Number Range Object for Invoice (NORANGE) fields, as shown in Table 7.5.
2. For all combinations of billing type and plant combination, assign a number range object in table ZINVNRANGE.
3. Define the number range objects used in table ZINVNRANGE in Transaction SNRO (RV_BELEG object).

The code in the include program RV60AFZZ (shown in Listing 7.1) will ensure that the invoice number of a delivery (or order) belonging to different plant belongs to different number ranges as defined in table ZINVNRANGE.

```
FORM USEREXIT_NUMBER_RANGE USING US_RANGE_INTERN.
DATA: V_VBTYP type VBRK-VBTYP,
 V_FKART type VBRK-FKART,
 V_WERKS type VBRP-WERKS.
DATA: WA_ZINVNRANGE type ZINVNRANGE.
DATA: V_NUMKI type TVFK-NUMKI,
V_ANS(1).
V_VBTYP = xvbrk-vbtyp.
V_FKART = xvbrk-FKART.
V_WERKS = XVBRP-WERKS.
Select single *
from ZINVNRANGE
into wa_ZINVNRANGE
where
vbtyp eq V_VBTYP and
```

```
FKART eq V_FKART and
WERKS eq V_WERKS.
IF SY-SUBRC = '0'.
US_RANGE_INTERN = WA_ZINVNRANGE-NORANGE.
ELSE.
Message I001(ZKK) with 'ENTRY NOT FOUND IN TABLE ZINVNRANGE'.
ENDIF.
ENDFORM.
```

Listing 7.1 Program RV60AFZZ

Different Number Ranges for Different Countries

If you want to base the number range on geographical region (country or province), then assign all of the delivery plants in a region should to the same number range object in table ZINVNRANGE. If there are five plants in three different regions, and you require three different number ranges, the entries in table ZINVNRANGE will be similar to the entries shown in Table 7.5.

SAP Notes

SAP ERP offers the functionality of official document numbering for many countries that require special rules or norms for numbering invoices. Italy, Taiwan, Chile, Peru, Latvia, Argentina, India, and China are some such countries. Refer to the SAP Notes listed here and any other SAP notes that are referenced in those notes for exploring this functionality for a specific country.

- SAP Note 746162: Using Official Document Numbering for Italy
- SAP Note 1259078: Official Document Numbering for Latvia
- SAP Note 605870: Official Document Numbering for India—Program Changes
- SAP Note 571376: Official Document Numbering—New Customizing Tables (Argentina)
- SAP Note 385973: China: Various Problems with Official Document Numbering
- SAP Note 408769: Peru, Chile: New Settings for Official Document Numbering

Client (MANDT)	Doc Cat. (VBTYPE)	Bill Type (FKART)	Plant (WERKS)	Number Range (NORANGE)
300	M	F2	1000	A1
300	M	F2	2000	A1
300	M	F2	3000	A2

Table 7.5 ZINVNARANGE with Sample Entries

Client (MANDT)	Doc Cat. (VBTYPE)	Bill Type (FKART)	Plant (WERKS)	Number Range (NORANGE)
300	M	F2	4000	A2
300	M	F2	5000	A3

Table 7.5 ZINVNARANGE with Sample Entries (Cont.)

Plants 1000 and 2000 will take the same number range (A1), and so will invoices for the deliveries or orders of plant 3000 and 4000 (A2). Invoices for plant 5000 will have a different invoice range (i.e., A3). The entries made in Transaction SNRO (RV_BELEG object) for the A1, A2, and A3 number range objects will determine the exact number that the invoices will take.

7.2.3 Check Customized Billing Types

Use Transaction VCHECKVOFA to check customization of billing types or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Documents • Define Billing Types • Check Customizing Settings for Billing Document Types. In the initial screen, you have the option of restricting the customization check to some billing type (e.g., Z*) or executing without any restriction for checking all the billing types.

The report checks the following settings:

1. For the pro forma billing type, (VBTYP = U), the field account determination procedure field gets hidden in the screen shown in Figure 7.5. But if you're creating a pro forma invoice type by copying a billing type that's not a pro forma invoice, and you enter a value in the account determination field first and then change the billing type, the error shown in Figure 7.6 (which shows the billing type ZF2) will occur.
2. Billing type N can cancel billing type (VBTYP) M. In customization, if you enter a different cancellation billing type, you'll receive an error message. However, a situation may occur in which you assigned a correct cancellation billing type to a billing type, and then the billing type field of the cancellation billing type can be changed. The change will cause an inconsistency. The billing document type ZF1 shown in Figure 7.6 shows this type of error.
3. Transaction VCHECKVOFA also checks if the cancellation billing document type partner functions are empty, or if those that correspond to the billing type

used are empty. The billing document type ZF3 shown in Figure 7.6 has this type of error.

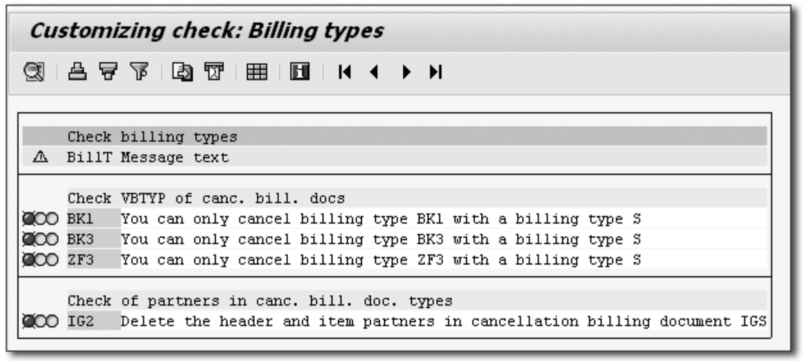


Figure 7.6 Error Messages for Transaction VCHECKVOFA

However, there will be no error for incomplete customization. For example, if a billing type does not maintain any of the following fields, you'll have a problem in bill processing using the particular document type, but Transaction VCHECKVOFA will not report an error:

- Cancellation invoice type
- Output determination procedure
- Number range
- Document category
- Text determination procedure at header or item level or any other field

Now that you know about billing types and customized ones, let's talk about another important feature: the billing plan.

7.3 Billing Plan

When certain rules dictate that items in a sales order should be billed on different dates, a billing plan becomes necessary.

There are a couple different types of billing plans. When you want to bill a percentage of the total bill amount on different dates aggregating to cent per cent, the billing plan is called *milestone billing*. Billing dates, called *milestones*, can be particular

stages in a large project, for example, as for an SAP ERP implementation project using ASAP methodology (see the introduction). The other standard billing plan in SAP systems is *periodic billing*. Periodic billing (e.g., rent) takes place at regular intervals (e.g., monthly) for the entire bill amount (e.g., monthly rent as per the rent contract) for a particular period (e.g., three years as per the rent contract).

During sales order processing, the items relevant for the billing plan automatically determine whether milestone billing or periodic billing applies to the item. In the overview screen for a billing plan, the details to enter for the item differ, depending on whether it's a milestone billing or periodic billing plan.

The steps for customizing a billing plan are as follows:

1. Define billing plan types.
2. Define date descriptions.
3. Define and assign date categories.
4. Maintain date proposals for milestone billing.
5. Assign billing plan types to sales document types.
6. Assign billing plan types to item categories.
7. Define rules for determining dates.

Now that you have an overview of the steps, let's discuss each of these in further detail.

7.3.1 Define Billing Plan Types

As already mentioned, the standard system comes with two predefined billing plans: milestone billing and periodic billing. To modify a milestone billing plan (billing plan type 02), use Transaction OVBO or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define Billing Plan Types • Maintain Billing Plan Types for Milestone Billing. Use Transaction OVBI to change periodic billing plans (billing plan type 01), or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define Billing Plan Types • Maintain Billing Plan Types for Periodic Billing.

Both Transactions OVBI and OVBO are for modifying the existing billing plan types. To create a new billing plan type, click on the Back icon to go to the overview screen, where you can see the existing billing plan type (by default one in both periodic and milestone cases). You can select any existing billing plan type and click on the Copy As icon to go to the screen shown in Figure 7.7 and Figure 7.8, respectively, for milestone (Transaction OVBO) and periodic (Transaction OVBI) billing.

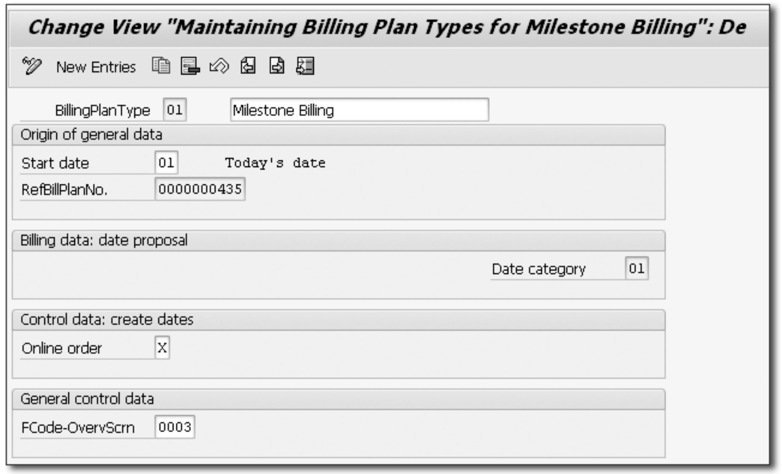


Figure 7.7 Milestone Billing

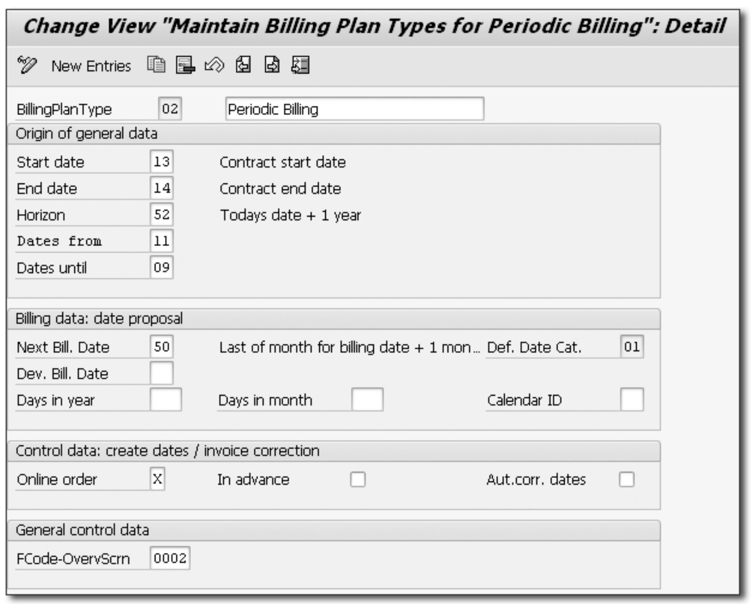


Figure 7.8 Periodic Billing

In the milestone billing customization screen, in addition to the two-character key and description, you fill in three fields in the screen shown in Figure 7.7 in enable mode (white background):

- In the Start Date field, you define the rule for the milestone billing plan's starting date.
- When the Online Order field is blank, you will manually enter the billing plan dates during order processing. Dates are automatically determined according to the date proposal, with (option `X`) or without (option `Y`) a dialog box for manual entry to overwrite the proposed dates.
- The Fcode for Overview Screen determines the maintainable fields in the overview screen. The reference billing plan number and date categories are assigned to the billing plan type in subsequent steps.

Periodic Billing

From the screen shown in Figure 7.8, you can create periodic billing plan types with a two-character alphanumeric key and a description in the Billing Plan Type field. Except for the Default Date Category field, which you assign to the billing plan in a later step, you customize the other fields in this step.

7.3.2 Define Date Descriptions

Date descriptions differentiate between different dates in a billing plan. You define the date description using Transaction OVBN or following the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define Date Descriptions.

7.3.3 Define and Assign Date Categories

To create date categories, use Transaction OVBJ or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define And Assign Date Categories • Maintain Date Category for Billing Plan Type. The initial screen shows all of the existing date categories. Select any existing categories and click on the Copy As (F6) icon to create a new date category. You will see the screen shown in Figure 7.9 when you click on the Copy As icon. We have selected the standard date category `01` as the reference for creating a new one.

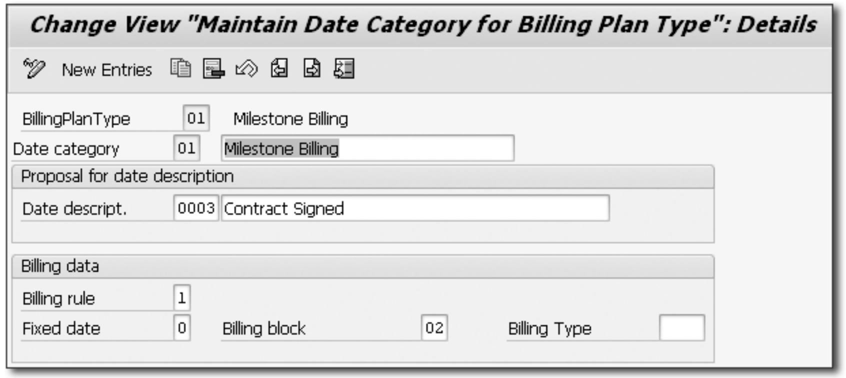


Figure 7.9 Maintain Date Categories for Billing Plan Type

In the customization for date category, you can specify a date description for the category. The billing rule can use any of the options listed in Table 7.6.

Billing Rule	Description
1	Milestone billing on a percentage basis
2	Milestone billing on a value basis
3	Closing invoice in milestone billing
4	Down payment in milestone billing on percentage basis
5	Down payment in milestone billing on a value basis

Table 7.6 Billing Rules

You can also specify values for a fixed date (from the options listed in Table 7.7), billing block (if required), and billing type.

Fixed Date	Description
Blank	Assignment to milestones not possible
0	Fixed date, date not copied from milestone
1	Planned/actual date from milestone
2	Planned/actual date from milestone if before billing date
3	Planned/actual date from milestone if after billing date

Table 7.7 Fixed Date for Date Category

The customization of billing date category controls the billing at the billing date level. The same item can have several billing dates; the bill of each date, depending upon the date category, can vary.

You assign date categories to the billing plan types by following the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define And Assign Date Categories • Allocate Date Category. When you double-click on the Allocate Date Category option, you see the screen shown in Figure 7.10, in which you will enter the default date category for the existing billing plan in the DD column.

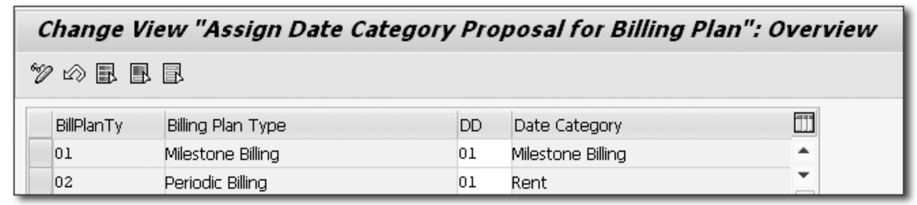


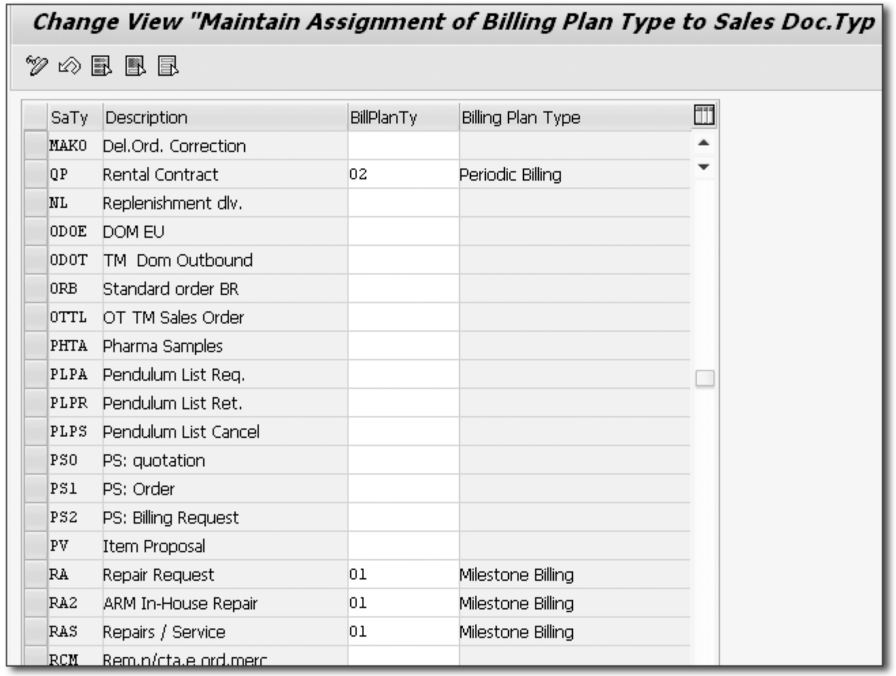
Figure 7.10 Assign Default Date Category to Billing Plan Type

7.3.4 Maintain Date Proposals for Milestone Billing

To maintain the date proposal for milestone billing, use Transaction OVBM or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Maintain Date Proposals For Billing Plan Types. The date proposal is not relevant for periodic billing. From the initial screen, you click on Maintain Date with or without entering a reference billing plan. You control the invoice to be raised on different dates with this customization. The dates in the reference billing plan copy over to the invoice and are predetermined as per the rule (see the last step) specified for this purpose.

7.3.5 Assign Billing Plan Types to Sales Document Types

To assign billing plan types to the sales document types, use Transaction OVBP or follow the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Assign Billing Plan Types To Sales Document Types. After you execute the transaction, you go to the screen shown in Figure 7.11. The system proposes all of the sales document types existing in the system. For those relevant to the billing plan, you specify the billing plan type in the BillPlanTy column. This step is not required if you don't use a header billing plan.

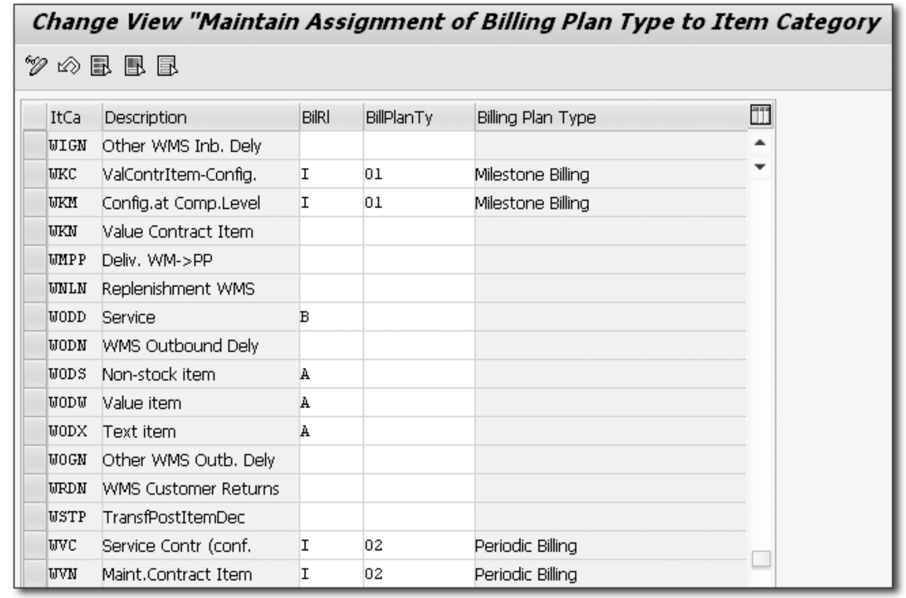

Change View "Maintain Assignment of Billing Plan Type to Sales Doc.Typ

SaTy	Description	BillPlanTy	Billing Plan Type
MAKO	Del.Ord. Correction		
QP	Rental Contract	02	Periodic Billing
NL	Replenishment dlv.		
ODOE	DOM EU		
ODOT	TM Dom Outbound		
ORB	Standard order BR		
OTTL	OT TM Sales Order		
PHTA	Pharma Samples		
PLPA	Pendulum List Req.		
PLPR	Pendulum List Ret.		
PLPS	Pendulum List Cancel		
PS0	PS: quotation		
PS1	PS: Order		
PS2	PS: Billing Request		
PV	Item Proposal		
RA	Repair Request	01	Milestone Billing
RA2	ARM In-House Repair	01	Milestone Billing
RAS	Repairs / Service	01	Milestone Billing
RCM	Rem.n/cta.e ord.merc		

Figure 7.11 Assign Billing Plan to Sales Document Type

7.3.6 Assign Billing Plan Types to Item Categories

You define item categories as relevant for a billing plan (option I) using Transaction OVBK or following the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Assign Billing Plan Types To Item Categories. Upon entering the transaction code in the transaction window, you go to the screen shown in Figure 7.12. You also define the billing plan type applicable for the item categories here. You cannot change the billing plan type assigned to an item category at the time of document processing.


Change View "Maintain Assignment of Billing Plan Type to Item Category

ItCa	Description	BilRl	BillPlanTy	Billing Plan Type
WIGN	Other WMS Inb. Dely			
WKC	ValContrItem-Config.	I	01	Milestone Billing
WKM	Config.at Comp.Level	I	01	Milestone Billing
WKN	Value Contract Item			
WMPP	Deliv. WM->PP			
WNLN	Replenishment WMS			
WODD	Service	B		
WODN	WMS Outbound Dely			
WODS	Non-stock item	A		
WODW	Value item	A		
WODX	Text item	A		
WOGN	Other WMS Outb. Dely			
WRDN	WMS Customer Returns			
WSTP	TransfPostItemDec			
WVC	Service Contr (conf.	I	02	Periodic Billing
WVN	Maint.Contract Item	I	02	Periodic Billing

Figure 7.12 Assigning Billing Plan Type to Item Categories

7.3.7 Define Rules for Determining Dates

You can execute the rule for defining date determination using Transaction OVBS or following the menu path SAP IMG • Sales and Distribution • Billing • Billing Plan • Define Rules For Determining Dates. When you enter the transaction in the transaction window and press Enter, you go to an overview screen, which lists all of the existing rules. Select any one of them (e.g., 50 – Monthly on First of Month) and click on the Copy As (F6) icon to go to the screen shown in Figure 7.13. The baseline date forms the basis of date determination. You specify the rule for baseline date determination, which can be any one of the standard options listed in Table 7.8.

Baseline Date	Description
01	Today's date
02	Contract start date
04	Acceptance date

Table 7.8 Baseline Date Options

Baseline Date	Description
05	Installation date
06	Date contract signed
07	Billing date/invoice date
08	Contract start date plus contract duration
09	Contract end date

Table 7.8 Baseline Date Options (Cont.)

In the Time Period field, you can specify the number of days or months. The unit (e.g., days or months) in the Time Unit field is then added to the baseline date. Use the Last of Month field to change the date from any date to either the first or last day of the month, if required. You can also specify the calendar ID that uses the rule. Select the Contract Data checkbox if item level dates are to be ignored while calculating the baseline date.

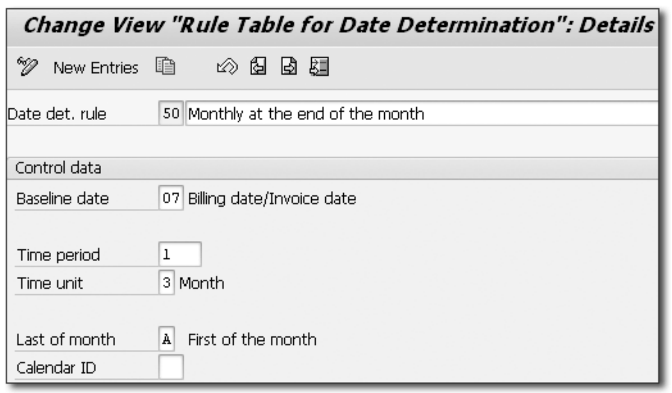


Figure 7.13 Rules for Date Determination

7.4 Revenue Account Determination

Revenue account determination also uses the condition technique. Account determination is the basic customization for transferring billing information to the accounting document. From the accounting point of view, revenue is not generated until the accounting document for the bill is generated, which means no profit, and no payable.

The accounting document generated for the bill may contain several line items pertaining to several general ledgers. This is an important integration of the Sales and Distribution functionality with the Financial Accounting functionality of SAP ERP. The basic steps for account determination are as follows:

1. Include fields relevant for account determination in the field catalog for the account determination table.
2. Select the available account determination table, or create customized ones.
3. Create the access sequence for the account determination table.
4. Customize the account determination type.
5. Customize the account determination procedure.
6. Customize the account key.
7. Assign GLs to account determination types.

Now that we've listed the general steps, let's discuss them in the following subsections.

7.4.1 Field Catalog for the Account Determination Table

The Field Catalog is the list of fields allowed for use in the account determination table. Certain fields such as the Condition Type (KSCHA), Chart of Accounts (KTOPL), Account Group Customer (KTGRD), Account Group Material (KTGRM), Account Key (KVSL1), Sales Organization (VKORG), Distribution Channel (VTWEG), and Plant (WERKS) are by default present in the standard field catalog for the account determination table. You can add new fields to the catalogue using Transaction OV25 or following the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Define Dependencies Of Revenue Account Determination • Field catalog: Allowed fields for the Tables.

Existing entries will appear in the initial overview screen. To insert a new field, click on the New Entry button, and then press the F4 function key. The screen shown in Figure 7.14 will appear. This screen shows the list of all fields that you can import into the field catalog. Double-click on the field that you want to import and save it.

Table Name	Short Description
Field Name	Short Description
KOMCV	Maintenance
VKORG	Sales Organization
VTWEG	Distribution Channel
KTGRD	Account assignment group for this customer
WERKS	Plant
KTGRM	Account assignment group for this material
KSCHA	Condition type
KVSL1	Account key
SPART	Division
CCINS	Payment cards: Card type
LOCID	Payment cards: Point of receipt for the transaction
LIFNR	Account Number of Vendor or Creditor
MWSKZ	Tax on sales/purchases code
BEMOT	Accounting Indicator
AUGRU	Order reason (reason for the business transaction)
KDUMMY	Dummy function in length 1
PDUMMY	Dummy function in length 1
PSTYV	Sales document item category
KOMKCV	Determination header
KTOPL	Chart of Accounts
VKORG	Sales Organization
VTWEG	Distribution Channel
KTGRD	Account assignment group for this customer
KAPPL	Application
KALSMC	Account determination procedure
RKPREL	CO account assignment exists
LIFNR	Account Number of Vendor or Creditor
LLAND	Country of Destination
AUGRU	Order reason (reason for the business transaction)
KDUMMY	Dummy function in length 1
IX_KOMT1_V	Index number for internal tables
IX_KOMT1_B	Index number for internal tables
CLMTY	Warranty Claim Type
RELTY	Type of Warranty Object
KATEG	Category
KOMPCV	Determination item
WERKS	Plant
KTGRM	Account assignment group for this material
KSCHA	Condition type
KVSL1	Account key
POSNR	Item number of the SD document
STUNR	Step number
KRUEK	Condition is Relevant for Accrual (e.g. Freight)
SPART	Division
CCINS	Payment cards: Card type
LOCID	Payment cards: Point of receipt for the transaction
MWSKZ	Tax on sales/purchases code
BEMOT	Accounting Indicator
PDUMMY	Dummy function in length 1
PSTYV	Sales document item category
J_1ISTCODE	LST CST applicability code
J_1IFORMC1	Form Type
J_1IFORMC2	Form Type
POSKT	Controlling Item Type
REFKT	Reference Type
RETPA	Status for Parts that Have to Be Returned from Claimant

Figure 7.14 Allowed Fields for Account Determination Table

7.4.2 Account Determination Table

SAP ERP predefines six standard account determination tables. To create an account determination table, you can use Transaction V/12 or follow the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Define Dependencies of Revenue Account Determination • Account Determination: Create Tables. The customized table should have numbers between 501 and 999. You can create a condition table with or without reference to an existing condition table. If you create it without reference, then the field catalog will appear in the right side of the screen shown in Figure 7.15, and the Selected Fields area will be empty. You have to select the field in the field catalog and click on the Select Field button on the application toolbar to move it to the left side.

When creating with reference, you will see the fields in the referenced table in the Selected Fields part of the screen, so you may have to add only a few fields to them. To delete an already selected field, click on that field and then click on the Delete icon. Once the fields that will constitute the condition table are finalized and in the Selected Fields section of the screen, click on the Generate icon present in the far left of the application toolbar.

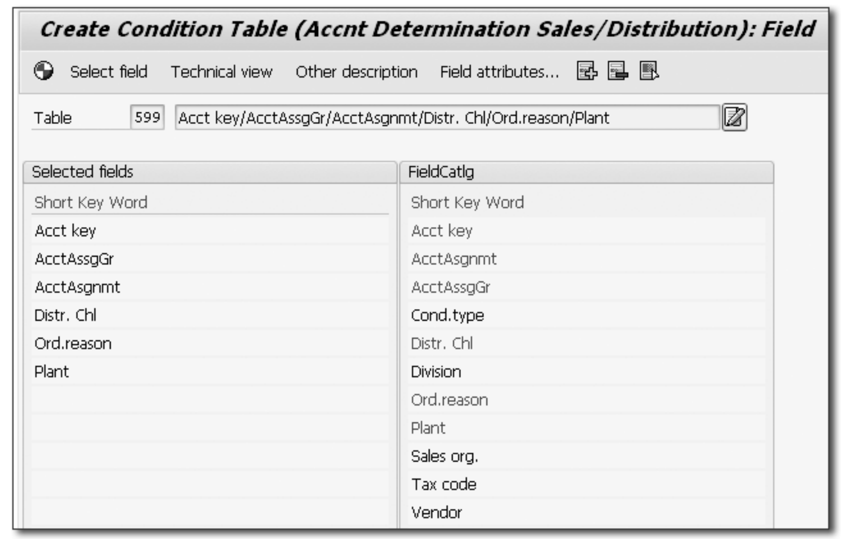


Figure 7.15 Create Condition Table

7.4.3 Access Sequence

Access sequences are assigned to the condition types that a determination procedure has automatically determined using a condition technique.

The menu path for customizing an access sequence is SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Revenue Account Determination • Define Access Sequences And Account Determination Types • Maintain access sequences for account determination. The existing access sequence types will appear in the right side of the initial screen. KOFI and KOFR are two standard access sequences. You can modify these sequences or create your own by selecting an existing one and clicking on the Copy As (F6) icon and then giving a new key and description to the access sequence. Once a sequence is created, double-click on it to go to the screen shown in Figure 7.16. Here, you list the sequence of condition tables accessed in order to find the desired condition record (GL account in this case). You can assign the requirement routines for account determination to optimize performance.

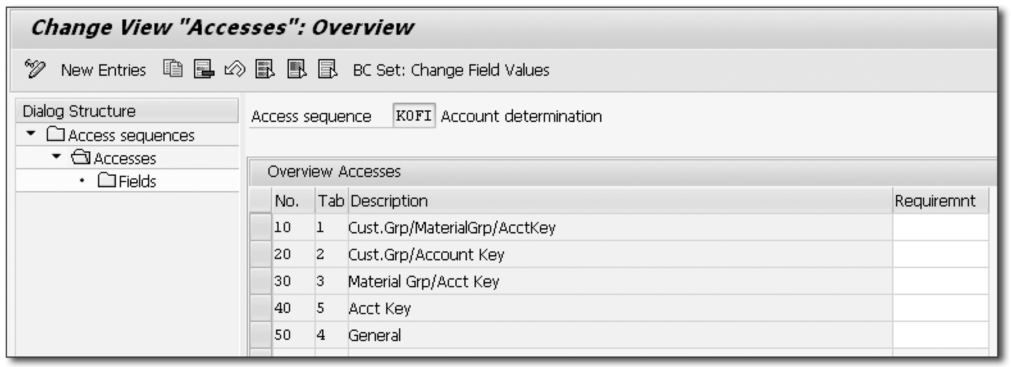


Figure 7.16 Standard Access Sequence KOFI

You can optimize performance using Transaction OVU1 to specify the access number for a condition type. The setting in Figure 7.17 shows that access 10 of access sequence KOFI executes for condition type KOFI. This contradicts the customization shown in Figure 7.16. So, for account determination type KOFI, access number 10 of access sequence KOFI only executes if you expect the previous accesses 3 and 5 to execute first. To make the customization shown in Figure 7.16 valid, you have to delete the entry shown in Figure 7.17.

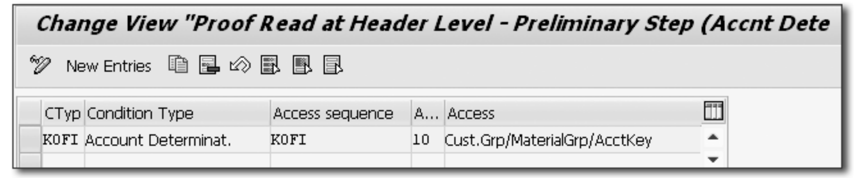


Figure 7.17 Optimize Access (Revenue Account Determination)

7.4.4 Account Determination Type

Here, the condition type is referred to as account determination type. You define it by following the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Revenue Account Determination • Define Access Sequences and Account Determination Types • Define Account Determination Types. Double-clicking on the IMG – Activity icon at the end of the menu path takes you to the screen shown in Figure 7.18. The two standard account determination types are KOFI and KOFK. You create new account determination types by clicking on the New Entries button and entering a key and a name. You can also specify the access sequence for the account determination type, if you require automatic determination of GL.

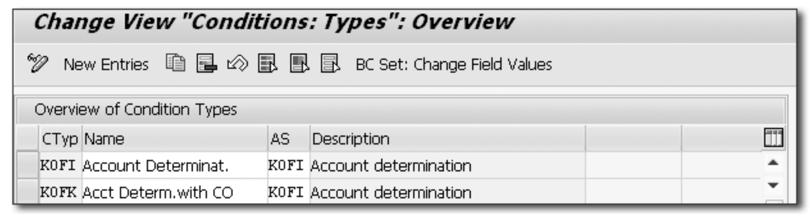


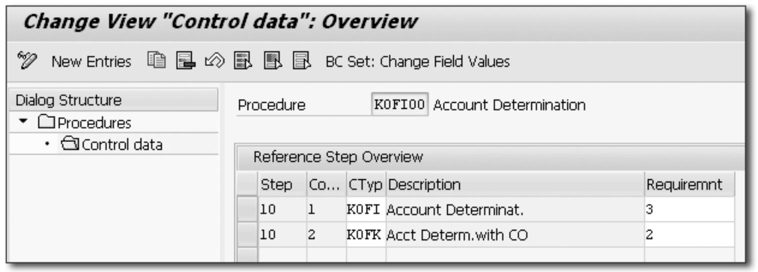
Figure 7.18 Account Determination Types

7.4.5 Account Determination Procedure

An account determination procedure must contain at least one account determination type. The system assigns it to the billing types in order to automatically find the revenue accounts for prices, discounts, taxes, and surcharges (including freight).

To define an account determination procedure and assign it to the billing types, use Transaction S_ALR_87007038 or follow the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Define And Assign Account Determination Procedures. After clicking on the IMG – Activity icon at the end of the menu path, you have the option of either defining or assigning the account determination procedure. Double-clicking on the Define Account Determination Procedure option takes you to the list of existing procedures. Select any procedure and click on the Control folder at the left to go to the screen shown in Figure 7.19.

You list the account determination types that must be determined once the procedure becomes relevant. The standard account determination routines assigned here are for optimization purposes. You can have your own customized routines assigned here for achieving certain business requirements. If those requirements are not met, account determination stops. Assigning requirements at the procedure level is better than assigning them at the access sequence level.


Change View "Control data": Overview

New Entries BC Set: Change Field Values

Dialog Structure
Procedures
Control data

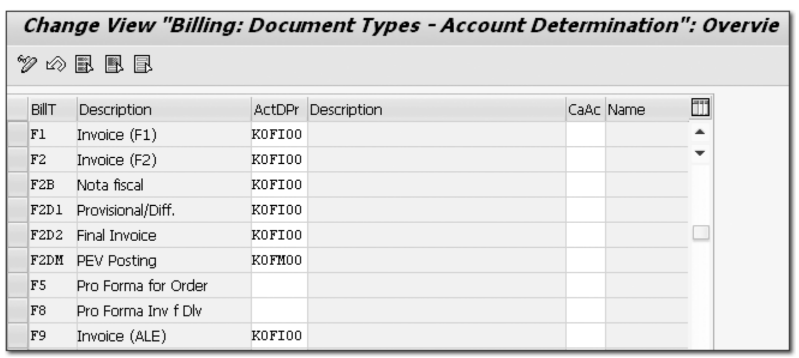
Procedure KOFI00 Account Determination

Reference Step Overview

Step	Co...	CTyp	Description	Requiremnt
10	1	KOFI	Account Determinat.	3
10	2	KOFK	Acct Determ.with CO	2

Figure 7.19 Account Determination Procedure KOFI00

After defining the account determination procedure, assign it to the billing type by double-clicking on the option Assign Account Determination Procedure at the end of the Customizing menu path. You'll see the overview screen shown in Figure 7.20. For pro forma invoices, the system does not assign an account determination procedure because no accounting document is to be generated for them.


Change View "Billing: Document Types - Account Determination": Overvie

BillT	Description	ActDPr	Description	CaAc	Name
F1	Invoice (F1)	KOFI00			
F2	Invoice (F2)	KOFI00			
F2B	Nota fiscal	KOFI00			
F2D1	Provisional/Diff.	KOFI00			
F2D2	Final Invoice	KOFI00			
F2DM	PEV Posting	KOFM00			
F5	Pro Forma for Order				
F8	Pro Forma Inv f Dlv				
F9	Invoice (ALE)	KOFI00			

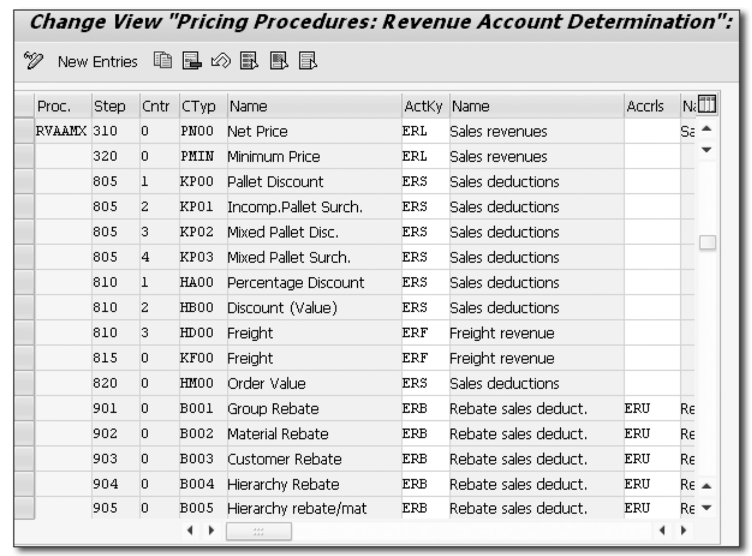
Figure 7.20 Assign Account Determination Procedure to Billing Types

7.4.6 Account Key

Account keys are used to group GL accounts. They also automatically post components of the pricing procedure, such as sales, freight, discounts, surcharges, and taxes to relevant GL accounts. You can copy the standard account keys such as `ERL` (revenues), `ERF` (freight revenue), `ERS` (discounts), `EVV` (cash settlement), and `MWS` (tax) to create new account keys.

The menu path for defining and assigning account keys is SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Revenue Account Determination • Define And Assign Account Keys. By clicking on the IMG – Activity icon, you get the options of defining and assigning. When you double-click on Define Account Key, you receive a list of all existing account keys. You can select any one and click on the Copy As (F6) icon to create a new account key starting with Y or Z and a description.

In the Customizing menu path, you can click on Assign Account Keys to assign the account keys to the condition types (not account determination type but pricing condition types) of the pricing procedure. All of the pricing procedures already defined become available in the overview screen with the assignments, if any, already made in Transaction V/08 (Define Pricing Procedure). Figure 7.21 shows the overview screen.


Change View "Pricing Procedures: Revenue Account Determination":

New Entries

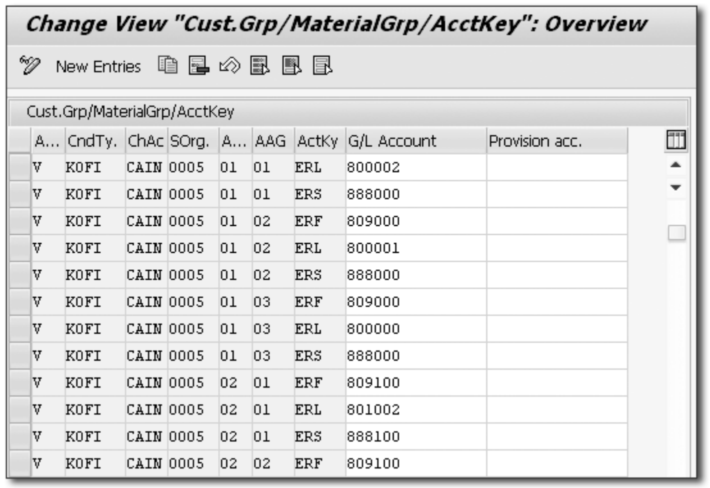
Proc.	Step	Cntr	CTyp	Name	ActKy	Name	Accrls	N:
RVAAMX	310	0	PN00	Net Price	ERL	Sales revenues		Sa
	320	0	PMIN	Minimum Price	ERL	Sales revenues		
	805	1	KP00	Pallet Discount	ERS	Sales deductions		
	805	2	KP01	Incomp.Pallet Surch.	ERS	Sales deductions		
	805	3	KP02	Mixed Pallet Disc.	ERS	Sales deductions		
	805	4	KP03	Mixed Pallet Surch.	ERS	Sales deductions		
	810	1	HA00	Percentage Discount	ERS	Sales deductions		
	810	2	HB00	Discount (Value)	ERS	Sales deductions		
	810	3	HD00	Freight	ERF	Freight revenue		
	815	0	KF00	Freight	ERF	Freight revenue		
	820	0	HM00	Order Value	ERS	Sales deductions		
	901	0	B001	Group Rebate	ERB	Rebate sales deduct.	ERU	Re
	902	0	B002	Material Rebate	ERB	Rebate sales deduct.	ERU	Re
	903	0	B003	Customer Rebate	ERB	Rebate sales deduct.	ERU	Re
	904	0	B004	Hierarchy Rebate	ERB	Rebate sales deduct.	ERU	Re
	905	0	B005	Hierarchy rebate/mat	ERB	Rebate sales deduct.	ERU	Re

Figure 7.21 Assign Account Keys to Pricing Procedure

7.4.7 Assign General Ledger to Account Determination Types

Transaction VKOA assigns a general ledger to account determination types (e.g., `KOFI`). You can also use the general Transaction OBYF and then select application `V` (sales/distribution), or follow the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Assign G/L Accounts.

The initial screen lists all of the account determination tables. Double-click on any table for which you want to maintain the GL accounts. You'll see the screen shown in Figure 7.22. Note that there is a provision for two GL account numbers. The second GL account is to be to be specified for accruals (e.g., rebate agreements).



A...	CndTy.	ChAc	SOrg.	A...	AAG	ActKy	G/L Account	Provision acc.
V	KOFI	CAIN	0005	01	01	ERL	800002	
V	KOFI	CAIN	0005	01	01	ERS	888000	
V	KOFI	CAIN	0005	01	02	ERF	809000	
V	KOFI	CAIN	0005	01	02	ERL	800001	
V	KOFI	CAIN	0005	01	02	ERS	888000	
V	KOFI	CAIN	0005	01	03	ERF	809000	
V	KOFI	CAIN	0005	01	03	ERL	800000	
V	KOFI	CAIN	0005	01	03	ERS	888000	
V	KOFI	CAIN	0005	02	01	ERF	809100	
V	KOFI	CAIN	0005	02	01	ERL	801002	
V	KOFI	CAIN	0005	02	01	ERS	888100	
V	KOFI	CAIN	0005	02	02	ERF	809100	

Figure 7.22 Assign GL Account to Account Determination Type

In Figure 7.22, the fourth and fifth columns contain the same heading AAG (account assignment group). The first heading is the account assignment group for customers, and the second one is for account assignment groups for materials. These groups are simply a group of customers or materials that are identical from an accounts posting point of view. For example, you can define all customers from one country (e.g., Mexico) as one account assignment group (for customers), and all trading materials as one account assignment group (for materials). Therefore, the sale of such a material made to such a customer will go to one specific GL account (e.g., Mexico trading account).

These account assignment groups are maintained in the customer master record (Billing Document tab of Sales Area data) and material master record (Sales:Sales Org 2 tab) for individual customers or materials, respectively. You can create new account assignment groups for *materials* using Transaction OVK5 or following the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Check Master Data Relevant For Account Assignment • Materials: Account Assignment Groups. You can create new account assignment groups for *customers* using Transaction OVK8 or following the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Check Master Data Relevant For Account Assignment • Customers: Account Assignment Groups. Defining and assigning customer and material assignment accounts is a prerequisite for account determination—return to Chapter 2 for more information on these.

Now that you understand how revenue accounts are determined, let's discuss the accounts interface for billing.

7.5 Accounts Interface

In this section, we'll discuss various topics related to the Sales and Distribution–Financial Accounting interface in SAP ERP. We'll specifically discuss revenue recognition, reconciliation account determination, cash account determination, and data that's transferred to accounting from invoices.

7.5.1 Revenue Recognition

To use the revenue recognition functionality of SAP ERP, you need explicit permission from the SAP system (see SAP Note 820417). You can get the best practice guide (in PDF format) for implementing revenue recognition functionality in SAP Note 1172799. SAP Note 1323315 is also very helpful for implementing revenue recognition.

You customize revenue recognition for any sales item category using Transaction OVEP or following the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Revenue Recognition • Set Revenue Recognition For Item Categories. The initial overview screen lists all of the existing item categories. Double-click on any item category to view the customization. Customization specifies four fields—Revenue Recognition Category, Accrual Period Start Date, Revenue Distribution Type, and Revenue Event—for the item category.

The revenue recognition category for an item category can take any of the following six options:

- Blank: The system recognizes revenue for this item category at the time of invoice creation (standard option).
- A: The value of this item category is recognized for the same amounts according to the accrual period.
- B: Revenue is recognized based on business transactions (e.g., goods receipt for delivery-relevant items, sales order creation for items not relevant to delivery).
- D: The value of the item is implemented in equal amounts, in accordance with the accrual period for this item (billing-related).
- E: Billing-related, service-related revenue recognition (IS-M).
- F: Credit and debit memos with reference to predecessor.

The accrual period start date can take any of the following three options:

- Blank: Not relevant.
- A: Proposal based on contract start date.
- B: Proposal based on billing plan start date. For milestone billing plans, this is the billing date of the first milestone. For periodic billing plans it's either the billing plan start date or the date of the first settlement period, whichever is earlier.

The revenue distribution type can take any of the following four options:

- Blank: The total value is linear, and the correction value is not distributed.
- A: The total value is linear, and the correction value is distributed linearly.
- B: The total value is Bill.Plan-Reld, and the correction value is not distributed.
- C: The total value is Bill.Plan-Reld, and the correction value is linearly distributed.

The revenue event is the event that determines revenue recognition. The possible options it can take are as follows:

- Blank: Not event-related
- A: Incoming invoice

- B: Acceptance date
- X/Y/Z: Customer-specific event X/Y/Z, the definitions of which are in the BAdI for the specific event

The configuration done in the Sales and Distribution functionality in SAP ERP is only part of the overall customization done in SAP ERP Financials. So before beginning the customization, be sure to read the relevant SAP Notes mentioned at the beginning of this section, understand the limitations of the revenue recognition functionality, and work with an SAP ERP Financials consultant.

7.5.2 Reconciliation Account Determination

You'll find the customer reconciliation account in the customer master record (Account Management tab of Company Code Data). The offsetting entry for the revenue accounts posts to this reconciliation GL, so when you make a sale, the accounting entries look like:

- Cr Sales Revenue – 100 USD
- Cr Tax Payable – 5 USD
- Dr Customer Reconciliation Account – 105 USD

You can use a condition technique for reconciliation account determination, similar to the revenue account determination we discussed earlier in this chapter. The steps for customizing the condition technique are available via the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Reconciliation Account Determination. At this node of the menu path, you have the following options for customizing the condition technique:

- Maintain Condition Tables (Transaction OV62)
- Maintain Field Catalog (Transaction OV60)
- Maintain Access Sequences (Transaction OV67)
- Maintain Condition Types (Transaction OV66)
- Maintain Account Determination Procedure (Transaction OV65)
- Assign Account Determination Procedure (Transaction OV68)
- Assign G/L Accounts (Transaction OV64)
- Define Alternative Reconciliation Accounts (Transaction S_ALR_87002480)

7.5.3 Cash Account Determination

You may involve a cash account in a sales invoice (e.g., credit memo). For example, instead of issuing credit memos that are used as payments for other purchases by the customer, you may want to issue a check for the credit memo. In such a situation, you can determine the cash account to be posted by using a condition technique, just like you would for revenue or reconciliation account determination.

The steps for customizing cash account determination are available via the menu path SAP IMG • Sales and Distribution • Basic Functions • Account Assignment/Costing • Cash Account Determination. At this node, you can branch into any of the following IMG activities for customizing the condition technique:

- Maintain Condition Tables (Transaction OV71)
- Maintain Field Catalog (Transaction OV73)
- Maintain Access Sequences (Transaction OV74)
- Maintain Condition Types (Transaction OV75)
- Maintain Account Determination Procedure (Transaction OV76)
- Assign Account Determination Procedure (Transaction OV78)
- Assign G/L Accounts (Transaction OV77)

7.5.4 Data Forwarded to Accounting Document

Various data from billing documents of Sales and Distribution are transferred to the SAP ERP Financials accounting documents. In our discussion of the customization of billing types, we've covered how the following data is determined for accounting documents based on the information available in billing document.

1. Accounting document type
2. Reference number (`BKPF-XBLNR`)
3. Allocation number (`BSEG-ZUONR`)
4. Partner function for accounting document
5. Invoice reference (`BSEG-REBZG`)

Aligning an Accounting Document Number with an Invoice Number

By default, the number range assigned to accounting document types used to create accounting documents for invoices is the *internal number range*. There's no provision for manually entering a number for a bill's accounting document, so the question of making it external does not arise.

However, if you make the number range *the same* as that for a billing document type and select the checkbox for external assignment, then the accounting document number will be same as that of the billing document. Because several billing document types can have the same accounting document type, the number range for the accounting document type should be such that all of the number ranges for billing document types assigned to it fall within its number range. At the same time, the number range cannot overlap with the number range of any other accounting document type. Tracking the billing document and corresponding accounting document (and vice versa) for error handling wastes a lot of time. Also, it becomes very complicated to link the two in an ABAP report when they're different numbers.

7.6 Solving Common Billing Problems

As with previous chapters, let's take a look at common crises that arise during billing.

Note

We've included some common errors or queries that are expected of a junior or middle-level consultant, especially in a post-implementation scenario. Most of the problems that come from super users or junior consultants are of two types: mistakes in configuration or customization. We've avoided these because they would have been repetitions of what we've already covered. We also won't cover errors due to customized reports, user exits, or routines, because they're project specific. You can regenerate most of these problems in a test environment.

- **Problem**
  We have a large invoice to cancel. It should take few minutes to cancel, but each time we attempt to cancel it, we encounter a timeout and are unable to do so. We can't find any options for executing the transaction for invoice cancellation, Transaction VF11, in the background.

  Solution
  It isn't possible to execute Transaction VF11 in the background, so when an invoice is too large, or when you include multiple invoices for cancellation, the

time-out situation may arise. Your only option is to increase the time limit for the time out by changing the time limit for the parameter `RDISP/MAX_WPRUN_TIME` using Transaction RZ11.

Go to the screen shown in Figure 7.23 when you enter the parameter `RDISP/MAX_WPRUN_TIME` in the initial screen of Transaction RZ11, and execute it. To change the existing values, click on the CHANGE VALUES button, and the dialog box also shown in Figure 7.23 will appear. This is where you change the values of the parameter. Be sure to review SAP Note 25528 before attempting this.

Maintain Profile Parameters

Change Value

Metadata for Parameter rdisp/max_wprun_time

Description	Value
Name	rdisp/max_wprun_time
Type	String
Further Selection Criteria	
Unit	
Parameter Group	System
Parameter Description	Maximum work process run time
CSN Component	BC-CST-DP
System-Wide Parameter	No
Dynamic Parameter	Yes
Vector Parameter	No
Has Subparameters	No
Check Function Exists	No

Current Value of Parameter rdisp/max_wprun_time

Expansion Level	Value
Kernel Default	600
Standard Profile	600
Instance Profile	600
Current Value	600

Figure 7.23 Changing Values of Parameter of rdisp/max_wprun_time

- **Problem**
  We have few materials that are tax free, so we've made a tax code for 0% tax. This works fine until we have to create the invoice. While releasing it to accounts, we're getting the error shown below. Because there will be no value to be posted to accounts, we haven't assigned it to any GL. Even if we do, how can there be an accounting document with a zero value line item?

Error Message

Error in account determination: table T030K key CANA MWS U7

Message no. FF709

Diagnosis

In the chart of accounts to be posted to, no accounts are defined for the tax code you used.

Procedure

Contact your system administrator.

Define the accounts to which a tax posting are to be made with the tax code entered in CUSTOMIZING for taxes on sales/purchases.

To do this, choose MAINTAIN ENTRIES (F5).

Solution
Access table `T030K` using Transaction OB40, where you can maintain a GL for tax code U7 Transaction MWS in the chart of account `CANA`, even when no posting is required. You can do this by executing Transaction FTXP, entering the tax code in the initial screen, and then executing and clicking on the TAX ACCOUNTS button. Selecting the chart of account (e.g., `CANA`) will take you to a dialog box where you have to maintain the GL accounts for different transaction keys (e.g., MWS). Note that when using Transaction FTXP, you can maintain GL accounts even when the client is not modifiable, which is not the case for Transaction OB40. Because the document value, and therefore the accounting document value, will not be zero, there will be no error in posting to accounting. The tax GL that you've assigned to tax code U7 will, however, have no entry, even after posting. If you open the accounting document using Transaction FB02/03 (or by clicking on the ACCOUNTING button from the VF02/03 overview screen) and click on the TAXES button.

- **Problem**
  We have a customized report using Transactions S066 and S067. Currently, we are facing serious performance issues for the report. It's taking too much time, and we noticed that these tables contain many line items with zero value (or a negligible amount, e.g., 0.01). How can we improve the performance of the report?

  Solution
  Run report program `RVKRED77` at regular intervals. Be sure to refer to SAP Note 400311 for details.

- **Problem**
  We've been using the standard pricing condition type PR00 in both the pricing procedure for invoice (billing type F2) and pro forma invoice (billing type F8). In both cases, we've maintained condition records that are automatically determined during billing. We don't want any manual changes during billing. In the customization for the condition type PR00, we've opted for option D (Not Possible to Process Manually) in the MANUAL ENTRIES field. Also, in the copy control from order to invoice (Transaction VTFA), we've opted for option G (Copy Pricing Elements Unchanged and Redetermine Taxes) for the item categories. The same condition type should be modifiable manually in a pro forma invoice without changing the customization for the invoice. Is this possible?

  Solution
  In the standard SAP system, there's no provision for making a condition type modifiable in certain cases and nonmodifiable in others. To achieve this, you have to use exits. To do it in order, use the user exit USEREXIT_PRICING_PREPARE_TKOMP in the include program MV45AFZZ. If the objective is to make the condition type modifiable for certain users and nonmodifiable for others, you can create a customized authorization object as recommended in SAP Note 105621. Then, code the exit in include program MV45AFZZ for an order, or program RV60AFZZ for an invoice. To make the condition type modifiable for the F8 invoice type and nonmodifiable for others, you can input the code in Listing 7.2 in the user exit USEREXIT_PRICING_PREPARE_TKOMP of the include program RV60AFZZ.

```
FORM USEREXIT_PRICING_PREPARE_TKOMP.
DATA: i_T685A TYPE STANDARD TABLE OF T685A WITH HEADER LINE.
IF VBRK-FKART = 'F8'.
 LOOP AT XKOMV.
 IF XKOMV-KSCHL = 'PR00'.
 SELECT * FROM T685A INTO TABLE I_T685A WHERE KSCHL = 'PR00'.
 READ TABLE I_T685A WITH KEY KSCHL = XKOMV-KSCHL.
 I_T685A-KMANU = 'C'.
 MODIFY I_T685A INDEX SY-TABIX.
 MODIFY T685A FROM TABLE I_T685A.
 REFRESH I_T685A.
 ENDIF.
 ENDLOOP.
ELSE.
 LOOP AT XKOMV.
 IF XKOMV-KSCHL = 'PR00'.
 SELECT * FROM T685A INTO TABLE I_T685A WHERE KSCHL = 'PR00'.
 READ TABLE I_T685A WITH KEY KSCHL = XKOMV-KSCHL.
```



```
 I_T685A-KMANU = 'D'.
 MODIFY I_T685A INDEX SY-TABIX.
 MODIFY T685A FROM TABLE I_T685A.
 REFRESH I_T685A.
 ENDIF.
 ENDLOOP.
ENDIF.
ENDFORM.
```

Listing 7.2 USEREXIT_PRICING_PREPARE_TKOMP

- **Problem**
  We want to send a daily short message service (SMS) to customers for invoices created. We're in touch with a company that provides an HTTP API for sending bulk SMS. Can we use it to send SMS from our SAP server?

  Solution
  There are a lot of bulk SMS service providers who provide you with HTTP APIs. The advantage to using such services is the cost benefit, whereas the risk is data security. An example of one such provider is clickatell.com, whose API is *http://api.clickatell.com/http/sendmsg?user=xxxxx&password=xxxxx&api_id=xxxxx&to=xxxxxxxxxx&text=Hello+World*.

  After registration, most providers give a few free credits to test their service. After receiving the user, password, and api_id (it varies), you can insert those values in place of "xxxxx" in the API string. After "to=" you replace "xxxxxxxxxx" with the mobile number to which you want to send the message. The message in the sample API string is "Hello World." Test it by typing the whole string in the address window (where you type the website address) of any browser and press Enter. If the message reaches the intended number, then the HTTP API is ready for use. You can use the code in Listing 7.3 to enter the parameters of the API in the selection screen and execute to post the message.

```
REPORT ZSMS.
DATA: http_client TYPE REF TO if_http_client.
DATA: wf_string TYPE string,
result TYPE string,
r_str TYPE string.
DATA: result_tab TYPE TABLE OF string.

SELECTION-SCREEN: BEGIN OF BLOCK a WITH FRAME.
PARAMETERS: USER(20) LOWER CASE,
PASSWORD(20) LOWER CASE,
APIID(20) LOWER CASE,
```

```
TO(50) LOWER CASE.
TEXT(160) LOWER CASE,
SELECTION-SCREEN: END OF BLOCK a.

START-OF-SELECTION.
 CLEAR wf_string.
 CONCATENATE
'http://api.clickatell.com/http/sendmsg?user='
 USER
 '&password='
 PASSWORD
'&api_id='
 APIID
 '&to='
 TO
 '&text='
 TEXT
INTO
 wf_string.

CALL METHOD cl_http_client=>create_by_url
EXPORTING url = wf_string
IMPORTING client = http_client
EXCEPTIONS argument_not_found = 1
plugin_not_active = 2
internal_error = 3
OTHERS = 4.

CALL METHOD http_client->send
EXCEPTIONS
http_communication_failure = 1
http_invalid_state = 2.

CALL METHOD http_client->receive
EXCEPTIONS
http_communication_failure = 1
http_invalid_state = 2
http_processing_failed = 3.
CLEAR result.
result = http_client->response->get_cdata( ).

REFRESH result_tab.
SPLIT result AT cl_abap_char_utilities=>cr_lf INTO TABLE result_tab.
LOOP AT result_tab INTO r_str.
WRITE:/ r_str.
ENDLOOP.
```

Listing 7.3 Report ZSMS

Note that, for some service providers, the API may contain an IP address instead of a valid domain name, as shown below:

http://196.5.254.66/http/sendmsg?user=xxxxx&password=xxxxx&api_id=xxxxx&to=xxxxxxxxx&text=Hello+World

In such cases, you have to change the IP address to a valid domain name because the SAP server cannot use IP addresses, even though from a browser you won't have any problem. The message should not contain special characters such as *?*, *&* or *=*, because these characters have specific uses in an API string.
Once you are able to post messages from your SAP server, the next step is to trigger the message for different events and customize the message's content, such as invoice creation. You can also schedule the program to run as a background job.

- **Problem**
We're seeing the error message "Posting period 005 2200 is not open. Message no. F5201" while trying to release a billing document to accounts. The accounting document is not getting generated.

Solution
After you release the billing document, an accounting document is generated. The accounting document's posting date becomes the same as the billing date of the billing document.

In the system, you allow the users of a particular company code to post accounting documents for a specific time interval, using Transaction OB52. If the billing date and the subsequent posting date of the accounting document don't fall in the permitted periods, then the accounting document will not be generated, and you'll see the above error message. In this case, it seems that, rather than the allowed accounting period, you have to change the billing date, which, as per the error message is the fifth period of the year 2200 (May if the accounting year is the same as the calendar year, August if the accounting year is April to March, as practiced in many countries).

There's probably a typing error. You can rectify it by following the menu path GOTO • HEADER • HEADER from the overview screen of the invoice using Transaction VF02 and changing the billing date as shown in Figure 7.24.

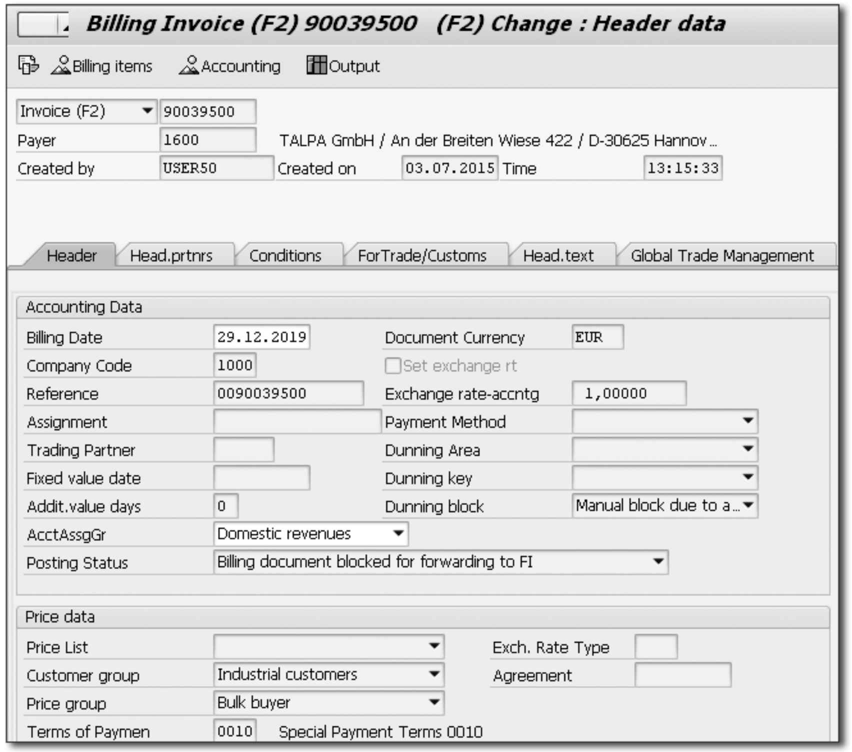


Figure 7.24 Change Billing Date

- **Problem**
  While saving an invoice, we're receiving the error "Foreign Trade Data is Incomplete." Why is this (especially because it's a domestic invoice)?

  Solution
  There can be several reasons for this error. Follow the menu path GOTO • HEADER • FOREIGN TRADE/CUSTOMS and click on the INCOMPLETENESS ANALYSIS icon (shown in Figure 7.25) to identify the incomplete data. Also check if, in the order for this invoice, the shipping point has been deleted. The possibility of this being the problem is very high, since you mentioned that it's a domestic sale. Also read SAP Note 354222 (Foreign Trade Data Incomplete for Domestic Business) to understand the problem.

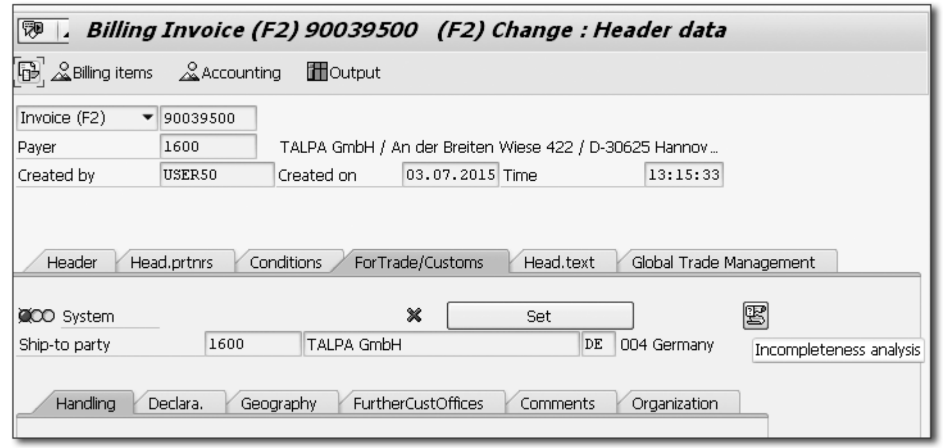


Figure 7.25 Incompleteness Analysis of Foreign Trade Data

- **Problem**
  We've activated number range buffering in our organization, but for our U.S. subsidiary, this feature creates trouble. There are times when the invoice numbers are not consecutive. We want to deactivate the number range buffering for U.S. invoices, but not for the other countries.

  Solution
  Use the code in Listing 7.4 in the form `USEREXIT_NUMBER_RANGE` using `US_RANGE_INTERN` of the include program `RV60AFZZ`. Refer to SAP Notes 23835, 424486, and 363901 for details.

```
DATA: LS_T001 LIKE T001.
 DATA: LD_I_INTCA LIKE T005-INTCA.
 CALL FUNCTION ‘FI_COMPANY_CODE_DATA’
 EXPORTING
 I_BUKRS = XVBRK-BUKRS
 IMPORTING
 E_T001 = LS_T001.
 CALL FUNCTION ‘COUNTRY_CODE_SAP_TO_ISO’
 EXPORTING
 SAP_CODE = LS_T001-LAND1
 IMPORTING
 ISO_CODE = LD_I_INTCA.
 IF LD_I_INTCA EQ ‘US’.
 NO_BUFFER = ‘X’.
 ENDIF.
```

Listing 7.4 USEREXIT_NUMBER_RANGE

- **Problem**
  Some sales documents show as open documents in Transaction VA05N. They also show up in the billing due list, and their status is open in tables `VBUK` and `VBUP`. But as per the document flow, we find that subsequent documents are created, and their status should have been complete.

  Solution
  To stop these documents from appearing in the document due list, use the report program `SDVBUK00`. This program will update the document status. In Transaction SE38, enter the program name (`SDVBUK00`) and press the F8 key. You'll go to the screen shown in Figure 7.26.

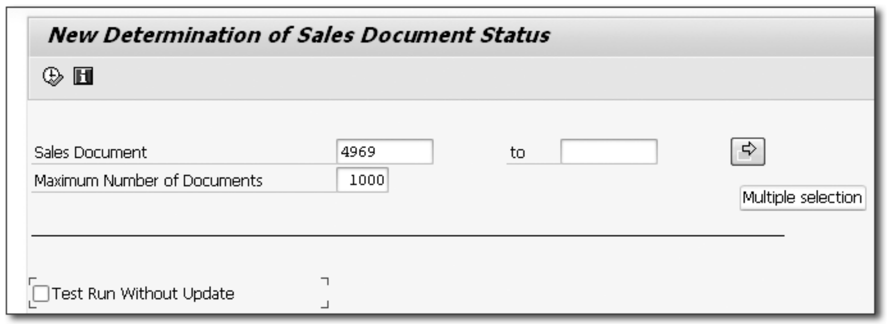


Figure 7.26 New Determination of Sales Document Status

  Click on the Multiple Selection icon highlighted in the figure and enter all of the documents whose status you want to redetermine. Unselect the Test Run without Update checkbox. You can do a test run without unselecting it, in which case you'll receive a report, but the document status won't change. When you run the report with this criteria, the statuses of documents are rectify and update. Refer to SAP Note 207875 for more details.

- **Problem**
  Our accounting department has found an instance where the figures of a billing document in Sales and Distribution do not match the figures in an accounting document. We have not found the reason for this error, or any other document with a similar problem. Is there any way to confirm that there is no such error in our system?

  Solution
  Run the report SDFI_CONSISTENCY_CHECK by executing the following steps.

  - Enter Transaction SE38.
  - In the Program field of the initial screen, enter the program name "SDFI_?CONSISTENCY_CHECK."
  - Press F8.
  - The selection screen will appear.
  - Enter the company code, fiscal year, and period (`01` for January, `02` for February, and so on, provided the fiscal year is the same as the calendar year) in which you require the report. You can run this program for few documents by specifying the document number in the selection screen.
  - Press F8 to run a check. The screen shown in Figure 7.27 will appear.
  - Select the Difference Amnt column and click on the Summation icon. If the total in the Difference column is zero, everything is likely to be OK.
  - Select the Totals tab. Figure 7.27 shows the Differences tab. In the Totals tab, GL-related totals are available. In the Differences tab, the totals are document-related.

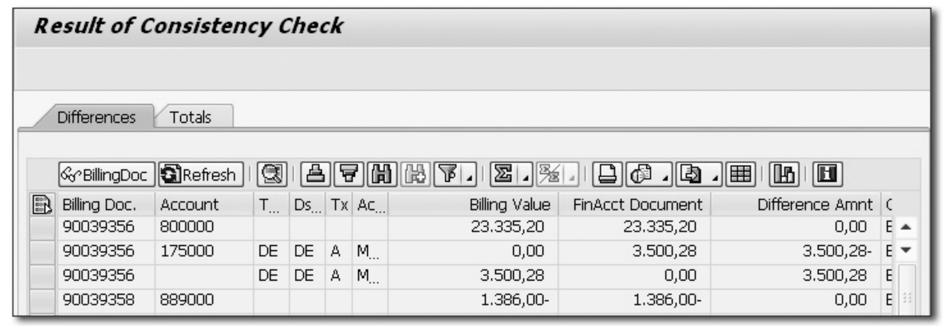


Figure 7.27 Result of Consistency Check for Audit

- **Problem**
  We've been asked to provide a report on tax codes and the GL assigned to them for automatic posting. Is there any standard report for this?

  Solution
  You can use the standard report SAPUFKB1 for this purpose, which actually is meant for auditing. Execute the following steps:

  - Enter the program name `SAPUFKB1` in the Program field in the initial screen of Transaction SE38.

- Press F8.
- In the screen that appears, enter the chart of account (e.g., CANA) and company code (e.g., US01) for which a report is required.
- The screen shown in Figure 7.28 will appear. The screen lists all of the possible automatic accounting postings in the system.
- Select the %TX – Sales/pur. Tax checkbox. This option will give you the details about the GL assigned for automatic tax posting.
- Press F8.

The report will provide the information you need. If there's a tax code for which a GL is not assigned, you'll be able to see it and rectify it. The same thing can be done for other auto-postings scenarios (e.g., posting to revenue accounts). This is a kind of preventive maintenance.

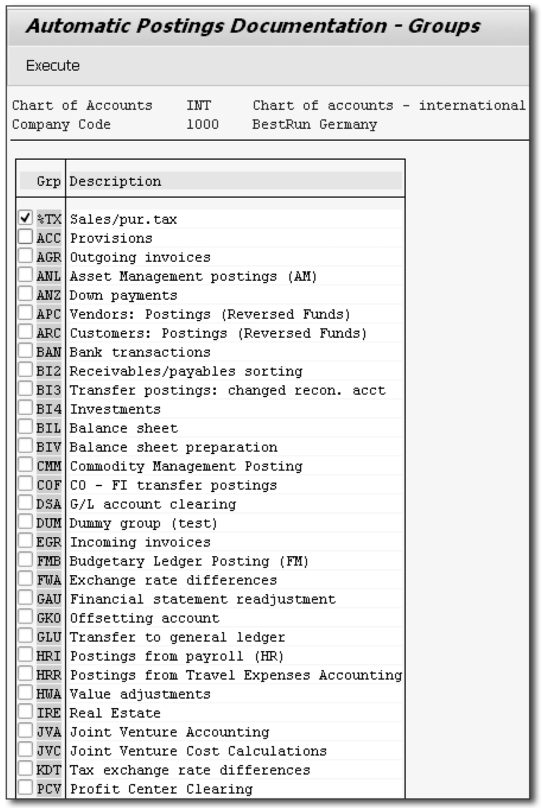


Figure 7.28 Automatic Postings (e.g., Tax Accounts) Audit

- **Problem**
  We cancelled a credit memo, so we no longer require the credit memo request for it. When we attempt to delete it, however, we get an error message. Because we cancelled the subsequent document (credit memo), why does it show such an error?

  Solution
  For normal sales processing of an order, delivery, and billing, if you want to cancel the order after creation of the bill, the following steps are required:
  - Cancel the invoice using Transaction VF02.
  - Reverse the PGI of the delivery using Transaction VL09.
  - Delete the delivery using Transaction VL02N.
  - Delete the sales order using Transaction VA02.

  In this situation, note that the subsequent document for the order (that is, the delivery) doesn't exist. However, the situation for a credit memo or debit memo is slightly different because there's no delivery in between. You cannot delete the invoices (e.g., credit memos) and can only cancel them if required. In this situation, the standard practice is to do either of the following, or both:
  - Reject all items of the credit memo request.
  - Change the quantity (and hence the value) to zero. Thus, everybody will ignore the zero-value open order.

  If neither option suits you, you can do the following to delete the credit memo requests of the cancelled credit memos:
  - Go to Transaction SE16N.
  - Enter the table name "VBFA."
  - Activate the function &SAP_EDIT.
  - Select the lines for the credit memo request. The line linking the request to the credit memo and the document that cancelled the credit memo (S2 type invoice) will appear.
  - Delete all of the rows for this credit memo request.
  - Go to Transaction SE38.
  - Run the report program SDVBFA01.
  - In the selection screen, enter the credit memo request number.
  - Unselect the Test Run without Update checkbox.

- Execute.
- In Transaction VA02, you can now delete the credit memo request.

- **Problem**
  We found several deliveries in a billing due list (VF04) that should not be there. These deliveries are already billed. Is there any way rectify this error?

  Solution
  Refer to SAP Note 128947. As suggested in the note, run the standard program RVV05IVB using Transaction SE38. In the selection screen, you'll find 14 checkboxes for updating indices, shown in Figure 7.29. In Table 7.9, we've listed the database tables corresponding to the checkboxes. The list in Table 7.9 is in the same sequence as the corresponding checkboxes (see Figure 7.29). So to update the billing due list for deliveries, select the ninth checkbox. The list of deliveries that are to be updated appears in the selection list. Also select the Billing Index checkbox in the Deliveries frame, as shown in Figure 7.29. Execute the program by pressing the F8 key.

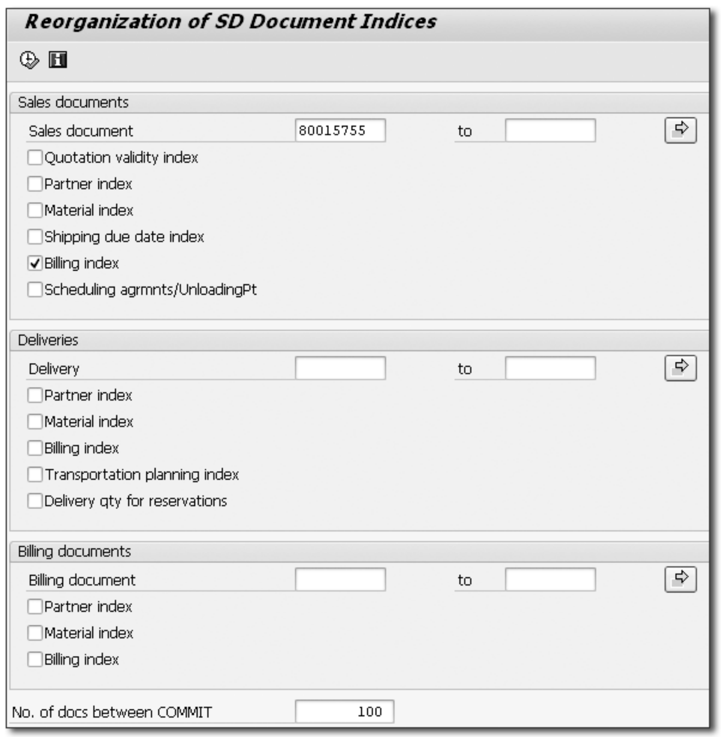


Figure 7.29 Selection Screen for Program RVV05IVB

No.	Table	Table Description	Transaction
1	VAKGU	Sales Index: Quotation Validity	VA25
2	VAKPA	Sales Index: Orders by Partner Function	VA05
3	VAPMA	Sales Index: Order Items by Material	VA05
4	VEPVG	Delivery Due Index	VL04
5	VKDFS	SD Index: Billing Initiator	VF04, VF24
6	VLPKM	Scheduling Agreements by Customer Material	VA25
7	VLKPA	SD Index: Deliveries by Partner Functions	VL05, VL06
8	VLPMA	SD Index: Delivery Items by Material	VL05, VL06
9	VKDFS	SD Index: Billing Initiator	VF04, VF24
10	VTRDI	Shipment Planning Index	VT01, VT04
11	VRSLI	Receipt of Materials from Deliveries	ME2O
12	VRKPA	Sales Index: Bills by Partner Functions	VF05
13	VRPMA	SD Index: Billing Items per Material	VF05
14	VKDFS	SD Index: Billing Initiator	VF04, VF24

Table 7.9 Tables Updated by Program RVV05IVB

- **Problem**
  We've have found a billing document that has not updated a sales info structure. Is there any way to manually update an info structure?

  Solution
  Refer to SAP Note 174141. The update programs are as follows:
  - Update SIS for orders (or old orders): RMCVNEUA
  - Update SIS for deliveries (or old deliveries): RMCVNEUL
  - Update SIS for invoices (or old invoices): RMCVNEUF

7.7 Summary

In this chapter, we've discussed how SAP ERP processes invoices. You learned about the steps involved in the configuration of billing types, billing plans, and revenue account determination. In the coverage of accounts interface, you also learned how to use the condition technique for reconciliation and cash account determination. We discussed how to modify revenue reorganization, and you should now understand how the accounting document can take the billing document number. In the last part of this chapter, we listed some of the common errors for billing and their solutions.

In the next chapter, you'll learn about text processing, message control, ABAP tools, and numbering objects.

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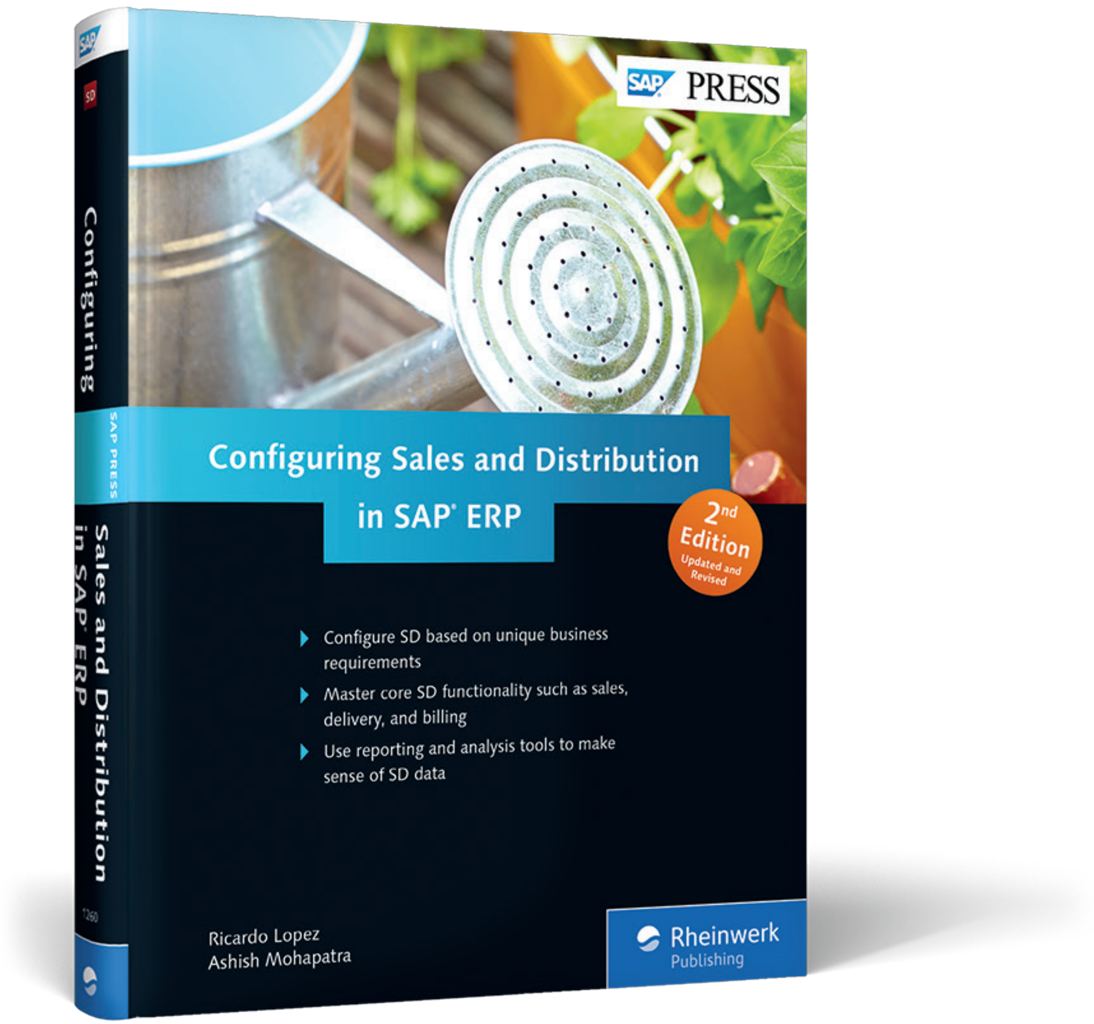

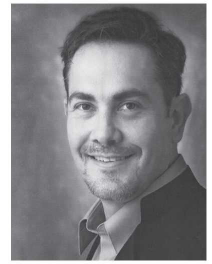

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