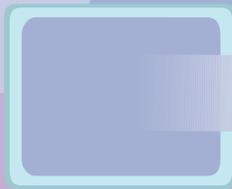


# *R/3 System*

## *Printout Design*

*Made Easy*



*For R/3 Release 3.1H*

Step-by-Step Guide  
to SAPscript Layout Sets

SAP Technology, Inc.  
R/3 Simplification Group



# *R/3 System Printout Design*



## *Made Easy*

Step-by-Step Guide  
to SAPscript Layout Sets

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# Chapter 1: Introduction

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## Overview

The purpose of this Guidebook is to reduce the consulting time needed to adapt layout sets. Because more than 80 percent of external communication output can be created with eight layout sets, this book will be useful. As an application consultant, although you may know your applications well, one tough job you may face is adapting a layout set to customers' needs.

## About This Guide

SAPscript offers more functionality than is necessary for creating layout sets and is more useful for word processing than layout sets. This Guidebook explains which SAPscript parts are necessary for layout sets and which are not. The book is divided into the following sections:

1. An overview of output creation with R/3.
2. A guide for bringing layout sets, which are a better fit with U.S. and Canadian markets, into the system. For users focusing on the Australian market, there is a section on copying layout sets between clients.
3. A brief description of the SAPscript needed to understand layout set parts.  
This description is necessary to understand the "How-To" section in chapter 5.
4. A "How-To" section that describes the possible changes in existing layout sets and using SAPscript to implement these changes.
5. An overview of existing third-party solutions available for output creation.
6. A question-and-answer section on customizing output.
7. Theoretical information on SAPscript control commands.  
Please look at the commands to understand the available formatting options and the options you may want to use.
8. A glossary.

9. An Appendix that includes the sample output we created with the layout sets from the Pre-Configured Client (PCC) and the diskette inside the back cover of this Guide.
10. This diskette has the eight layout sets ready to upload into a customer's system.  
If you are using the PCC, you do not have to upload these sets.

## For Who is This Guide Written?

This Guidebook is for Applications Consultants and Implementation project team members who do not know SAPscript. (The Project team members are experienced in the applications' customizing.)

## Assumptions

For this Guidebook to be useful, the following assumptions are made:

- This book is for the U.S., Canadian, and Australian markets.
- A Company normally uses only a few layout sets to create most of the printed output for the external communication. The following adapted layout sets for output produce more than 80 percent of the typical output:
  - Sales Order Confirmation
  - Packing List, Picking List
  - Invoice
  - Purchase Order
  - Check (Pre-numbered for the U.S. and Australia)

In addition, this guide covers the production layout sets although they are not externally used.

- A consultant and the implementation project team members know the application sufficiently enough to view every document screen.
- Except for producing checks in the U.S. and Australia, a company will not use preprinted forms; the only preprinted item on an output page may be the company logo.
- If your R/3 System uses the Correction and Transport System (CTS), then you know how to handle CTS screens. Since this is a Basis issue, it will not covered in this Guidebook.

Please consult your system administrator for this issue.

- You must know how to use the OSS to get an access key to modify R/3 objects.

Please consult your system administrator for this issue.

## The Most Important Layout Sets

The following table shows the names of the most frequently required layout sets on the diskette, in the PCC, and in the SAP standard system.

Output name	Diskette/Preconfigured Client Name	SAP Standard Name
SD Sales Order Confirmation	J_9H_RVORDER01	RVORDER01
SD Packing List	J_9H_RVDELNOTE	RVDELNOTE
SD Picking List	J_9H_RVPICKSIN	RVPICKSIN
SD Invoice	J_9H_RVINVOICE01	RVINVOICE01
MM Purchase Order	J_9H_MEDRUCK	MEDRUCK
FI Prenumbered Check (US)	J_9H_PRENUM_CHCK	F110_PRENUM_CHCK
FI Check (CDN)	J_9H_PRE_CHCK_CN	F110_PRENUM_CHCK
PP Goods Issue Slip	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Pick List	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Confirmation Slip	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Time Ticket	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Goods Receipt List	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Operation Control Ticket	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Object List	J_9H_PSFC_LAYOUT	PSFC_STD_LAYOUT
PP Kanban Card	J_9H_PSFC_KANBAN	PSFC_KANBAN

Except for checks, the corresponding layout sets on the diskette and in the SAP standard vary only slightly from each other. The main difference is that the layout sets on the diskette fit better on the U.S.-Canadian page format (8 1/2" × 11"), also known as "Letter" size, than the layout sets in the standard system.



Although R/3 provides a program to convert the page size of standard SAP layout sets from the German "DIN A4" to the U.S. and Canadian "Letter," please use the layout sets on the diskette or in the PCC as a starting point for customizing because these layout sets are already further customized for the target market. The program to convert the page format of layout sets is called RSTXFCON.



For checks, the difference between the diskette and the PCC and the SAP standard version is significant. The SAP standard contains a pre-numbered check in the "DIN A4" format, and the U.S. and Canadian format is 8 ½" x 7."

## How is The Guide Organized?

<i>Chapter Title</i>	<i>Contents</i>
<b>Introduction</b>	Describes the book's audience, how the book is organized, and how to use the book.
<b>SAPscript, the Big Picture in Small Words</b>	Provides the "big picture" about how to print from the R/3 System.
<b>Getting Started with Copied Layout Sets</b>	Describes what you need to do to transfer the provided layout sets from the diskette or between clients.
<b>A bit of Theory about Layout Set Elements</b>	Describes what you need to know about layout sets and SAPscript.
<b>An easy Guide to Otherwise Complicated Modifications</b>	Describes how to make common changes to layout sets.  We will provide you with information on the changes and also include a step-by-step example for each change.
<b>Third-Party Solutions</b>	Provides a brief overview about existing third-party solutions for output generation.
<b>Printout-related Customizing of the Applications</b>	Includes the customization of printing-related application areas.
<b>SAPscript Control Commands</b>	Provides an overview on SAPscript control commands and formatting options to help you create the desired layout.

The book also contains a Glossary, an Appendix, and an Index. The Appendix contains sample document printouts and layout sets used in this Guide.

## How to Use this Guide

Depending on your level of knowledge about SAP and SAPscript, we recommend the following:

- If you have little, or no, knowledge about SAPscript, begin with Chapter 2.
- Everyone should read Chapters 3 and 4 to upload the provided layout sets. These chapters are an ideal starting point and will help you understand the SAPscript you need.
- Depending on the desired changes and the details you need, Chapters 5, 6, 7, and 8 help you select the applicable sections.

Certain terms, user information, and special icons are used in this Guidebook. The following sections explain how to identify and understand these helpful features.

## Terminology

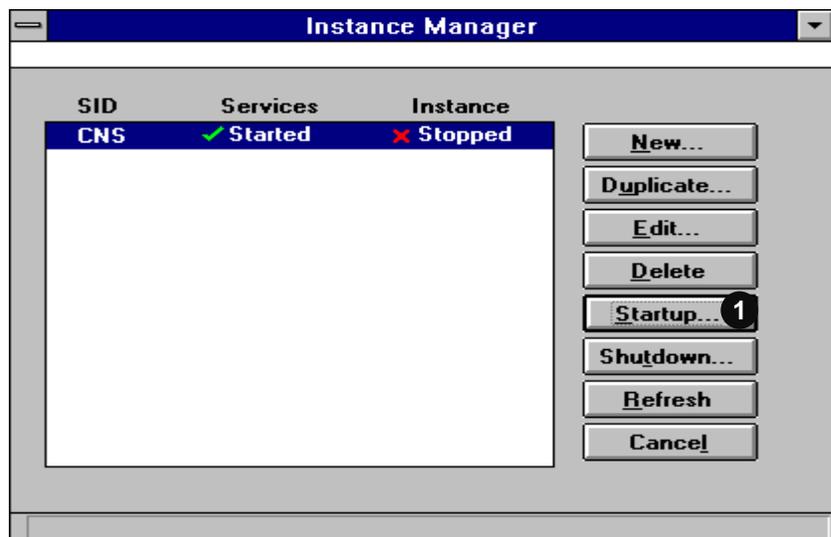
The following are explanations of the terms used throughout this guide.

### Click

When you see the word “Click”, use the mouse to point and perform the action. For example:

1. Click *Startup...*

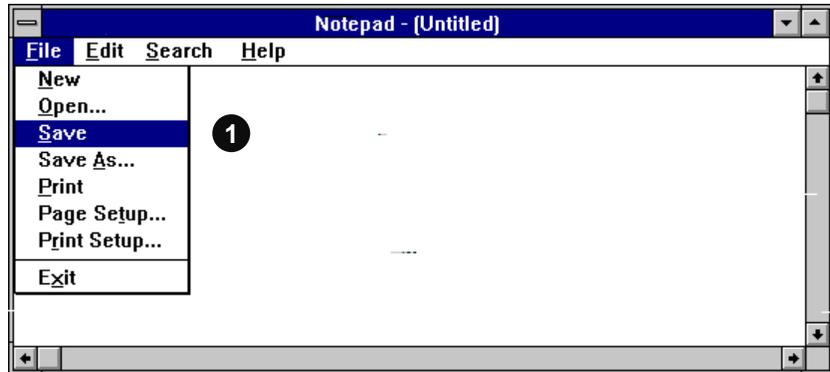
Use your left mouse button to click the on-screen button labeled “Startup...”



### Menu Path

To follow the menu path, choose the first menu item and each sub-menu item until the path is complete. Please see the example on the following page.

1. Choose *File* → *Save*.



## User Steps and Typeface Styles

The steps that require action and/or text to be entered into a field or at a command prompt are numbered.

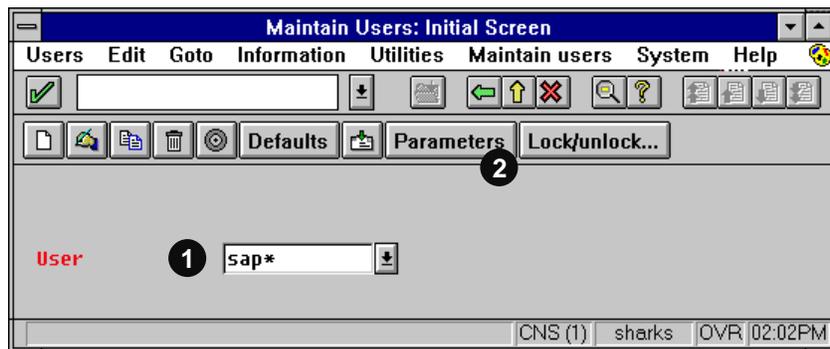
*Object style* is italicized text, which indicates that the word is an on-screen button or field, or a noun such as a book, an operating system, or an application.

**user input** is text, numbers, or symbols that the user enters and is represented by bold courier font.

For example:

1. Enter *SAP\** in *User*.
2. Click *Parameters*.

This step allows you to enter search parameters.



The first step is numbered, so an action is required. *User* is italicized because it refers to an on-screen object (a field in this case). *SAP\** is in the User Input style to indicate information that must be entered in a field.

The second step is numbered, so an action is required. *Parameters* is italicized because it refers to an on-screen button.

## Special Icons

Throughout this guide you will see special icons indicating the presence of important messages. Here is a brief explanation of each icon:



This textbox is a warning message. Please read this information carefully to avoid problems!



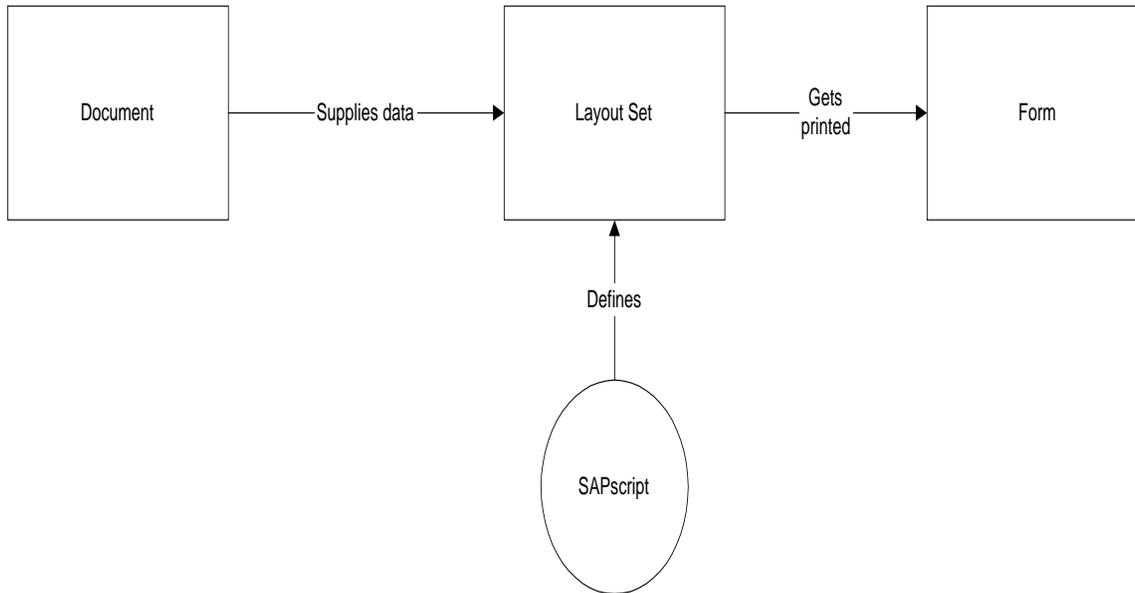
This textbox provides the nerdy details. Although life is possible without this information, these are the details if you want to understand the topic in depth.



This textbox provides helpful hints or shortcuts to make your work faster or easier.



## Chapter 2: SAPscript, the Big Picture in Small Words



If a user wants to print invoices or checks stored in the System, SAP allows the user to define these forms by using layout sets. The tool that SAP provides for creating layout sets is called SAPscript. Once the layout set is created, you can specify which layout set you want the System to use for a specific document.

To print a document, the SAP system runs a program that collects the document data and feeds this data into the layout set the user has specified for that document.

SAP provides a standard layout set for every printable document, so that users do not need to re-create layout sets.



If you do not want to use existing layout sets, *copy and modify* the layout set that closely matches your needs. After you have modified this layout set, instruct the system to use your version instead of the original.



## Chapter 3: Getting Started with Copied Layout Sets

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### Overview

This chapter helps you customize layout sets. When modifying these sets, ensure that you only change the copies! If you need layout sets for the U.S. or Canada, begin with the sets in the disk from inside the back cover of this guide or in the Pre-Configured Client (PCC). Upload the layout sets from the disk to your SAP client or copy the layout sets from the PCC into your client. If you need layout sets for Australia, begin with the standard layout sets from client 000 and copy the layout sets from client 000 into your client.

These two procedures are described in the following sections.

### Uploading the Layout Sets

The disk contains the following nine files for the layout sets:

<i>Output name</i>	<i>File name</i>
Sales Order Confirmation	sorder.scr
Packing List	delnote.scr
Picking List	picklist.scr
Invoice	invoice.scr
Purchase Order	porder.scr
Prenumbered Check (US)	pcheckus.scr
Check (CDN)	pcheckcd.scr
PP Output	pp_output.scr
PP Kanban Card	pp_kanban.scr

The easiest way to import the layout sets into your R/3 system is to make the files available on the presentation server, i.e. this is the computer where SAPGUI is running. Since this machine is usually a PC with a disk drive, insert the disk into the correct drive. You may also place the files on the application server. This process is complicated, especially if R/3 is running on a UNIX machine.

1. Make the files available on the presentation server, i.e. the front-end PC on which you are logged. If this server is a PC that runs Windows and has a disk drive, insert the disk and have the files available on drive A.



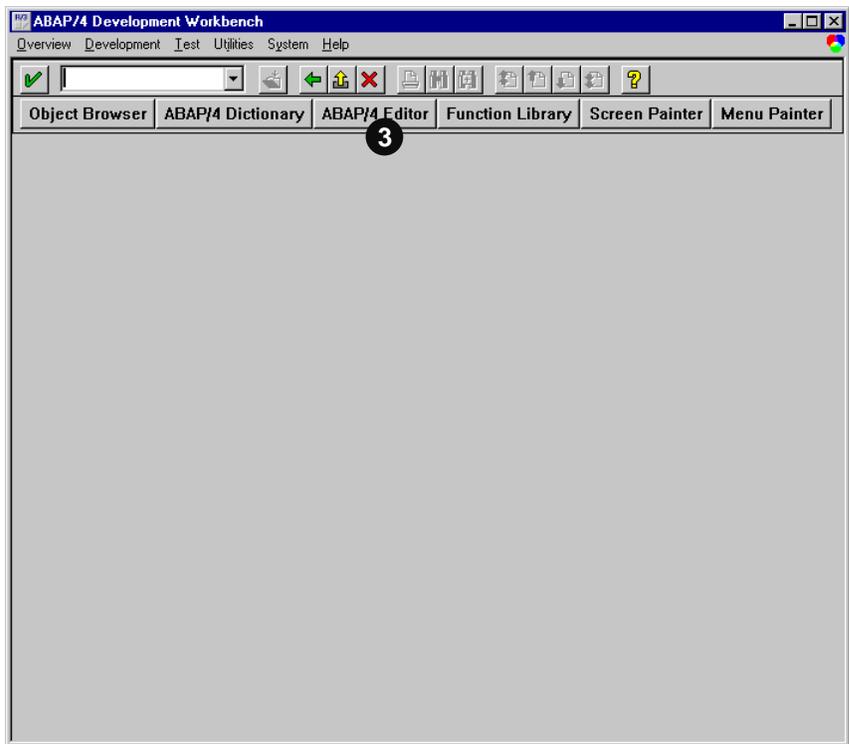
In UNIX, if you copy the files with ftp, ensure that you use ASCII, not the binary mode.

2. Choose *Tools* → *ABAP/4 Workbench* from the client that you want to upload the layout sets.

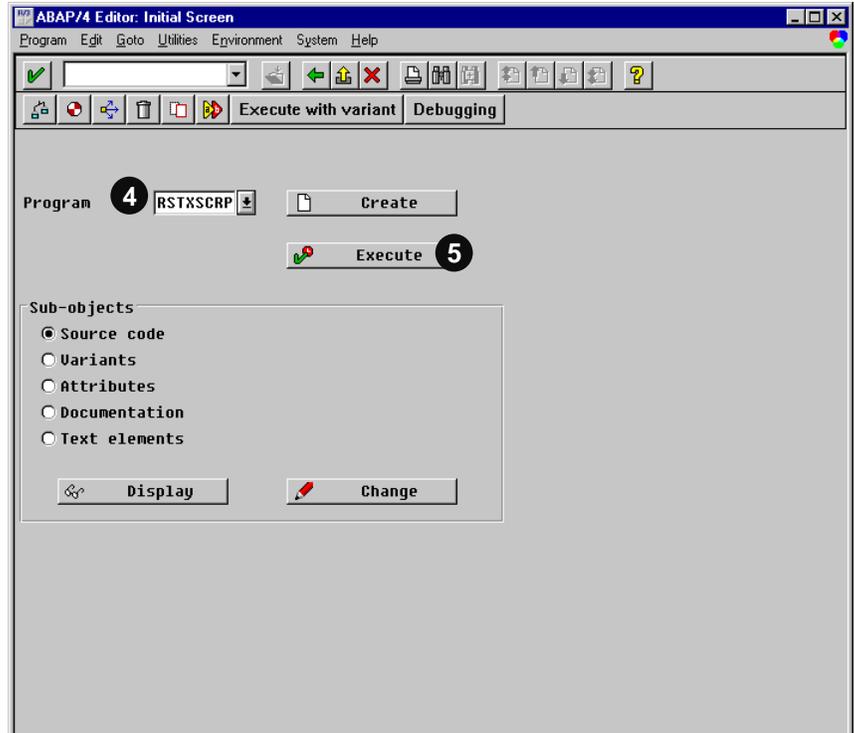


Layout sets are client-dependent. Therefore, the upload program only creates the sets in the client where the program is running.

3. Click *ABAP/4 Editor*.



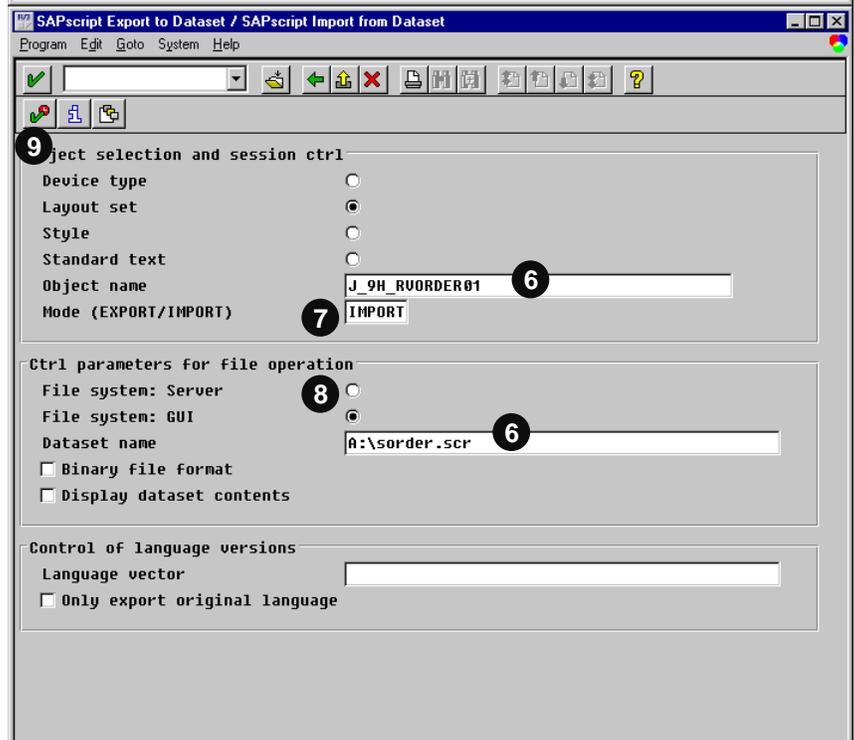
4. Enter `RSTXSCR` in *Program*.
5. Click *Execute*.



6. Enter information in *Object name* and *Dataset name*.

Refer to the table on the next page for information about this step.

7. Enter `IMPORT` in *Mode*.
8. If you use the disk drive of the presentation server, select *File system: GUI*, otherwise select *File system: Server*.
9. Click *Execute*.

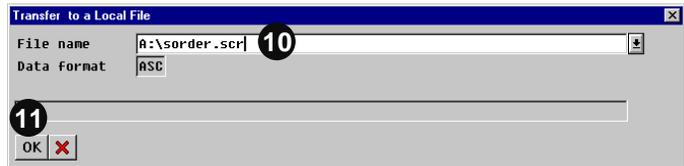


If you use a front-end PC and the disk drive is “A,” enter the following information in *Object name* and *Dataset name*:

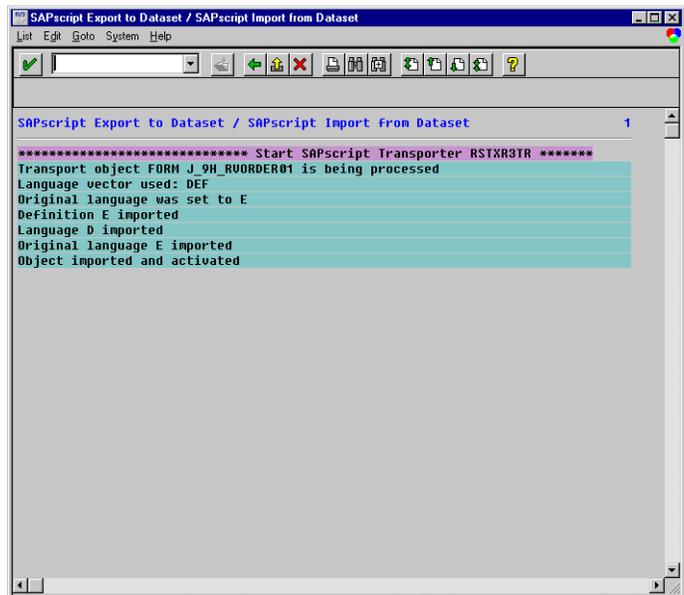
Output name	Object name	Dataset name
Sales Order Confirmation	Z_9H_RVORDER01	a:\sorder.scr
Packing List	Z_9H_RVDELNOTE	a:\delnote.scr
Picking List	Z_9H_RVPICKSIN	a:\picklist.scr
Invoice	Z_9H_RVINVOICE01	a:\invoice.scr
Purchase Order	Z_9H_MEDRUCK	a:\porder.scr
Prenumbered Check (USA)	Z_9H_PRENUM_CHCK	a:\pcheckus.scr
Check (CDN)	Z_9H_PRE_CHCK_CN	a:\pchecked.scr
PP Output	Z_9H_PSCF_LAYOUT	a:\pp_output.scr
PP Kanban Card	Z_9H_PSCF_KANBAN	a:\pp_kanban.scr

10. Enter the name of the dataset again.

11. Click *OK*.



The result is a protocol. A sales order confirmation should look like the screen on the right.



## Copying Layout Sets Between Clients

If you are using the PCC, you may have to copy the provided layout sets from the PCC to another client. Copying the layout sets is similar to copying layout sets from client 000, because you have to replace the client number 000 with the PCC's number. The PCC layout set's names are the same names as on the disk except the first letter is a J not a Z.

The following table contains the standard layout sets names delivered by SAP in client 000:

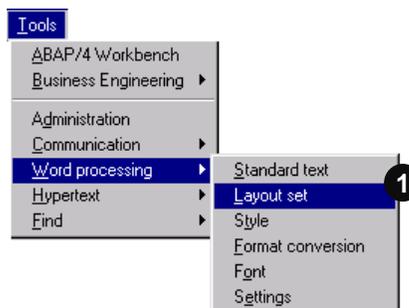
<i>Output name</i>	<i>Layout set name</i>
Sales Order Confirmation	RVORDER01
Packing List	RVDELNOTE
Picking List	RVPICKSIN
Invoice	RVINVOICE01
Purchase Order	MEDRUCK
Prenumbered Check	F110_PRENUM_CHCK
PP Output	PSCF_STD_LAYOUT
PP Kanban Card	PSCF_KANBAN

If you do not want to use these layout sets, copy them into your client and change them. The following procedure describes how to copy the layout set *RVORDER01* for sales order confirmation. Using the data established for the PCC, the name of the layout set should be *J\_9H\_RVORDER01*.

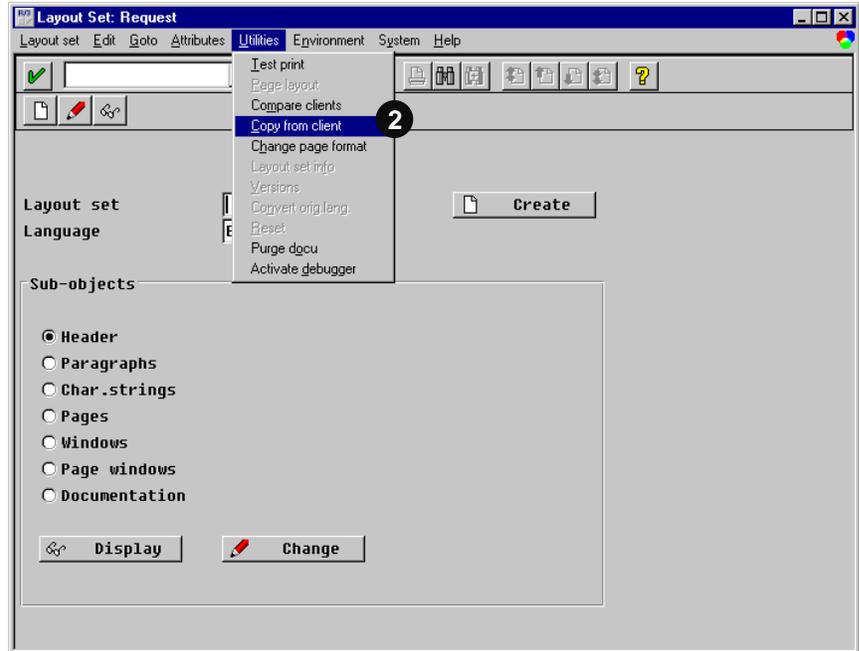


The new name of the copied layout set must begin with Y or Z, because the layout set name must be in the customer name range to be modified later.

1. Choose *Tools* → *Word processing* → *Layout set*.

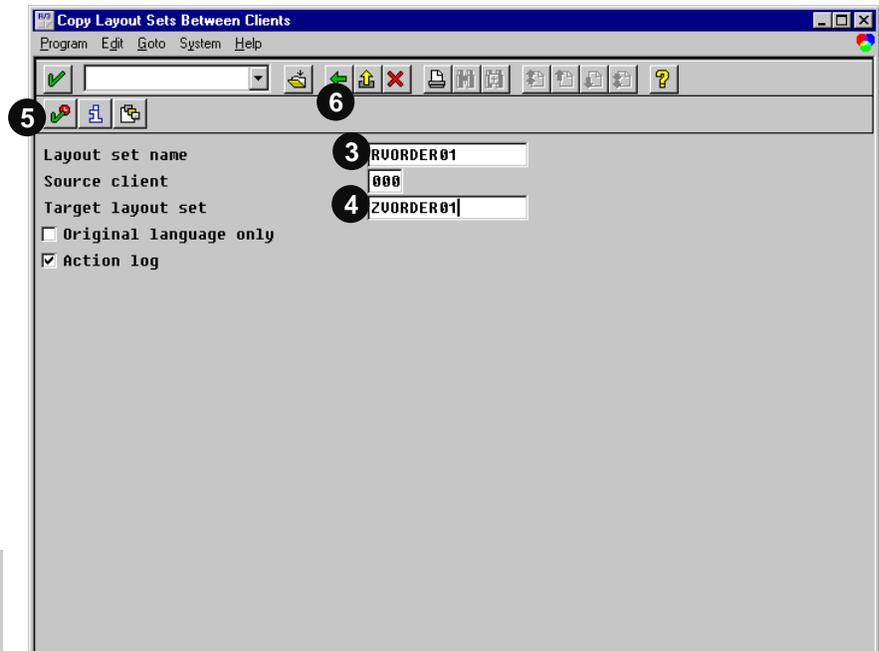


2. Choose *Utilities* → *Copy from client*.



3. Enter the layout set name in *Layout set name*.

4. Enter *Target layout set name*, replacing the first letter of the layout set name with z.



If you are copying data from the PCC, the layout set name will be J\_9H\_RVORDER01, the target name

must start with Y or Z, (e.g., Z\_9H\_RVORDER01), and the source client is the PCC number.

5. Click *Execute*.

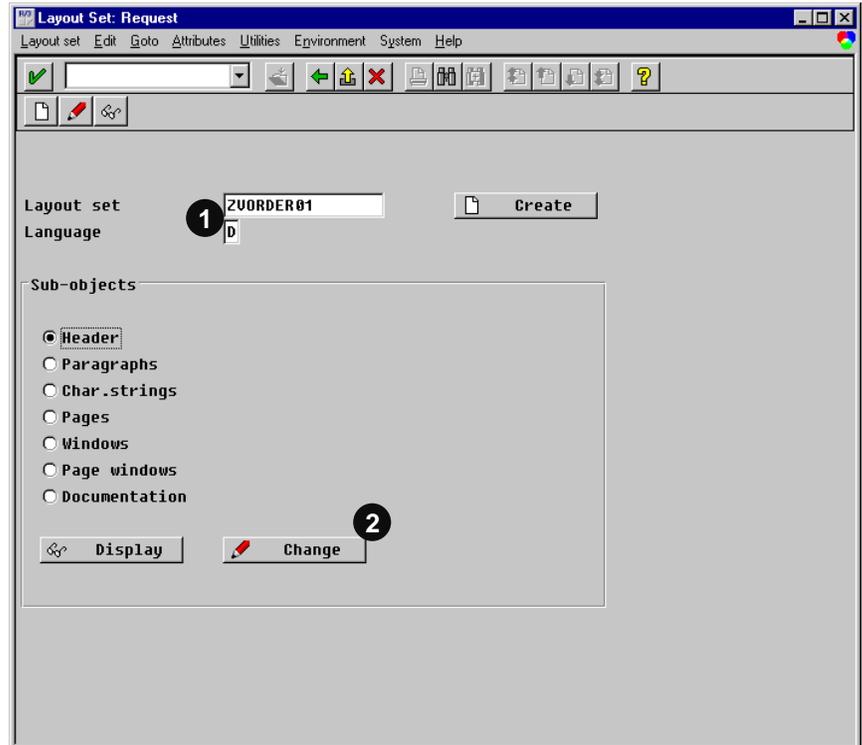
An action log is produced.

6. Click *Back* twice.

The SAP standard layout sets use *D* (German) as the original language. To modify the copied layout set, the original language of the set must be changed to the language in which you are working. Continuing with the example above, we have to change the original language of *ZVORDER01* to *E*.

Changing the default language to English is not necessary for the layout sets copied from the PCC – those layout sets already use English as original language.

1. Enter ZVORDER01 and D in the *Layout Set: Request* screen.
2. Click *Change*.  
If you activate the correction and transport system (CTS), put your new layout set ZVORDER01 on a correction request.



3. Choose *Utilities* → *Convert orig. lang...*
4. Enter E for the new language.
5. Click *OK*.

The new layout set is ready to be modified in the selected client.





## Chapter 4: Layout Set Elements

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### Overview

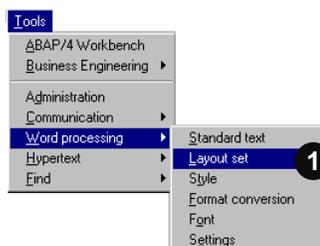
This section describes the elements that comprise a layout set. To understand the “How-To’s” that are described later, you will need to first understand certain aspects of SAPscript. For more information on SAPscript for layout sets, see the R/3 documentation.

A layout set consists of the following components:

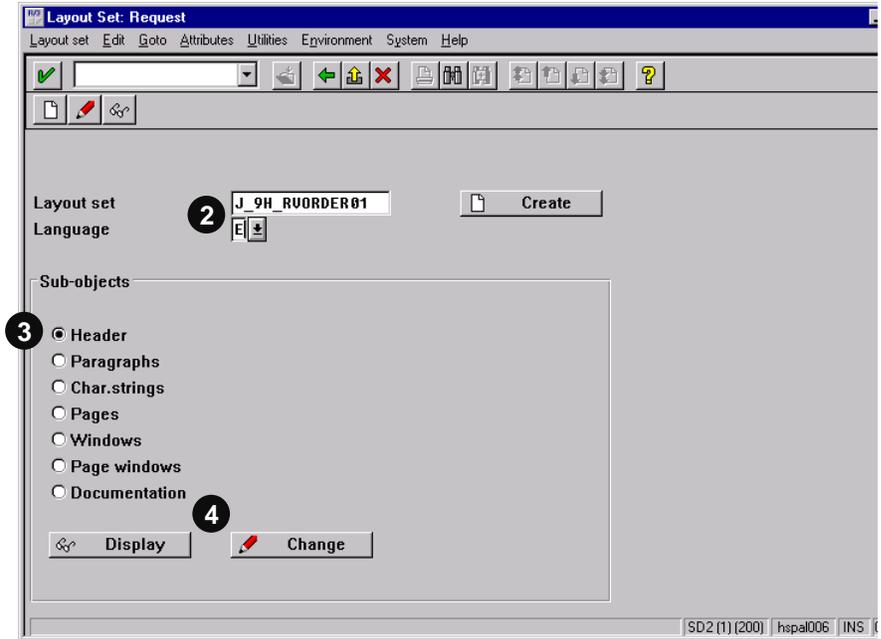
<b>Header:</b>	General information and default settings
<b>Paragraphs:</b>	Font and tab information for paragraphs
<b>Character strings:</b>	Font information within a paragraph
<b>Windows:</b>	Descriptions of areas on the pages
<b>Pages:</b>	Page names with page flow information
<b>Page windows:</b>	Position and size of the windows on the pages
<b>Documentation:</b>	Technical documentation about the layout set elements

### Where to Begin

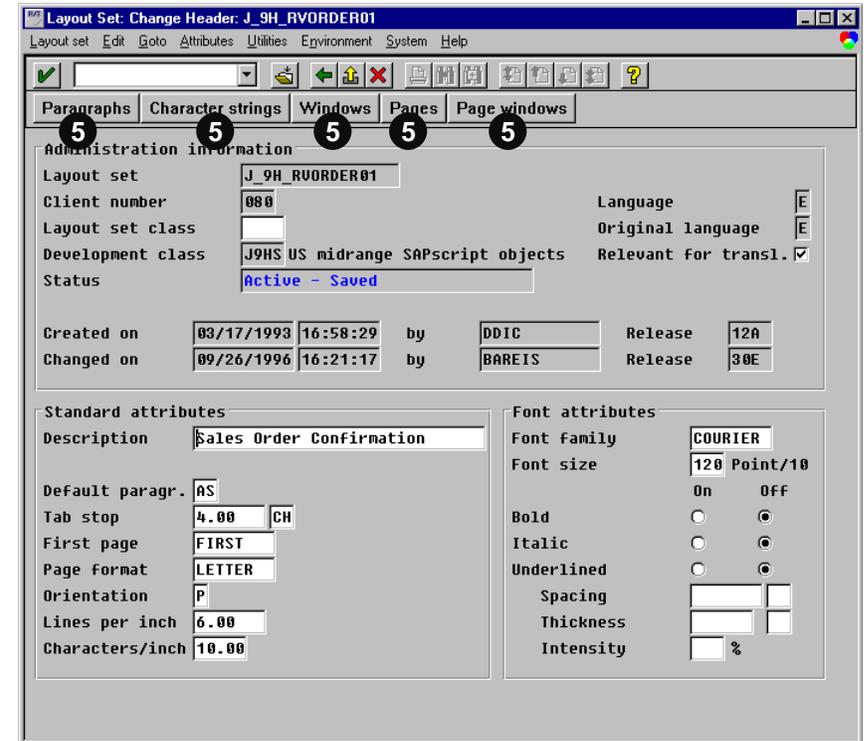
1. Choose *Tools* → *Word processing* → *Layout set*.



2. Access the components by specifying the layout set name and a language in the *Layout Set: Request* screen.
3. Under *Sub-objects*, select a component option. (In our example, we chose *Header*).
4. Click *Display* or *Change*.



5. Each component allows you to jump to other components without backing out to this screen. For example, to jump to the layout set windows from the header of a layout set, click *Windows*.



## Layout Set Components

### Header

The *Header* consists of either administrative information for the layout set or default settings that can be overridden in other parts of the set.

The two elements important to your customizations are the font and the page format. Except for checks, the page format for the U.S. and Canada is “Letter” and for Australia is “DINA4”. The only purpose of the values at ‘Lines per inch’ and ‘Characters/inch’ is to convert the measures specified in lines and characters to absolute values. **Do not** touch these two values because all the tabs and window coordinates will be readjusted. The font will be discussed later in this section.

### Paragraph

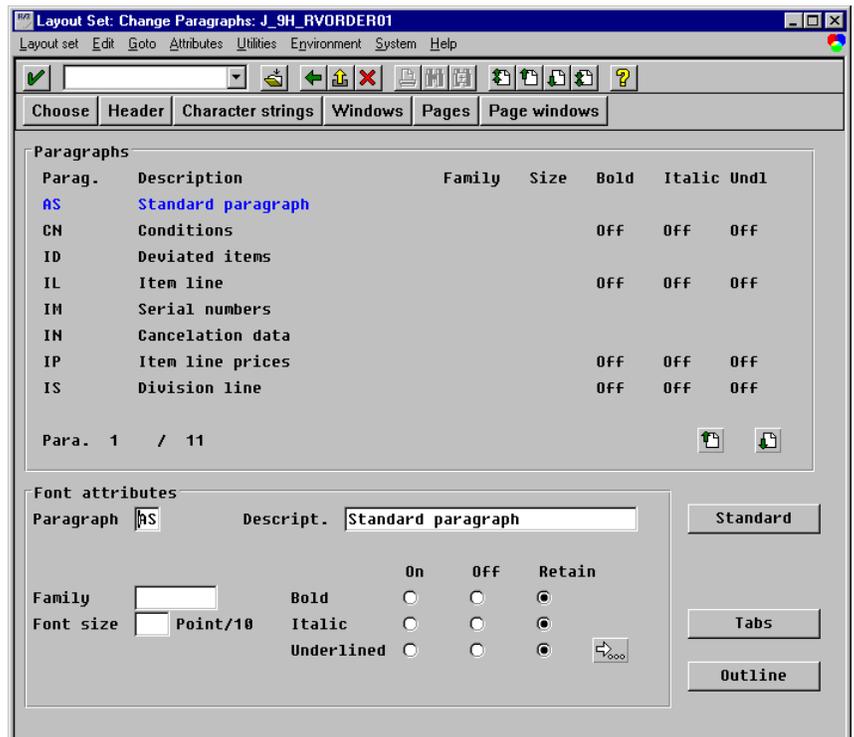
A *Paragraph* contains all the information needed to format text. In layout sets, not all of the formatting possibilities are used, because most layout set paragraphs consist of only a line or a word.

Font and tabs are important for paragraphs. If no font is specified, then the default font from the layout set header will be used. To create columns for outputting line items of a document, specify a list of tabs.

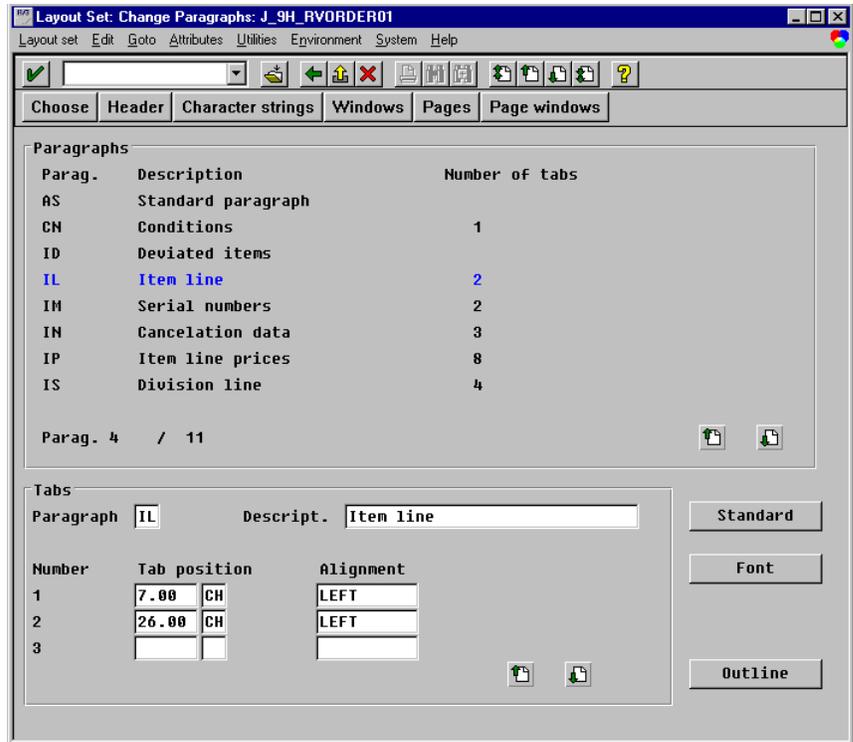


If a paragraph uses a small font, set the line spacing to less than one line. Please ensure that the printer can print more than six lines per inch.

The following two pictures illustrate a paragraph definition.



Tab positions are specified as the number of characters from the left. The system uses the “Characters per inch” value in the header to convert the number of characters into an absolute value. For this conversion, the font size does not matter.



## Character Strings

A *Character String* overrides paragraph settings for specific words in a paragraph. For example, you might want to italicize a single word and not the entire paragraph.

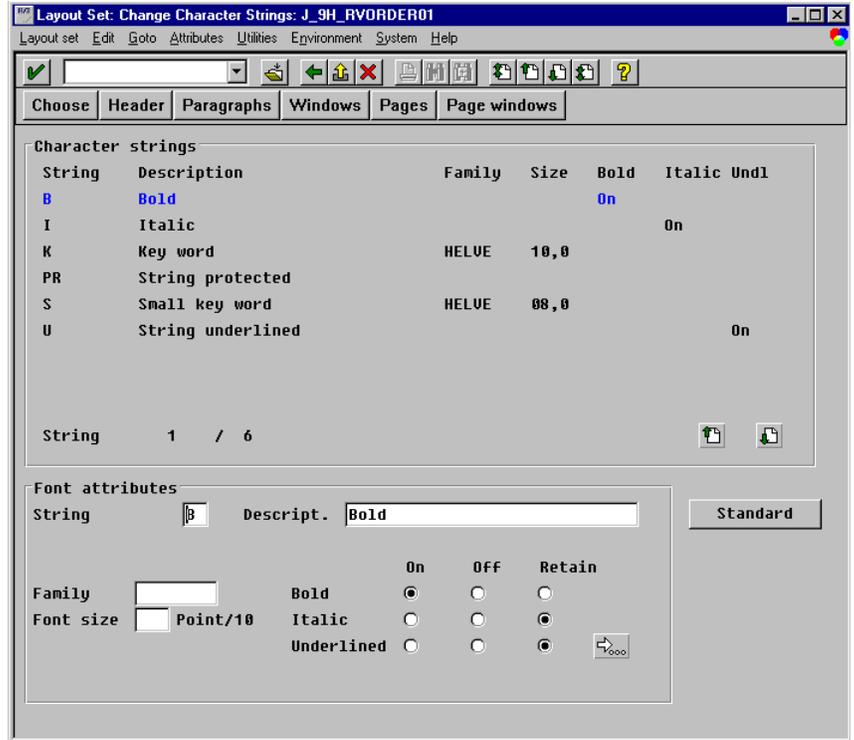


To apply character strings within a paragraph, turn on the settings for the character string by enclosing the character string name in “< >” before the specific text. To return to the standard paragraphs settings, insert “</>” at the end of the specific text.

For example: <B>These words will be bold</>

The only important information, which is defined in the standard view of character strings, is the barcode. For barcode printing, choose from a list of available barcodes.

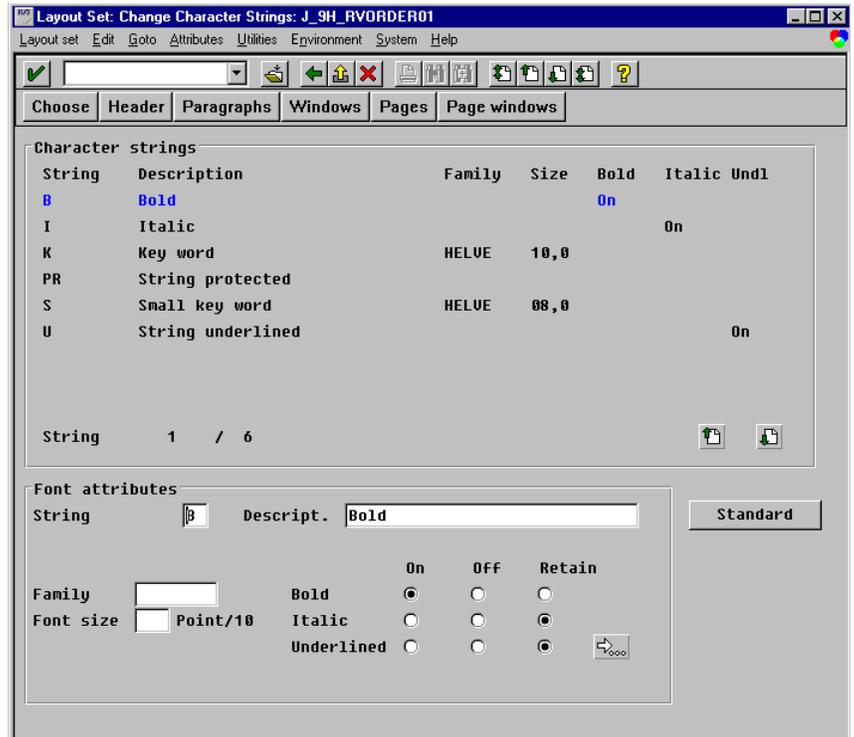
Click *Font* to get to the font definition of a character string.



Radio buttons can be used to underline the typeface, to italicize it, or to make it bold.

*Retain* means that bold, italics, or underlining settings are retained from the paragraph. If a character string has no specified font, then the paragraph font is used.

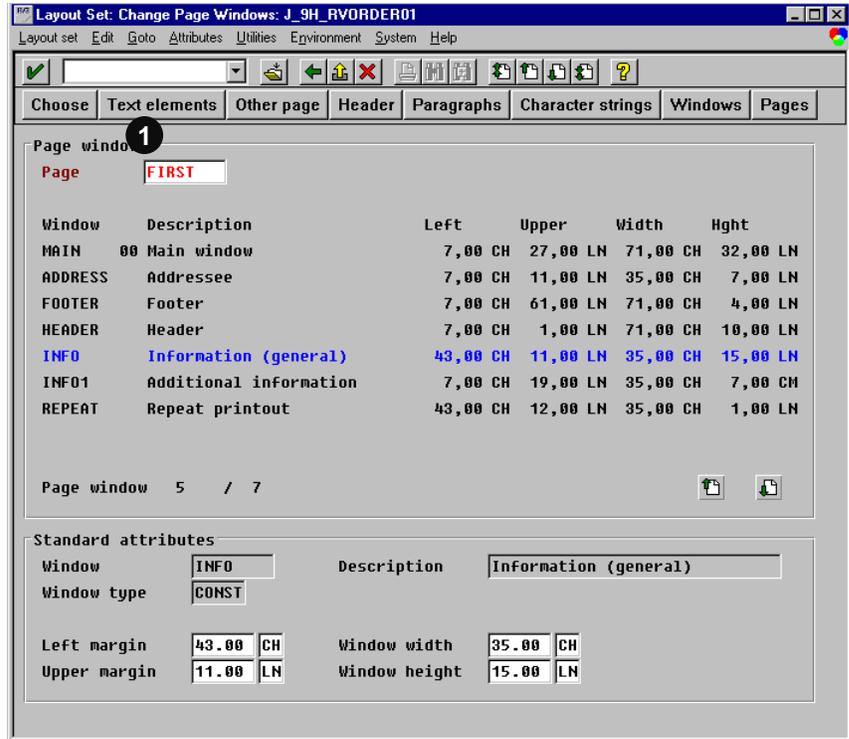
In the screenshot at the right, the character string *B* changes the format to bold, while the settings for Italics and Underline are retained from the paragraph.



## Windows

A *Window* contains the SAPscript text, which can be structured into blocks called “text elements,” and the to-be-printed variables. There is one special window, MAIN, that contains the output of the document line items.

1. From the list of windows, click *Text elements* to jump into the window text.



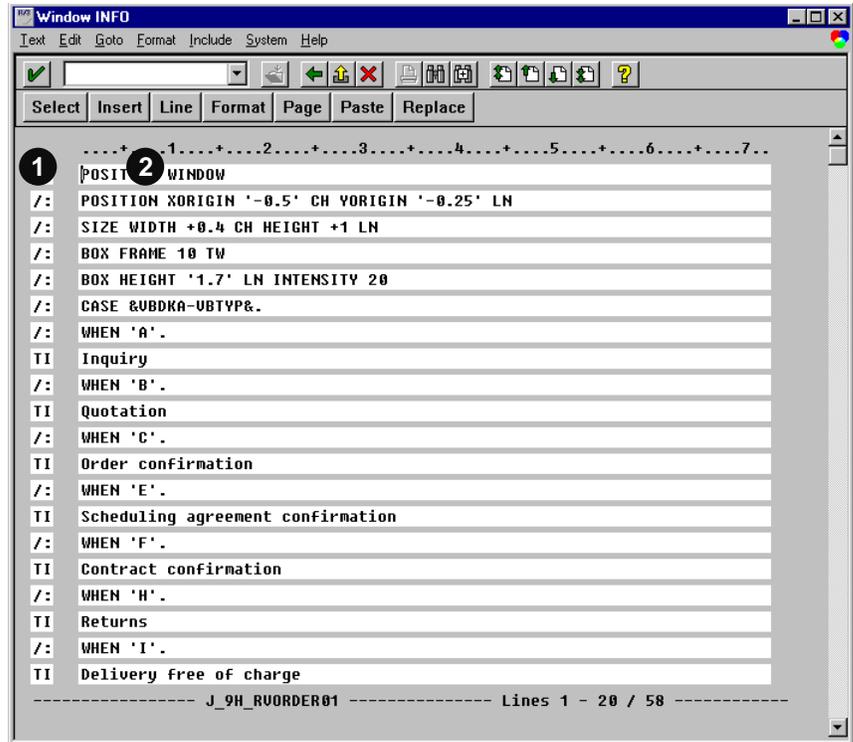
Except for MAIN, the window type can be either variable (VAR) or constant (CONST). SAPscript does not distinguish between the two window types, although these types are mentioned in the SAPscript documentation.

This is what the documentation says on window types:

Variable window content is regenerated on every new page. The content of a constant window is generated once at the beginning and is then printed on every page.

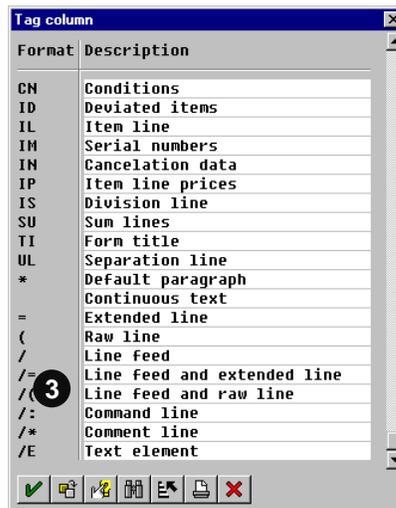
This means that, for better performance, windows that contain different information on different pages must be VAR and all others must be CONST. The contents of the window are defined in the SAPscript editor.

1. The first two-character column contains the format of the text.
2. The second column contains the text of the window.



The lines of the text editor can contain up to 132 characters but only displays 72 characters. The text editor indicates additional characters with a “>” at the end of the line. Click *Shift+F8* to switch between the first and the last 72 characters of the editor lines.

3. A format can be either paragraphs or special characters.



**The following are used as special characters in layout sets:**

- \* Default paragraph of the window or the header
- /: Command line for SAPscript commands
- /\* Comment line
- /E Text element



SAPscript offers the option of printing only parts of a window. For example, a part is printed only if customizing variables are set in a particular way. In this case, text elements are used. A text element always starts with `/E <name of text element>` and continues to the next text element, or to the end of the editor, whichever comes first. The print program controls whether a text element is printed and the order in which the elements are printed.

Paragraph tabs are specified by ‘,’ within the text editor.



If you specify more tabs than those defined for the paragraph, the default tab stop of the header is used. To jump to the contents of a window, select the window by double-clicking on its name, and clicking *Text elements*.

A variable name consists of the name of a DDIC structure, a hyphen, and the field name. All variable names must also be enclosed in ampersands (&). If you want to output variables, you may format them. This step is necessary if you do not want the standard formatting of the variables coming from the “Dictionary.”

The most common formatting options are:

- Truncating the variable length
- Outputting the variable with an offset
- Specifying the number of decimals
- Omitting leading zeros

Syntax:

`&table-field(n)&` prints the first n characters of the variable.

`&table-field+m&` prints the rest of the variable after the first m characters.

`&table-field(.l)&` prints the variable with l decimals.

`&table-field(Z)&` omits the leading zeros

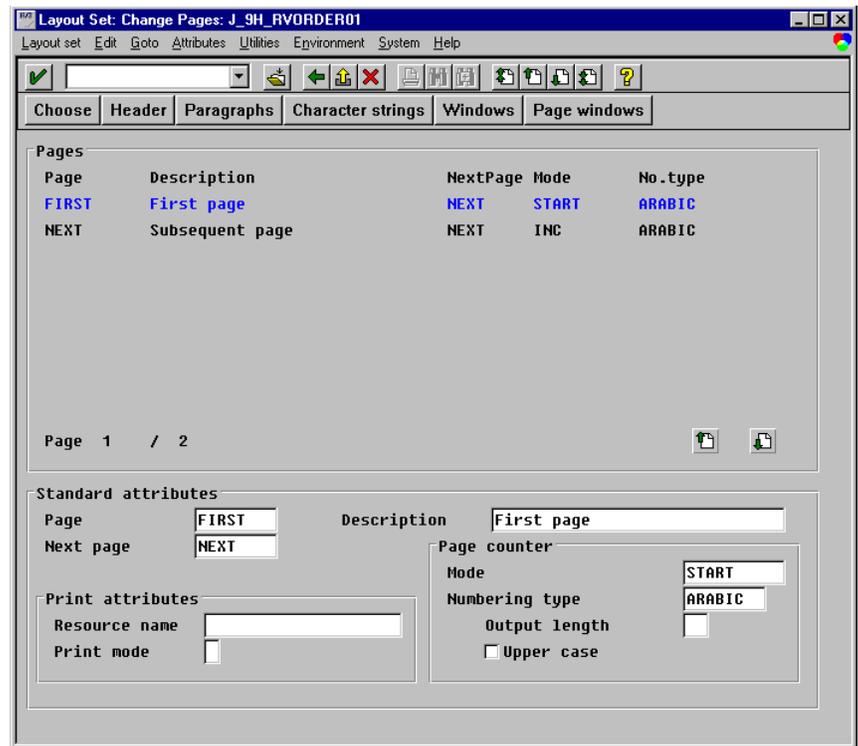
Only combinations of the first three formatting options are allowed. The syntax for all three formatting options together is:

`&table-field+m(n.l)&`

Please see the chapter *SAPscript Control Commands* for a detailed list of formatting options.

## Pages

*Pages* are not important for layout sets. Normally, you will not have to jump to pages while modifying layout sets.



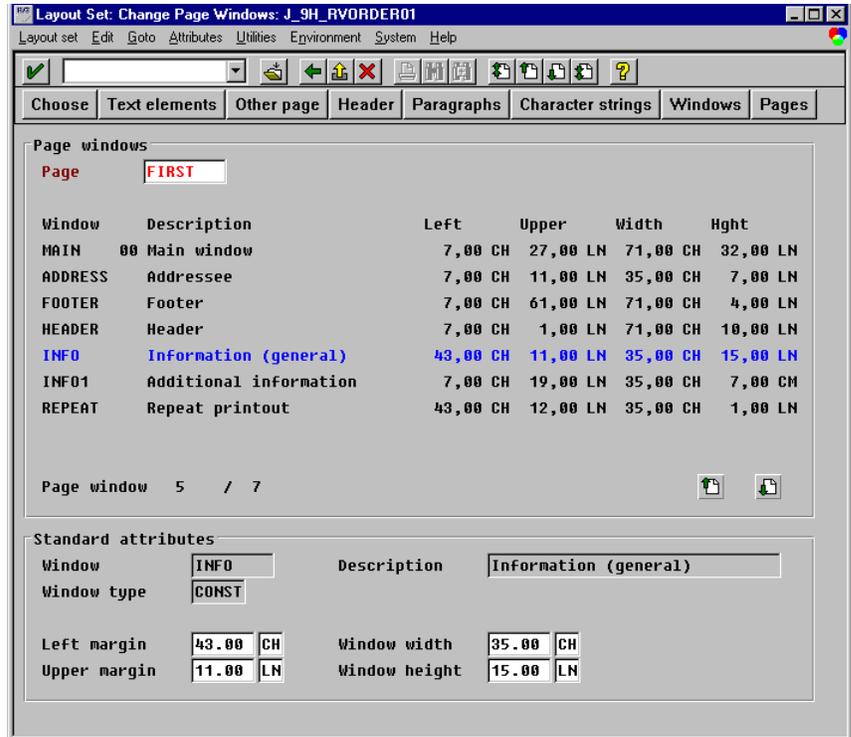
## Page Windows

If you select *Page windows*, a list of all the windows on the page appears, with coordinates defined by the upper left-hand corner, the width and the height. It is possible to jump from this list to the window text elements.



All of the windows that appear on pages must be first defined in *Windows* and then added to the page windows.

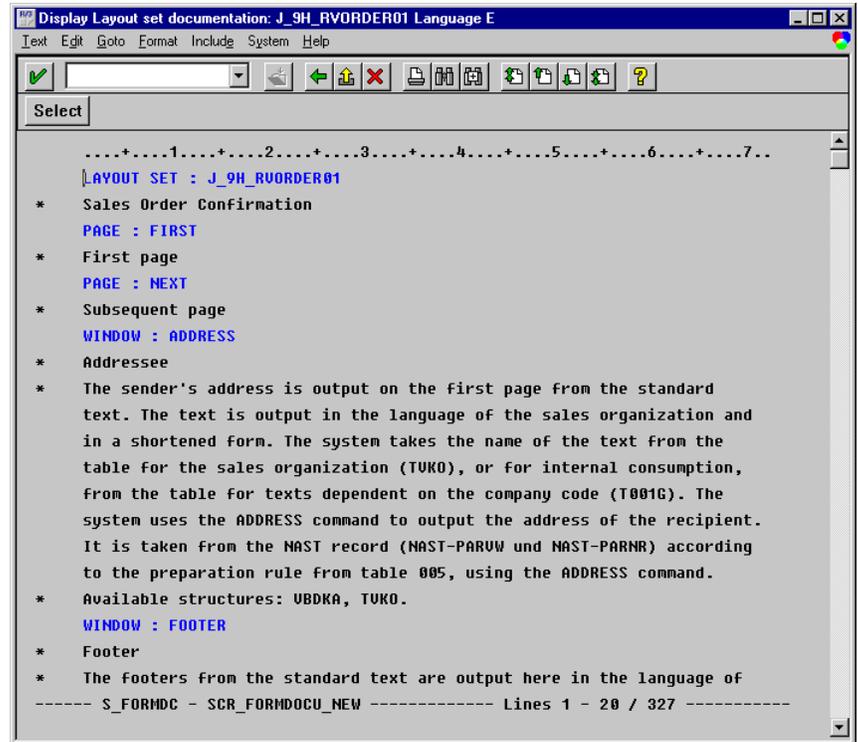
If you select *Page windows*, the windows of page FIRST are displayed. To access the page windows of another page, simply overwrite FIRST with NEXT and click *Enter*.



## Documentation

Storing technical documentation for layout sets is a new feature of SAPscript in Release 3.1H. Although most of the layout sets are documented in Release 4.0A, we recommend that you check to see if layout set documentation exists.

From Release 3.1H on, there will be useful technical information here. The layout set, the usage of the page windows, and its text elements are described. If you want to modify layout sets, look for information about the layout set variables and when the print program fills the variables.





## Chapter 5: An Easy Guide to Complicated Modifications

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### Overview

This chapter shows you how to modify layout sets from copying a provided layout set to adding bar codes and logos. Remember that some layout sets in Release 3.1H may have technical documentation. See the end of chapter 4 to learn how to access this documentation.

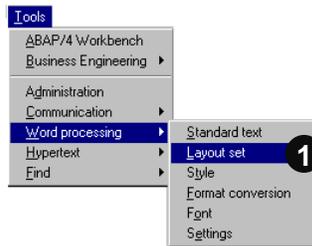


To make the next system upgrade easier and smoother, do not modify the standard layout sets or the layout sets from the disk; copy these sets and modify these copies.

## Copying a Layout Set

Layout sets must be copied before changes are made. The following example shows how to copy the layout set for a sales order confirmation.

1. Choose *Tools* → *Word processing* → *Layout set*.

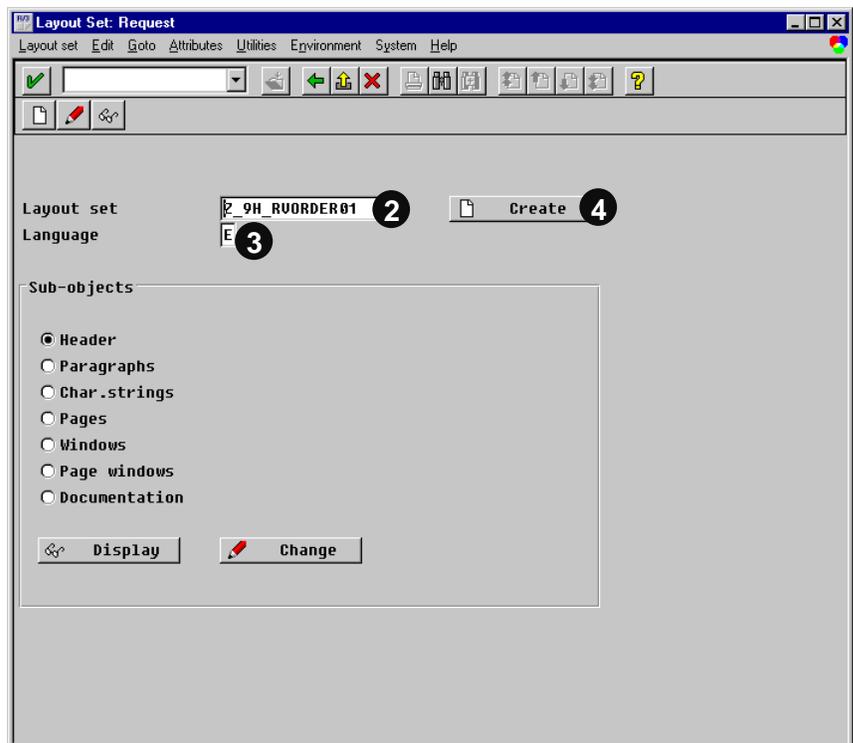


2. Enter the new layout set name. (This name is same as the old name except, that the first character is replaced with a Z.) In our example, the new name for the sales order confirmation is Z\_9H\_RVORDER01.



The new name of a layout set has to be in the name range for customer objects, so it must begin with Y or Z.

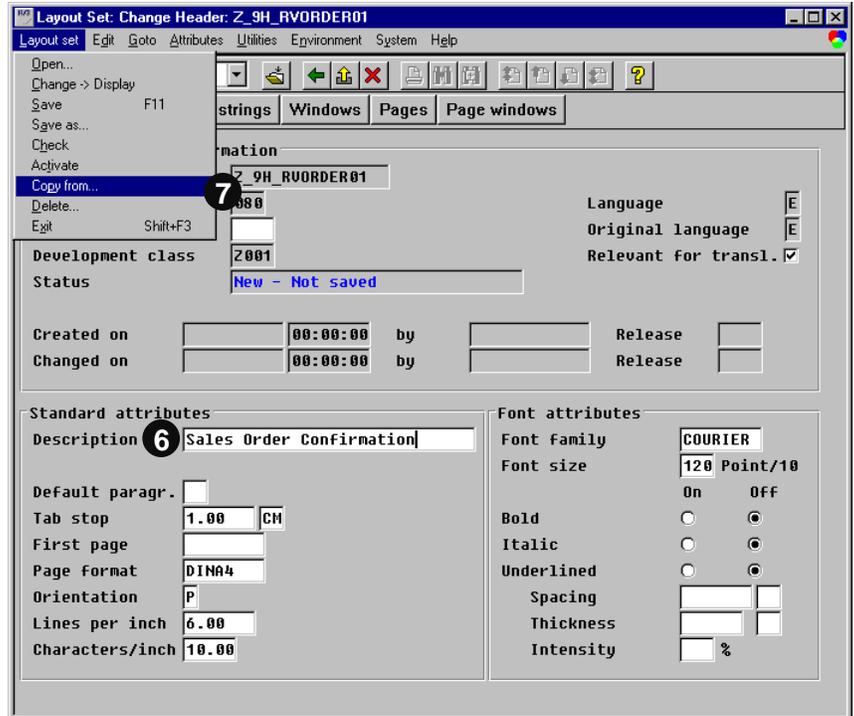
3. Enter **E**.
4. Click *Create*.



5. Click *Enter* to accept the message in the following pop-up window.



6. Enter Sales Order Confirmation in *Description* field.
7. Choose *Layout set* → *Copy from ...*



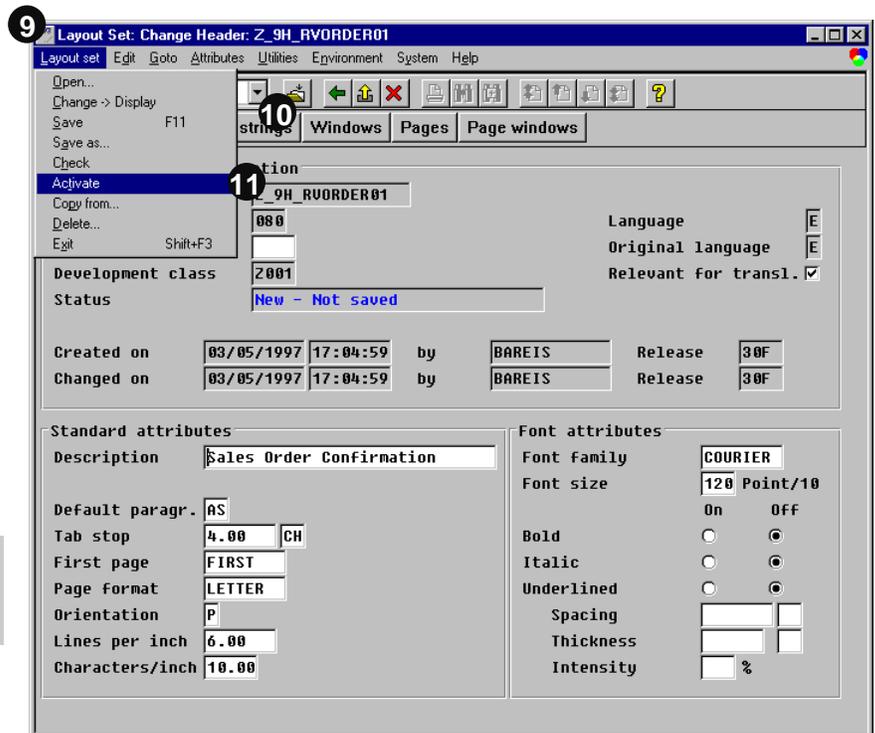
8. Enter J\_9H\_RVORDER01.
9. Click *OK* if the information in the pop-up window is correct.



10. Click *Save*.

If your system is connected to the Correction and Transport System (CTS), the new layout set must be written on a correction request. (The instructions to write a correction request are not included in this guide.)

11. Choose *Layout set* → *Activate*.



It is not necessary to click *Save* in step 10, because the layout set is saved during activation in step 11.

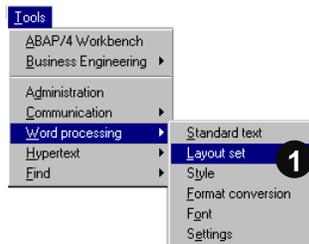


To test the layout set during sales order customizing, specify that layout set `Z_9H_RVORDER01` should be used to print all sales order confirmations. See chapter *Printout-related Customizing of the Applications*.

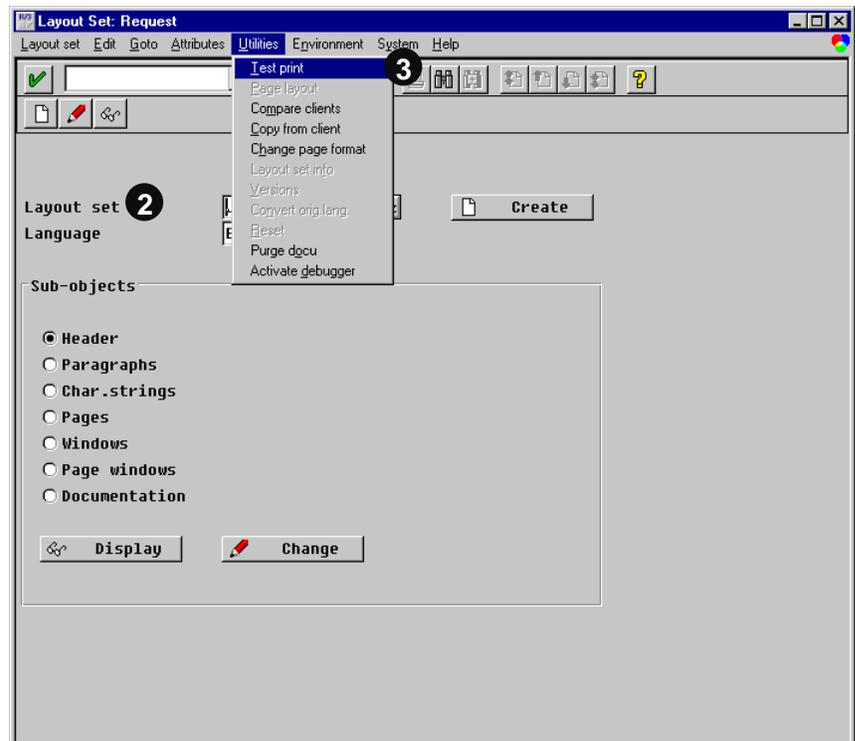
## Test Print of Layout Sets

An easy way to check layout set changes is to use the layout set's test print functionality. SAPscript replaces the variables in each layout set with character strings of `x` with the defined length. All page windows, except *MAIN*, are printed as they appear on the actual output. *MAIN* has a list of all defined text elements. Test printing layout sets is a quick way to check changes without printing the documents, and without disturbing the productive print process with unconfirmed layout set modifications.

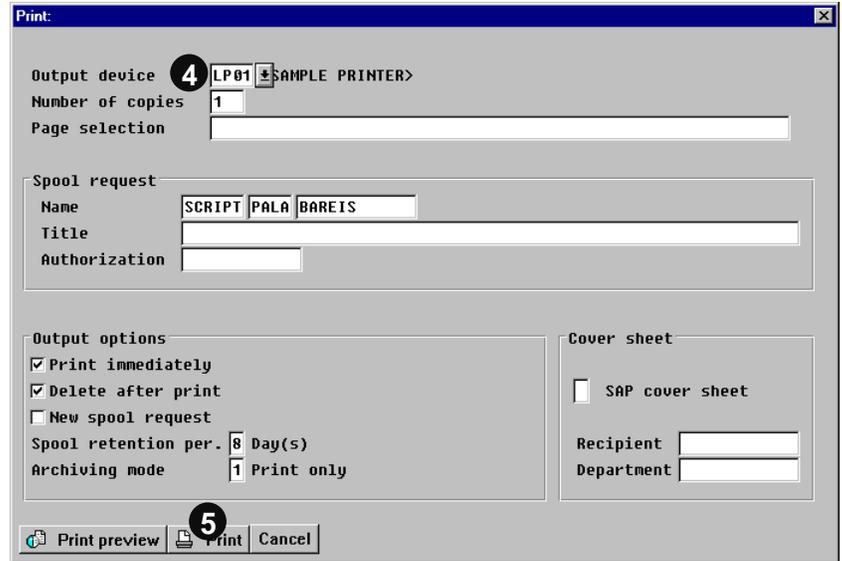
1. Choose *Tools* → *Word processing* → *Layout set*.



2. Enter `J_9H_RVORDER01`.
3. Choose *Utilities* → *Test print*.



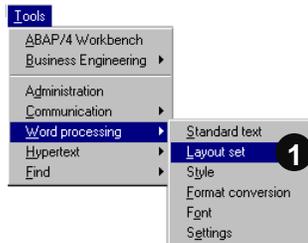
4. Enter LP01.
5. Click *Print*.



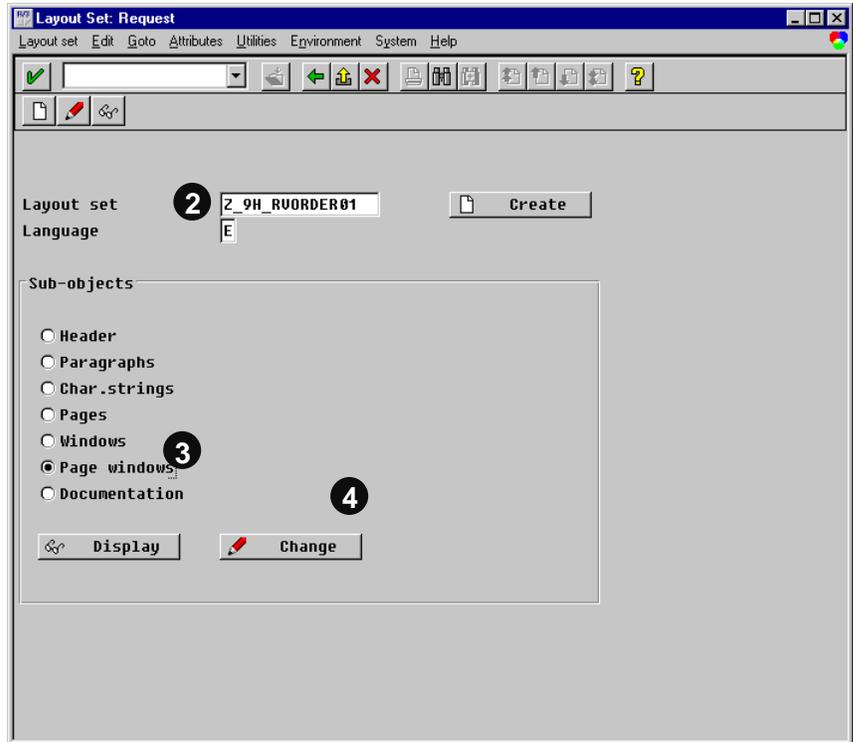
## Moving a Page Window

**Task:** To move the *INFO* window on page *FIRST* of the layout set, *Z\_9H\_RVORDER01*, one line up and one character to the left.

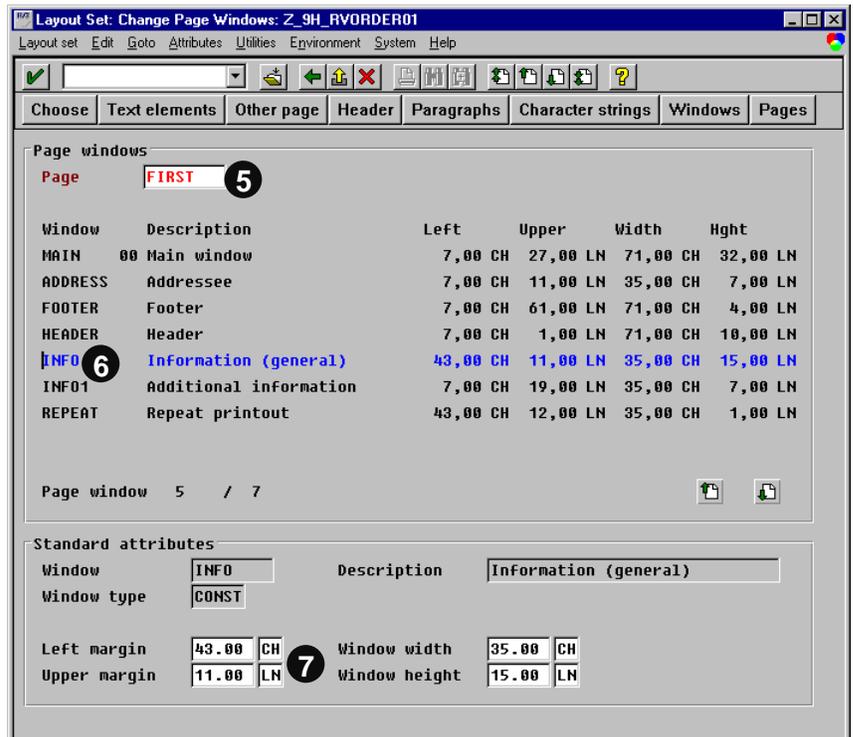
1. Choose *Tools* → *Word processing* → *Layout set*.



2. Enter `Z_9H_RVORDER01` and `E`.
3. Select *Page windows*.
4. Click *Change*.

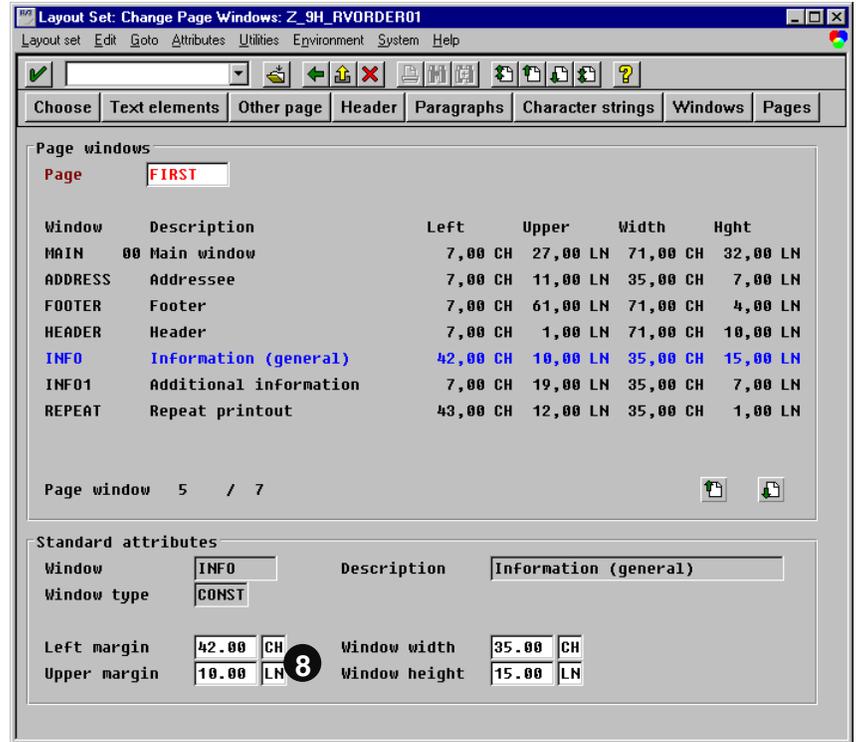


5. *FIRST* is automatically selected.
6. Select *INFO* by double-clicking on the window's name.
7. Enter the coordinates at the bottom of the screen.

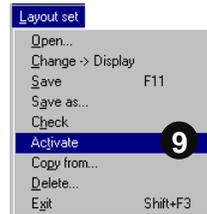


The window coordinates are located in the bottom of the screen. The upper left-hand corner is based on *Left margin* and *Upper margin*. The width and height is based on *Window width* and *Window height*. Make sure that the vertical measure is **LN** (lines) and that the horizontal measure is **CH** (characters).

- To move the window up one line and one character to the left, overwrite the left margin with 42.00 CH and the upper margin with 10.00 LN.



- To activate the changes, choose *Layout set* → *Activate*.



## Moving a Field

**Task:** Move the text that appears on the layout set output.

Moving text can be divided into the following cases:

- If it is the only text in a window then move the window.
- If it is positioned with a tab then move the tab.
- If it has to be moved vertically then insert or delete an empty line.

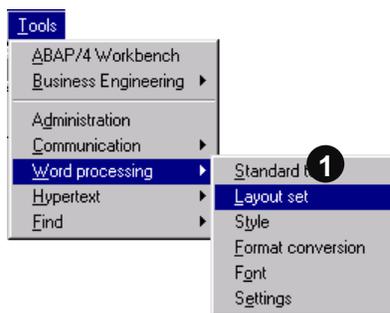
## Moving a Tab

**Task:** In the table header of line items for an order confirmation, move *Material* one character to the right.

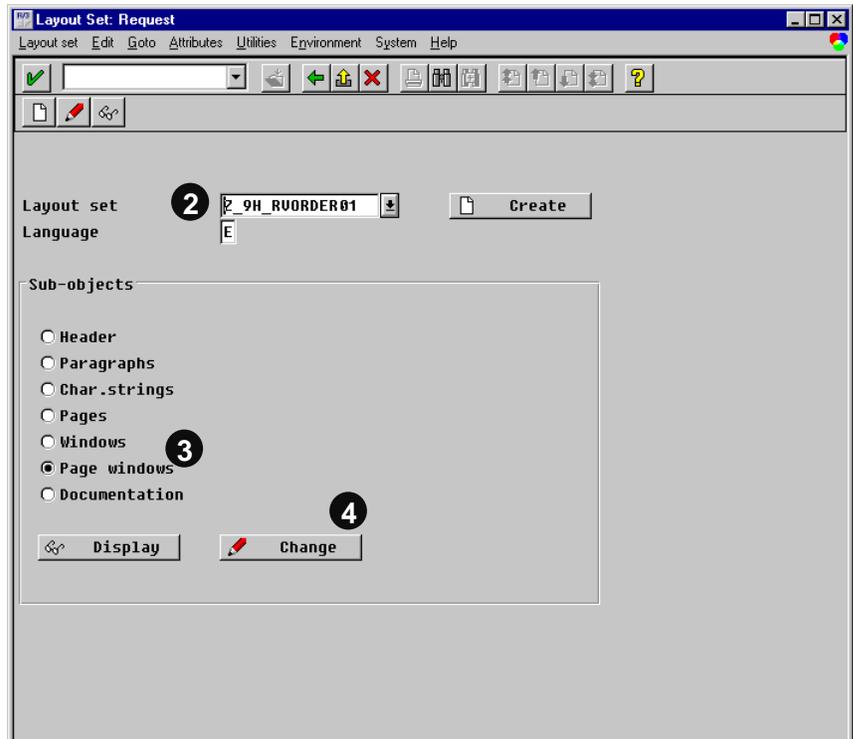


In this example, we describe the movement of one word in the table header of line items in a sales order. The complete task would be to also move the corresponding line items variable to match the columns for both the table header and line items.

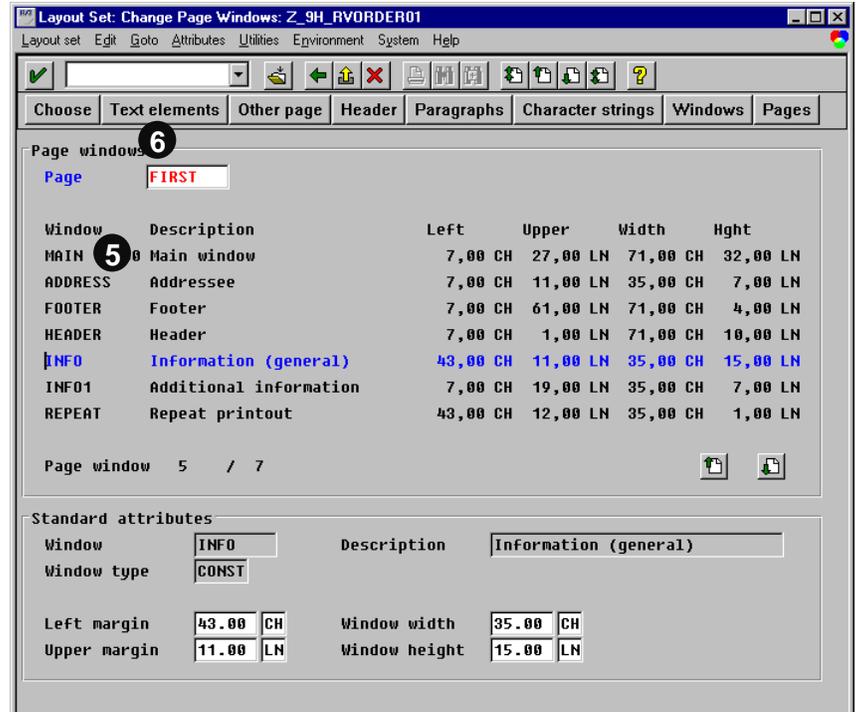
1. To see how *Material* is printed, choose *Tools* → *Word processing* → *Layout set*.



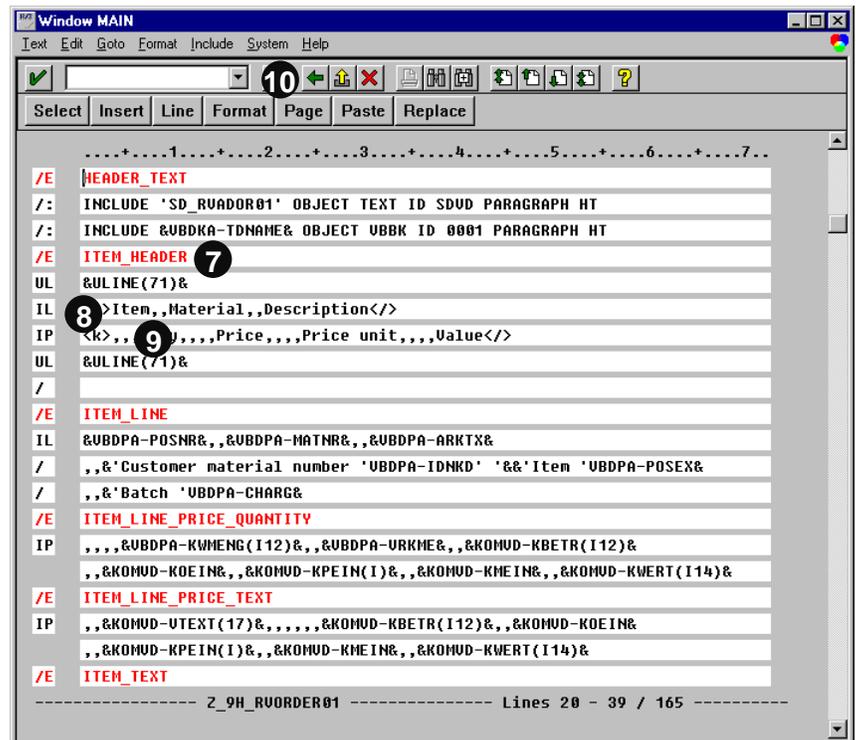
2. Enter *z\_9H\_RVORDER01* and *E*.
3. Select *Page windows*.
4. Click *Change*.



5. Double click on *MAIN*.
6. Click *Text elements*.



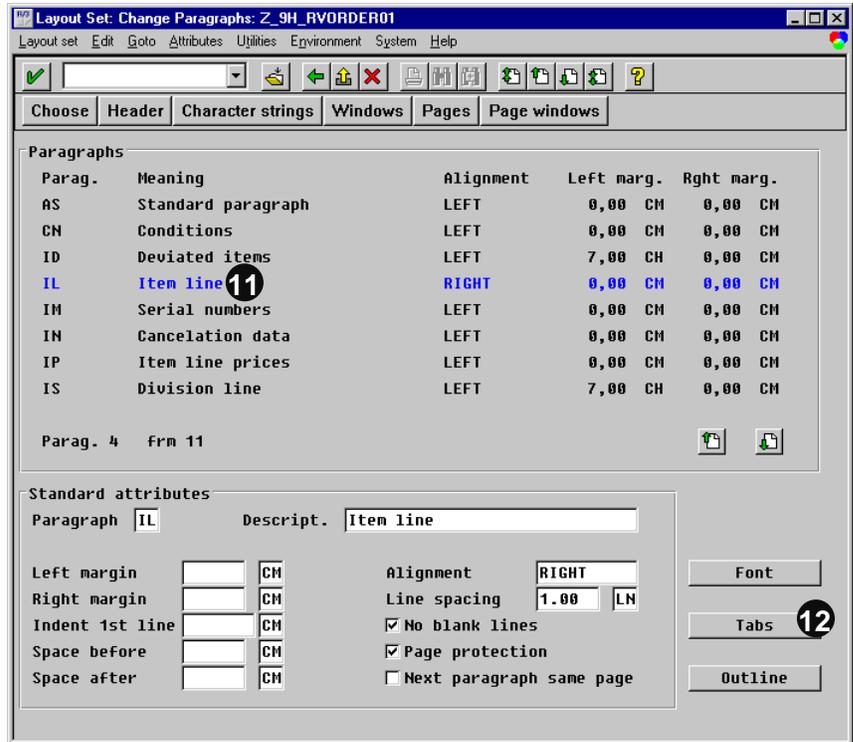
7. Scroll down until you see */E ITEM\_HEADER*.
8. The paragraph where *Material* is printed is *IL*.
9. *Material* is printed after the first tab, which is represented by a set of double commas. To move the word one character to the right, this tab has to also be moved one character to the right.
10. Go to the paragraphs' definition via the *Back* and *Paragraphs* buttons.



11. Double click on *IL*.

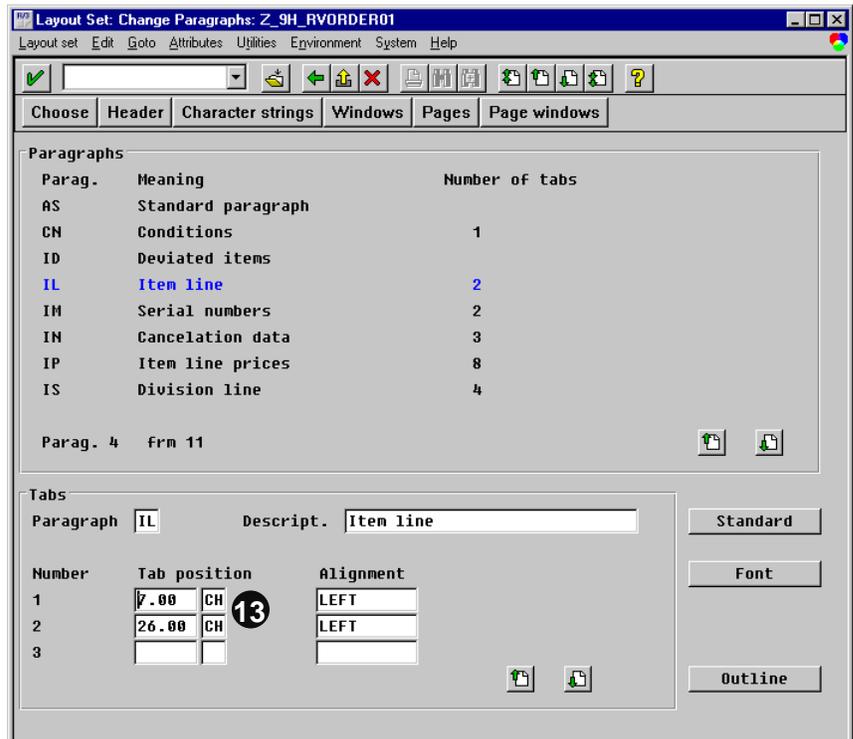
The paragraph will be highlighted after selection.

12. Click *Tabs*.

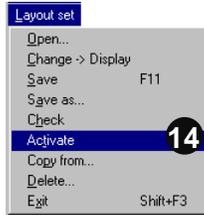


13. The first tab is positioned seven characters from the left, and the text that belongs to this tab is left justified.

To move *Material* one character to the right, increase the first tab by one and overwrite 7.00 with 8.00.



14. To activate the changes, choose *Layout set* → *Activate*.

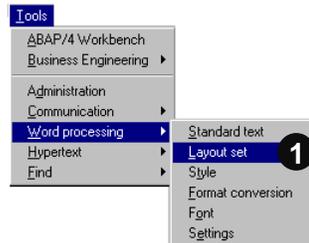


## Inserting or Deleting a Line

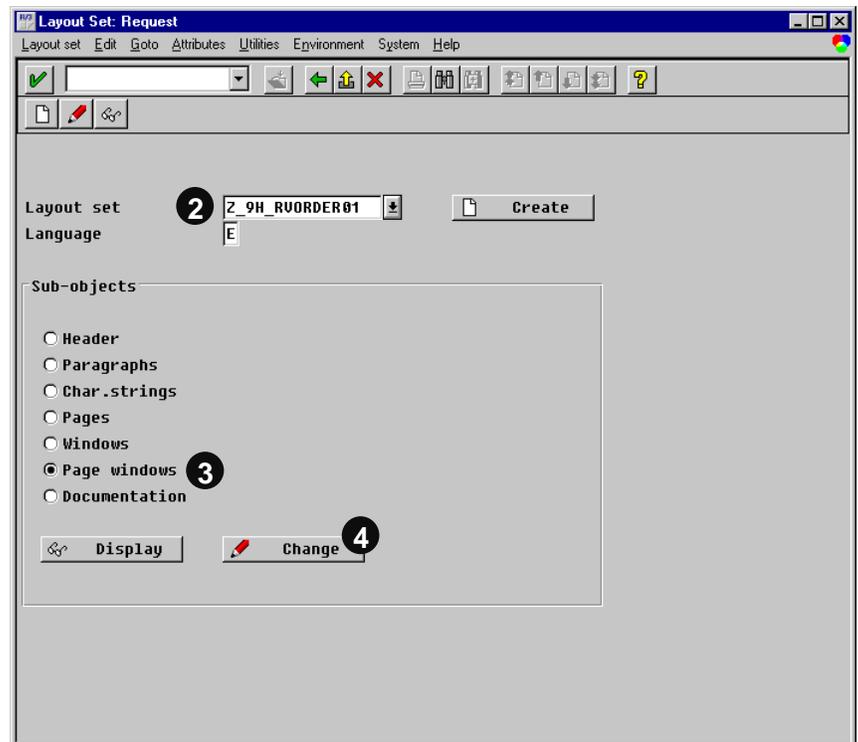
**Task:** On an order confirmation, insert a blank line between the words *Ship-to address* and the address.

Using page window *INFO1*, the ship-to address is printed on page *FIRST*.

1. To access the text editor of this window, choose *Tools* → *Word processing* → *Layout set*.



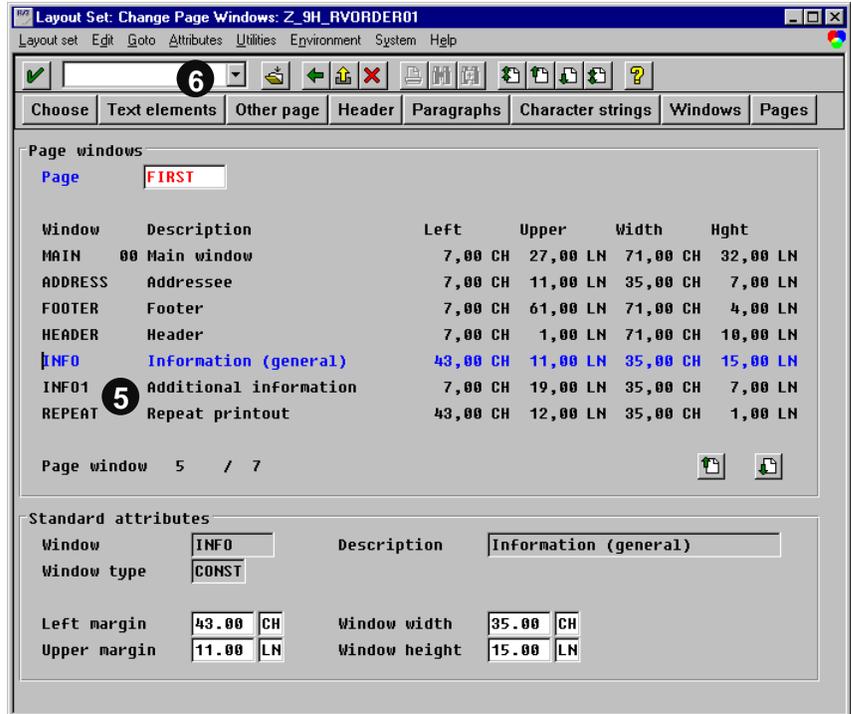
2. Enter **Z\_9H\_RVORDER01** and **E**.
3. Select *Page windows*.
4. Click *Change*.



5. Double click on *INFO1*.

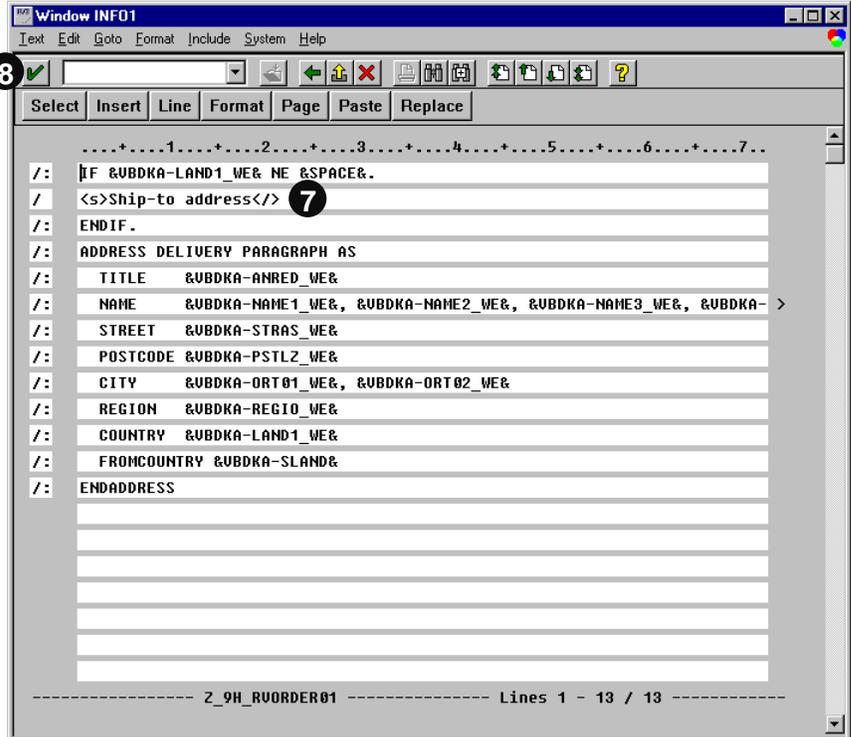
*INFO1* should be highlighted after selection.

6. Click *Text elements*.



7. To insert an empty line, position the cursor where you want to insert this line. In our example, it is at the end of / <s>Ship-to address</>

8. Click *Enter*.



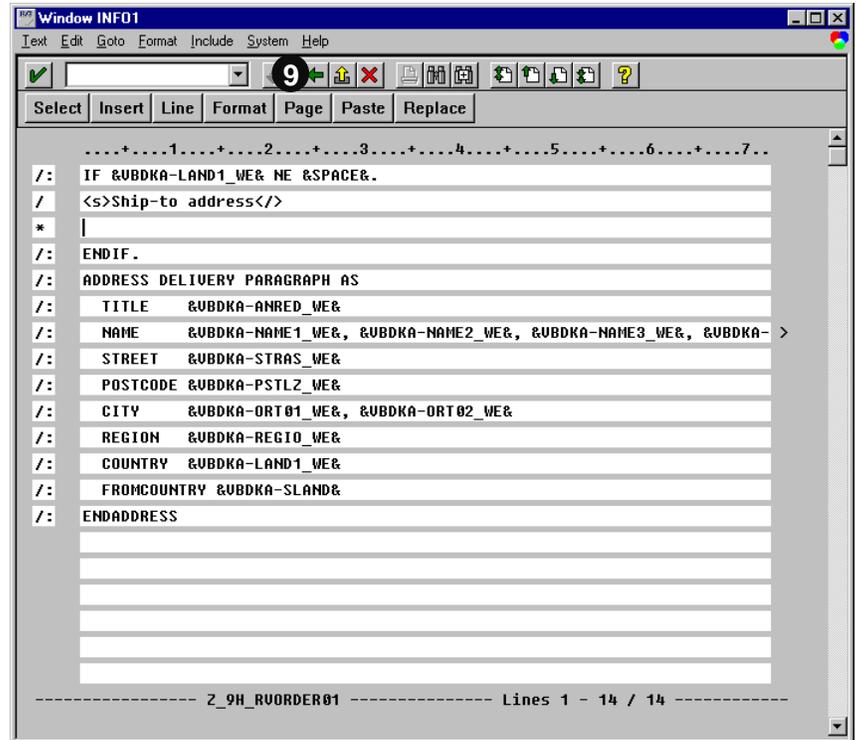


Note that the ship-to address is printed only if the variable for the ship-to country, *VBDKA-LAND1*, is filled. Character string *s* is used to print *Ship-to address*.

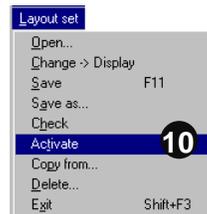
To use a character string in a paragraph, this string has to be turned on and off. To turn a character string on, place *< >* around the string name. For example, *<s>* switches the character string *S* on. To turn the character string off, enter *</>*.

The asterisk in the format column of the new line indicates that the previous paragraph should be re-used.

9. Click *Back* to exit the text editor.



10. Choose *Layout set* → *Activate* to activate the changes.



To delete a line, go to the window's text editor and overwrite the line (including the format column) using spaces.



After overwriting with spaces, do not click *Enter*, because it will insert an empty line. To exit editor, click *Back*.

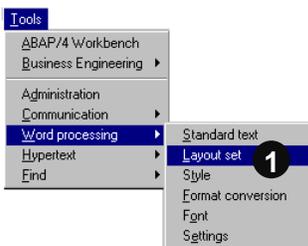
To delete an entire block of lines, mark the block by double clicking on the format columns of the first and last lines. Click *Delete*. The cut-and-paste functionality for example, moves the block to another window.

## Removing a Field

We just discussed removing a field by removing a line in the window. Another example of removing a field occurs when a field is with other fields that are not separated by tabs. In this case, delete the field by using the *Delete* key in the text editor.

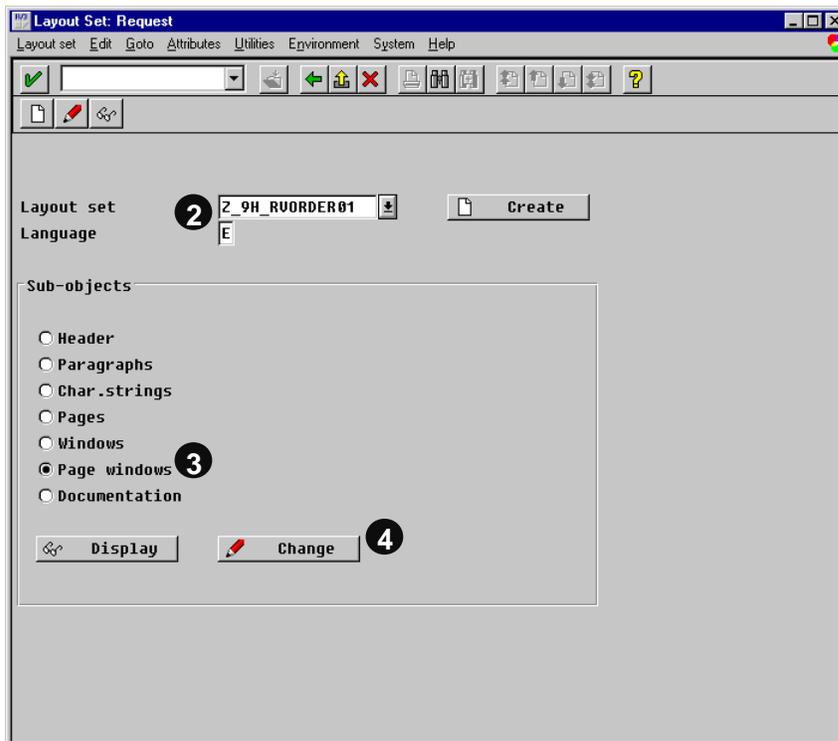
Removing a field from a line item table is more complicated. For example, to remove the item number from a sales order confirmation, first remove *Item* and move *Material* and *Description*. This procedure has to be repeated for the item number's variable. The variables for the material number and description also have to be moved.

1. Choose *Tools* → *Word processing* → *Layout set*.

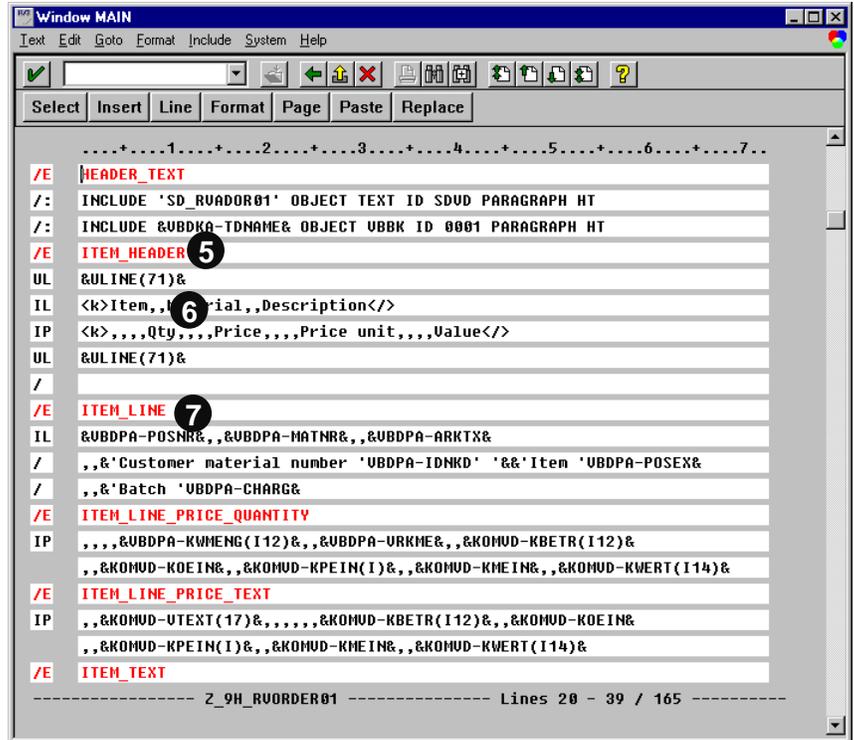


2. Enter `Z_9H_RVORDER01` and `E`.
3. Select *Page windows*.
4. Click *Change*.

*MAIN* is already selected, because it is highlighted.

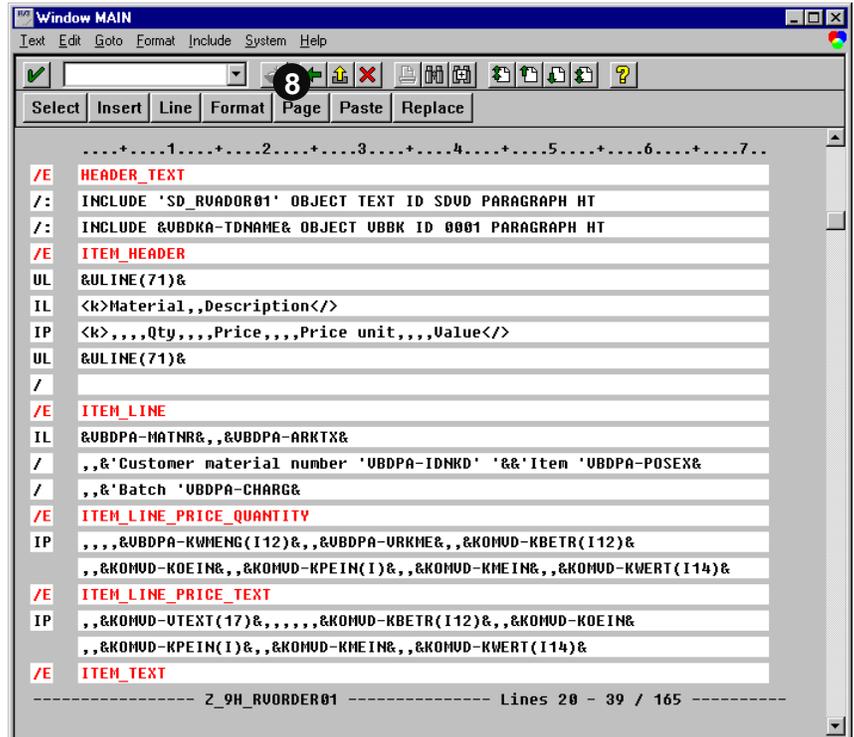


5. Click *Text elements* and scroll down until you see `/E ITEM_HEADER`.
6. Delete *Item* and the two commas that represent the first tab.
7. In `ITEM_LINE`, delete `&VBDPA-POSNR&` (the variable for the item number) and the first tab (the two commas).

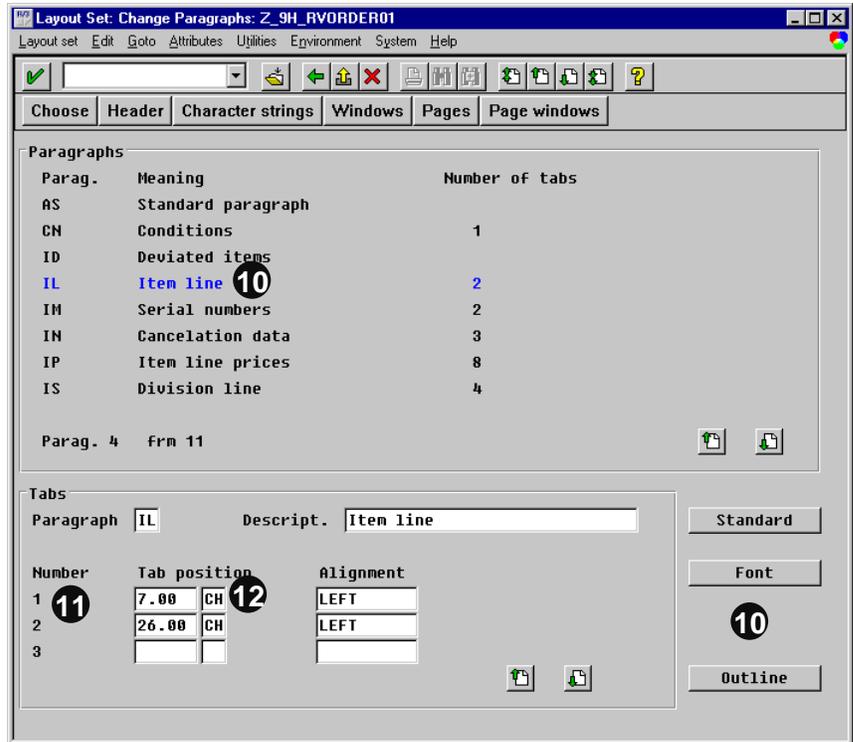


Since one tab has been deleted, adjust the tabs for `IL`.

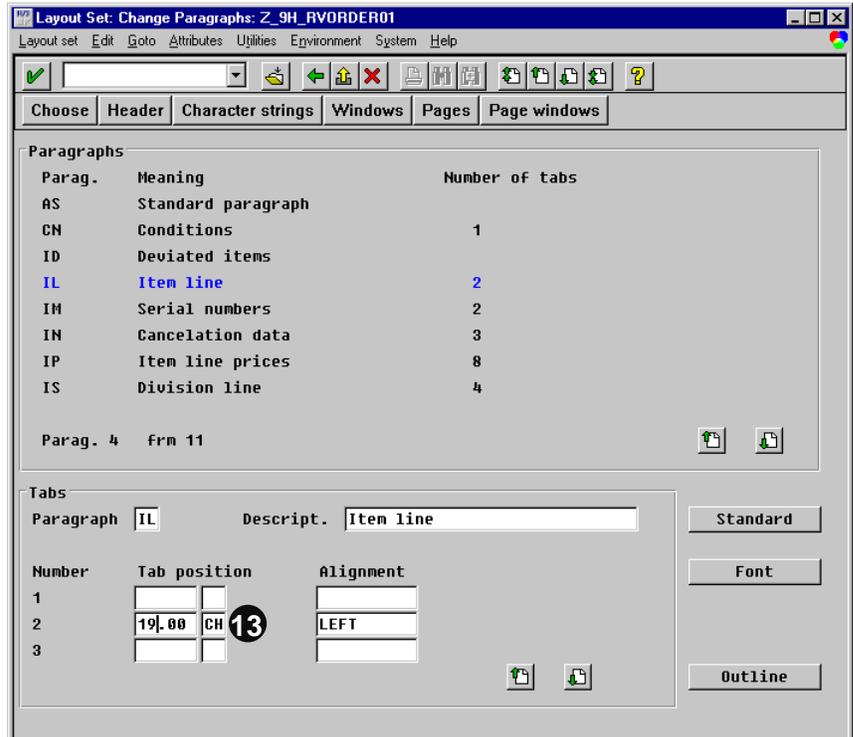
8. To do this, click *Back* to exit *Text editor*.
9. Click *Paragraphs* to proceed to the `IL` tabs.



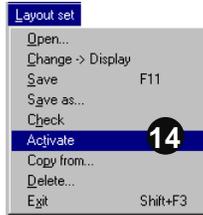
10. Double click on *IL* and click *Tabs* in the lower right-hand corner of the screen.
11. Delete the first tab and move the second tab to the left. Because the first tab was positioned seven characters from the left, the second tab has to be moved seven characters to the left.
12. Delete the first tab by overwriting all three columns with blanks.



13. Adjust the second tab by overwriting 26 with 19 (26-7).



14. To activate the changes, choose  
*Layout set* → *Activate*.



## Adding a New Field

Adding a new field can be a difficult task because not every field defined in the *Data Dictionary* can be printed. Only fields of special *Dictionary* structures can be used.

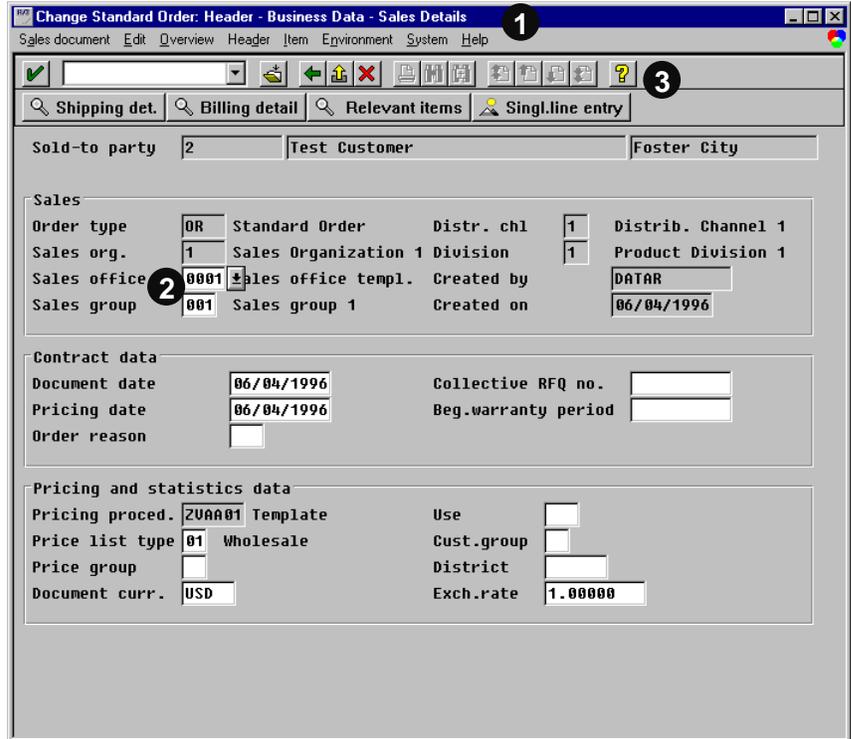


All R/3 documents have at least two structures defined in the *Data Dictionary*. These structures are used to print the header and line item document data. The fields of these structures can be used as variables in the layout set.

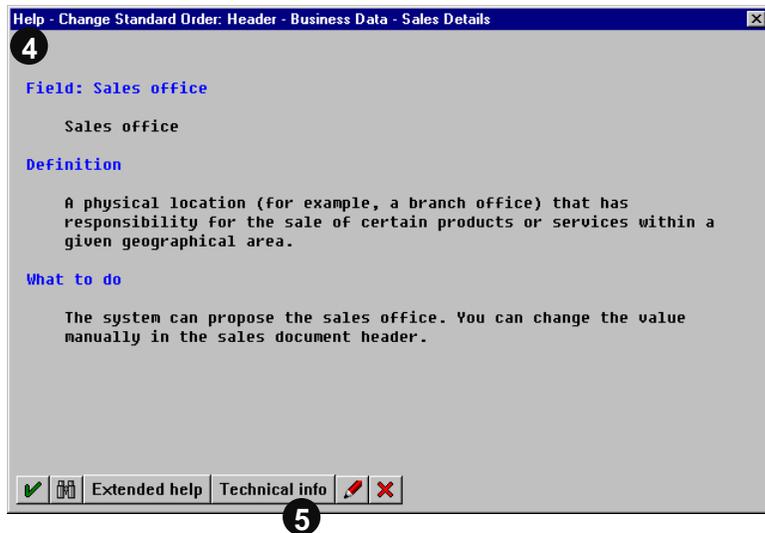
Some of the structures have user-exits for additional to-be-printed fields. And, although it is sometimes enough to add the user-exit field to the structure, some ABAP/4 programming maybe necessary.

Before adding a new field, find out the field's name. Here is the procedure for *Sales Office*, which you can find on the *Standard Order: Header - Business Data - Sales Details* screen.

1. Open the *Standard Order: Header - Business Data - Sales Details* screen.
2. Place the cursor on the field for which you want to find the name. In this example, it is *Sales office*.
3. Click *F1* or *Help*.



4. A pop-up *Help* window appears with information about the field.
5. Click *Technical info*.



6. The field's name is located in *Field name*. In our example, it is *VKBUR*.

The next step is to decide whether the field belongs to the document header or the document items. In our example, the sales office belongs to the header because it was located on the *Sales details* section of the *Sales Order Header*. The next task is to find out if the field is designated as output. A field is flagged as output only if it is included in a structure in the following table.

This table lists structures used to print header and item data:

Header Data	Dictionary Structure
Sales Order Confirmation	VBDKA
Packing List	VBDKL
Picking List	VBLKK
Invoice	VBDKR
Purchase Order	EKKO
Pre-numbered Check	REGUH
PP Goods Issue Slip	CAUFVD
PP Pick List	CAUFVD
PP Confirmation Slip	CAUFVD
PP Time Ticket	CAUFVD
PP Goods Receipt List	CAUFVD
PP Operations Control Ticket	CAUFVD
PP Object List	CAUFVD
PP Kanban Card	KARTE

Item Data	Dictionary Structure
Sales Order Confirmation	VBDPA
Packing List	VBDPL
Picking List	VLKP
Invoice	VBDPR
Purchase Order	EKPO
Prenumbered Check	REGUP
PP Goods Issue Slip	RESBD
PP Pick List	RESBD
PP Confirmation Slip	AFVGD
PP Time Ticket	AFVGD
PP Goods Receipt List	RESBD (In addition for co-products with settlement: AFPOD)
PP Operations Control Ticket	AFVGD
PP Object List	AFVGD
PP Kanban Card	KARTE

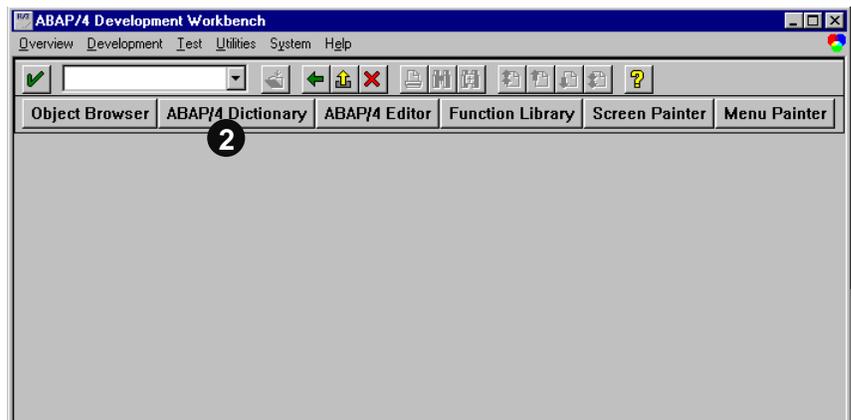
The *Prenumbered Check* print program also provides, *REGUD*, a structure for bank data.

To find out if *VKBUR* is included in *VBDKA* used to print *sales order confirmation* header data.

1. From the initial SAP screen, choose  
*Tools* → *ABAP/4 Workbench*.

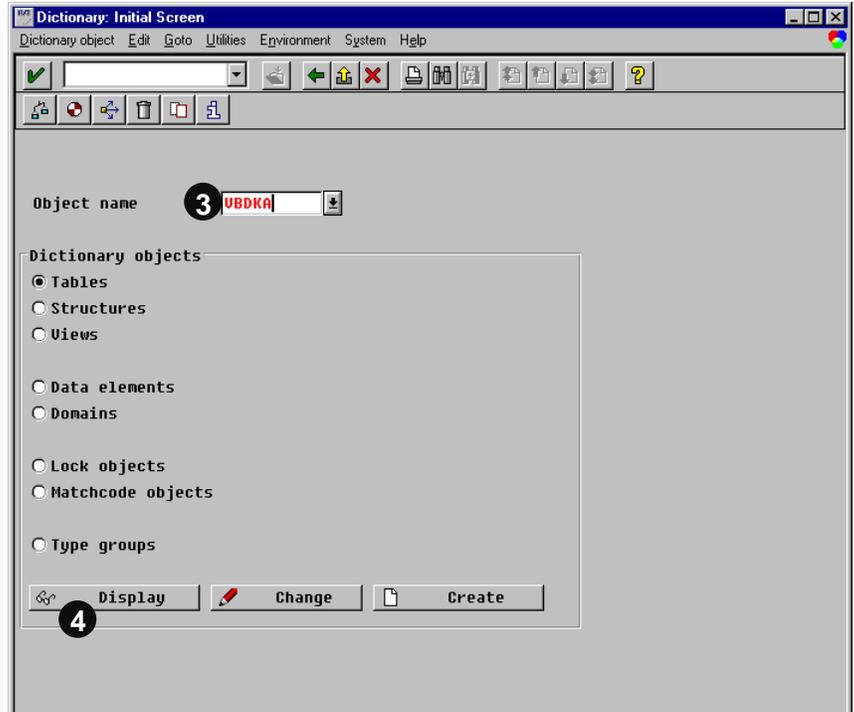


2. Click *ABAP/4 Dictionary*.

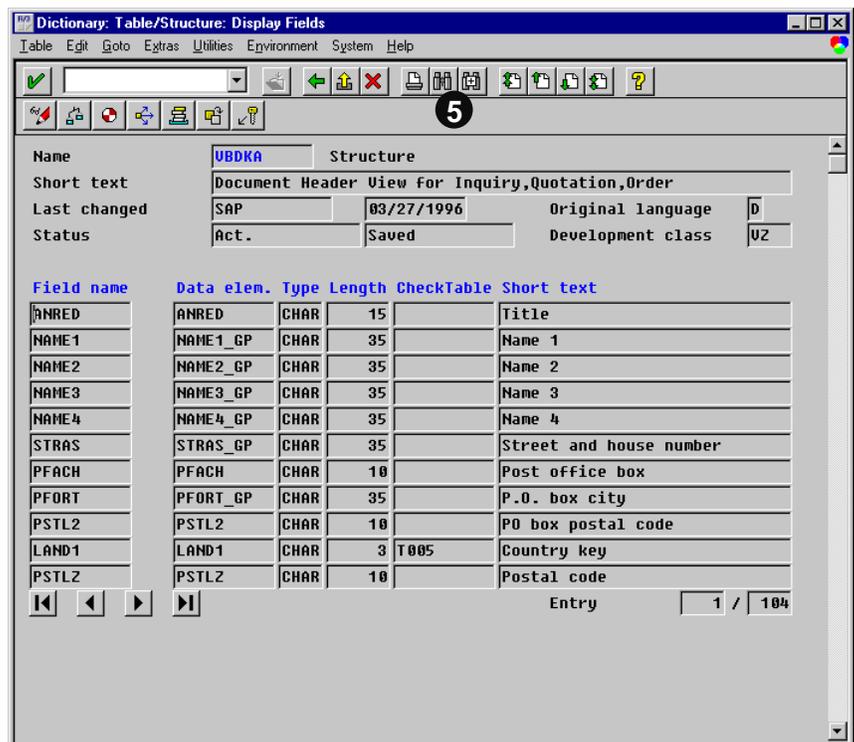


3. Enter **VBDKA**.
4. Click *Display*.

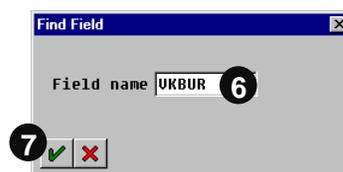
The result is the list of all fields in **VBDKA**.



5. Click *Find*.



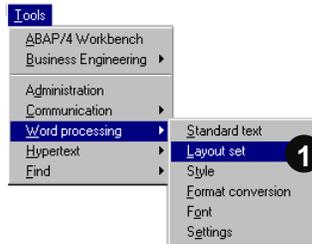
6. Enter **VKBUR**.
7. Click *Enter*.



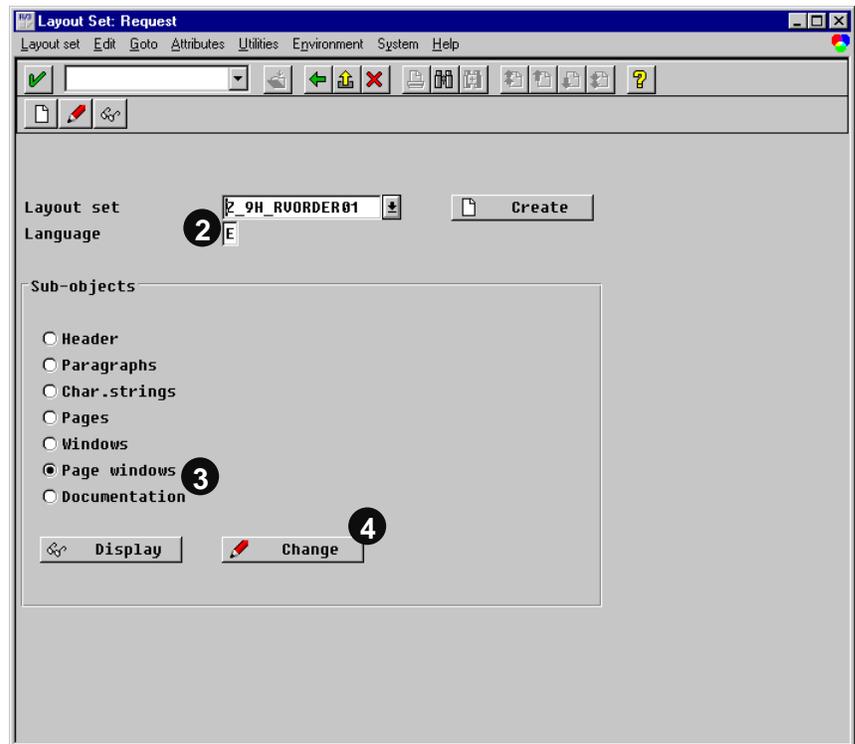
The cursor will either be positioned on the field name or the message *No appropriate field name found* appears. If the field name was found, follow the steps below. If the field name was not found, first proceed to the section titled, *Adding a new field to the print structure*, then return to this page and follow the steps below.

When the variable name is included, do the following, assuming that the field should be included at the bottom of the *INFO* window:

1. From the initial R/3 screen, choose *Tools* → *Word processing* → *Layout set*.



2. Enter `z_9H_RVORDER01` and `E`.
3. Select *Page windows*.
4. Click *Change*.

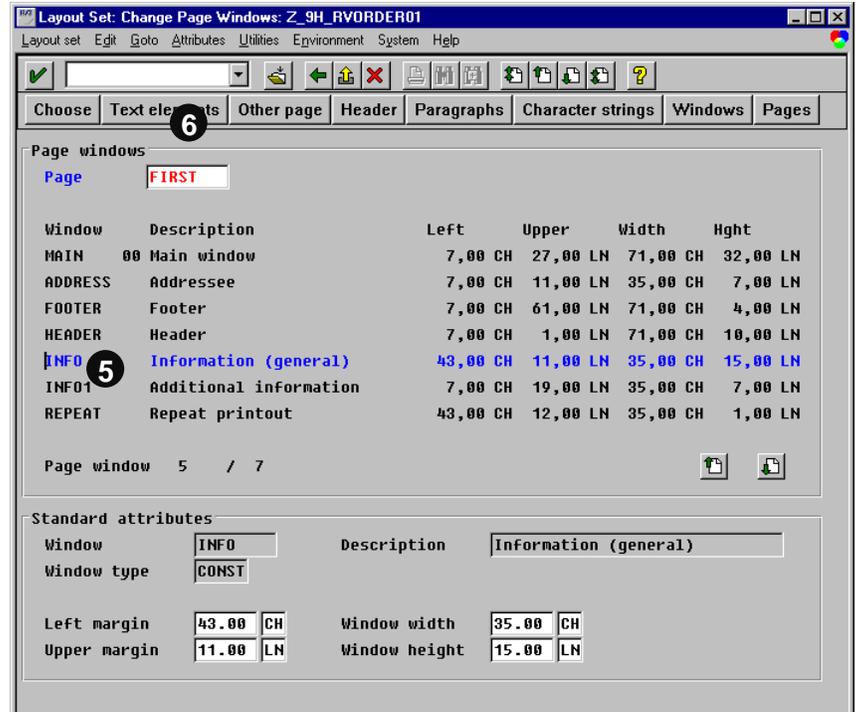


- Double click on *INFO*.

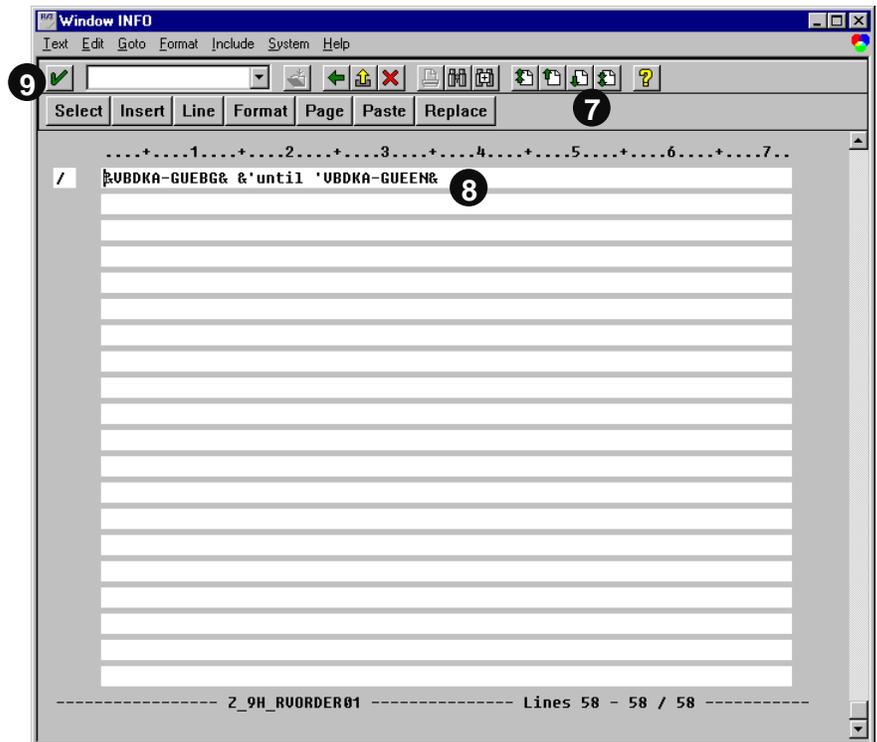
Note that the window is highlighted after selection.

- Click *Text elements*.

Insert the variable at the bottom of the window. Click *Page down* to scroll to this position.



- Scroll down until you see only one line.
- Position the cursor at the end of this line.
- Click *Enter* to create a new line.



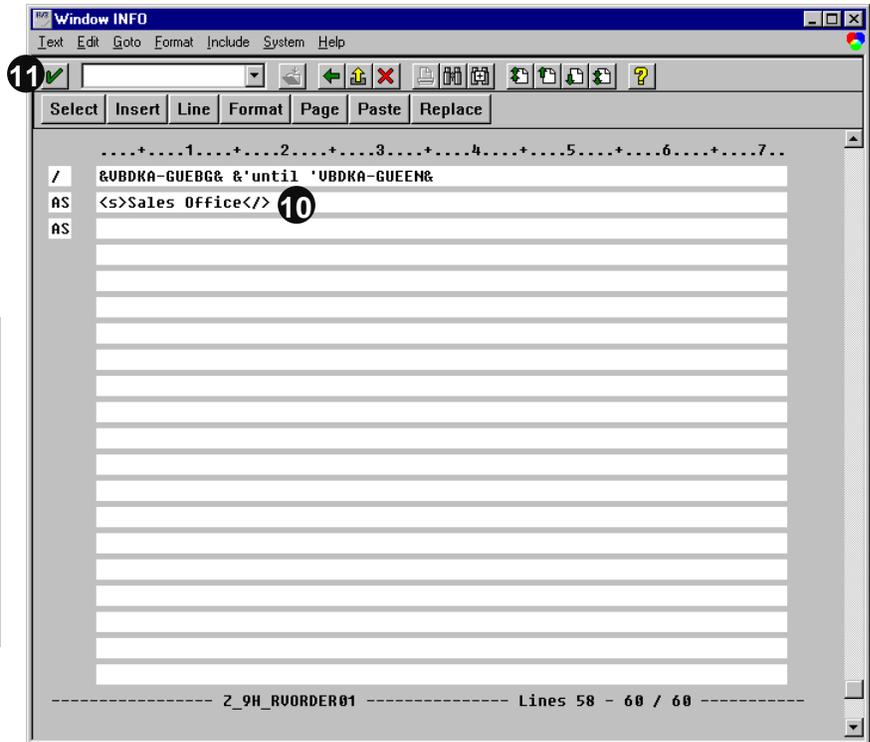
10. Enter `<s>Sales Office</>` (the header of the new variable).

11. Click *Enter*.



After creating the new line, the paragraph is automatically set to AS. This is the last paragraph used in this window.

All headers are printed in a smaller font, defined with the character string S. Therefore, *Sales Office* has to be enclosed in `<s>` and `</>`.

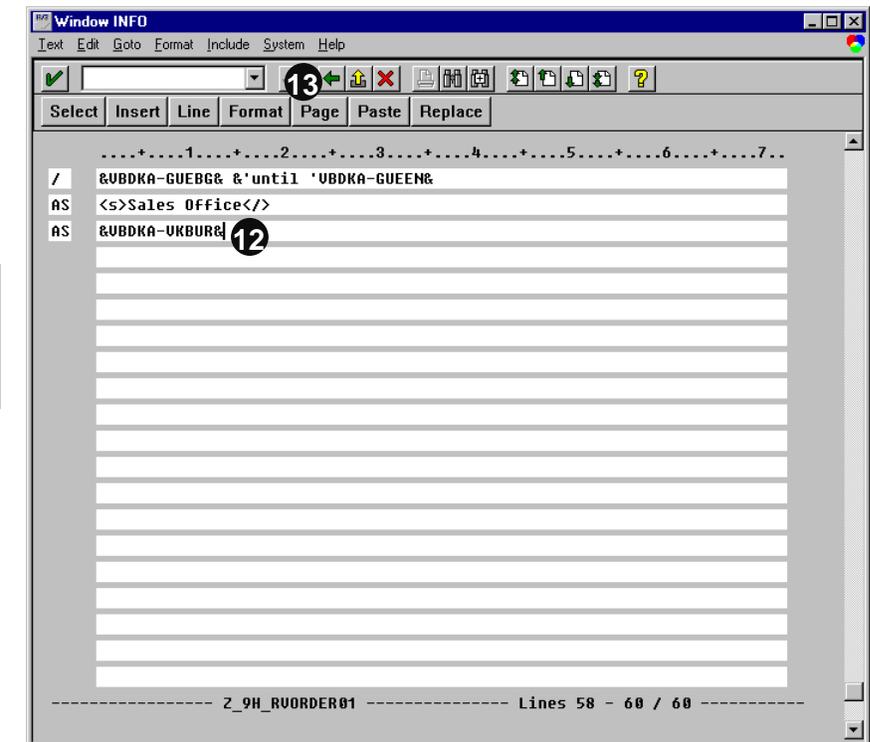


12. Enter `&VBDKA-VKBUR&` (the variable name enclosed in ampersands).

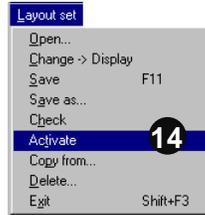


A variable name is the name of the structure followed by a hyphen ("-") and the field name. Variable names must be enclosed in ampersands.

13. Click *Back*.



14. Choose *Layout set* → *Activate*.



## Adding a Field to the Print Structure



These steps only apply to *SD* documents. No steps exist for other documents! However, the structures for the other documents already contain most, if not all, of the required fields.

This section provides directions to add a new field to a print structure. If a field is not included in a print structure, follow these steps. One example of a field not in the sales order header print structure is *XBLNR*. Please refer to the *Standard Order: Header - Business Data - Billing Details* screen. It is the field *Reference No.* in the *Accounting* frame.

The following table shows the names of the structures to which field names can be added:

Document	Structure
Sales Order Header	VBDKAZ
Sales Order Item	VBDPAZ
Packing List Header	VBDKLZ
Packing List Item	VBDPLZ
Picking List Header	VBLKKZ
Picking List Item	VBLKPZ
Invoice Header	VBDKRZ
Invoice Item	VBDPRZ



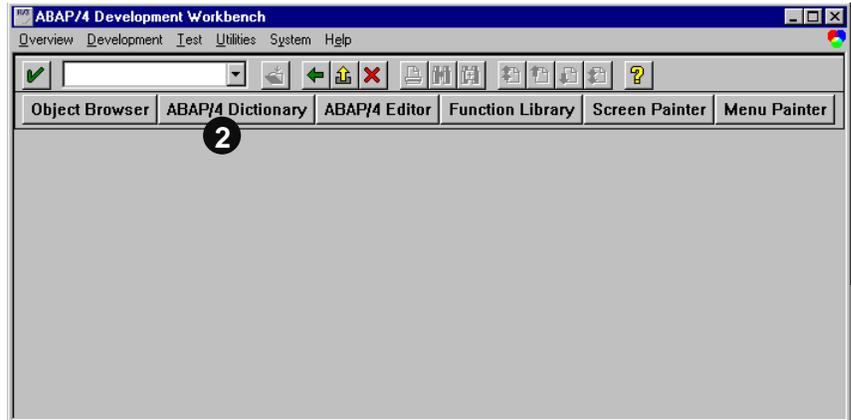
*SD* structures include sub-structures. By adding a field to a sub-structure and activating it, a field is automatically added to the structure.

These sub-structures are treated as a user exit, and SAP does not overwrite them during an upgrade. In the example above, *XBLNR* must be added to *VBDKAZ*.

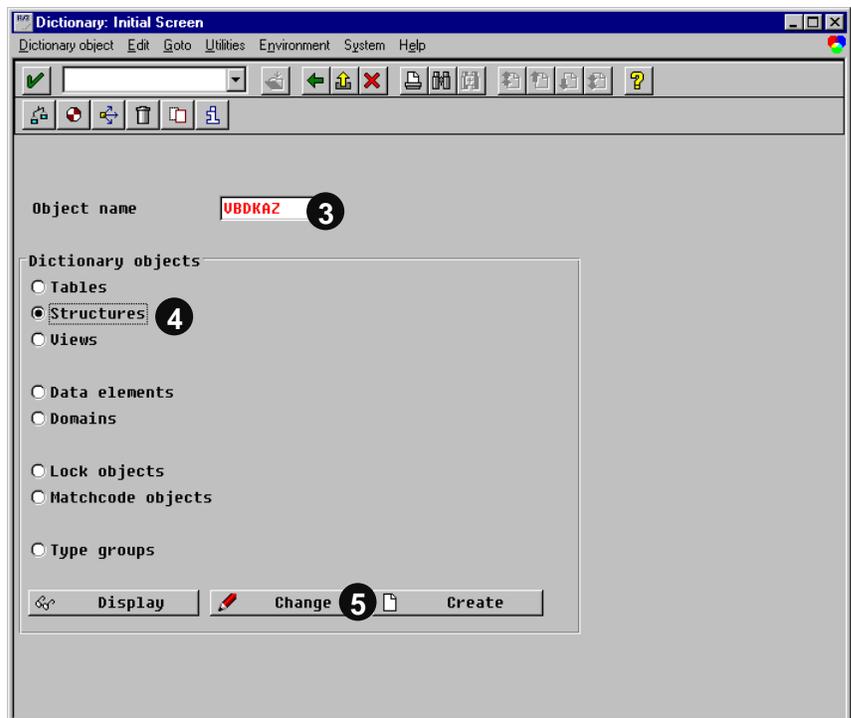
1. Choose *Tools* → *ABAP/4 Workbench*.



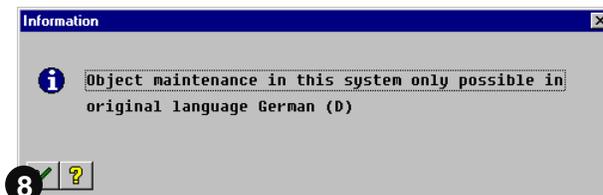
2. Click *ABAP/4 Dictionary*.



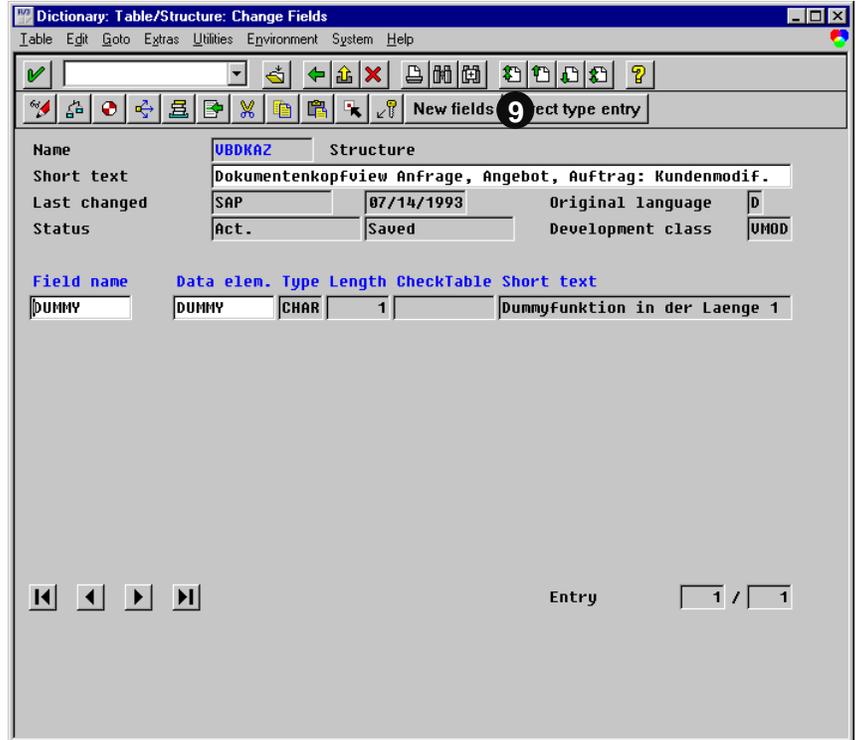
3. Enter *VBDKAZ*.
4. Select *Structures*.
5. Click *Change*.
6. Now, a 20-digit access key must be specified to register the object as *modified*. Ask the system administrator if you do not know where to get this key.
7. Click *Object for repair* and specify a correction number (CTS).



8. When this screen appears, click *Enter*.



9. Click *New fields*.



10. Enter *XBLNR*.

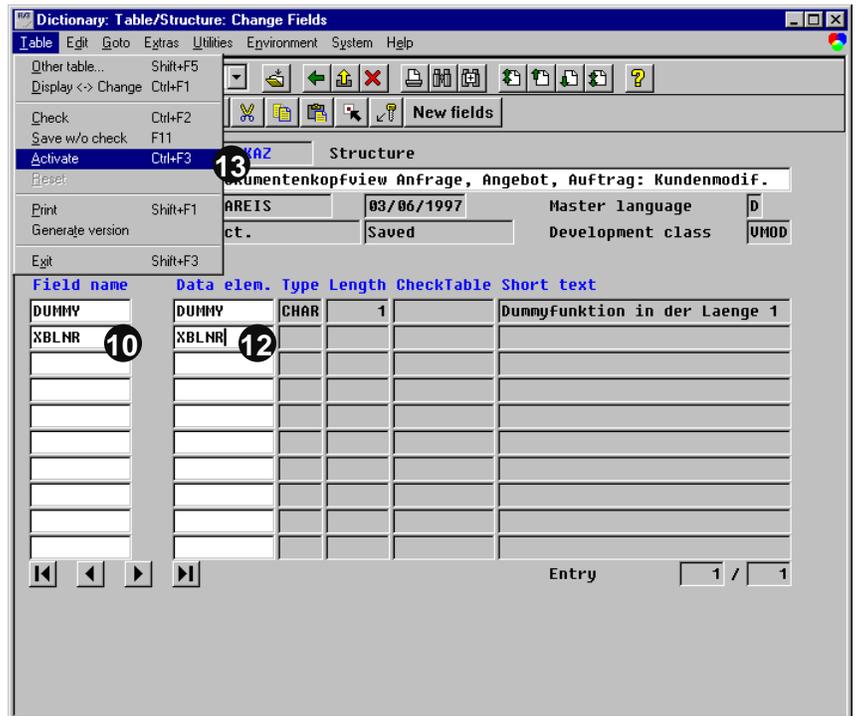
11. Tab to the next column.

12. Enter *XBLNR*.



Normally, the field name and the data element name are the same.

13. Choose *Table* → *Activate*.



Now *VBDKA-XBLNR* is a valid variable that can be added to the layout set. Note that the name of the structure is still *VBDKA*, not *VBDKAZ*.

The next procedure is to find out whether additional ABAP/4 programming is needed to fill the variable or if the new variable has been automatically filled. When you look up the field name notice the table name where the field is stored. For *XBLNR*, the table is *VBAK*. The following table shows the name of all tables where no additional ABAP/4 programming is necessary:

Document	Tables
Sales Order Header	VBAK
Sales Order Item	VBAP
Packing List Header	LIKP
Packing List Item	LIPS
Picking List Header	LIKP
Picking List Item	LIPS
Invoice Header	VBRK
Invoice Item	VBRP

If additional ABAP/4 programming is necessary, the following programs have been provided to fill the variables. (However, this guide does not provide programming instructions.)

Here is the table of user-exit program names:

Document	Program
Sales Order	V05DZZEN
Packing List	V05OZZEN
Picking List	V05AZZEN
Invoice	V05NZZEN

In the sales order print program, the header data is collected in *VBDKA*. The item data structure is *POS*. Here is an example for a sales order user exit, where data was first selected to be added to the header and then to be added to the items:

```
* Select field1 from dbtab1 and put it into newfield1 in vbdka
Select single * from dbtab1 where vbeln = vbdka-vbeln.
If sy-subrc = 0.
    Vbdka-newfield1 = dbtab-field1.
Endif.
* Select field2 from dbtab2 and put it into newfield2 in vbdpa
Loop at pos.
    Select single * from dbtab2 where vbeln = vbdka-vbeln
        And    posnr = pos-posnr.
    If sy-subrc = 0.
```

```
Pos-newfield2 = dbtab2-field2.
```

```
Modify pos.
```

```
Endif.
```

```
Endloop.
```

In the packing list print program, the header data is collected in VBDKL. The structure for the item data is VBDPL\_TAB. In the picking list print program, the header data is collected in VBLKK\_WA, and the item data structure is VBLKP\_TAB. In the invoice print program, the header data is collected in VBDKR, and the item data structure is LVBDPR.

## Printing a Company Logo

To print a company logo, either include it in the layout set, or include it as a macro on a PCL-5 printer. The following rules allow you to determine which method is most appropriate for you.

- If you cannot provide your logo in the *Baseline TIFF 6.0* format, the company logo should be a macro on the printer.

Note: Many paint programs support this format.

- If you do not have a PCL-5 printer, include the company logo in the layout set.
- In all other cases, include the company logo in the layout set.



If you followed the directions exactly, and no logo is printed, the format of the logo file format is probably not *Baseline TIFF 6.0*. SAPscript does not give an error message if an incorrect file format is used.

The following procedures are also documented in OSS notes 39031, 18045 and 5995.

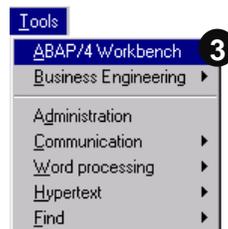
### Including the Company Logo in the Layout Set

1. Create your company logo with a graphics program.

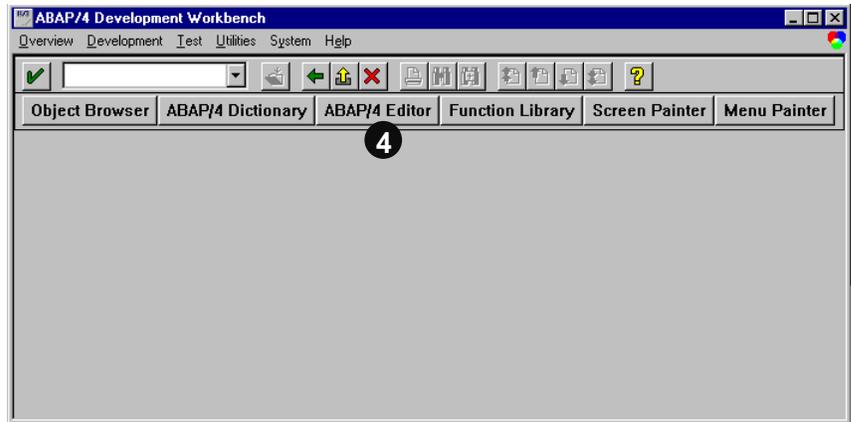
2. Save it in the *Baseline TIFF 6.0* format.

In our example, the filename is *LOGO.TIF*.

3. Choose *Tools* → *ABAP/4 Workbench*.



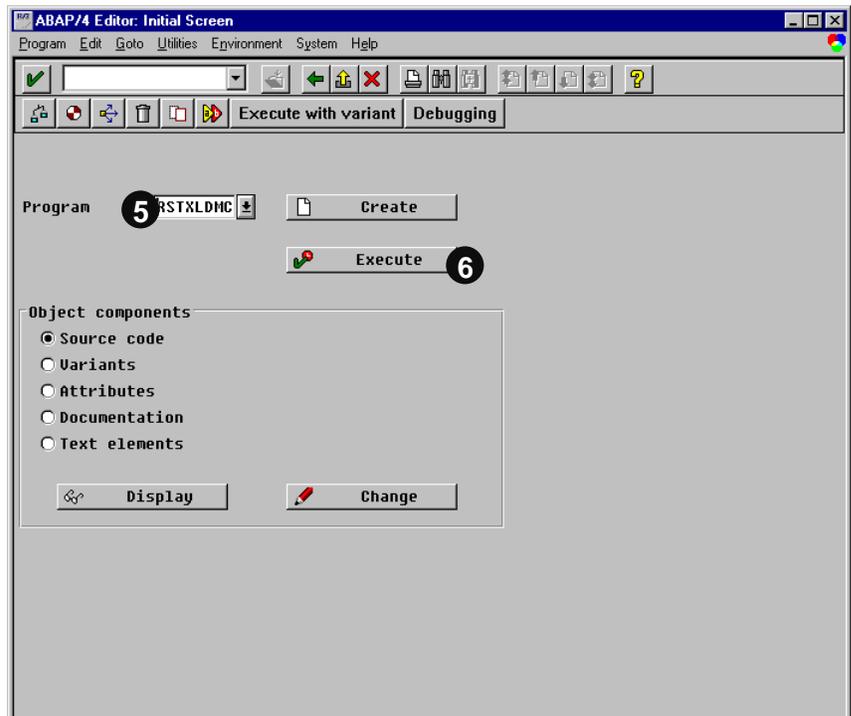
4. Click *ABAP/4 Editor*.



5. Enter *RSTXLDMC*.

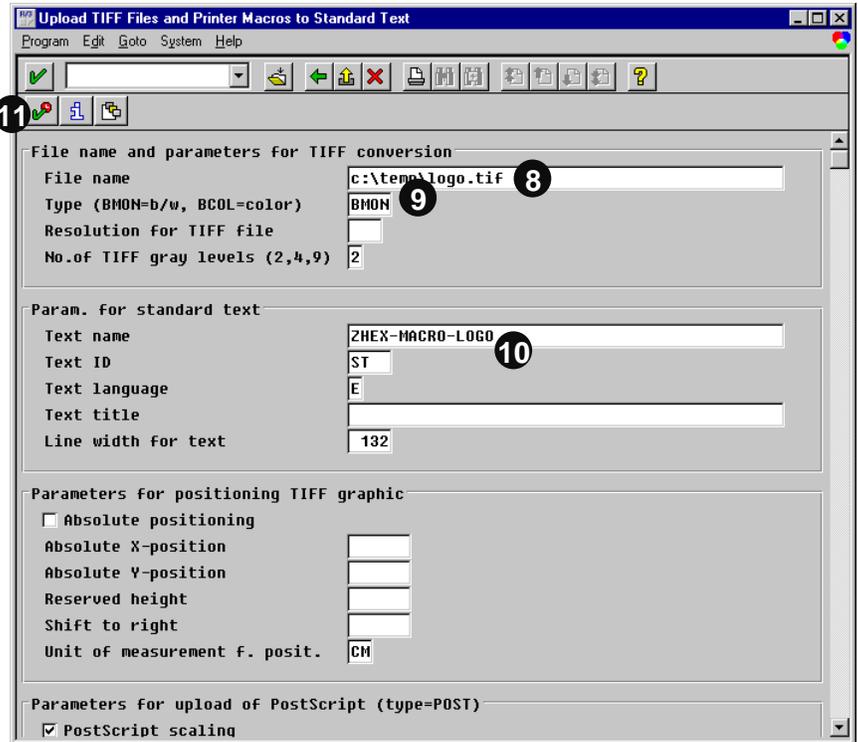
6. Click *Execute*.

7. Determine the location of *LOGO.TIF*.



Fill out the following report parameters:

8. Enter the file name with its location. Note that UNIX file names are case sensitive.
9. Choose and enter a *Type* choice:  
     **BMON** for a black and white raster image or  
     **BCOL** for a color raster image with up to 256 colors.  
  
 Use **BMON** for monochrome printers because these printers normally do not perform a gray-level conversion.
10. Enter **ZHEX-MACRO-LOGO** in *Text name*.
11. Click *Execute*.



The upload may take a while so be patient. The result should be a protocol with a *saved-successfully* message at the end.



The result is a standard text. To display the standard text:

1. Choose *Tools* → *Word processing* → *Standard text*
2. Enter **ZHEX-MACRO-LOGO**
3. Click *Display*

For additional documentation, access report RSTXLDMC:

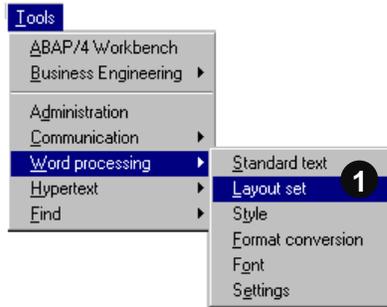
1. Choose *Tools* → *ABAP/4 Workbench*
2. Click *ABAP/4 Editor*
3. Enter **RSTXLDMC**
4. Select *Documentation*
5. Click *Display*

## Including the Logo in the Layout Set

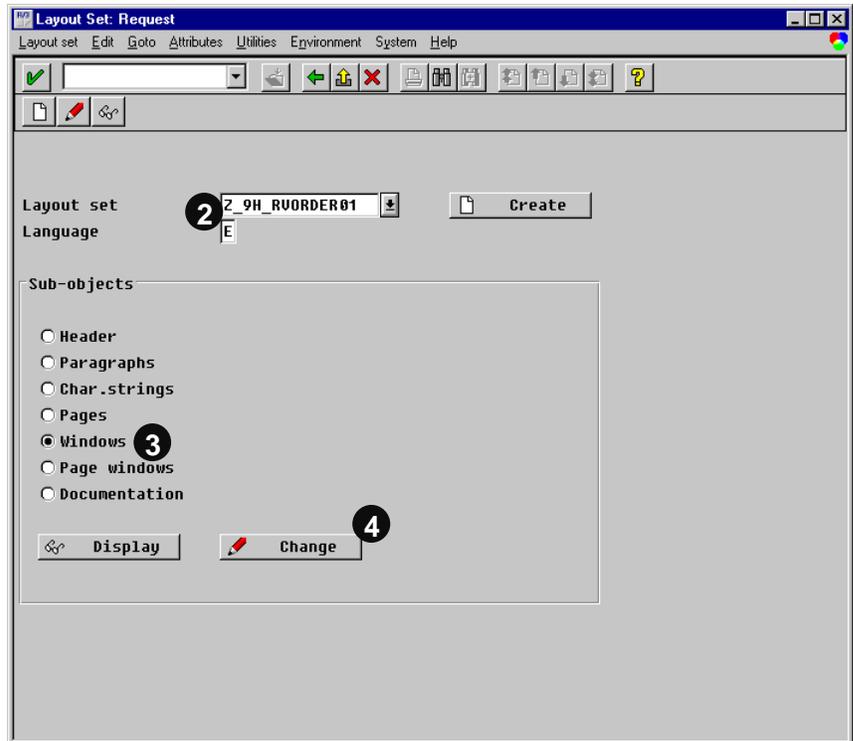
To illustrate the procedure, consider `Z_9H_RVORDER01` for sales order confirmation.

First, create a new window for the logo.

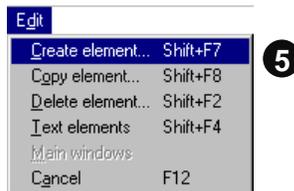
1. Choose *Tools* → *Word processing*  
→ *Layout set*.



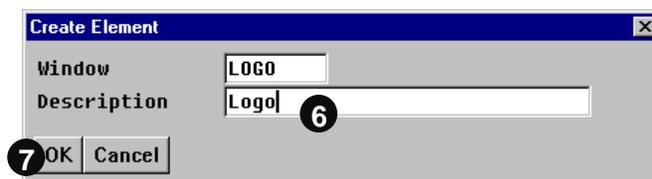
2. Enter `Z_9H_RVORDER01` and `E`.
3. Select *Windows*.
4. Click *Change*.



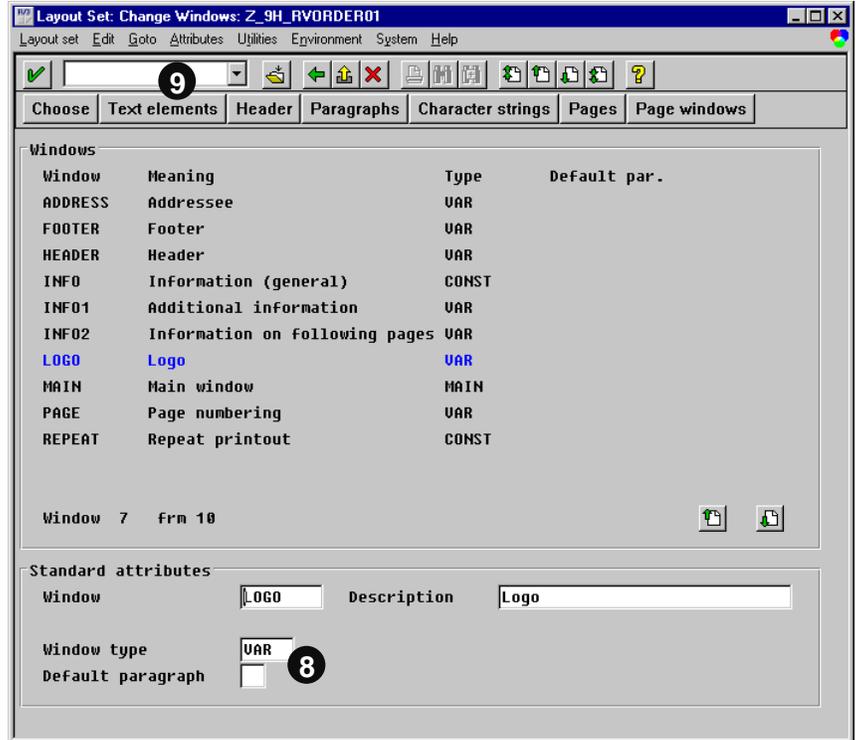
5. Choose *Edit* → *Create element...*



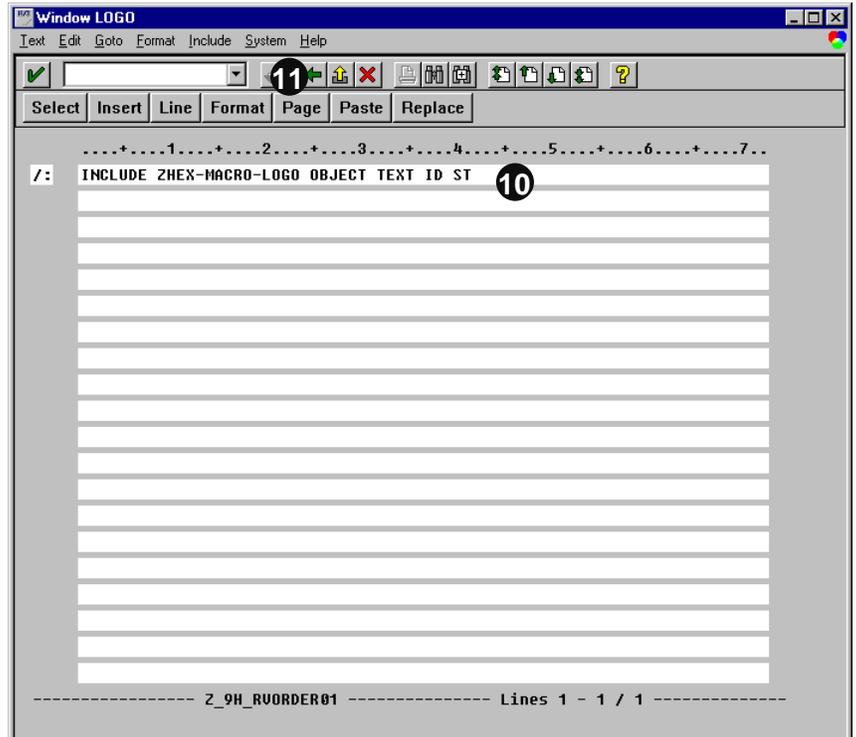
6. Enter `LOGO` in the *Window* and `Logo` in *Description*.
7. Click *OK*.



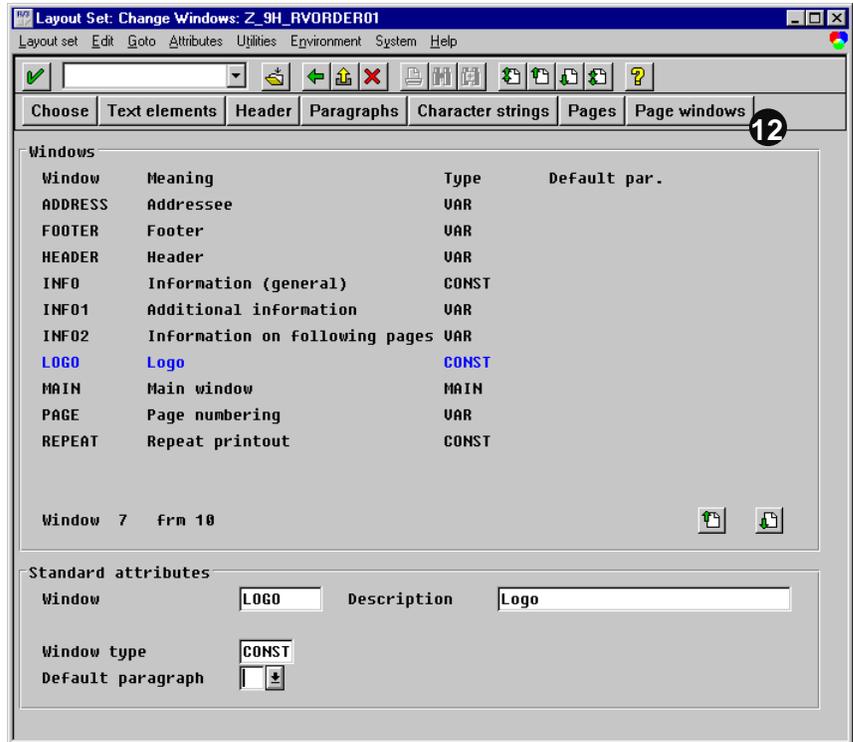
8. Overwrite VAR with CONST.
9. Click *Text elements*.



10. Enter INLCUDE ZHEX-MACRO-LOGO OBJECT TEXT ID ST in the first line.
11. Click *Back*.

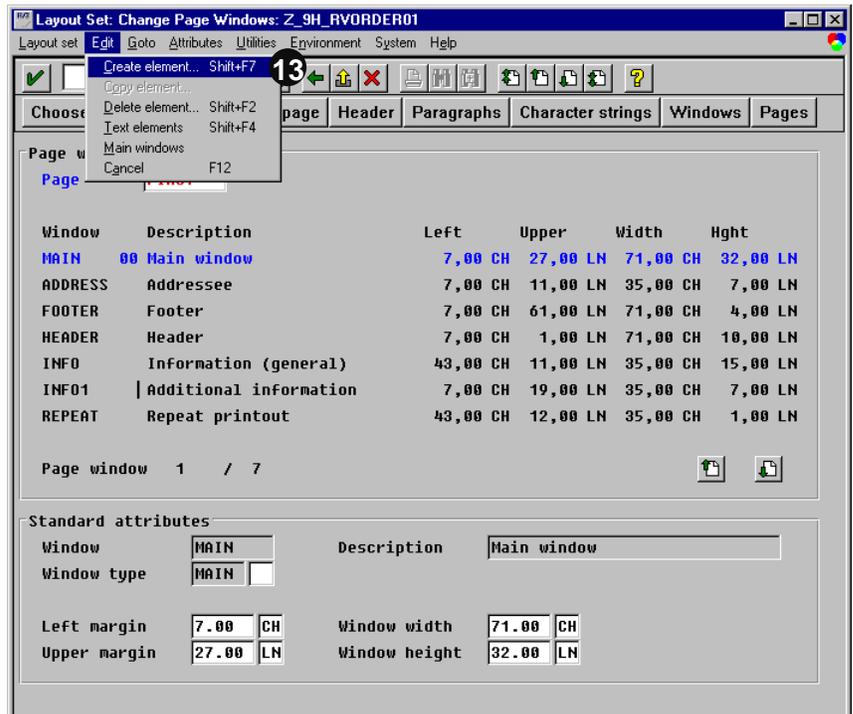


12. Click *Page windows*.



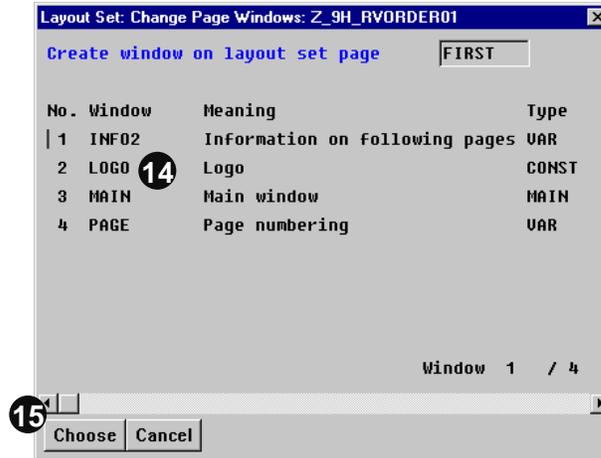
Add the new window to the page windows of the pages.

13. Choose *Edit* → *Create element...*



14. Position the cursor on *LOGO*.

15. Click *Choose*.



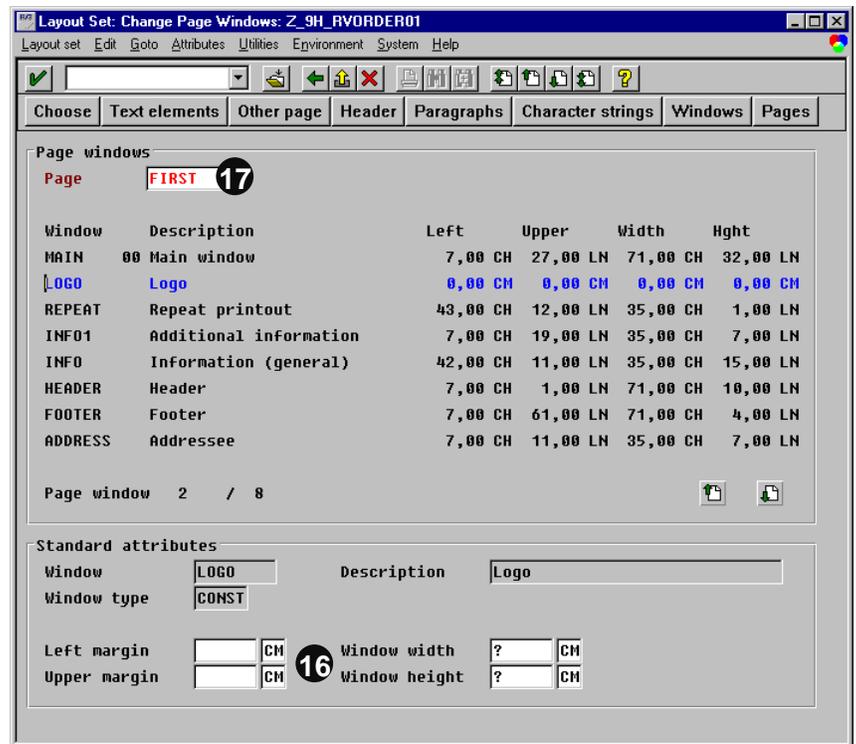
Fill out the coordinates of the window with the logo.

16. Sample coordinates for a logo, to be positioned in the top left-hand corner of a page, are:

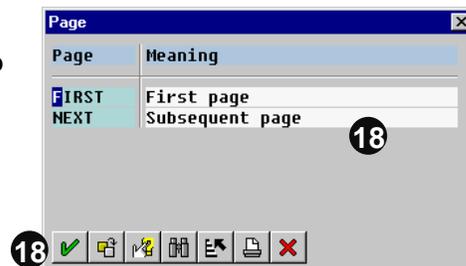
- Left margin: 7 CH
- Upper margin: 0 LN
- Window width: 71 CH
- Window height: 8 LN

Horizontal coordinates must be specified in *CH* and vertical coordinates in *LN*.

17. Repeat steps 13 to 15 for every page of the layout set. Position the cursor on the field with the page name and click *F4*.



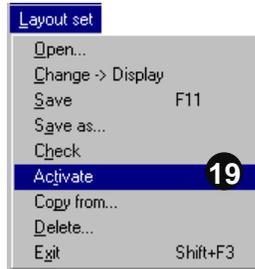
18. Position the cursor on each page and click *Enter* to repeat steps 13 to 15.





The coordinates of *LOGO* are taken from *FIRST* onto the other pages. Since you do not have to repeatedly overwrite the window coordinates, step 16 does need not to be repeated.

19. Choose *Layout set* → *Activate*.



## The Logo as a Macro on a PCL-5 Printer

The following procedure only works on a PCL-5 printer. In R/3, the printer types are either the following or a copy of the following:

- HPLJIIID
- HPLJ4
- HPLJ5SI
- HPLJMI
- IBMAFP
- IBMAFP3
- IBMEFP
- IBMEFP3
- LX4039
- SNI20XX8

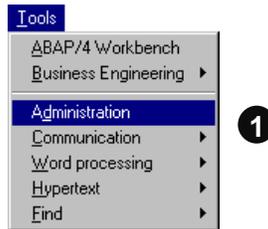
Various third-parties offer logos as a PCL-5 macro and can instruct you on how to bring the logo to the printer.



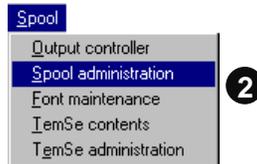
The macro file can be loaded on the printer by printing the file once from the operating system level (for example UNIX command *lp*). The disadvantage to this step is that macros are lost when you turn off the printer. To avoid this, load the macro onto a Flash-Memory cartridge.

To modify a printer type, first copy a standard printer type.

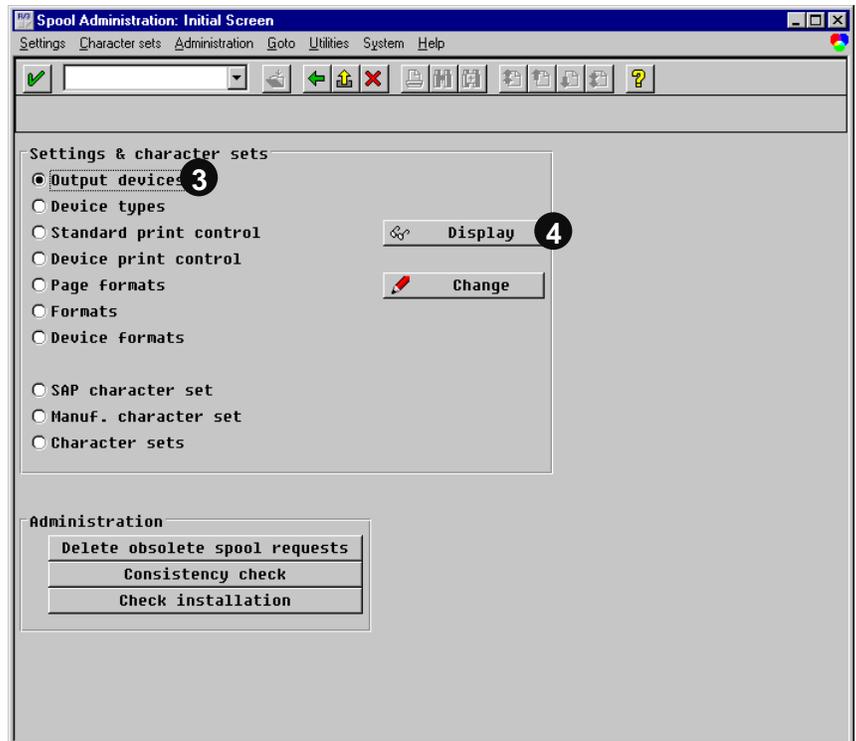
1. To determine the device type to use, choose *Tools* → *Administration*.



2. Choose *Spool* → *Spool administration*.

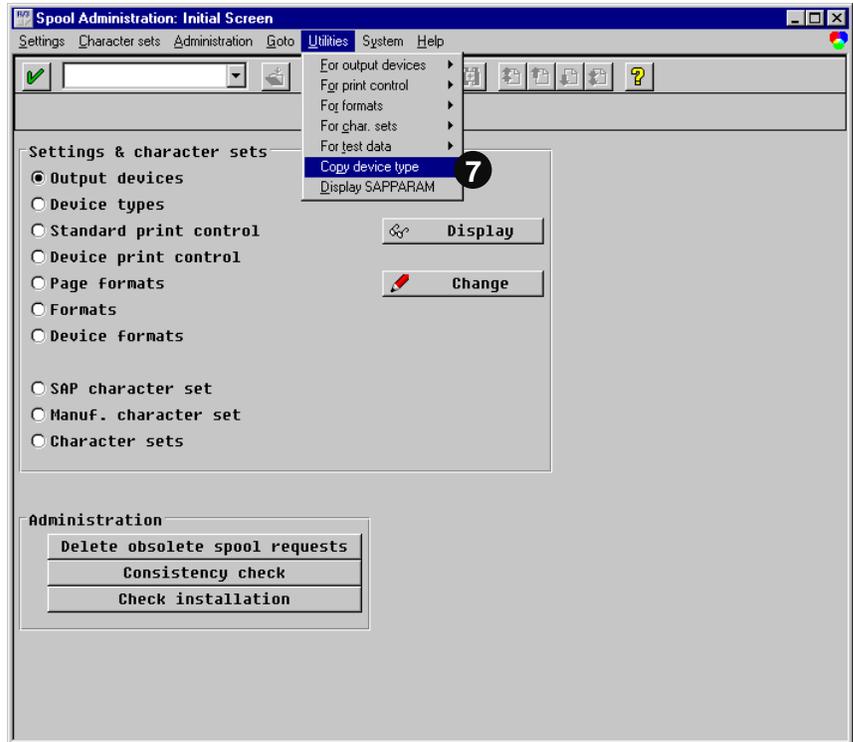


3. Select *Output devices*.
4. Click *Display*.



5. Behind the four-character printer name, find the device-type name. Let us assume the device-type name is *HPLJ4* (*HP Laserjet 4 series PCL-5*).
6. Click *Back* and return to the *Spool administration* screen.

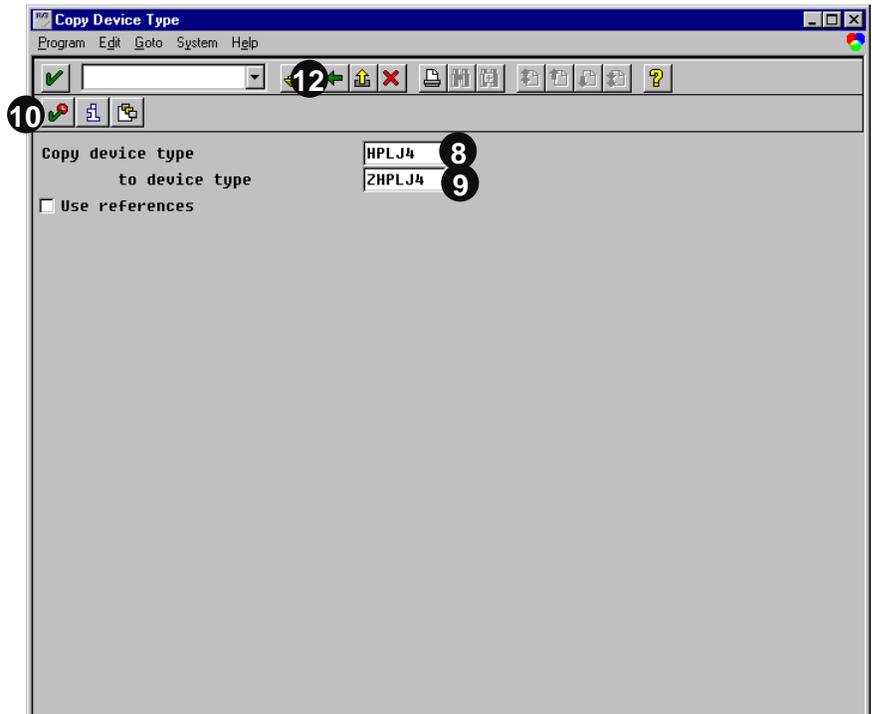
7. Choose *Utilities* → *Copy device type*.



8. Enter HPLJ4.
9. In *to device type*, enter a name for a copy of the device type.

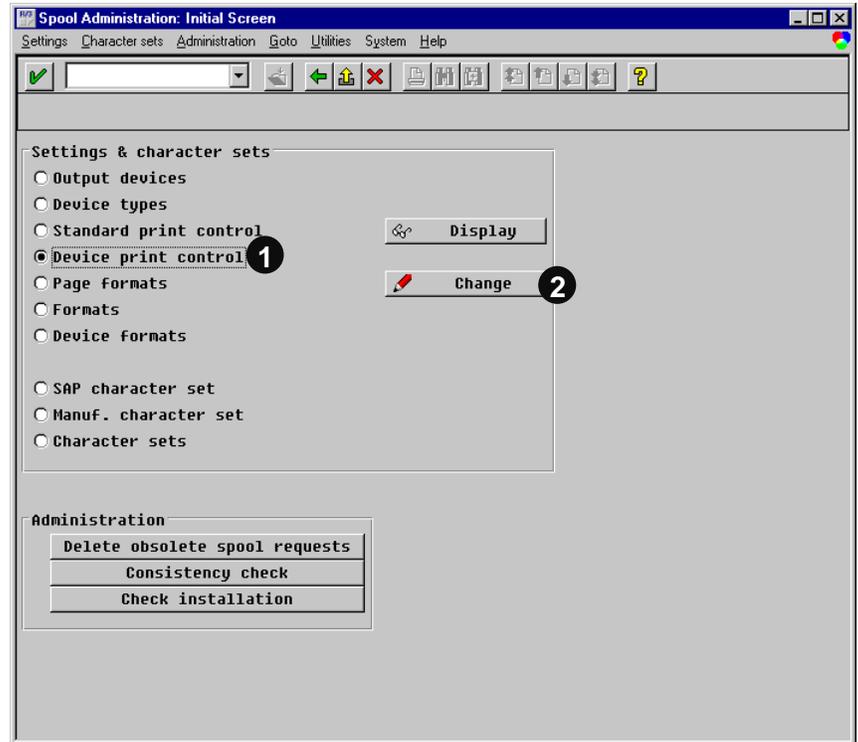
The name must begin with a Y or Z (for example ZHPLJ4).

10. Click *Execute*.
11. Click *Yes* to confirm all the pop-up windows.
12. Click *Back* and return to the initial *Spool Administration* screen.

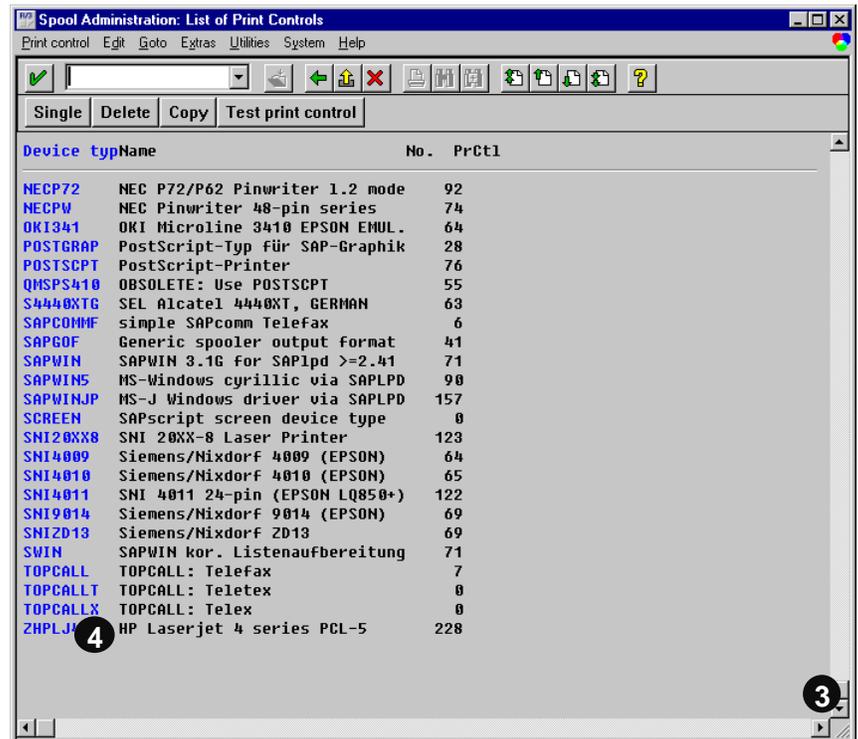


Now, define a print control for your macro. In our example, the macro has macro id of 100. The macro id, which is set when you bring the macro to the printer, must be between 100 and 999. Please get your id from your system administrator.

1. Select *Device print control*.
2. Click *Change*.



3. Scroll down until you see *ZHPLJ4*.
4. Double click on the device type you have created.

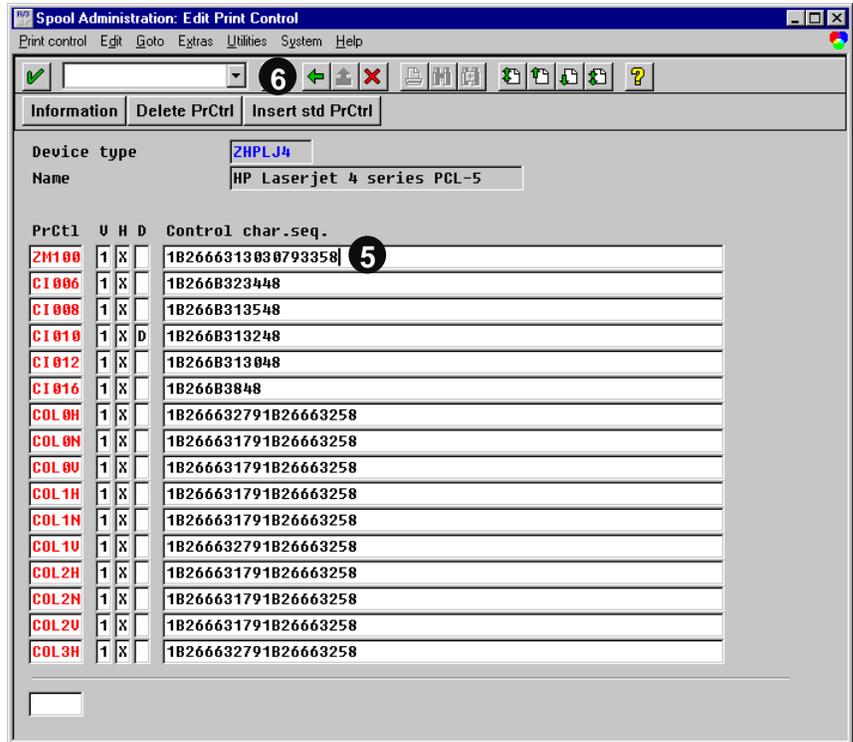


- Overwrite the first line with **ZM100** (the new print control) and the control character sequence **1B2666313030793358**.



The control character sequence contains the macro id in hexadecimal representation. The sequence is 1B2666...793358, where the three dots are the hexadecimal representations of the macro id letters. If the macro id is 100, the three dots will be 313030. In general: The hexadecimal representations for 0 to 9 are 30 to 39.

- Click *Back*.
- Click *Yes*.
- Click *Back* twice.

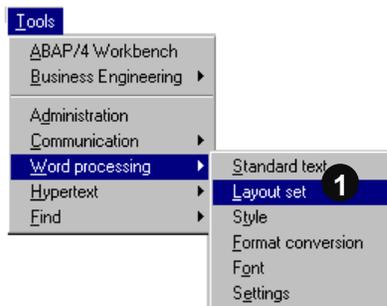


## Including the Print Control in the Layout Set

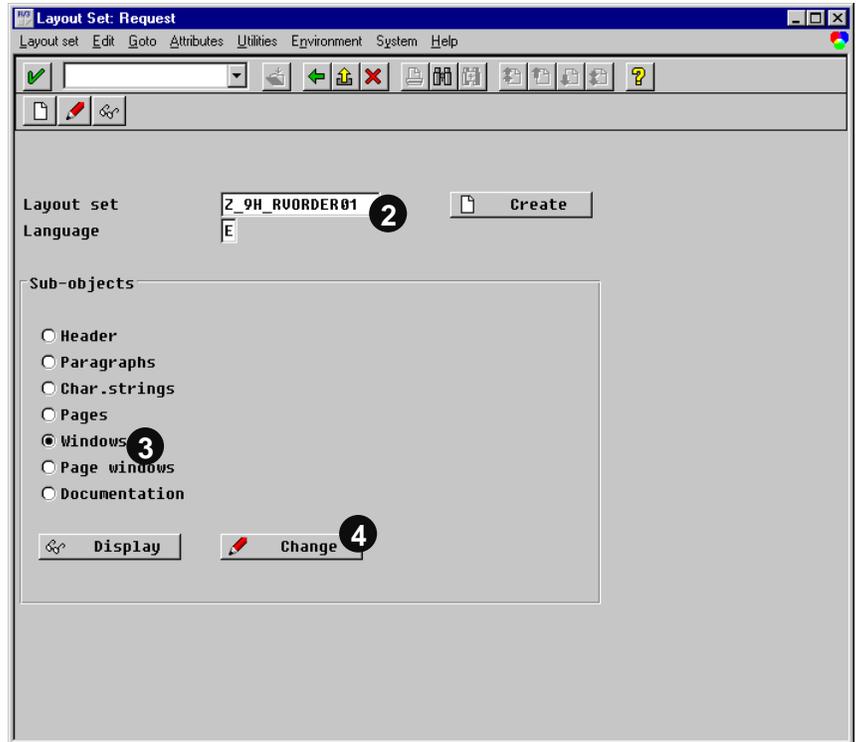
To illustrate the procedure, consider *Z\_9H\_RVORDER01* for *sales order confirmation*.

First we have to create a new window for the logo.

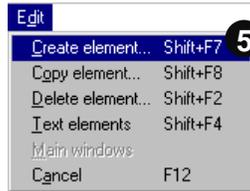
- Choose *Tools* → *Word processing* → *Layout set*.



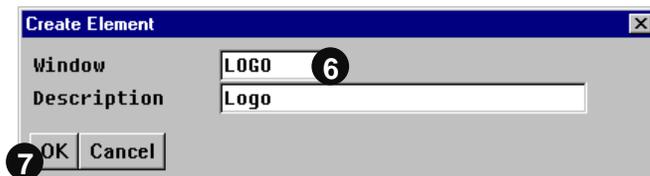
2. Enter `Z_9H_RVORDER01` and `E`.
3. Select *Windows*.
4. Click *Change*.



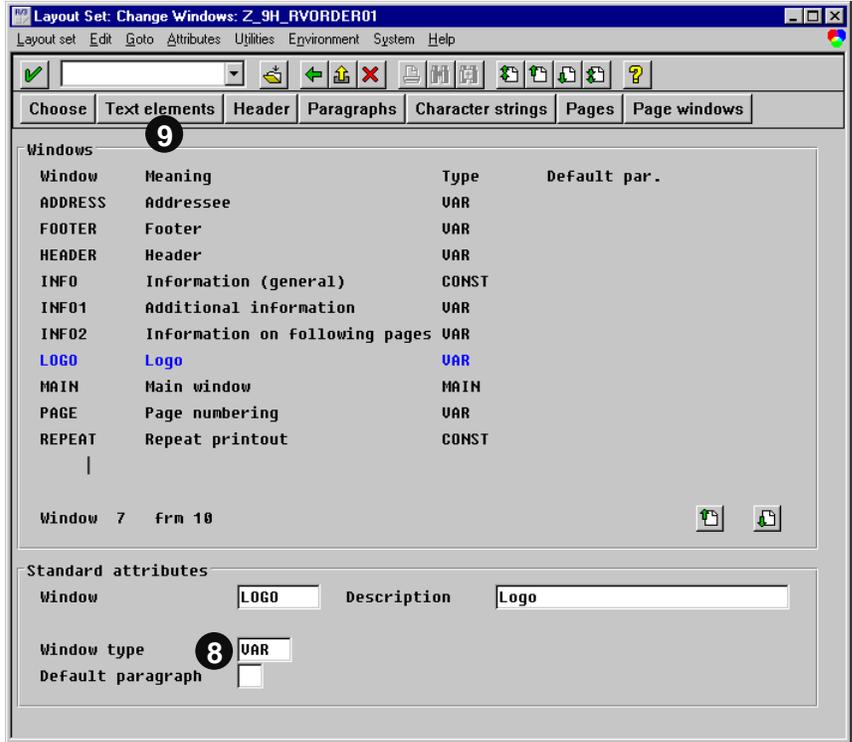
5. Choose *Edit* → *Create element...*



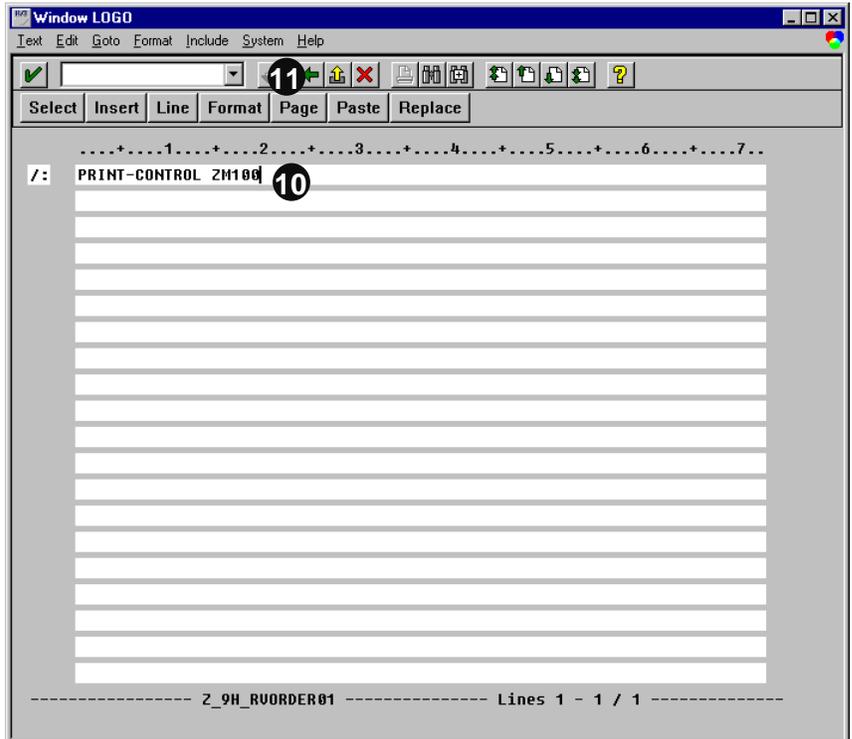
6. Enter `LOGO` in *Window* and `Logo` in *Description*.
7. Click *OK*.



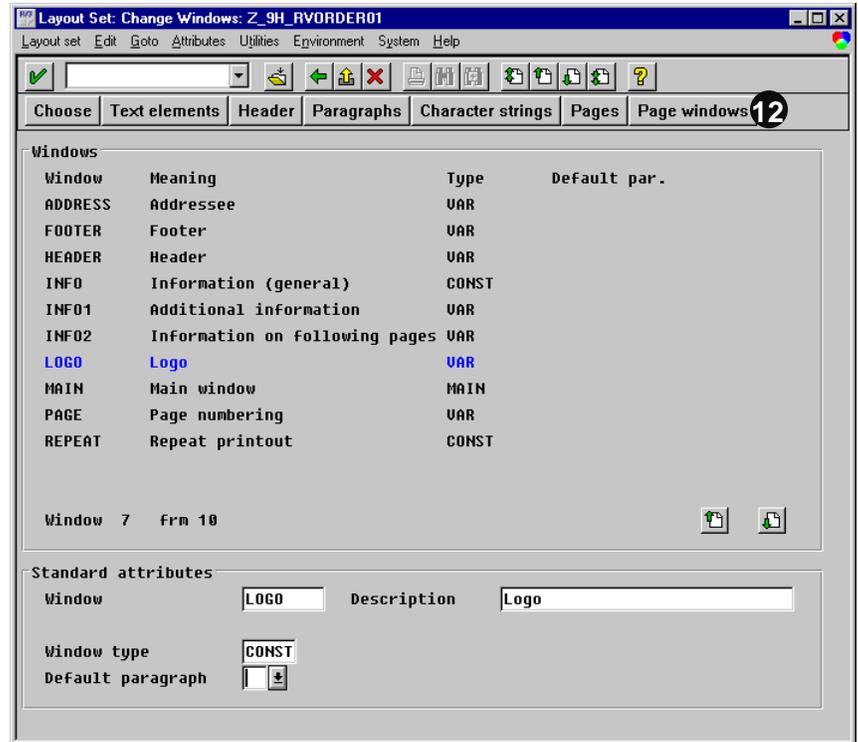
- 8. Enter CONST to overwrite VAR.
- 9. Click *Text elements*.



- 10. Enter /: PRINT-CONTROL ZM100.
- 11. Click *Back*.

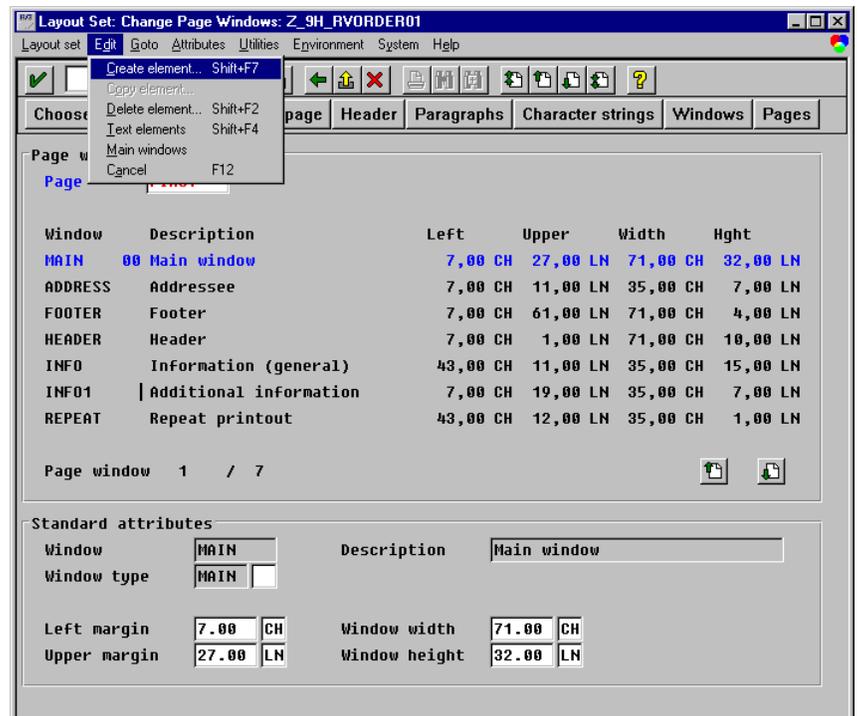


12. Click *Page windows*.



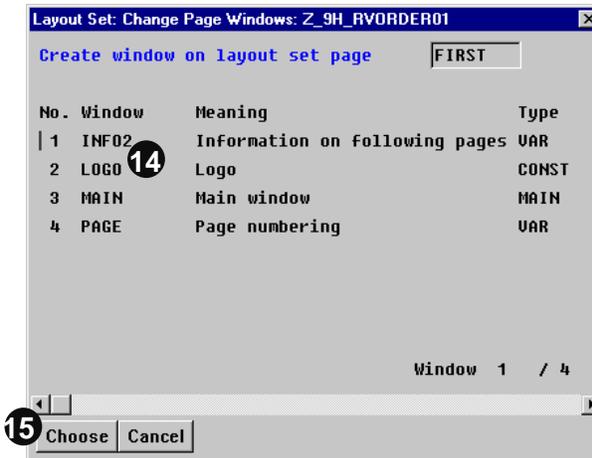
Add the new window to the page windows of the pages.

13. Choose *Edit* → *Create element...*



14. Place the cursor on *LOGO*.

15. Click *Choose*.



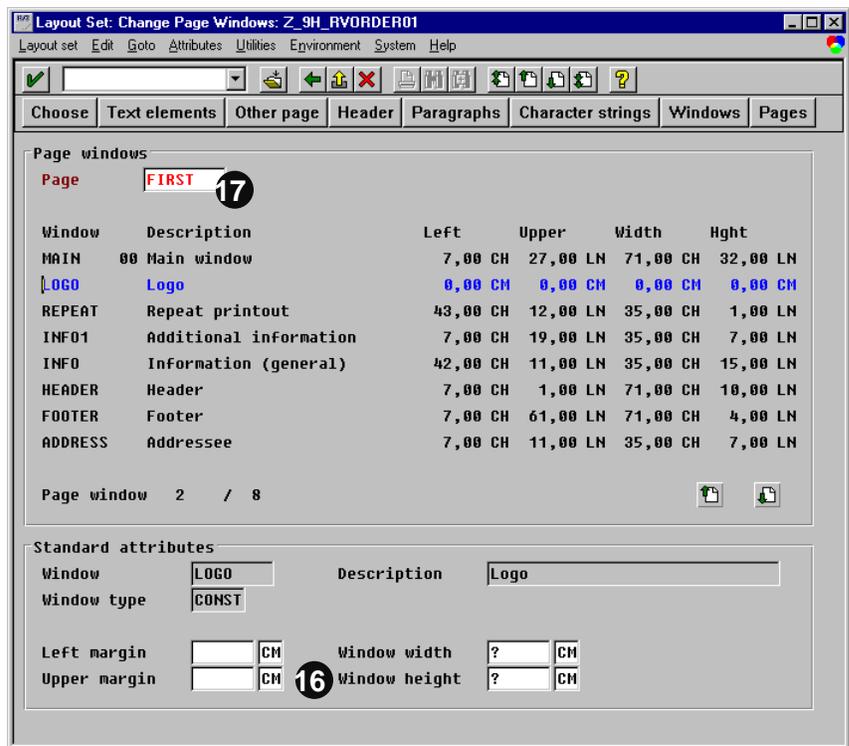
Enter the coordinates of the window with the logo on the following screen.

16. Sample coordinates for a logo to be positioned in the top left-hand corner of a page are:

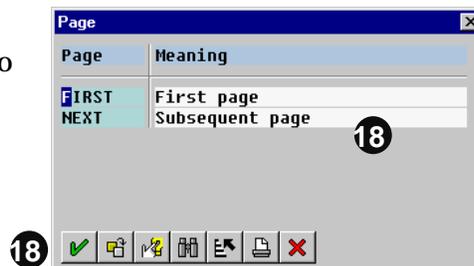
- Left margin: 7 CH
- Upper margin: 0 LN
- Window width: 71 CH
- Window height: 8 LN

Horizontal coordinates have to be specified in *CH*, vertical coordinates in *LN*.

17. Repeat steps 13 to 15 for every layout set page. Position the cursor on the field with the page name and click *F4*.



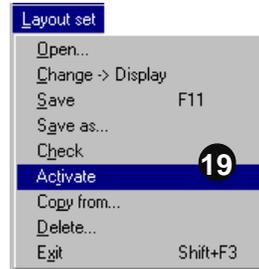
18. Position the cursor on each page and click *Enter* to repeat steps 13 to 15.





The coordinates of *LOGO* are taken automatically from *FIRST* to the other pages. Since you do not have to repeatedly overwrite the window coordinates, step 16 does not have to be repeated.

19. Choose *Layout set* → *Activate*.



## Printing Bar Codes

The work in the SAP System depends on whether you need hardware or software and can become technical. The easiest way to print bar codes is to use a Kyocera laser printer, because no additional hardware or software is needed. You just need to add the bar code to the layout set.

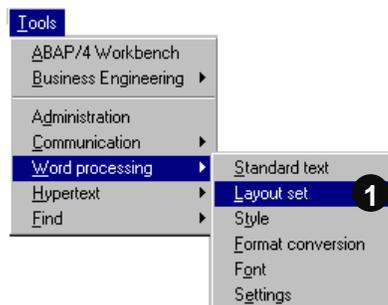
With a HP laser printer, the solution is quite as simple, it is almost “plug-and-play.” Add the JetCAPS BARSIMM to a HP Laserjet 4 or 5 printer and add the bar code to the layout set. Most other solutions require more work. To keep bar code printing easy, this guide covers only the Kyocera and HP laser printers. For HP laser printers, insert the *SIMM* into your HP Laserjet 4 or 5 and make sure that your printer is an HPLJ4 in R/3. If you do not know your printer’s type, ask your system administrator.



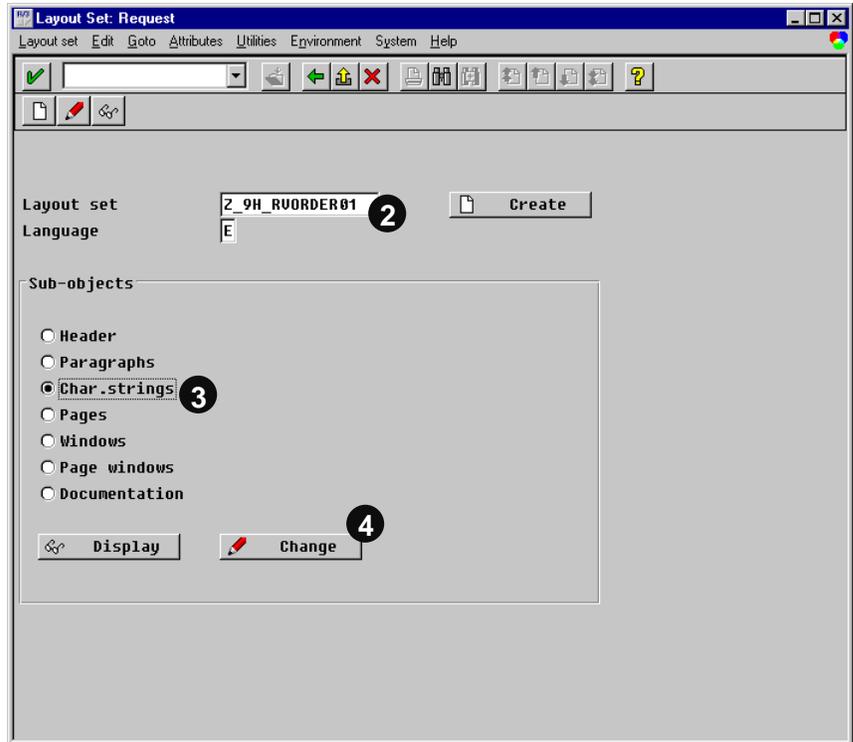
With the *SIMM*, you receive a list of print controls that tell you how to switch the bar codes on and off. These print controls are already defined for the HPLJ4.

The next step is to define the bar code in the layout set. Assume that you want to print the material numbers on a sales order confirmation as a “3 of 9” bar code with check digit.

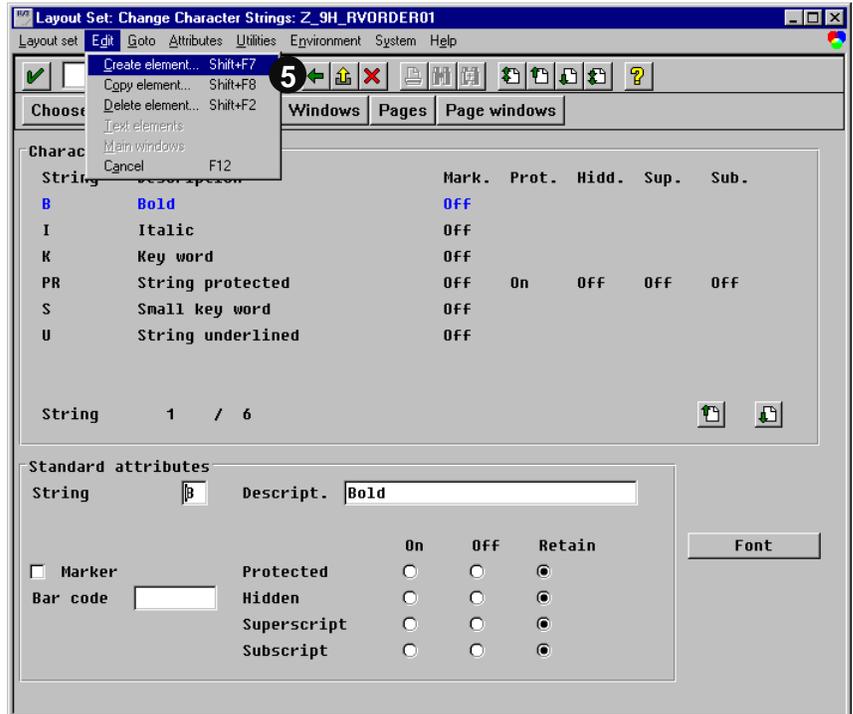
1. Choose *Tools* → *Word processing*  
→ *Layout set*.



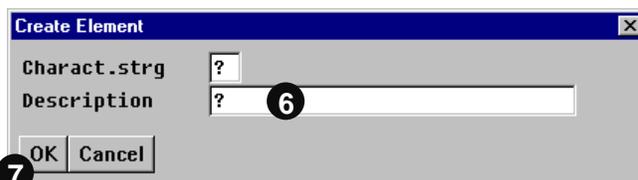
2. Enter `Z_9H_RVORDER01` and `E`.
3. Select *Char.strings*.
4. Click *Change*.



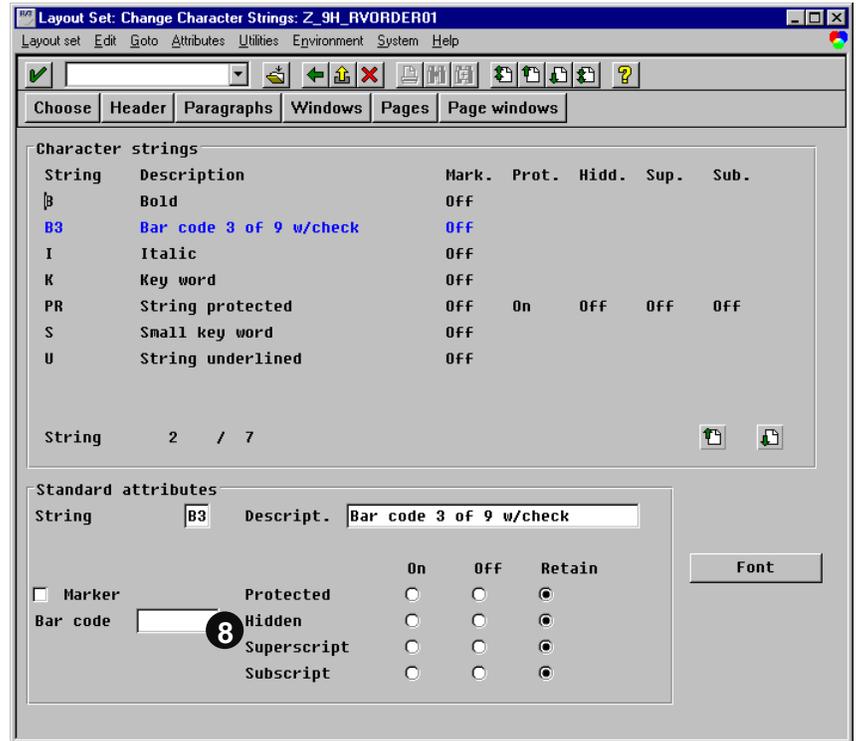
5. Choose *Edit* → *Create element...*



6. Enter up to two characters in *Charact.strg* and a description (for example, `B3` and Bar code 3 of 9 w/check).



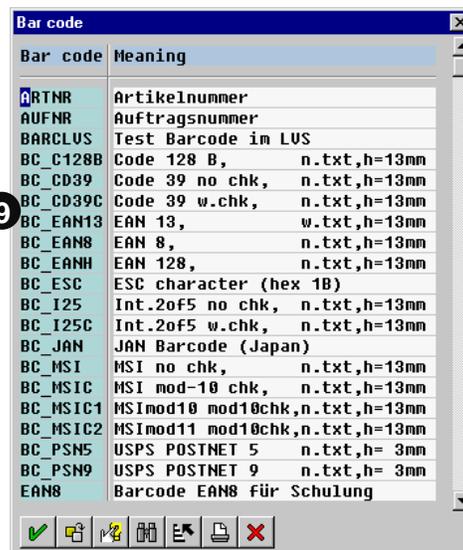
7. Click *OK*.
8. Place the cursor in *Bar code* and click *F4* to choose from the available bar codes.



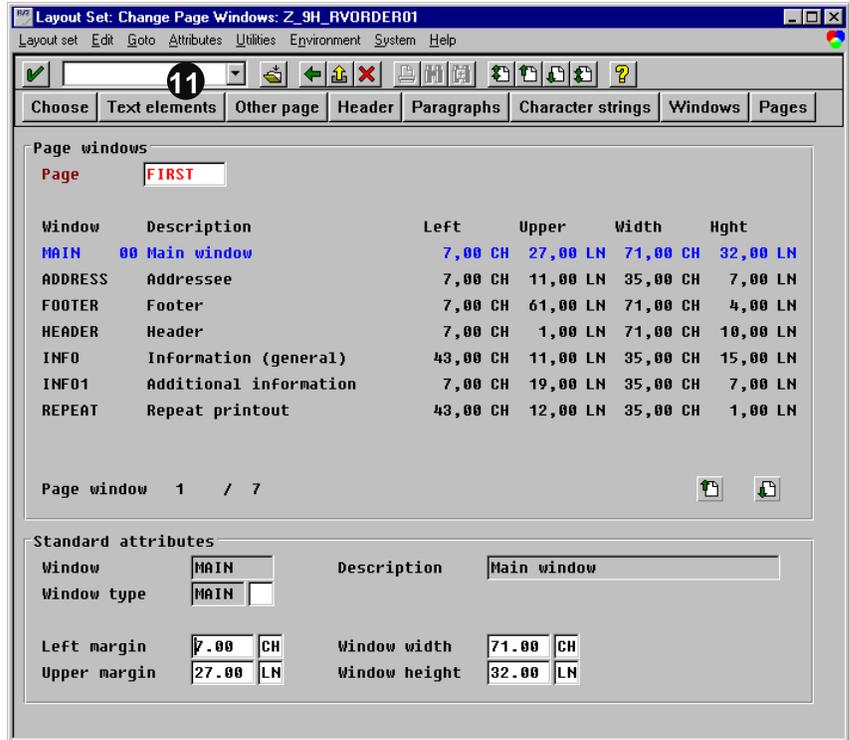
9. Double-click on the appropriate bar code. (In our example, we double-click *BC\_CD39C*.)

The bar code is now defined and can be used. We have to go to the text elements of *MAIN* and print the material number as the bar code in a separate line.

10. Click *Page windows*.



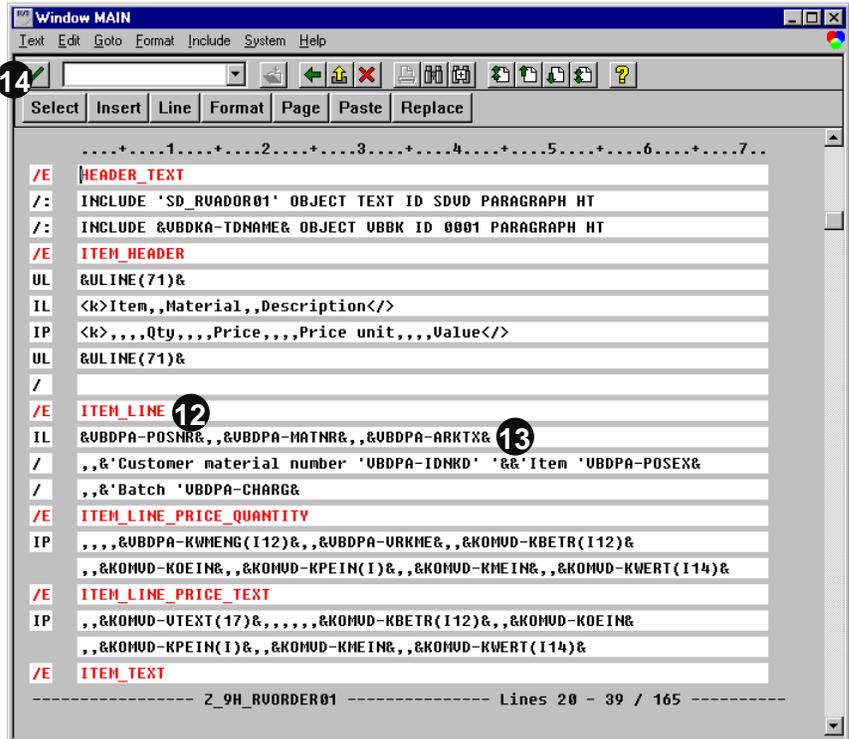
11. Click *Text elements*.



12. Scroll down until you see `/E`  
`ITEM_LINE`.

13. Place the cursor at the end of the  
 first line under `/E ITEM_LINE`

14. Click *Enter* to create a new line.



15. Enter `, , <B3>&VBDPA-MATNR&</>` on this new line.

```

Window MAIN
Text Edit Goto Format Include System Help
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----
/ E  HEADER_TEXT
/ :  INCLUDE 'SD_RVADOR01' OBJECT TEXT ID SDUD PARAGRAPH HT
/ :  INCLUDE &VBDKA-TDNAME& OBJECT UBBK ID 0001 PARAGRAPH HT
/ E  ITEM_HEADER
UL  &ULINE(71)&
IL  <k>Item,,Material,,Description</>
IP  <k>,,,Qty,,,Price,,,Price unit,,,Value</>
UL  &ULINE(71)&
/
/ E  ITEM_LINE
IL  &VBDPA-POSNR&,,&VBDPA-MATNR&,,&VBDPA-ARKTX&
IL  |
15 |
/   ,,&'Customer material number 'UBDPA-IDNKD' '&&'Item 'UBDPA-POSEX&
/   ,,&'Batch 'UBDPA-CHARG&
/ E  ITEM_LINE_PRICE_QUANTITY
IP  ,,,&VBDPA-KWMENG(I12)&,,&VBDPA-URKME&,,&KOMUD-KBETR(I12)&
    ,,&KOMUD-KOEIN&,,&KOMUD-KPEIN(I)&,,&KOMUD-KMEIN&,,&KOMUD-KWERT(I14)&
/ E  ITEM_LINE_PRICE_TEXT
IP  ,,&KOMUD-UTEXT(17)&,,,,,&KOMUD-KBETR(I12)&,,&KOMUD-KOEIN&
    ,,&KOMUD-KPEIN(I)&,,&KOMUD-KMEIN&,,&KOMUD-KWERT(I14)&
----- Z_9H_RVORDER01 ----- Lines 20 - 39 / 166 -----
    
```



The two commas, for the first tab, position the bar code under the material number. With `<B3>`, change to the character string `B3`, which defines the bar code. `</>` ends the character string and returns to `IL`.

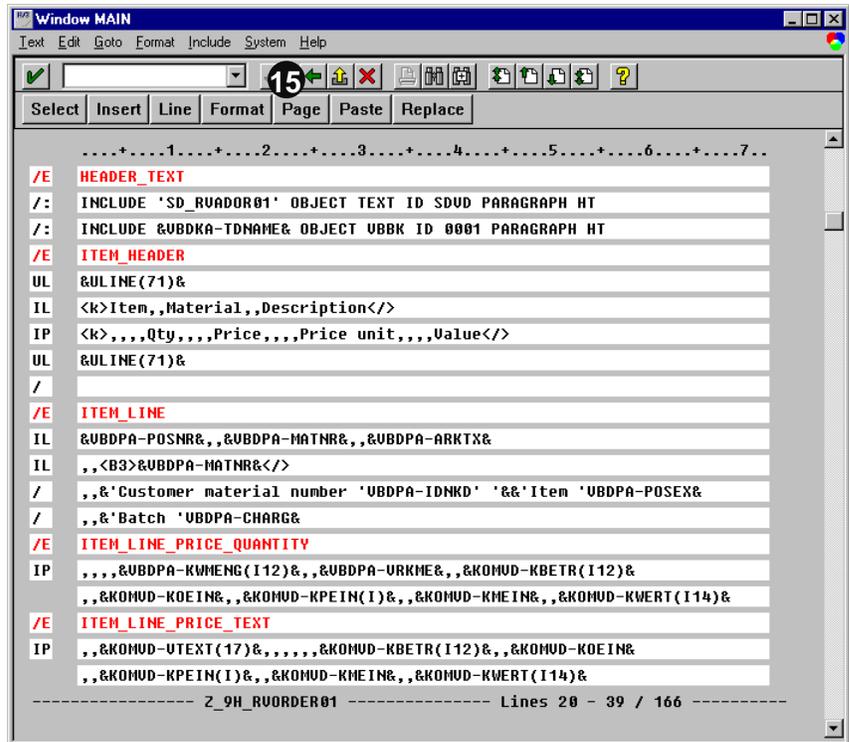
Some of the bar codes are higher than one line, which may cause the previous lines to overlap. To avoid overlapping, add blank lines before the line with the bar code. Use such a paragraph for this blank line, so that the blank lines are not compressed. To check the paragraph setting, go to the paragraph's standard attributes and ensure that the *No blank lines* checkbox is de-selected.



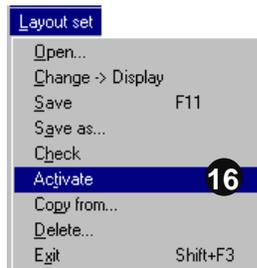
In our example, notice the bar code, which reserves space for the entire material number field. (This field is 18 characters long.) If you do not use all 18 characters and do not want to waste space, delimit the field length by using the output length formatting option. The text editor line is `, , <B3>&VBDPA-MATNR(8)&</>`

In a numerical bar code, some scanners cannot read special characters. For these scanners, omit the special characters inserted by SAPscript during formatting. An example of a special character is the delimiter for "Thousands" that is used for some numerical fields. See chapter 7 for more information on formatting options.

15. Click *Back*.



16. Choose *Layout set* → *Activate*.



## Adding a Box with Shading

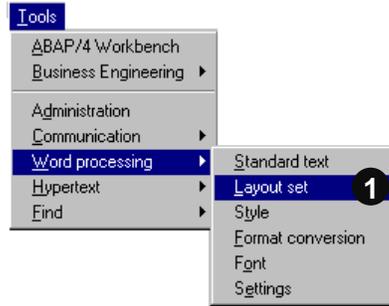
**Task:** On the sales order confirmation output, draw a box around the ship-to address and shade *Ship-to address*.



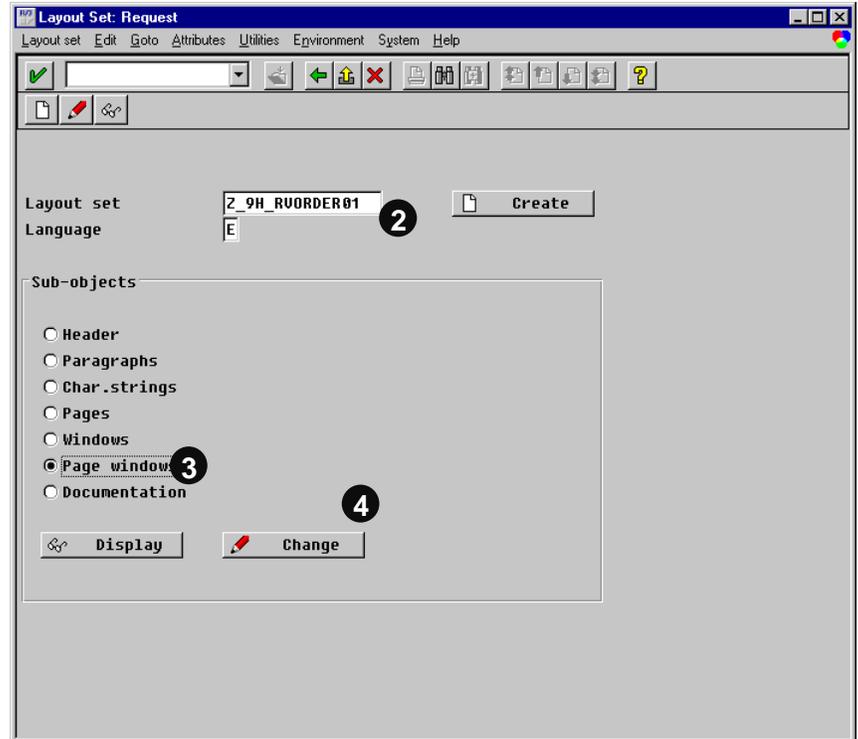
In this task, we want to have a box around an entire page window and shade the first line of this page window.

Boxes, lines, and shading are well documented in R/3. To access this documentation, choose *Help* → *R/3 library* from any R/3 screen. Click *Basis Components, System Administration, Style & Layout Set Maintenance, Styles and Layout Sets: Components and Techniques and Boxes, Lines, and Shading*.

1. To access *Z\_9H\_RVORDER01*, choose *Tools* → *Word processing* → *Layout set*.



2. Enter *Z\_9H\_RVORDER01* and *E*.
3. Select *Page windows*.
4. Click *Change*.



5. Double-click on *INFO1*.

Make sure that it is highlighted after selection.

6. Click *Text elements*.

Page windows

Window	Description	Left	Upper	Width	Hght
MAIN	00 Main window	7,00 CH	27,00 LN	71,00 CH	32,00 LN
ADDRESS	Addressee	7,00 CH	11,00 LN	35,00 CH	7,00 LN
FOOTER	Footer	7,00 CH	61,00 LN	71,00 CH	4,00 LN
HEADER	Header	7,00 CH	1,00 LN	71,00 CH	10,00 LN
INFO	Information (general)	43,00 CH	11,00 LN	35,00 CH	15,00 LN
<b>INFO1</b>	<b>Additional information</b>	<b>7,00 CH</b>	<b>19,00 LN</b>	<b>35,00 CH</b>	<b>7,00 LN</b>
REPEAT	Repeat printout	43,00 CH	12,00 LN	35,00 CH	1,00 LN

Page window 6 / 7

Standard attributes

Window	INFO1	Description	Additional information
Window type	VAR		
Left margin	7.00 CH	Window width	35.00 CH
Upper margin	19.00 LN	Window height	7.00 LN



If the variable `VBDKA-LAND1_WE` is filled, the window is only output. Therefore, the box and shading should be printed only if this variable is filled. (We inserted the box and shading commands between the first and second line of the text editor).

```

.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....
/: |IF &VBDKA-LAND1_WE& NE &SPACE&.|
/ |<s>Ship-to address</s>|
/: ENDIF.
/: ADDRESS DELIVERY PARAGRAPH AS
/: | TITLE &VBDKA-ANRED_WE&|
/: | NAME &VBDKA-NAME1_WE&, &VBDKA-NAME2_WE&, &VBDKA-NAME3_WE&, &VBDKA- |
/: | STREET &VBDKA-STRAS_WE&|
/: | POSTCODE &VBDKA-PSTL2_WE&|
/: | CITY &VBDKA-ORT01_WE&, &VBDKA-ORT02_WE&|
/: | REGION &VBDKA-REGIO_WE&|
/: | COUNTRY &VBDKA-LAND1_WE&|
/: | FROMCOUNTRY &VBDKA-SLAND&|
/: | ENDADDRESS|

```

----- Z\_9H\_RVORDER01 ----- Lines 1 - 13 / 13 -----

1. Place the cursor at the end of the first line.
2. Click *Enter*.

```

.....1.....2.....3.....4.....5.....6.....7..
/: IF &UBDKA-LAND1_WE& NE &SPACE&.
*
/ <s>Ship-to address</>
/: ENDIF.
/: ADDRESS DELIVERY PARAGRAPH AS
/: TITLE &UBDKA-ANRED_WE&
/: NAME &UBDKA-NAME1_WE&, &UBDKA-NAME2_WE&, &UBDKA-NAME3_WE&, &UBDKA-
/: STREET &UBDKA-STRAS_WE&
/: POSTCODE &UBDKA-PSTLZ_WE&
/: CITY &UBDKA-ORT01_WE&, &UBDKA-ORT02_WE&
/: REGION &UBDKA-REGIO_WE&
/: COUNTRY &UBDKA-LAND1_WE&
/: FROMCOUNTRY &UBDKA-SLAND&
/: ENDADDRESS

```

----- Z\_9H\_RUORDER01 ----- Lines 1 - 14 / 14 -----

3. In the format column, replace \* in with /:
4. Enter POSITION XORIGIN '-0.5' CH YORIGIN '-0.25' LN.



This command positions the cursor a half character and a quarter line off the page window's upper left corner. This is the starting point for the next command, which will be the sizing of the box. Place the cursor off the page window to avoid overwriting the contents of the window with the box.

11. Place the cursor at the end of the previously entered line and click *Enter*.

This inserts an empty line.

```

.....1.....2.....3.....4.....5.....6.....7..
/: IF &UBDKA-LAND1_WE& NE &SPACE&.
/: POSITION XORIGIN '-0.5' CH YORIGIN '-0.25' LN
/ <s>Ship-to address</>
/: ENDIF.
/: ADDRESS DELIVERY PARAGRAPH AS
/: TITLE &UBDKA-ANRED_WE&
/: NAME &UBDKA-NAME1_WE&, &UBDKA-NAME2_WE&, &UBDKA-NAME3_WE&, &UBDKA-
/: STREET &UBDKA-STRAS_WE&
/: POSTCODE &UBDKA-PSTLZ_WE&
/: CITY &UBDKA-ORT01_WE&, &UBDKA-ORT02_WE&
/: REGION &UBDKA-REGIO_WE&
/: COUNTRY &UBDKA-LAND1_WE&
/: FROMCOUNTRY &UBDKA-SLAND&
/: ENDADDRESS

```

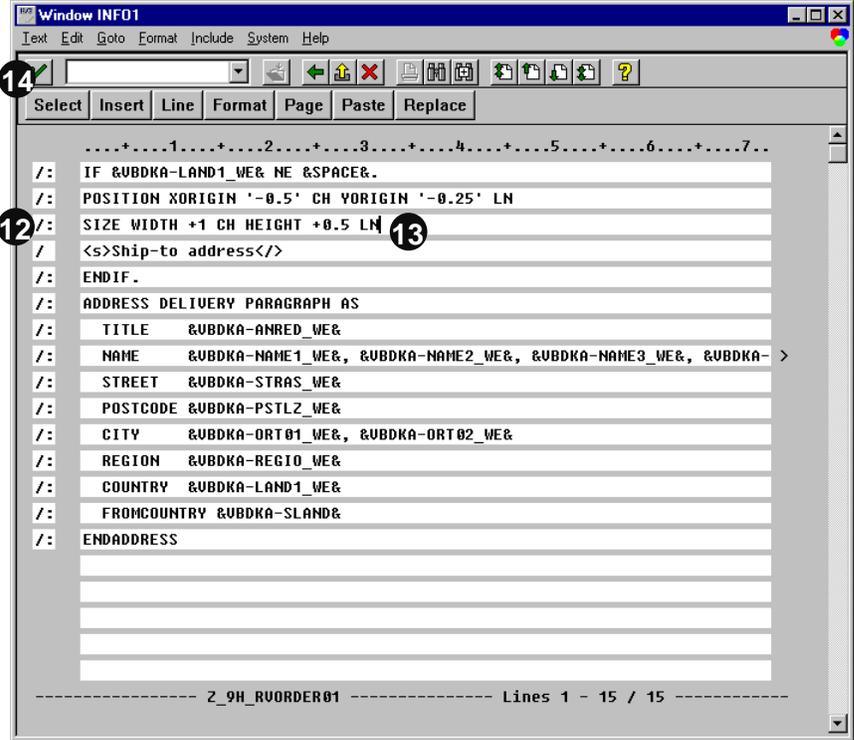
----- Z\_9H\_RUORDER01 ----- Lines 1 - 14 / 14 -----

12. In the format column, replace the \* with /:
13. Enter `SIZE WIDTH +1 CH HEIGHT +0.5 LN`
14. Place the cursor at the end of the previously entered line and click *Enter*.

This inserts an empty line.



The command defines a window one character wider and half a line higher than the page window. The line inserted in step 13 creates a window, which overlaps the page window by half a character on the left and right side and by a quarter line on the top and bottom of the window. Size the box bigger than the page window to avoid overwriting the contents of the window with the box.



15. Replace the \* in the format column with /:

16. Enter **BOX FRAME 10 TW**.



The command paints the box in the previously defined size. The thickness of the line of the box is specified with 10 twips.

We now have painted the box. Next, we will shade the first line of the box.

17. Place the cursor at the end of the line in step 16 and click *Enter*.

This inserts a blank line.

```

.....1.....2.....3.....4.....5.....6.....7..
/: IF &UBDKA-LAND1_WE& NE &SPACE&.
/: POSITION XORIGIN '-0.5' CH YORIGIN '-0.25' LN
/: SIZE WIDTH +1 CH HEIGHT +0.5 LN
16 /: BOX FRAME 10 TW
/ <s>Ship-to address</s>
/: ENDF.
/: ADDRESS DELIVERY PARAGRAPH AS
/: TITLE &UBDKA-ANRED_WE&
/: NAME &UBDKA-NAME1_WE&, &UBDKA-NAME2_WE&, &UBDKA-NAME3_WE&, &UBDKA-
/: STREET &UBDKA-STRAS_WE&
/: POSTCODE &UBDKA-PSTLZ_WE&
/: CITY &UBDKA-ORT01_WE&, &UBDKA-ORT02_WE&
/: REGION &UBDKA-REGIO_WE&
/: COUNTRY &UBDKA-LAND1_WE&
/: FROMCOUNTRY &UBDKA-SLAND&
/: ENDADDRESS

```

----- Z\_9H\_RUORDER01 ----- Lines 1 - 16 / 16 -----

18. Replace the \* in the format column with /:

19. Enter **BOX HEIGHT '1.5' LN INTENSITY 20**.



This command shades the first one and a half lines of the box with an intensity of 20% gray. Shading more than one line is necessary because the box begins a quarter line above the page window. With a shading level of 1.5 lines, the line, the quarter line above the page window, and a quarter line below the text line are shaded.

20. Click *Back* to exit the text editor.

```

.....1.....2.....3.....4.....5.....6.....7..
/: IF &UBDKA-LAND1_WE& NE &SPACE&.
/: POSITION XORIGIN '-0.5' CH YORIGIN '-0.25' LN
/: SIZE WIDTH +1 CH HEIGHT +0.5 LN
/: BOX FRAME 10 TW
19 /: BOX HEIGHT '1.5' LN INTENSITY 20
/ <s>Ship-to address</s>
/: ENDF.
/: ADDRESS DELIVERY PARAGRAPH AS
/: TITLE &UBDKA-ANRED_WE&
/: NAME &UBDKA-NAME1_WE&, &UBDKA-NAME2_WE&, &UBDKA-NAME3_WE&, &UBDKA-
/: STREET &UBDKA-STRAS_WE&
/: POSTCODE &UBDKA-PSTLZ_WE&
/: CITY &UBDKA-ORT01_WE&, &UBDKA-ORT02_WE&
/: REGION &UBDKA-REGIO_WE&
/: COUNTRY &UBDKA-LAND1_WE&
/: FROMCOUNTRY &UBDKA-SLAND&
/: ENDADDRESS

```

----- Z\_9H\_RUORDER01 ----- Lines 1 - 17 / 17 -----

21. Choose *Layout set* → *Activate*.

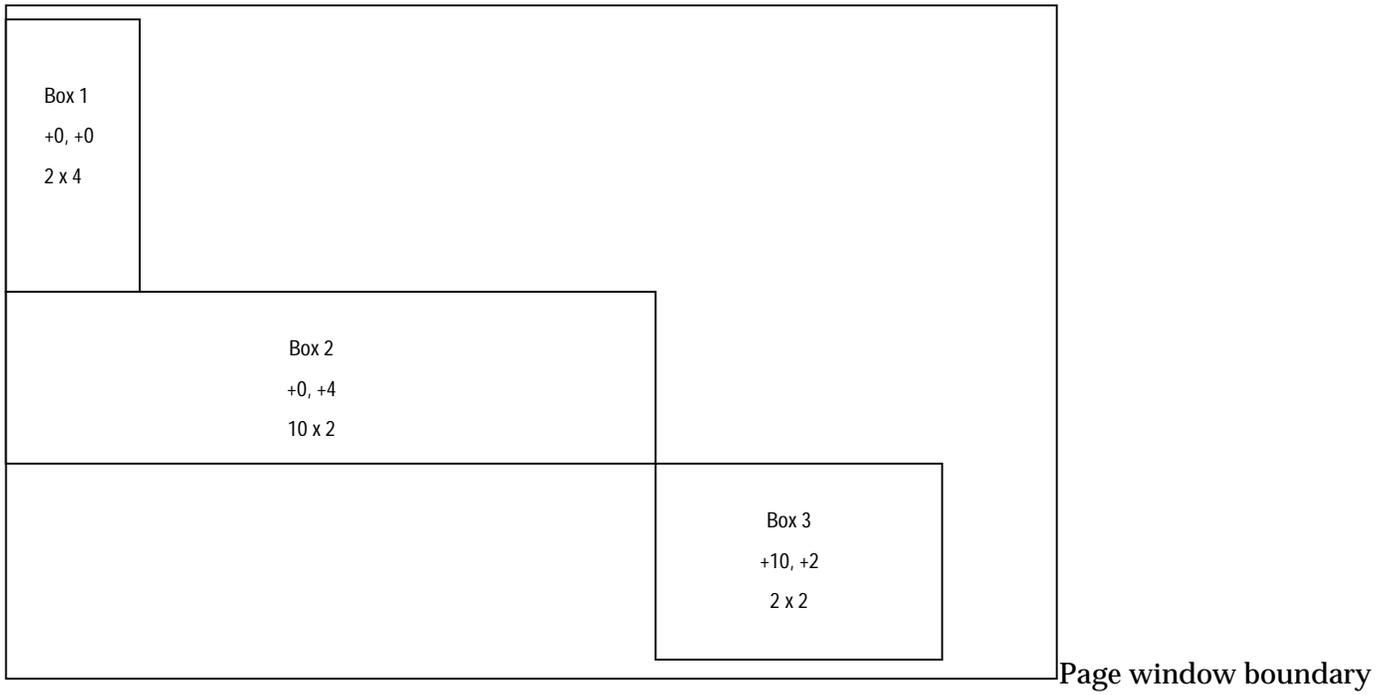


By default, a box is oriented to the page window coordinates. Therefore, create a new page window for every box you want to include in the output. Also, instead of creating boxes for just parts of a window, have the box fill out the entire page window. If you want to have many boxes on a page, do not create a page window for every box. The list of page windows will be intricate.

The following is a simple example of multiple boxes in one page window:

```
/: POSITION WINDOW
/* First Box
/* POSITION XORIGIN `+0' CH YORIGIN `+0' LN      "This is the default
/: SIZE WIDTH `2'CH HEIGHT `4' LN
/: BOX FRAME 4 TW
/* Second Box
/: POSITION XORIGIN `+0' CH YORIGIN `+4' LN
/: SIZE WIDTH `10'CH HEIGHT `2' LN
/: BOX FRAME 4 TW
/* Third Box
/: POSITION XORIGIN `+10' CH YORIGIN `+2' LN
/: SIZE WIDTH `2'CH HEIGHT `2' LN
/: BOX FRAME 4 TW
```

This code will generate three boxes relative to a page window:





## Chapter 6: Third-Party Solutions

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### Overview

This chapter provides an overview of existing third-party solutions, but the list of these solutions is not complete. There may be other companies that offer comparable output solutions. Although company representatives have reviewed this content, it may have changed and cannot be guaranteed.

In general, SAP is not recommending any particular third-party solution. In fact, SAPscript should be used whenever the functionality of SAPscript is sufficient, because it is the only integrated solution.

The content of the following sections is provided by the third-party vendors and does not necessarily represent the opinion of SAP.

## AFP: FormScape

FormScape is an enterprise output management system that lets you centralize form design and control the flow of output within your organization from one server, i.e., the program takes the burden of generating form output off your workstation and places it on one server within your organization. This approach help you reduce network load because you can print your form without sending the entire formatted print job across your network wire.

### FormScape Components

FormScape consists of three components (FormScape Server, FormScape Developer, and FormScape Reprint Manager) that work together to provide your forms management solution. FormScape Server traps data that you want to merge with a form from files on a hard disk or a Windows print queue and processes the data (e.g., re-maps it, changes fonts, configures overlays, and selects printers and papers). After FormScape Server finishes processing your data, it routes the final output to a printer, fax, or other archive device. This component runs as a background process on your Windows NT or Windows 95 machine (on NT, it also runs as a service), and it doesn't require user input once you start it. On a Windows 95 machine the Server can be installed into the startup group for automatic activation or on Windows NT the installation installs FormScape Server as a service inside of control panel.

You use the FormScape Developer component to configure how the FormScape Server component captures and processes print jobs. FormScape Developer refers to each unique set of instructions as a project. When you define a project for FormScape Server, you specify what input it uses, what processes it performs on the data, and how it designs and redirects your output. Typically the Developer module would be used on a single machine and manage one or more Server machines across the network.

FormScape Developer consists of a What-You-See-Is-What-You- Get (WYSIWYG) interface for creating your form layout.

The last component is FormScape Reprint Manager. This component lets you retrieve any document FormScape Server processes. Once you retrieve the document, you can view it online or print it.

FormScape requires about five megabytes. A small footprint will allow you to quickly migrate to a different machine in the event of hardware problems.

### Cross-Platform Features

FormScape is of a platform-independent nature. You can share FormScape files among PCs, UNIX, mainframe, and midrange systems through third-party, interconnectivity products.

For example, a user on a SCO UNIX machine running SCO's Advanced File and Print Server can direct output data for an invoice to an NT print queue. FormScape will intercept the data, format it, and print the invoice, complete with graphical formatting.

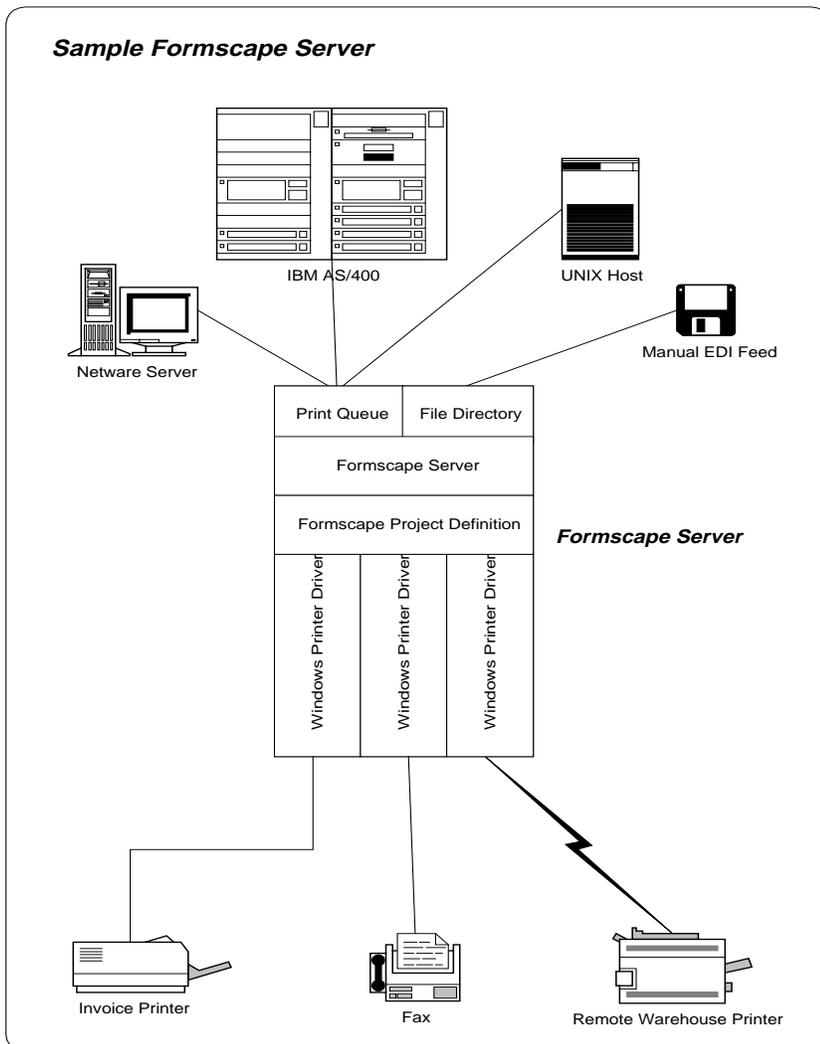
## The Concept

FormScope Server is driven by a project built with the Developer module. SAP R/3 prints to a “printer” that is actually a FormScope print queue. FormScope then massages the print stream based upon the rules in your project and routes the data to its final destination(s). Print can be accommodated by a multitude of host systems; this includes the AS/400, UNIX line-print daemon, and Windows-based workstations.

FormScope is text driven, so when printing from Windows workstations and Servers, it is best to use a “generic text” print driver. FormScope is also able to understand PCL. After FormScope acts on your text/PCL print job, it will apply the filtering rules from your project and send them on to the designated print queue(s).

The Server module works in three distinct phases:

1. Collection -- Collection is the point where the FormScope Server receives the data by either a printer queue or via file queue
2. Identification -- this stage determines which set of defined rules should act upon this particular job
3. Reporting -- after Identification, the specific rules and routing procedures are applied to the data and then sent to the proper printer driver



**Contact:**

AFP Technology

Phone: 919-462-1797

Fax: 919-462-1580

Internet: <http://www.afptech.com>E-mail: [usinfo@afptech.com](mailto:usinfo@afptech.com)**Price:**

- \$4950 per FormScape Server license
- \$2250 for a limited two-printer FormScape Server license
- \$4950 per FormScape Developer license
- \$750 per FormScape Reprint Manager license

**HP: Electronic-Forms Solution****Solution**

The HP E-Forms solution for SAP R/3 allows SAP customers to create custom electronic forms and merge them with data from R/3 applications in the HP LaserJet Printer.

**Features**

- Extensive forms processing capabilities (bar code, rotated text, watermarks)
- Flexible forms output - print data elements, such as totals anywhere on the page
- Capability to support multiple variations of one form using a single layout set

**Ordering Information**

See also [http://www.hp.com/go/sap\\_hp](http://www.hp.com/go/sap_hp)

HP Product Number	Product Name	HP List Price ②
B4177A	HP E-Forms SIMM for HP LaserJet 5 printer	\$ 595 (US) \$ 850 (Canada)
B4178A	HP E-Forms Software Developer Kit ①	\$ 995 (US)

		\$ 1,420 (Canada)
B4179A	HP E-Forms Hard Disk SIMM for LaserJet 5Si	\$ 499 (US)

① This software and documentation product is designed to be used with SAP R/3 3.0F/3.1G

② HP list price of August 20,1997. Pricing is subject of change. Actual reseller pricing may vary.

## System Requirements

HP Product Number	Product Name	
B4177A	HP E-Forms SIMM for HP LaserJet 5 printer	HP LaserJet 5/5N/5M printer. Need to order one for every HP LaserJet 5 printer.
B4178A	HP E-Forms Software Developer Kit ①	The forms design tool requires an IBM PC or compatible with 80486/Pentium processor with a minimum of 8MB of RAM, 20MB of free hard disk space, graphics display monitor, mouse or other pointing device, Microsoft Windows 95 or Windows NT.
B4179A	HP E-Forms Hard Disk SIMM for LaserJet 5si	HP LaserJet 5Si family printer. Need to order one for every HP LaserJet 5Si printer.

## HP: JetCAPS Bar SIMM

The BARSIMM prints virtually any bar code in any size and direction with processing intelligence for checksums and test.

## Solution

A unique feature is the full EAN 128 set A and the EAN 128 autoswitch, able to analyze incoming data and to switch dynamically between sets A, B and C within the same bar code. This feature make the HP LaserJet printer the only standard laser printers that are fully compatible with the new international shipping label standards UCC/EAN-128 defined by ANSI/MH 10.8 and the ENC/MITL (European Normalization Committee/Multi-Industry Transport Label).

## Features

- Data integrity check
- Checksum calculations
- Text value can be automatically printed

- Automatic font selection and scaling

## Ordering Information

Please refer to the HP Printing Solution web page ([http://www.hp.com/go/sap\\_hp](http://www.hp.com/go/sap_hp)) for more detailed order information.

## Supported HP Printer models

LaserJet 4P, 4MP

LaserJet 4, 4M

LaserJet 4Plus, 4Mplus

LaserJet 5, 5M, 5N

LaserJet 4V, 4MV

LaserJet 4Si, 4Si/MX

LaserJet 5Si, 5Si/MX, LaserJet 5Si/Mopier

## SAP R/3 specific information

The R/3 device type HPLJ4 designed for PCL-5 printers supports printing of bar codes using the JetCAPS BarSIMM. HPLJ4 contains the PCL-5 commands necessary to drive the bar code SIMM and is delivered with SAP release 3.0. Customers running SAP releases 2.1/2.2 may install this device type into their systems following R/3 note #8928.

## HP: Flash SIMM

### Solution

The HP Flash SIMM is capable to store forms, letterheads or any other commonly used document actually inside the HP printer.

### Features

- Integration of graphics, company logos, signatures, etc.
- Update Formats Instantly
- Boost Network Efficiency
- Ensure High Security
- Produce Consistent Documents
- Guaranteed Quality
- Effective Management Control

## Printer Support

- HP LaserJet 4/ 4M
- HP LaserJet 4 Plus/4M Plus
- HP LaserJet 4P/ 4MP
- HP LaserJet 4 Si/ 4SI MX
- HP LaserJet 4V/ 4MV
- HP LaserJet 5P/ 5MP
- HP LaserJet 5/ 5N/ 5M
- HP LaserJet 5Si/ 5Si MX
- HP LaserJet 6P/ 6MP

## Management Software Systems Requirements

PC running Windows 3.1 or later, Windows NT, Windows 95 or OS/2.

## Order Information

See also [http://www.hp.com/go/sap\\_hp](http://www.hp.com/go/sap_hp)

HP Product Number	Product Name	HP List Price
C4025A/B/C	1/2/4 MB Flash SIMM LaserJet 4 family manual	\$ 370 (US) / \$ 530 (US) / \$ 875 (US)

## JetForm: Output Pak

The JetForm Output Pak for SAP allows SAP customers to merge SAP data with a JetForm electronic form and print it on existing printers. The JetForm Output Pak for SAP consists of the following products and services:

### JetForm Design

JetForm Design for Microsoft Windows is a WYSIWYG graphical design and development tool for creating electronic replicas of paper forms. Customers can design forms that contain company logos, graphics, and bar codes. The format of data can be customized. Tools such as user-defined grids allow for precise placement of graphics and text. Full font support is provided, as well as shaded or rotated text. Forms developed with JetForm Design are merged with data from SAP applications using JetForm Central.

### JetForm Central

JetForm Central is a server-based application, with which customers can deliver presentation-quality forms output from information stored in the SAP R/3 databases. JetForm Central's data merge functions replace pre-printed forms and unformatted reports. The custom print drivers of JetForm Central guarantee print

speed three to five times faster than standard operating system print drivers. JetForm Central is a multi-platform product that runs under a variety of operating systems.

### JetForm Layout Sets for SAP R/3

JetForm has simplified many of the standard SAP R/3 layout sets so that they generate SAP data in the format that a JetForm form knows how to process. The layout sets included are listed in Table 1.

### JetForm Forms for SAP R/3

JetForm has created form files that work with the JetForm layout sets. These forms can be modified to meet customer-specific needs such as the addition of company logos. These forms are listed in Table 1.

### Maintenance

One year of premium maintenance for the software.

### Consulting

Five days of consulting services for installation of JetForm Central and tailoring of the JetForm forms (adding the customer's logo, changing headers and footers, moving fields, etc.). Travel and living expenses are not included.

SAP Module	Layout Set	Form
SD	RVORDER01	Order Confirmation
SD	RVDELNOTE	Delivery Note
SD	RVINVOICE01	Invoice
SD	SD_PACKING_LIST	Packing List
SD	SD_PICK_SINGLE	Picking List
SD	SD_LOADING_LIST	Loading List
SD	SD_CASH_SALE	Cash Sale
FI	F110_IN_CHECK	International Check
FI	F140_PAY_CONF_01	Payment Notice Diff.
FI	F150_DUNN_01	Dunning Letter
MM	MEDRUCK	Purchase Order
MM	MEDRUCK	Request for Quote

**Table 1: The JetForm Output Pak Forms and Layout Sets**

### How it Works

Using the JetForm Output Pak for SAP R/3, the formatting attributes are removed from the layout set and reside in a form template that is stored on the print server. Formatting attributes on the form can be

moved, changed, added, or deleted using the WYSIWYG graphics design tool, JetForm Design. Page sizes, font types, line spacing, justification, shading, logos, and sizing are all specified within the form itself, which is independent of the layout set.

## The Print Process

The processing steps in printing from R/3 are shown in Figure 1. When a user requests that a form be printed, the SAP R/3 application program executes an ABAP/4 print program to call the SAPscript subsystem and open the appropriate layout set. It then passes the application data extracted from the R/3 database to SAPscript by calling elements defined in the layout set. SAPscript is responsible for formatting the data output stream according to instructions defined in the layout set and specific commands issued by the print program. The changes JetForm has made to the layout sets allow the SAP R/3 application to generate the JetForm data stream that JetForm Central knows how to process. The SAPscript subsystem sends the application data stream to the SAP spool subsystem. The SAP spooler output device type is specified as a plain ASCII printer, which results in a JetForm data stream being passed to the host spool system. The corresponding operating system print queue is configured to send the data stream unmodified to JetForm Central. JetForm Central then performs the data merge function, taking the data from SAP and placing it on the form created with JetForm Design. Form files and graphic files such as company logos are stored on the server so that there is no need to download them for each print job. JetForm Central contains its own print drivers and converts the merged form to the appropriate printer language and sends it to the specified printer which outputs the document as a printed form.

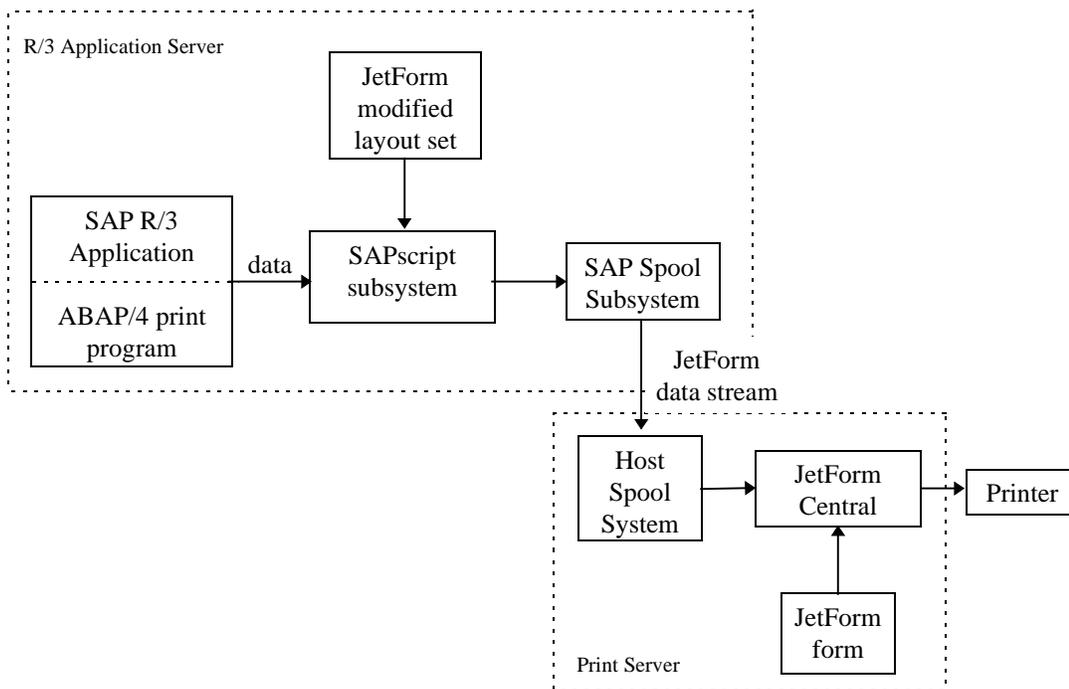


Figure 1: SAP R/3 Print Processing Steps Using JetForm

## Features

Layout sets are language independent, so only one version needs to be maintained. (Language-dependent “boilerplate” is stored within the JetForm form file.) Processing time by the SAPscript composer is saved

because the layout set is simpler. Downloading the forms only once and storing them on the print server reduces the amount of data that is transferred across the network. Network traffic is reduced because the spool system data stream sent across the network is significantly smaller than a standard SAP data stream with embedded formatting information (as small as 1/10<sup>th</sup> of the typical size).

Features:

- Extensive forms processing capabilities (bar codes, rotated text, watermarks, multi-part forms)
- Print data values anywhere on a form, for instance, “amount due” total at the top rather than bottom of the page
- JetForm layout sets are language independent
- JetForm data stream sent across the network contains only data, no formatting
- Forms are stored on the print server
- JetForm Central print drivers are 3-5 times faster than operating system print drivers

## About JetForm

JetForm Corporation is the global leader in electronic forms automation worldwide, with major offices in the United States, the UK, France, Germany, Sweden, and the Pacific Rim.

For more information about JetForm, please call 1-800-538-3676 or 1-613-230-3676, or visit their website at <http://www.jetform.com>.

# Chapter 7: Printout-Related Customizing of the Applications

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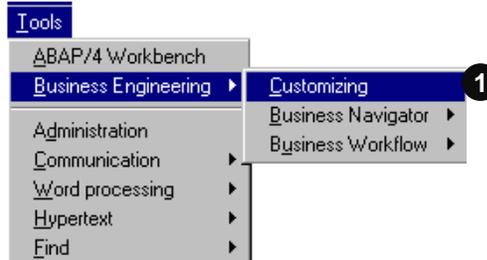
## Overview

Some application customizing is needed to use a non-standard layout set and to achieve certain printing results that cannot be achieved through modifying the layout set. In this chapter we will cover both types of customizing entries.

## Accessing the IMG

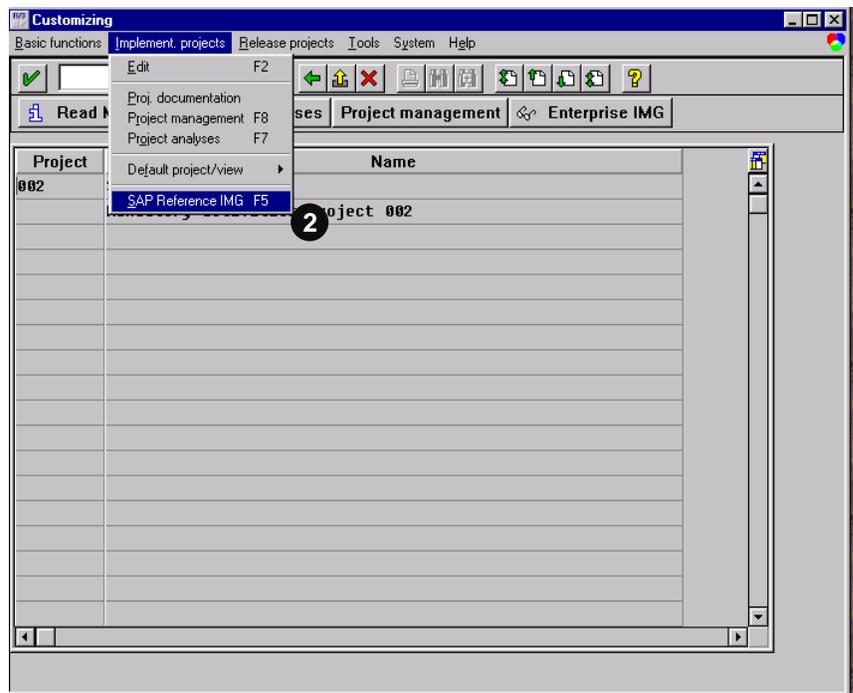
Since customizing is done through the IMG, we will use this procedure as the starting point for subsequent sections. All of the IMG-related procedures begin with *Access the IMG*, and if you do not know how to access this screen, use the following steps:

1. Choose *Tools* → *Business Engineering* → *Customizing*.

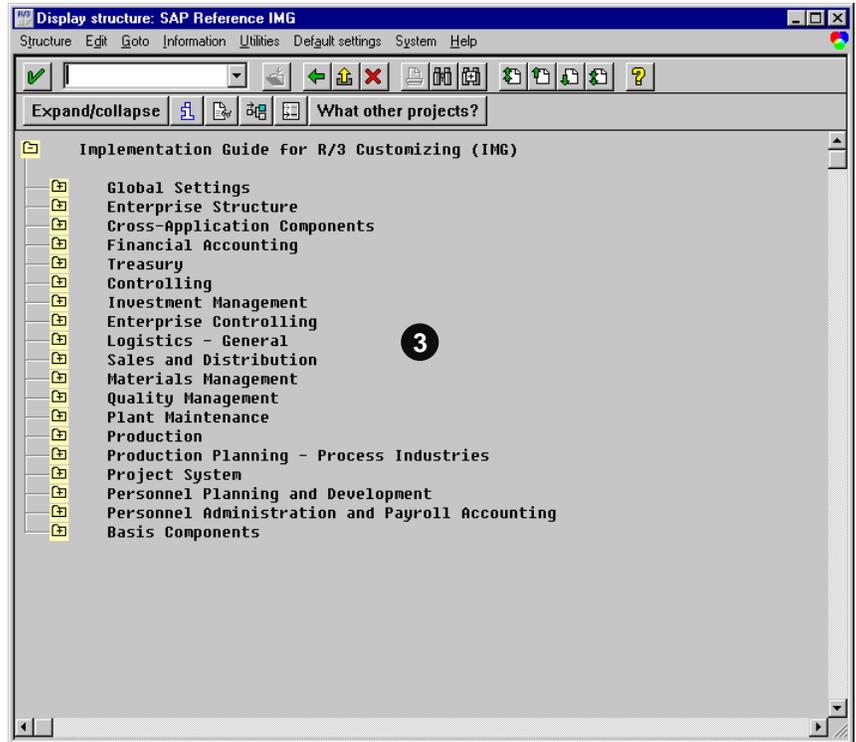


This screen displays all of the customizing projects defined in your system.

2. Choose a customizing project by double clicking the project name, or choose *Implement. projects* → *SAP Reference IMG*.



3. This *Display structure* screen shows the *SAP Reference IMG*. Depending on your customizing projects, you may see fewer topics on your screen.



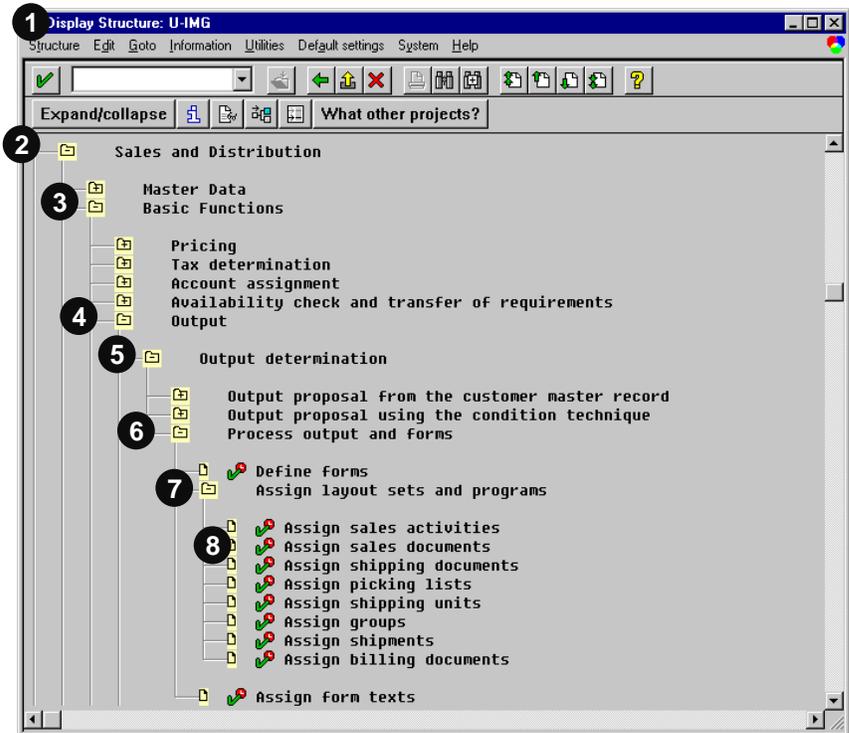
A plus sign (+) at the beginning of an IMG line indicates that the topic can be expanded to reveal additional layers. Expand the IMG layers by placing the cursor on the “+” and clicking the left mouse button once. A minus sign (-) at the beginning of a line indicates that the topic can be condensed to reveal the previous layer. We will be using the term *Expand* in later examples. When you see “Expand *Production*,” then *Production* is expandable by positioning the cursor on the “+” and clicking the left mouse button once.

## Customizing in SD

### Assigning Print Programs and Layout Sets to Documents

If you copy a layout set to modify it, then inform the system that you want to use this new set for printing. The following procedure shows how to access the relevant customizing screens. You may also specify another print program to collect data and printing. However, the print program does not have to be changed.

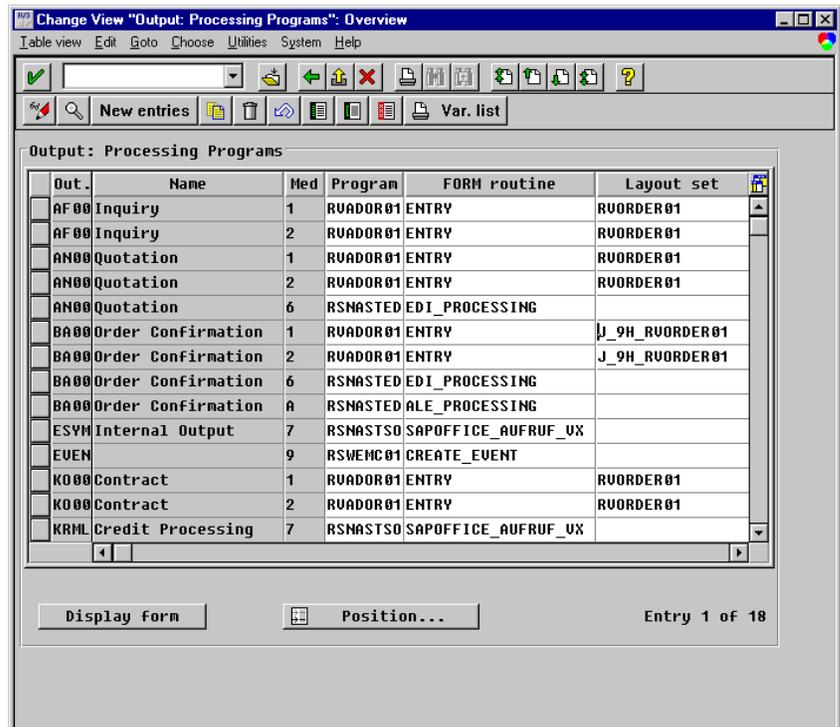
1. Access the IMG (see page 2).
2. Expand *Sales and Distribution*.
3. Expand *Basic Functions*.
4. Expand *Output*.
5. Expand *Output determination*.
6. Expand *Process output and forms*.
7. Expand *Assign forms and programs*.
8. Execute *Assign sales documents*.



In this guide, we considered only the sales order confirmation output. However, the standard layout set, *RVORDER01*, or the layout set, *J\_9H\_RVORDER01* (on the disk), can be used for all the other output types on this screen.

In the third column of this screen, notice the output medium (“1” for printer and “2” for fax).

You can specify the print program and a layout set for each output type and medium combination.



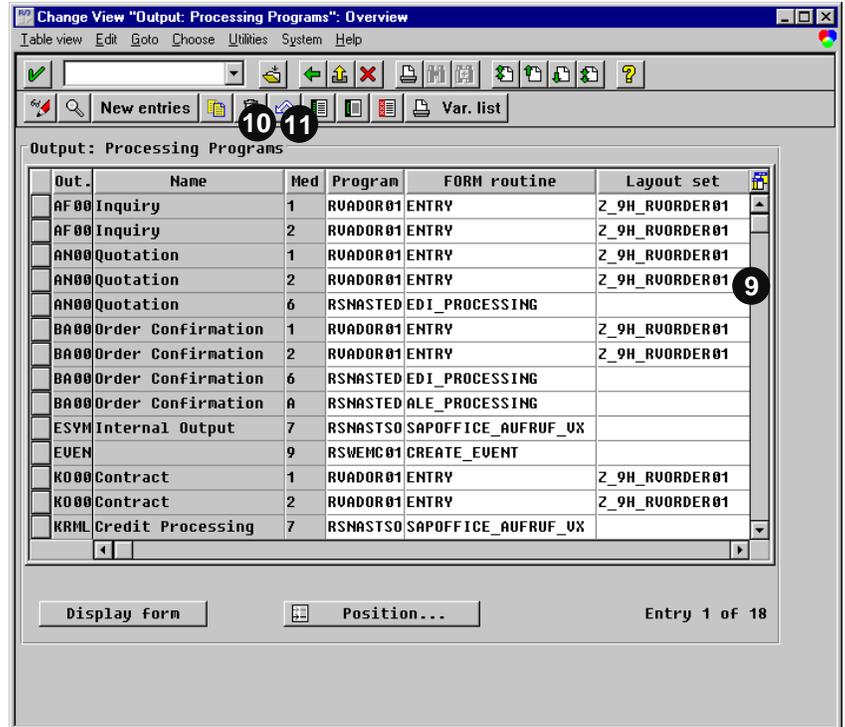
- Enter your layout set name (Z\_9H\_RVORDER01) in each line of output type and medium you want to use.

To output inquiry, quotation, sales order confirmation, contract, and scheduling agreement confirmation on the printer or the fax and use Z\_9H\_RVORDER01, the screen should look like this example.

- Click Save.

If you use the *Correction and Transport System (CTS)*, specify a transport request after saving.

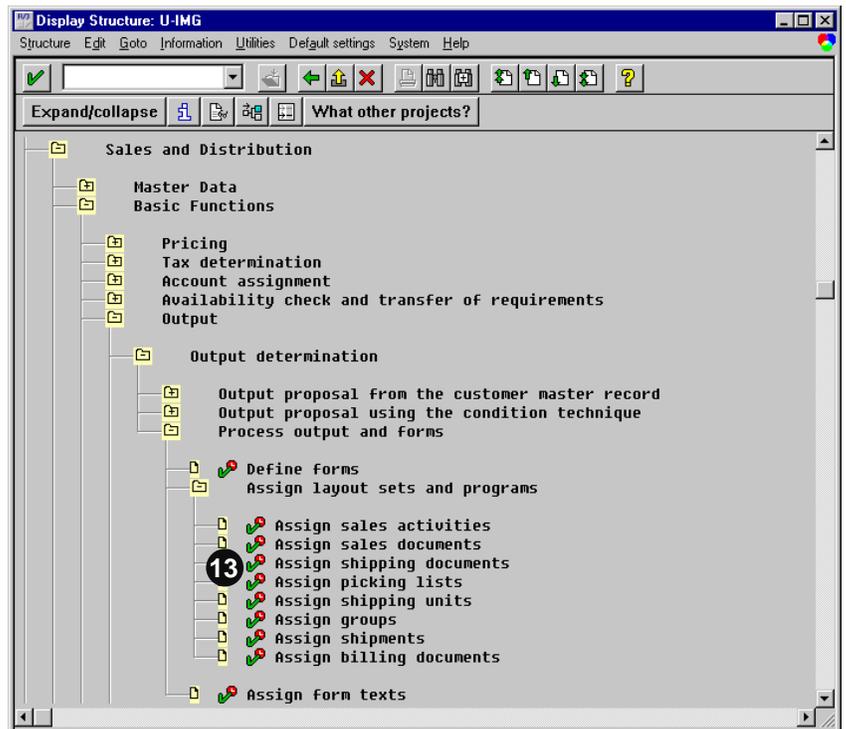
- Click Back.



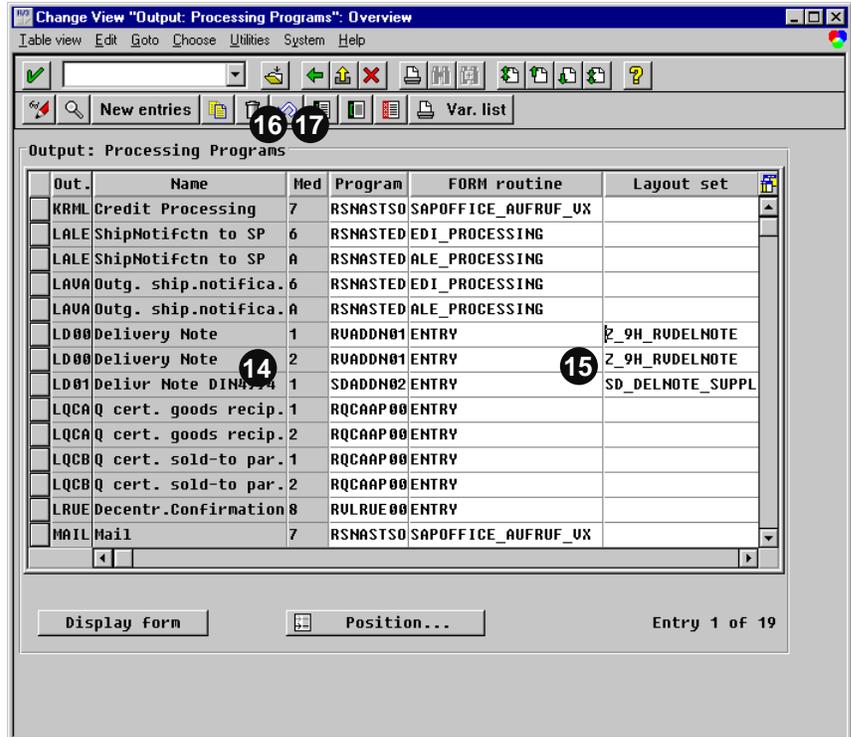
- You will now be back in the IMG, the screen from step 8.

Now we will perform similar customizing for the other SD documents, such as a packing list, a picking list, and an invoice.

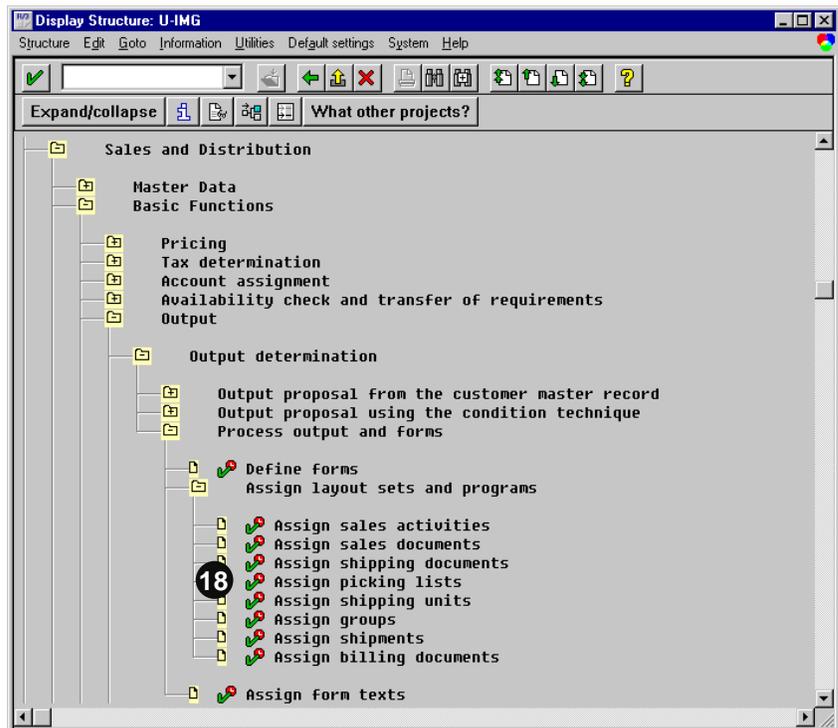
- For the packing list, execute *Assign shipping documents*.



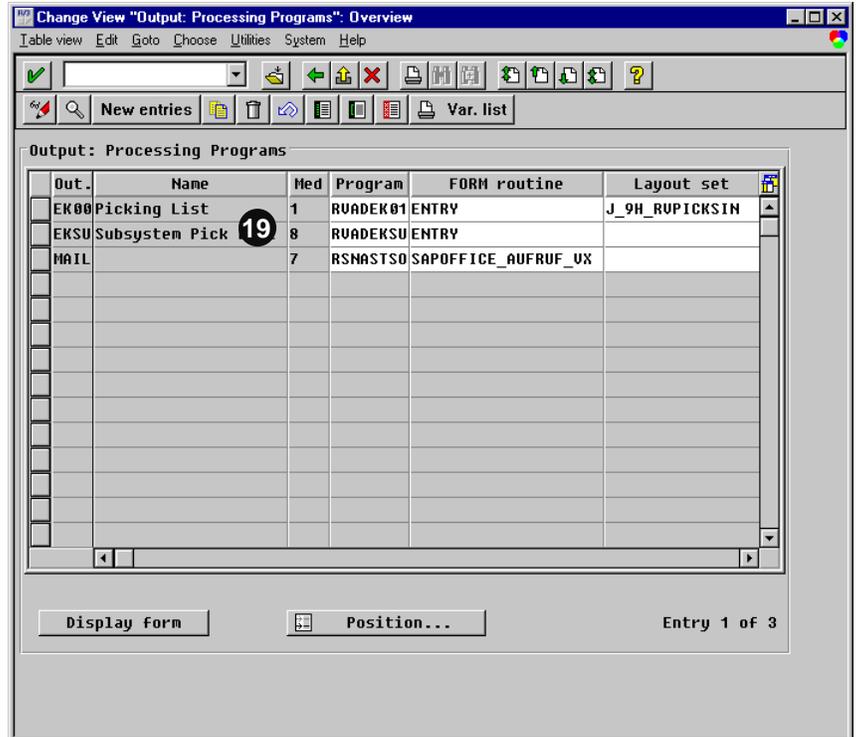
14. The only relevant output type here is *LD00 (Delivery note)*, which is the SAP lingo for *packing list*.
15. To use the printer and the fax as print media, enter your layout set name in the two lines of this output type. (In our example, the layout set is *Z\_9H\_RUDELNOTE*.)
16. Click *Save*.  
 If you use the CTS, specify a transport request after saving.
17. Click *Back* to return to the screen in step 8.



18. Execute *Assign picking lists*.



19. The only relevant output type here is *EK00 (Picking list)*, which uses the printer as an output medium.

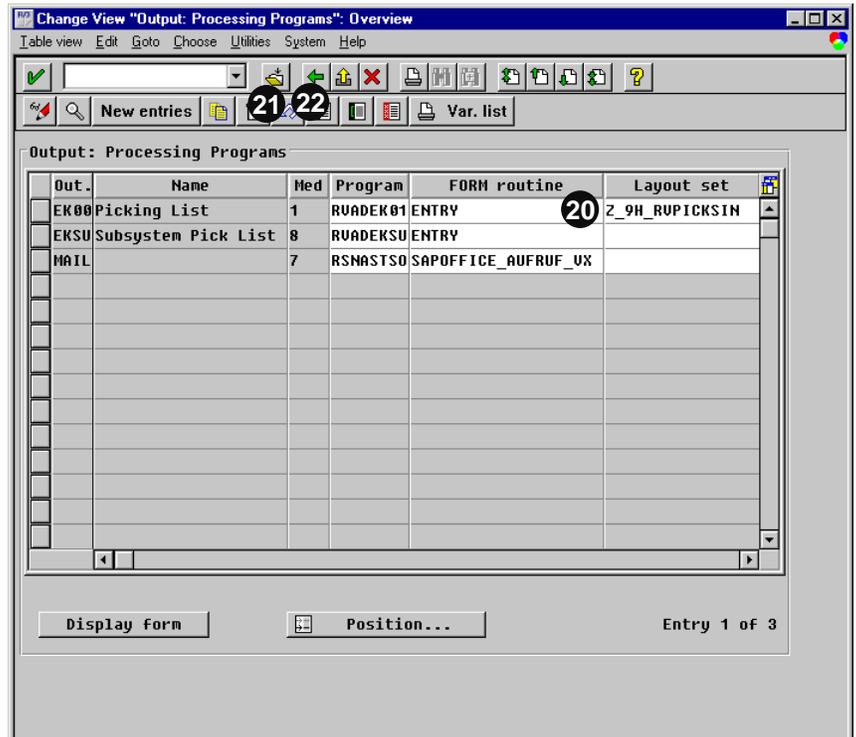


20. Enter your layout set name in the line of this output type. In our example, the layout set is *Z\_9H\_RVPICKSIN*.

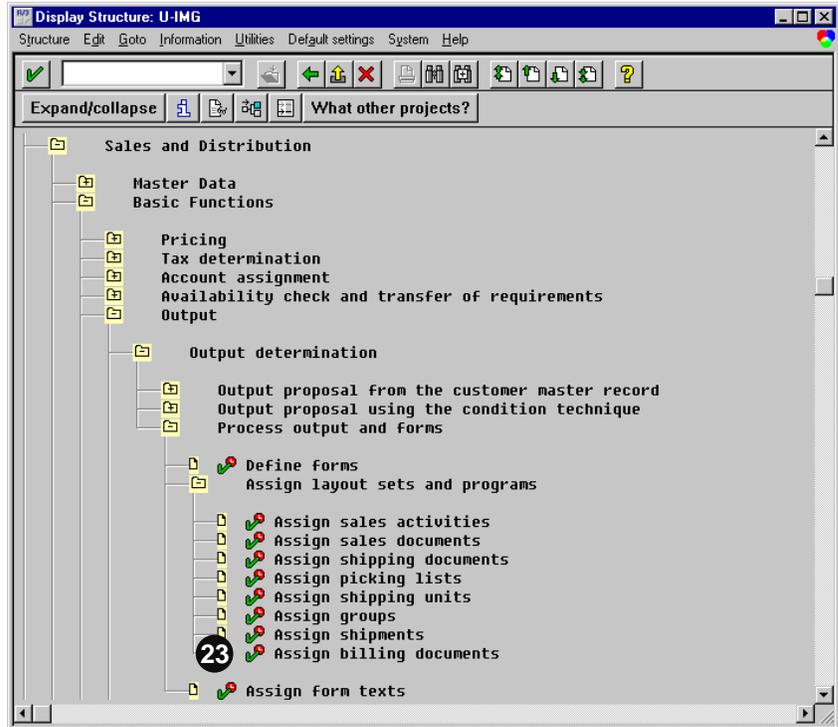
21. Click *Save*.

If you use the CTS, specify a transport request after saving.

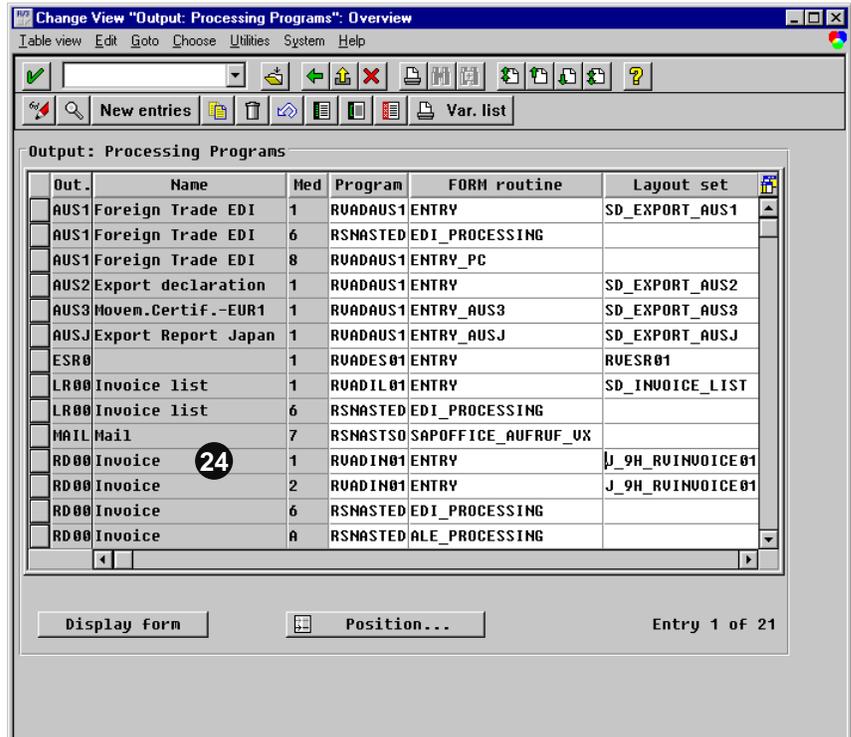
22. Click *Back* to return to the screen in step 8.



23. Execute *Assign customer billing documents*.



24. The only relevant output type here is *RD00 (Invoice)*.

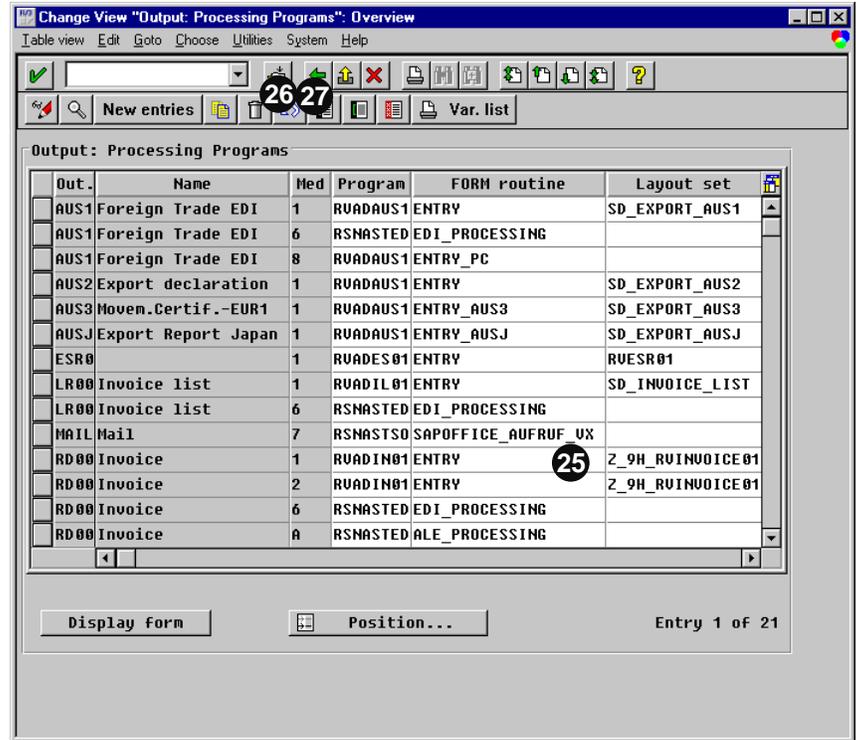


25. To use printer and fax as print media, enter your layout set name in the two corresponding lines of this output type. (In our example, the layout set is Z\_9H\_RVINVOICE.)

26. Click *Save*.

If you use the CTS, specify a transport request after saving.

27. Click *Back* to return to the screen in step 8.

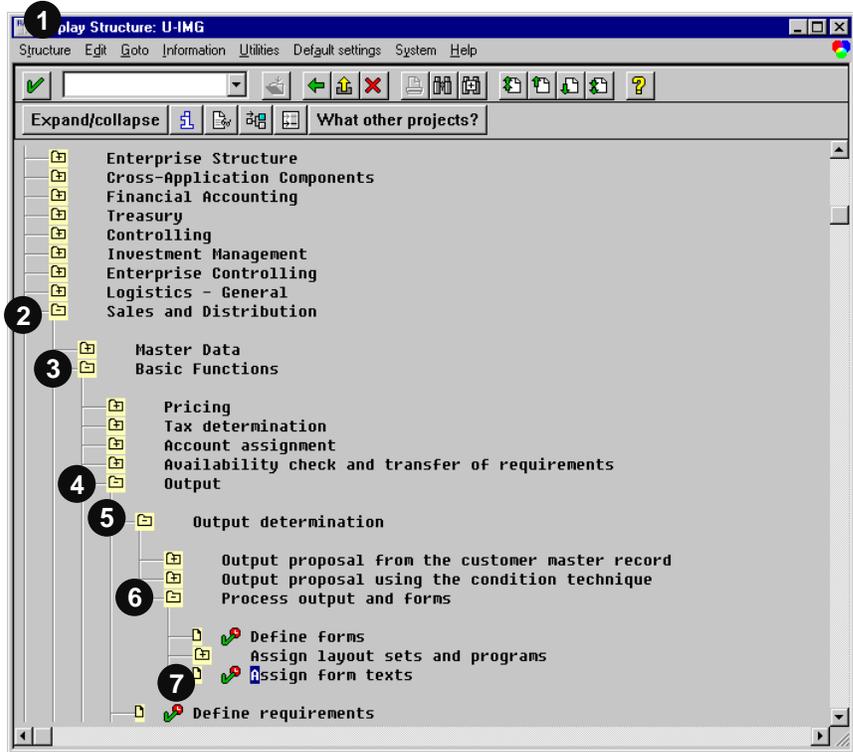


28. Click *Back* twice to completely exit, or remain at this level and continue from step 7 in the next section.

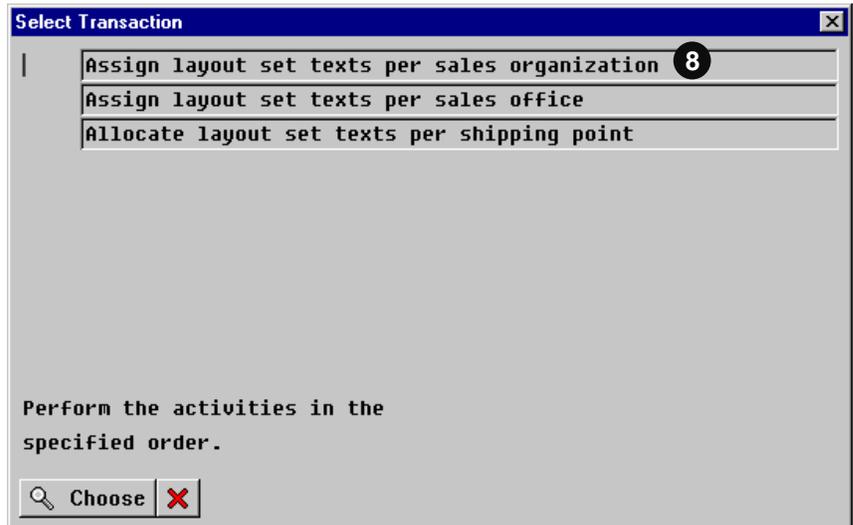
## Specifying Standard Texts for Sender, Header and Footer

Standard texts can be specified to appear on output. The layout sets are configured to print standard texts as the header, the footer, and the mailing address. This address is printed above the greeting, and the header and footer are printed at the top and bottom, respectively. Sales order confirmation, packing list, and invoice use different standard texts for each sales organization, and the picking list uses different standard texts for each shipping point. Not specifying standard text or if the specified standard texts do not exist, does not result in an error.

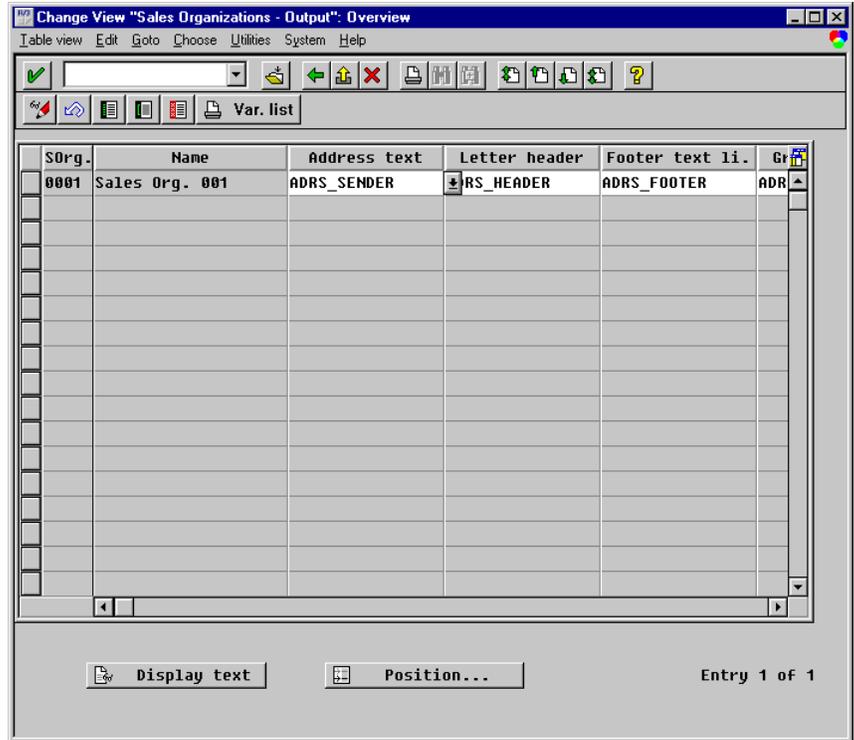
1. Access the IMG (see page 2).
2. Expand *Sales and Distribution*.
3. Expand *Basic Functions*.
4. Expand *Output*.
5. Expand *Output determination*.
6. Expand *Process output and forms*.
7. Execute *Assign form texts*.



8. To specify the standard texts for sales order confirmation, packing list, and invoice, double click *Assign layout set texts per sales organization*.



Your screen displays the sales organizations that you have defined.



Enter the standard text names for:

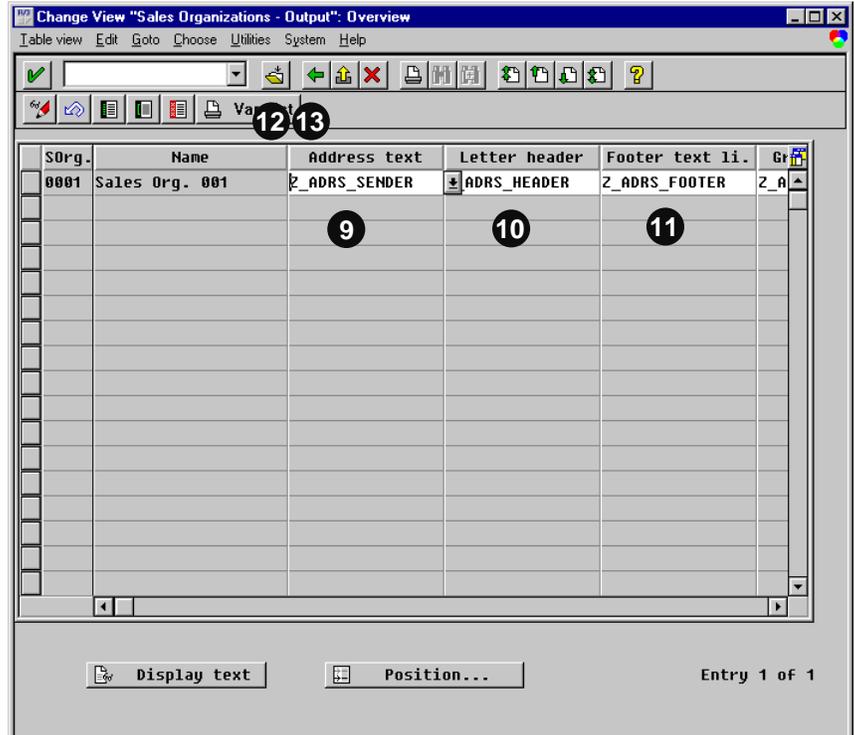
9. The *Address text*
10. The *Letter header*
11. The *Footer text*

Make sure the text names start with "Y" or "Z."

12. Click *Save*.

If you use the CTS, specify a transport request after saving.

13. Click *Back* to return to the pop-up window in step 8.





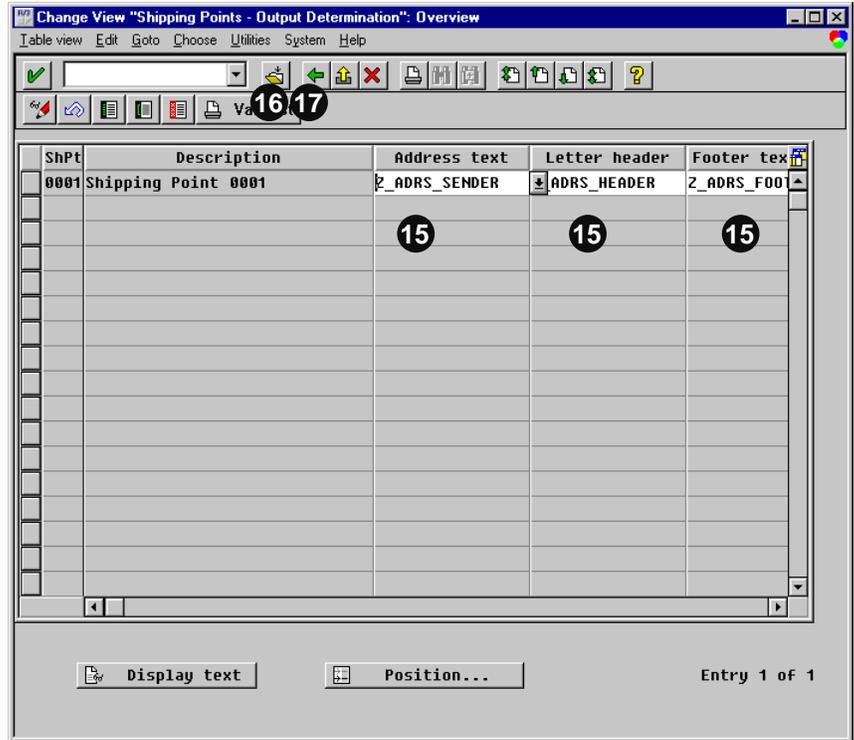
15. Enter the standard text names for the *Address text* (sending address), *Letter header*, and *Footer text*.

Make sure the text names start with "Y" or "Z."

16. Click *Save*.

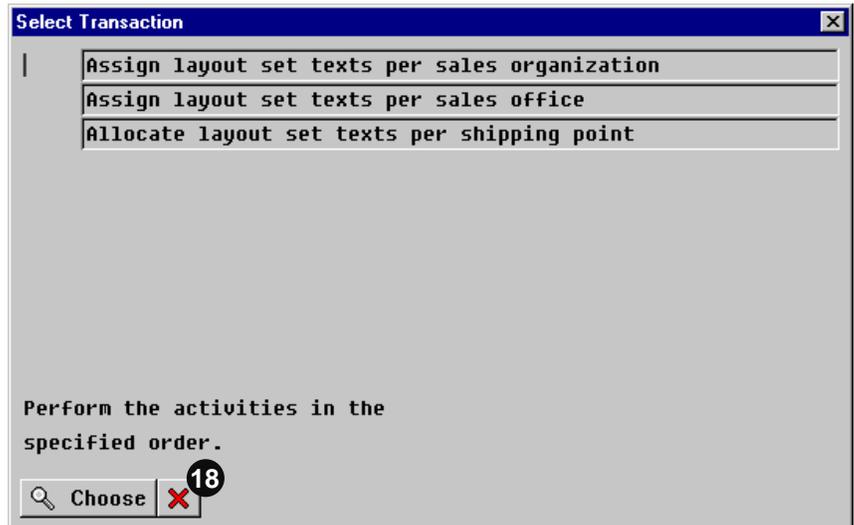
If you use the CTS, specify a transport request after saving.

17. Click *Back*.



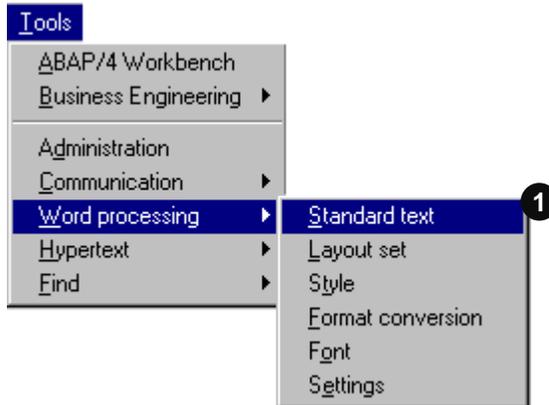
18. Click *Cancel*.

19. Click *Back* twice to completely exit.



To define the above-mentioned standard texts:

1. Choose *Tools* → *Word processing* → *Standard text*.

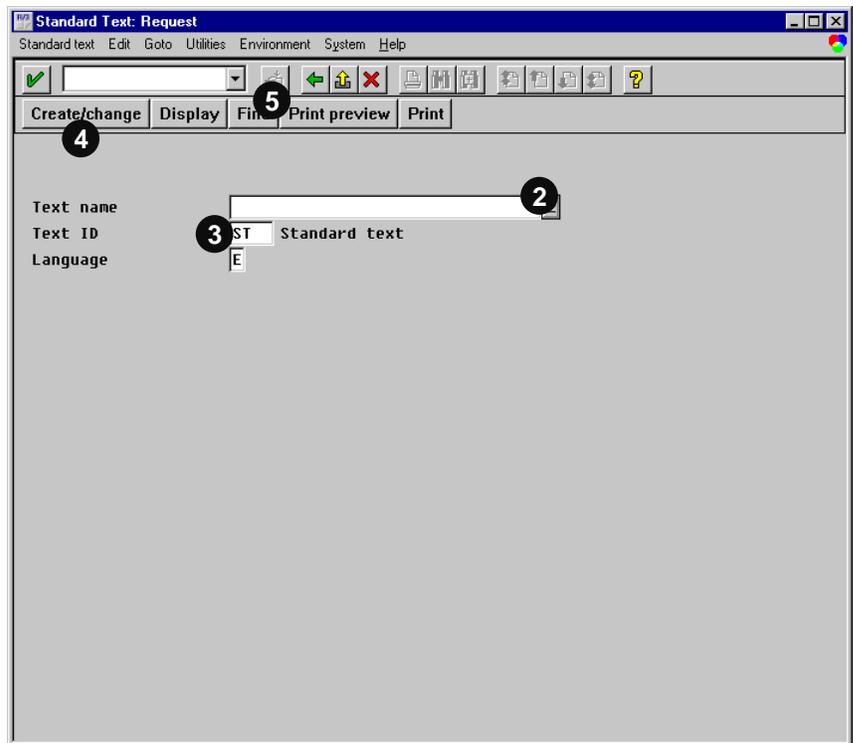


2. Enter the text name you have specified in the customizing steps above.
3. Enter *ADRS* in *Text ID*.



In general, the text id is not important. Since *ADRS* is used in the layout sets, it is also easier to use this id here. If you use another text id, you need to change the corresponding command line in the text editor of the layout sets.

4. Click *Create/change*.



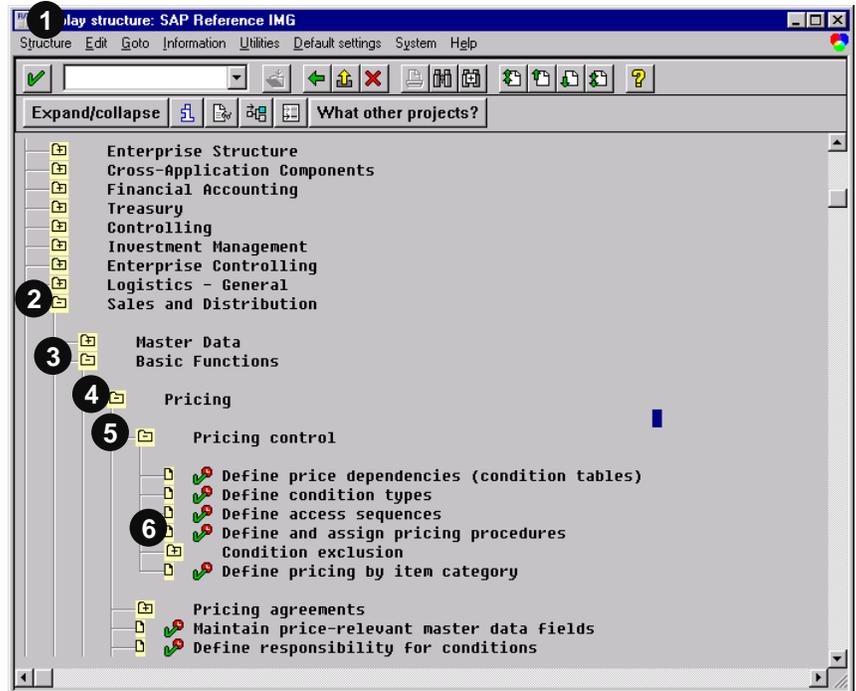
5. After editing, save your changes.

## Marking Pricing Conditions to Appear on Output

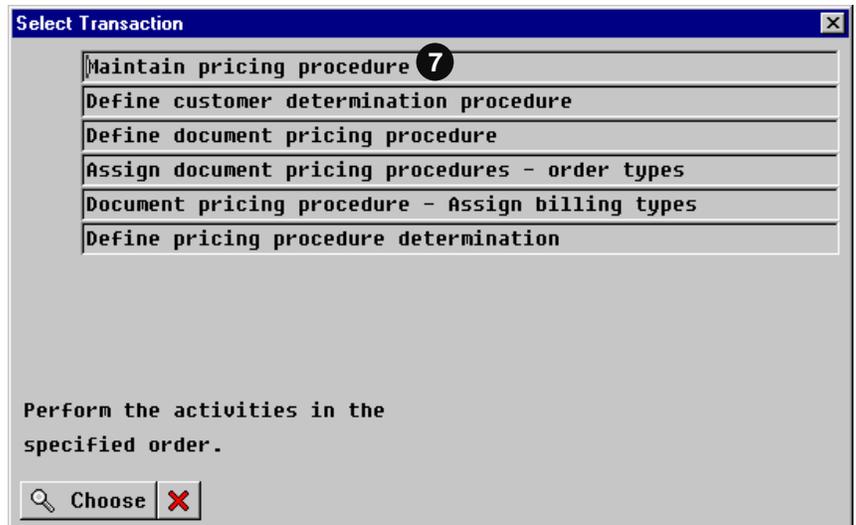
Pricing conditions can be marked to appear on output, either on the item level or as a sum. In customizing, you can specify whether pricing conditions should appear:

- After each item
- As a sum at the end of all the items
- Or not appear on the output

1. Access IMG (see page 2).
2. Expand *Sales and Distribution*.
3. Expand *Basic Functions*.
4. Expand *Pricing*.
5. Expand *Pricing control*.
6. Execute *Define and assign pricing procedures*.

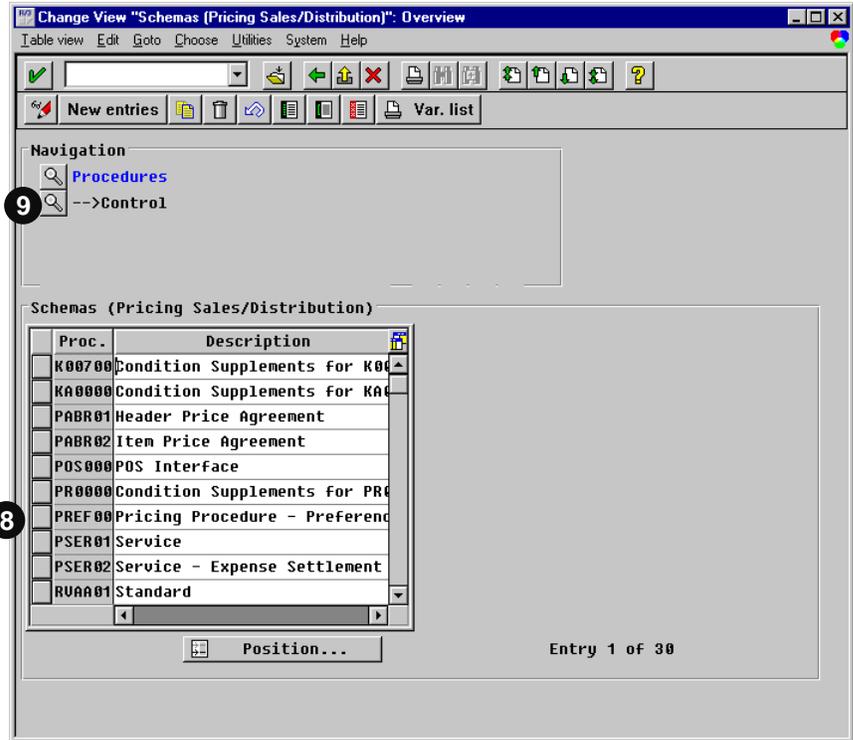


7. Double click *Maintain pricing procedure*.



Repeat the following steps for every relevant pricing procedure:

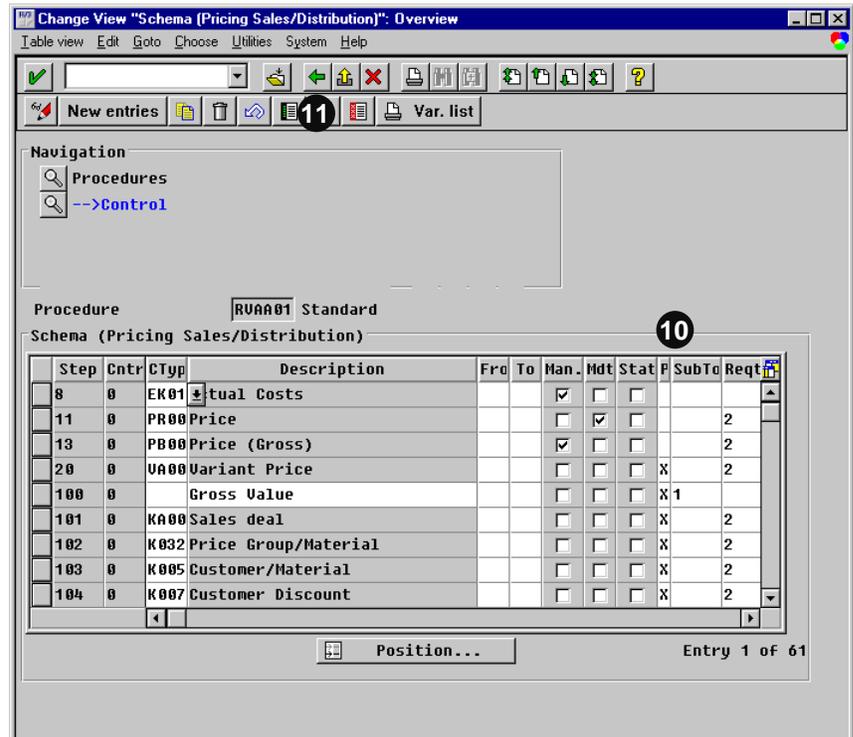
8. Click the box in front of a pricing procedure.
9. Click the icon in front of *Control*.



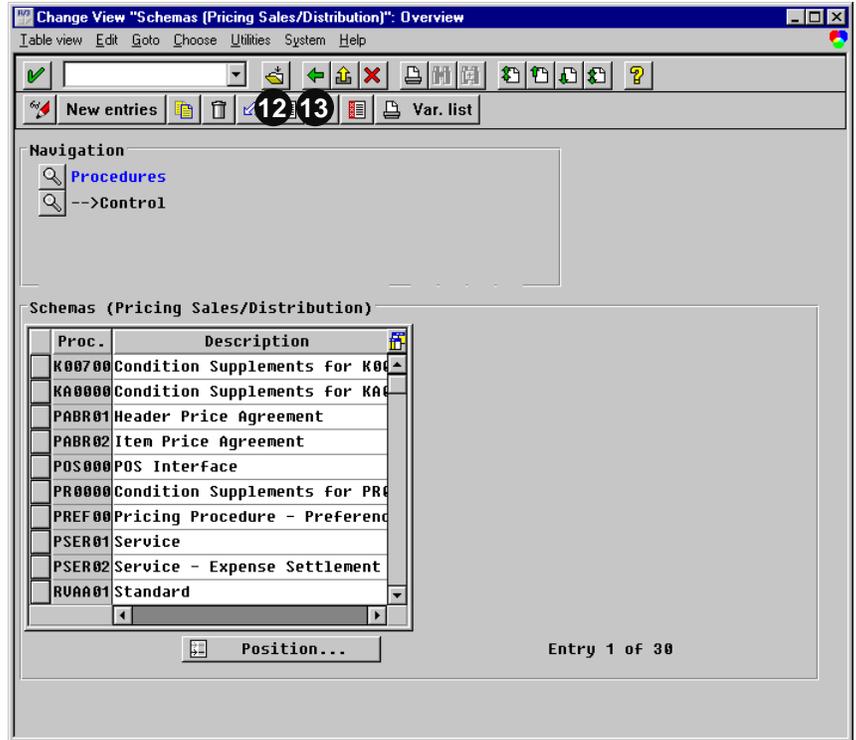
10. In *Print line* column, press the space bar if:

- The pricing condition does not appear on the output.
- Enter x if it appears for every item.
- Enter s if it appears as a sum.

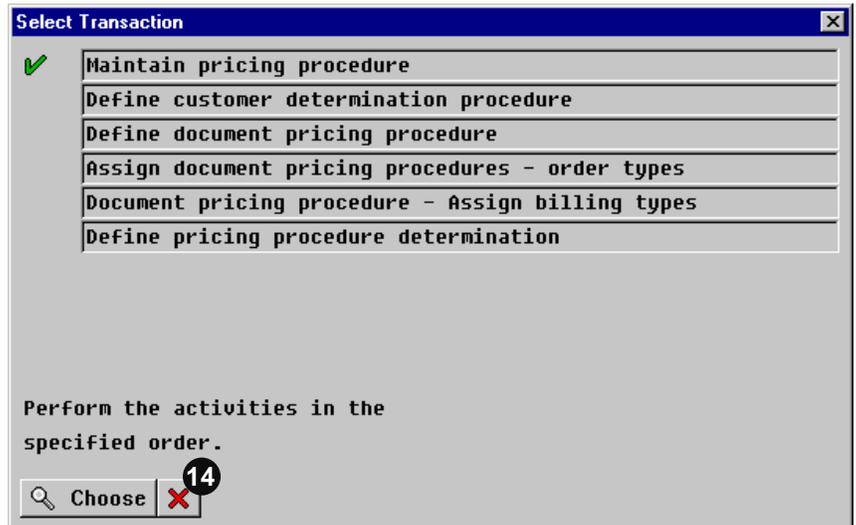
11. Click *Back* to return to step 8 for every relevant pricing procedure.



- 12. When you are ready, click **Save**.
- 13. Click **Back**.



- 14. Click **Cancel**.
- 15. Click **Back** twice to return to the initial screen.

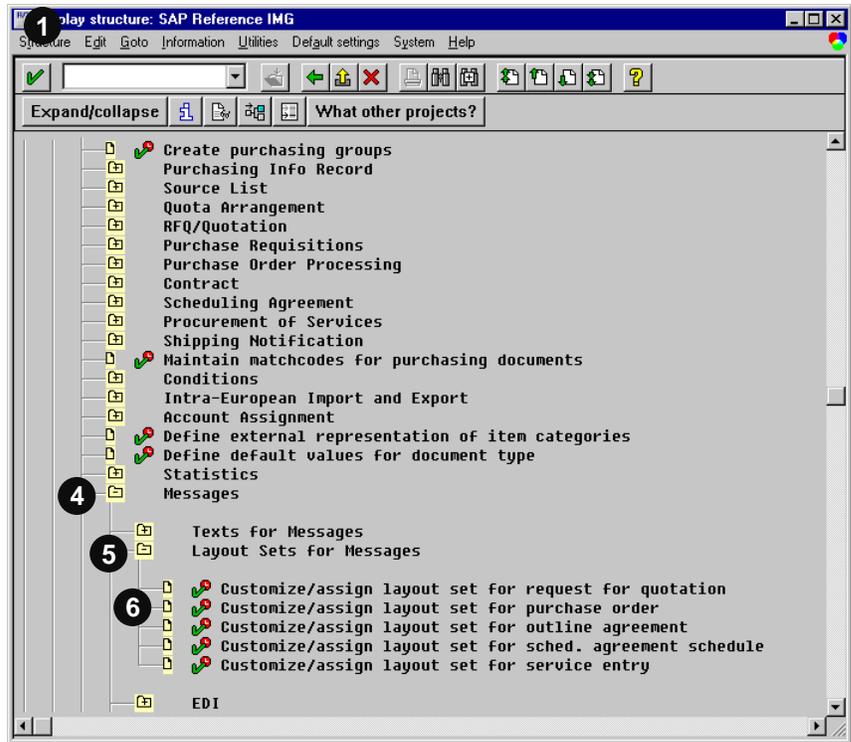


## Customizing in MM

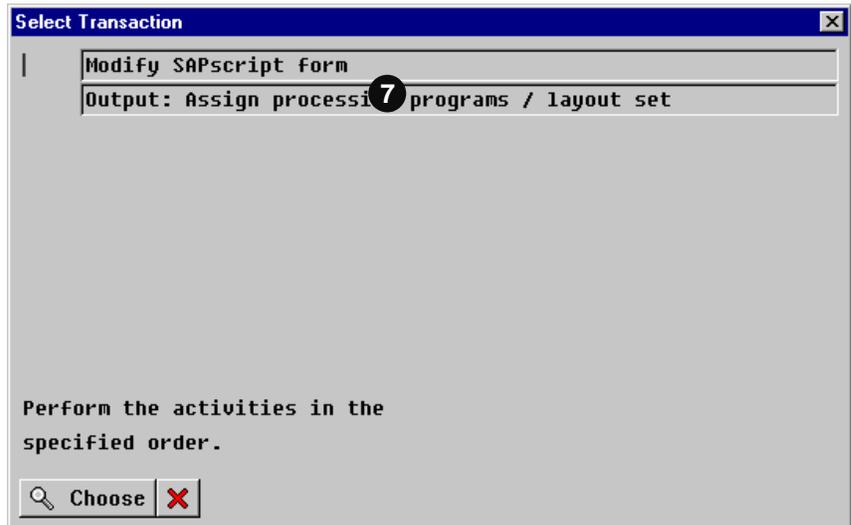
### Assigning Print Programs and Layout Sets to Documents

If you have copied a layout set to modify it, inform the system that you want to use this new layout set for printing. The following procedure shows how to access the relevant customizing screens. A print program to collect data and printing can also be specified. However, the print program does not need to be changed.

1. Access IMG (see page 2).
2. Expand *Materials Management*.
3. Expand *Purchasing*.
4. Expand *Messages*.
5. Expand *Layout sets for messages*.
6. Execute *Customize/assign layout set for purchase order*.

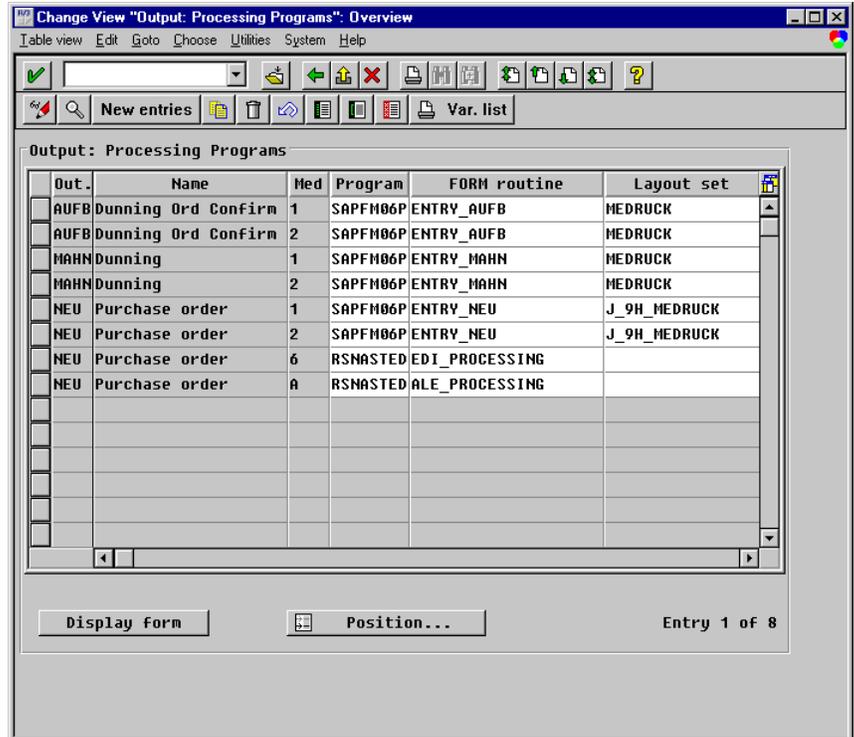


7. Double click *Output: Assign processing programs / layout set*.



*NEU* is the output type for the purchase order.

In the third column of this screen, notice the output medium (“1” for printer and “2” for fax).



Specify the print program and a layout set for each combination of output type and medium.

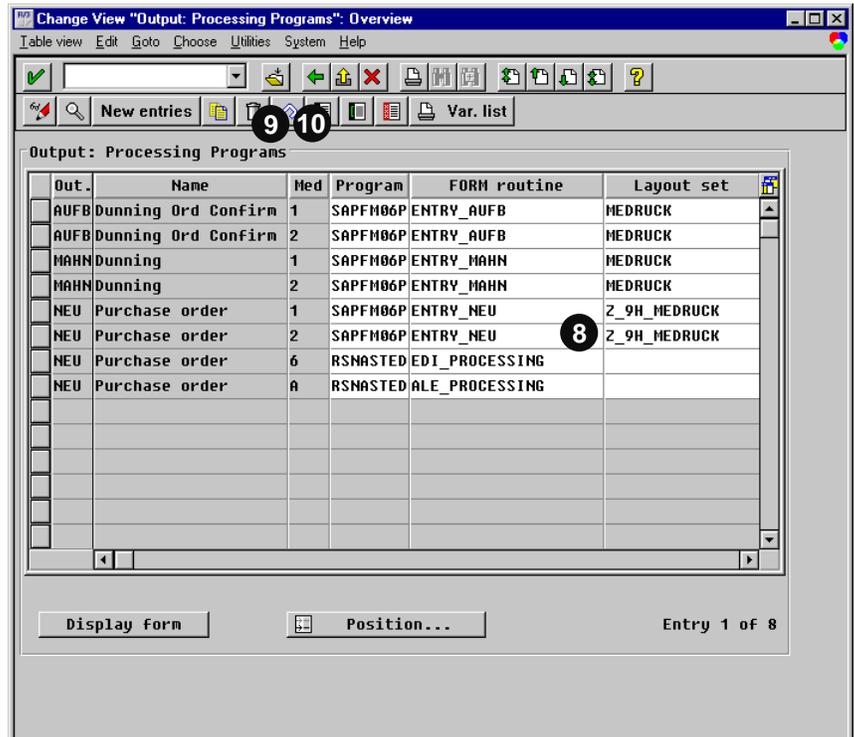
- Enter the layout set name in every line of output type and medium you want to use.

In this case, we want to send output to both printer and fax and use the layout set **Z\_9H\_MEDRUCK**.

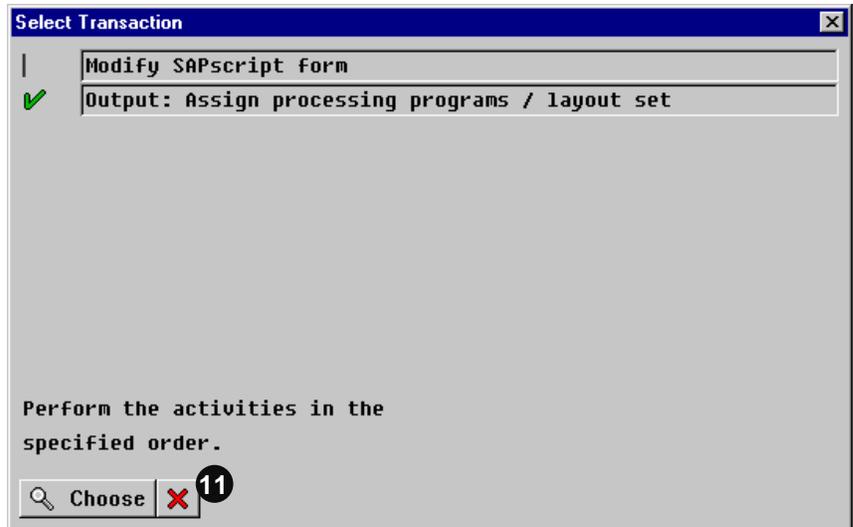
- Click *Save*.

If you use the CTS, specify a transport request after saving.

- Click *Back*.



11. Click *Cancel*.



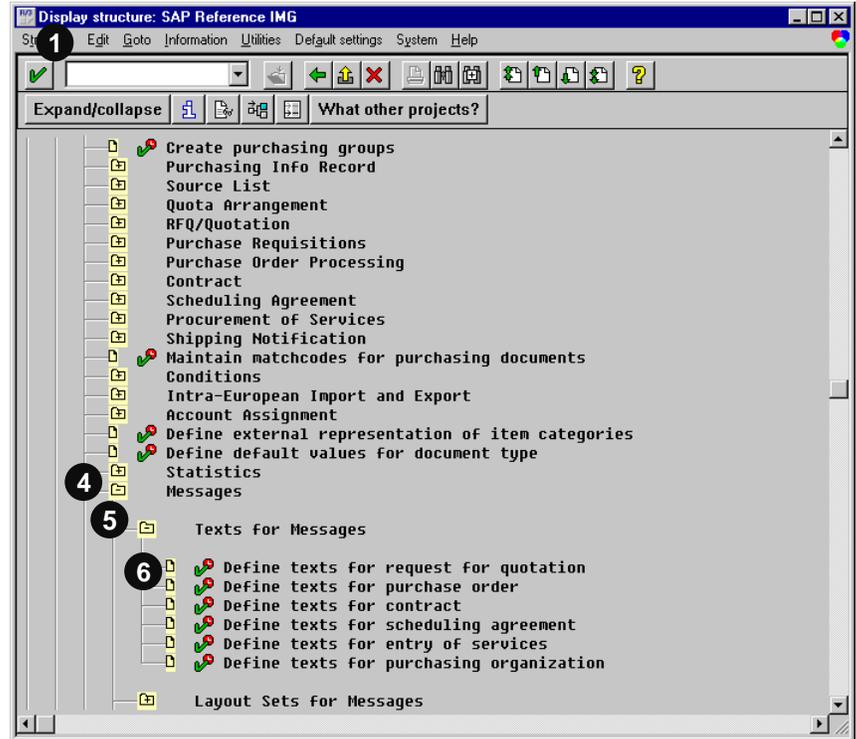
You will now be back on the IMG.

12. Either click *Back* twice to completely exit, or remain at this level and proceed with step 5 in the next section.

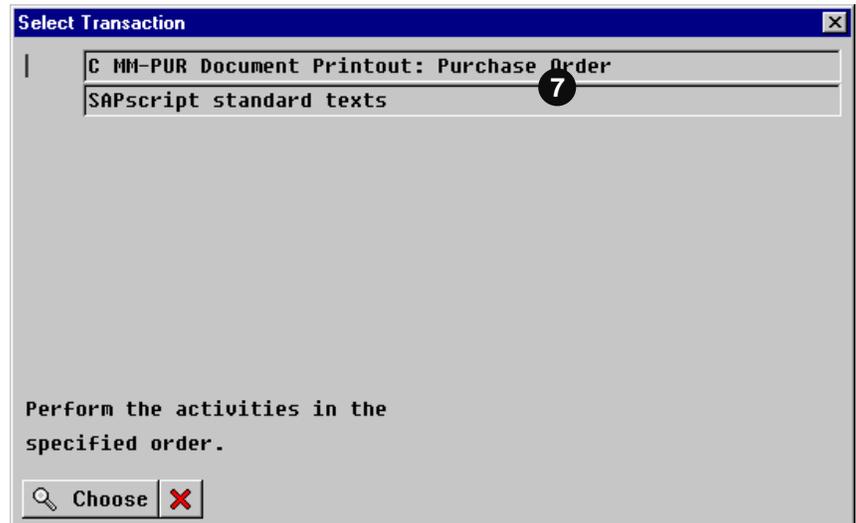
## Marking Document Texts for Printing

The text from the purchase order and the header and item levels can be selected to appear on the output. Also, if the material is included in the item, all material texts can be selected to appear on the output at item level of the purchase order.

1. Access the IMG (see page 2).
2. Expand *Materials Management*.
3. Expand *Purchasing*.
4. Expand *Messages*.
5. Expand *Texts for Messages*.
6. Execute *Define texts for purchase order*.

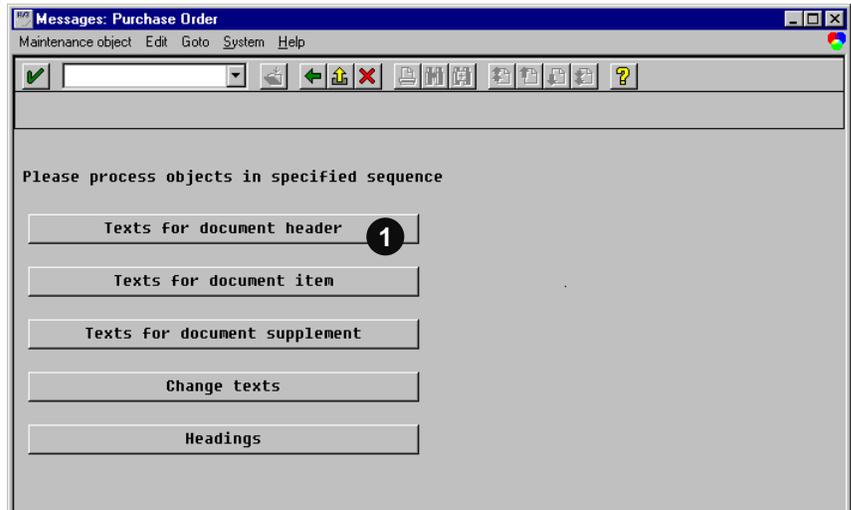


7. Double click *C MM-PUR Document Printout: Purchase Order*.



## Header texts

1. Click *Texts for document header*.



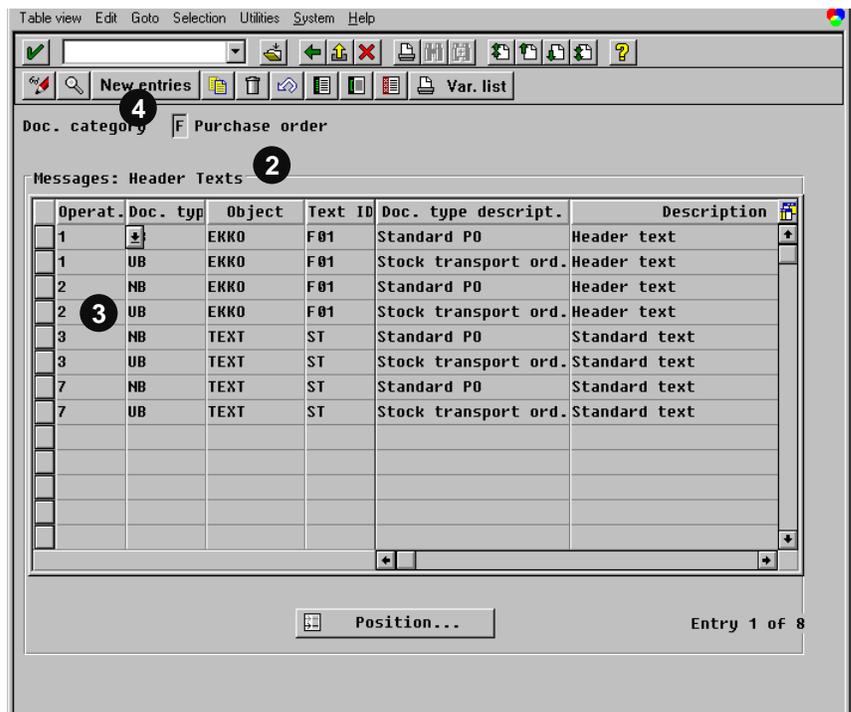
2. On the *Change View "Messages: Header Texts": Overview* screen, notice the texts selected to appear in the output. These texts are a subset of all the texts defined on header level of the purchase order.

3. The most important lines are those with document type *NB* (*Standard PO*). The important operations are "1" (*New purchase order*) and "2" (*Changed purchase order*).

Texts printed on the header level can come from either the purchase order header or can be standard texts. If they come from the purchase order header, then *EKKO* is *object* and the header text id is *id*. If they are standard texts, then *TEXT* is *object* and *ST* is *id*.

If you want more texts on the output, insert new lines.

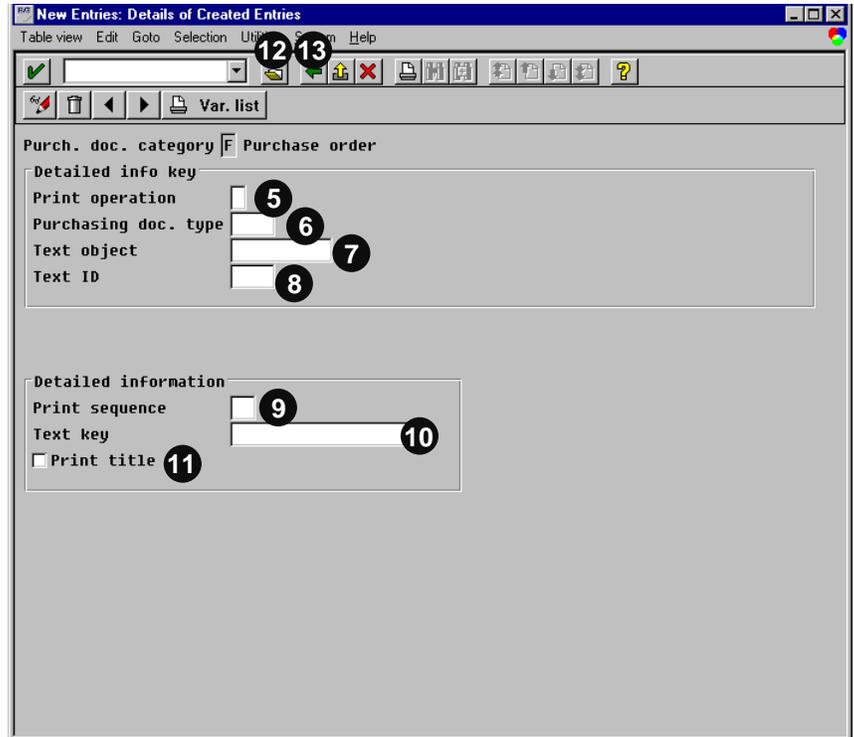
4. Click *New entries*.





All of the fields have to be filled out without clicking *Enter* in between. After all the information has been entered, click *Save* without clicking *Enter*.

If you accidentally click *Enter*, click *Back* to exit from the procedure, without saving, and begin again. If you click *Enter* and save your entries, you will get empty customizing entries.



5. Enter a print operation (1 for *New purchase order* and 2 for *Changed purchase order*).

6. Enter **NB** (*Standard purchase order*) in the purchasing document type field.
7. Enter **EXKO** (*Purchasing document header texts*) in the text object field or **TEXT** for a standard text.
8. Enter **F02** (*Header note*) in the text id field or **ST** for a standard text.
9. After *Print sequence*, enter the number that determines the sequence in which the text is printed.



The numbers you enter may not be used more than once; but you are not required to enter numbers in sequence. For example, the following sequences are valid:

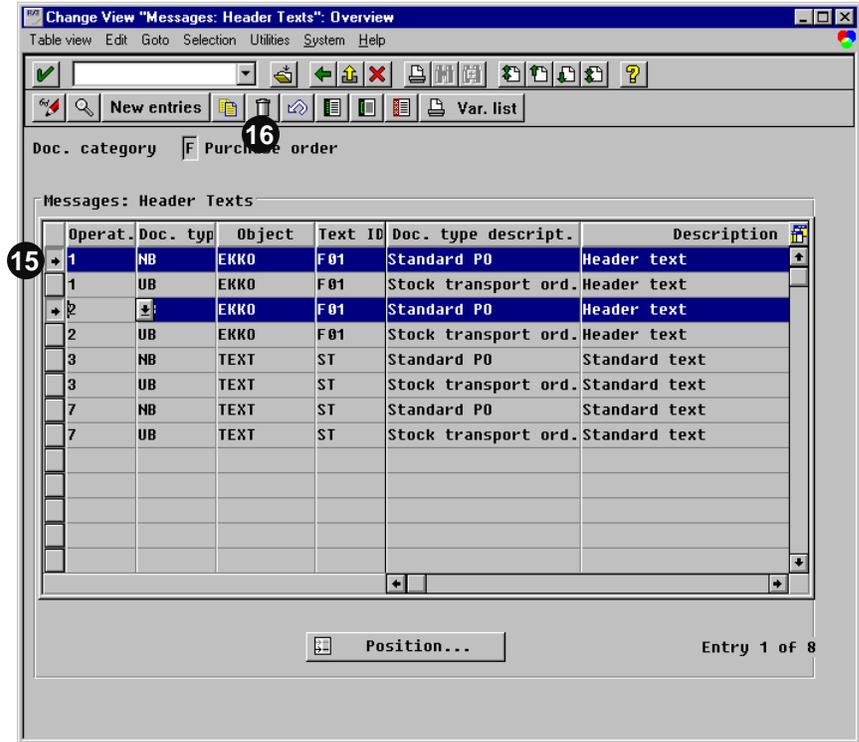
- “1, 3, 4, 6, and 8”
- “1, 2, 3, 4, and 5”
- “3, 5, 6, and 9”

10. To print standard texts compared to texts, from the purchase order header, enter the standard text name in *Text key*.
11. Select *Print title* to print the text title on the text. Otherwise the text is printed without a title.
12. Click *Save*. If you use the CTS, specify a transport request after saving.
13. Click *Back*.
14. Repeat steps 4-13 for every new text that you want on the output.

If you do not want some texts to be output, delete them.

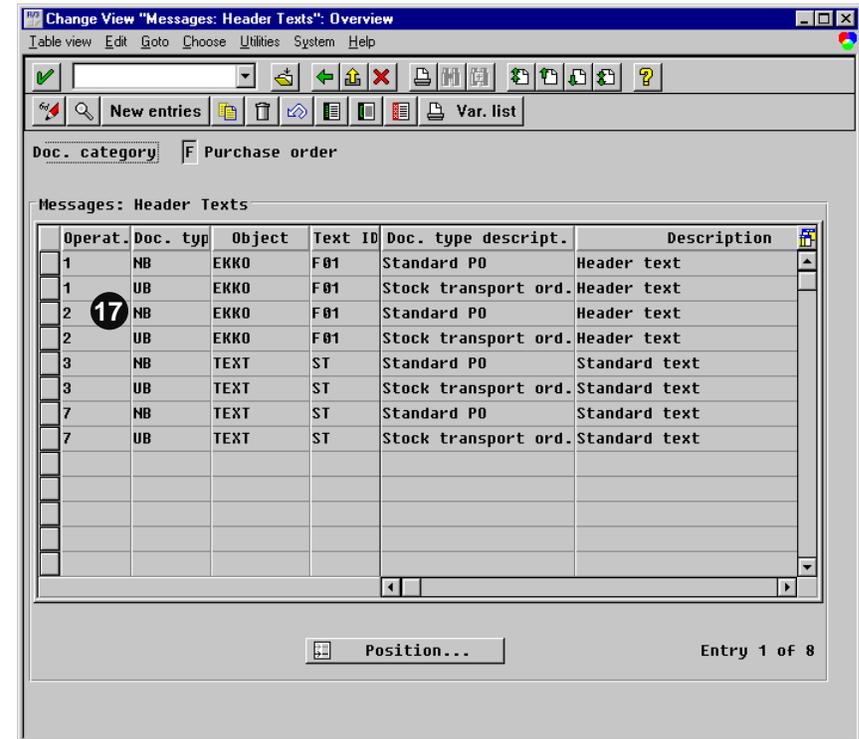
15. Select the box in the beginning of those lines that you want to delete.

16. Click *Delete*.



To double check the print sequence, perform the following steps for all texts:

17. Double click the texts you want on the output.



18. In *Print sequence* field, enter the number that determines the sequence in which the text is printed.



The numbers you enter may not be used more than once; but you are not required to enter numbers in sequence. For example, the following sequences are valid:

- “1, 3, 4, 6, and 8”
- “1, 2, 3, 4, and 5”
- “3, 5, 6, and 9”

19. To print standard texts compared to texts from the purchase order header, enter the standard text name in *Text key*.

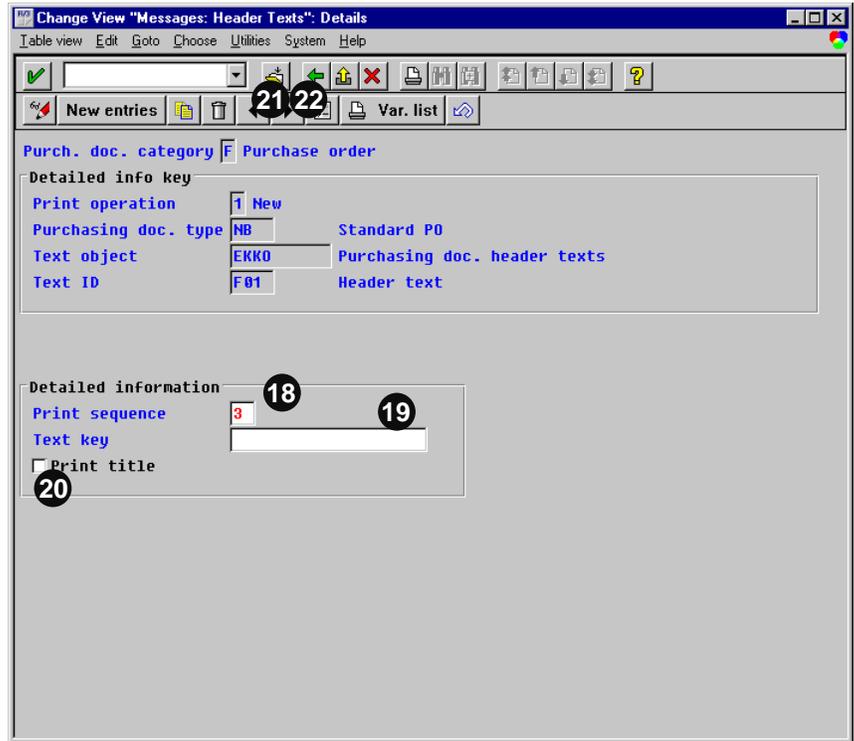
20. Select *Print title* to print the text title at the top of the text. Otherwise the text is printed without title.

21. Click *Save*. If you use the CTS, specify a transport request after saving.

22. Click *Back* to return to the text overview screen.

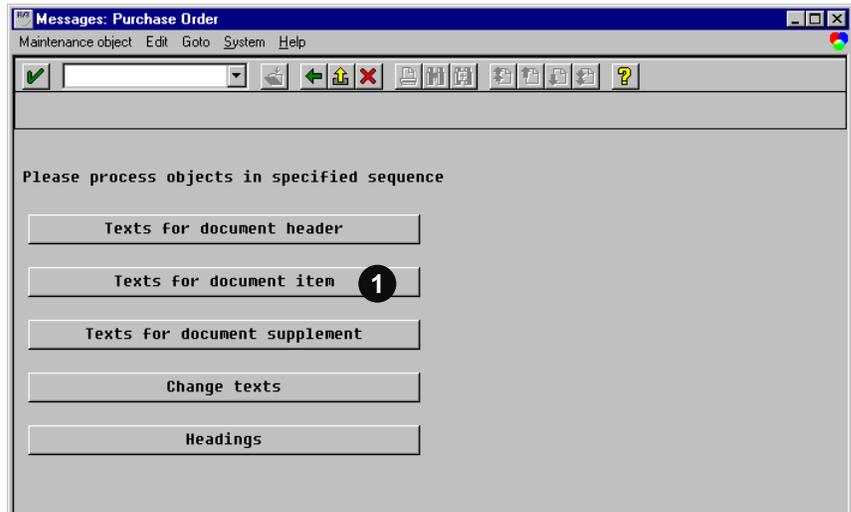
23. Repeat steps 17 to 22 for every text that should appear on the output.

24. When you are finished, click *Back*.



## Item texts

1. Click *Texts for document item*.



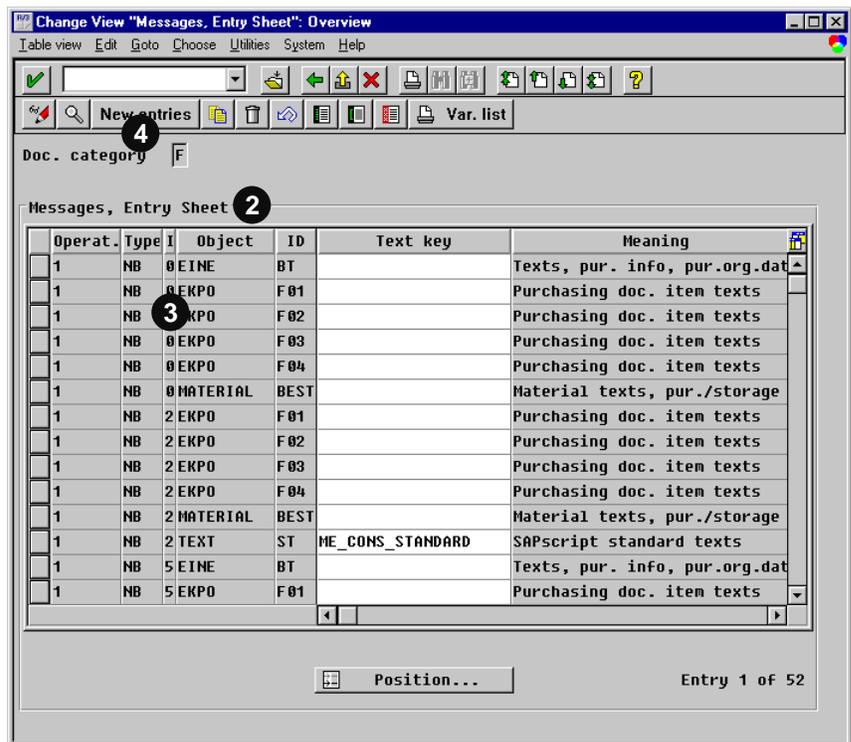
2. On the *Change View "Messages, Entry Sheet": Overview* screen, notice the texts you selected to appear on the output. The texts are a subset of all the texts defined at the item level of the purchase order.

3. The most important lines are those with *NB (Standard PO)*.

Important operations are "1" (*New purchase order*) and "2" (*Changed purchase order*). The output texts can be distinguished by item categories in the "I" column.

Possible item categories could be:

- Standard items
- Consignment items
- Subcontracting items
- Items for unknown material
- Third-party items
- Text items
- Stock transfer items
- Material group items
- Service items



Texts printed on item level can come from a various number of objects. You can find all these objects by clicking *F4* in the *Object* column. The most important objects are:

- *EKPO* (purchase order items)
- *MATERIAL* (materials)
- *EINE* (purchasing info records)
- *VBBP* (sales order items in case of a third-party item)
- *ASMD* (service master record)
- *ESLL* (services)
- *TEXT* (standard texts)

If you want more texts on the output, insert new lines.

4. Click *New entries*.



Enter information in the fields without clicking *Enter*. When you finish, click *Save*, without clicking *Enter*.

If you accidentally click *Enter*, click *Back* and exit out of the procedure without saving and begin again. If you click *Enter* and save your entries, you will get empty customizing entries.

5. Enter a print operation (1 for *New purchase order* and 2 for *Changed purchase order*).
6. Enter the purchasing document type, (*NB* for *Standard purchase order*).

7. Enter the item category (nothing for the standard purchase order or 2 in *consignment*, etc.).
8. Enter for example *EKPO* (*Purchasing document item texts*) in the text object field or *TEXT* for a standard text.
9. Enter for example *F03* (*Material PO text*) in the text id field or *ST* for a standard text.
10. To print standard texts compared to all the other texts, enter the standard text name in *Text key*.
11. After *Sequence*, enter the number that determines the sequence in which the text is printed. The *Printing priority* field can remain empty.



*Sequence* and *Printing priority* determine the sequence in which the texts should be printed. It is a two-level sequence. That is, if the input after *Sequence* is equal for two texts, the input after *Printing priority* determines the sequence.

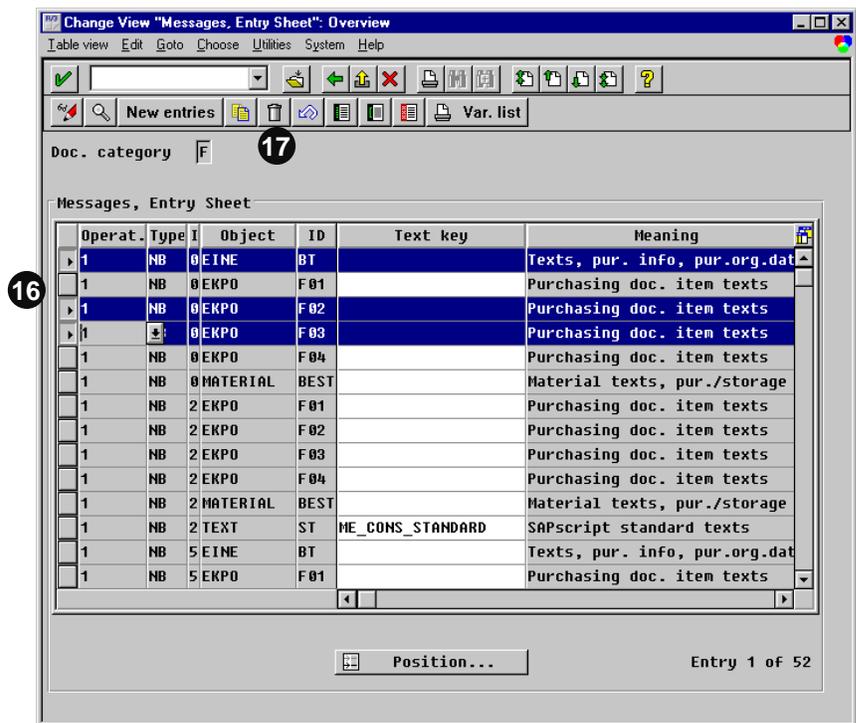
However, *Sequence* can take up to 99 numbers, which is sufficient to determine a unique sequence of text. Therefore, we recommend that you leave *Printing priority* empty.

You must enter an increasing sequence in *Sequence* and *Printing priority*, but you may skip numbers. For example, both “1, 2, 3, 4, and 5” and “3, 5, 6, and 9” are valid sequences.

12. Select *Print title* to print the text title at the top of the text. Otherwise the text is printed without a title.
13. Click *Save*. If you use the CTS, specify a transport request after saving.
14. Click *Back*.
15. Repeat steps 4 through 14 for every new text that you want on the output.

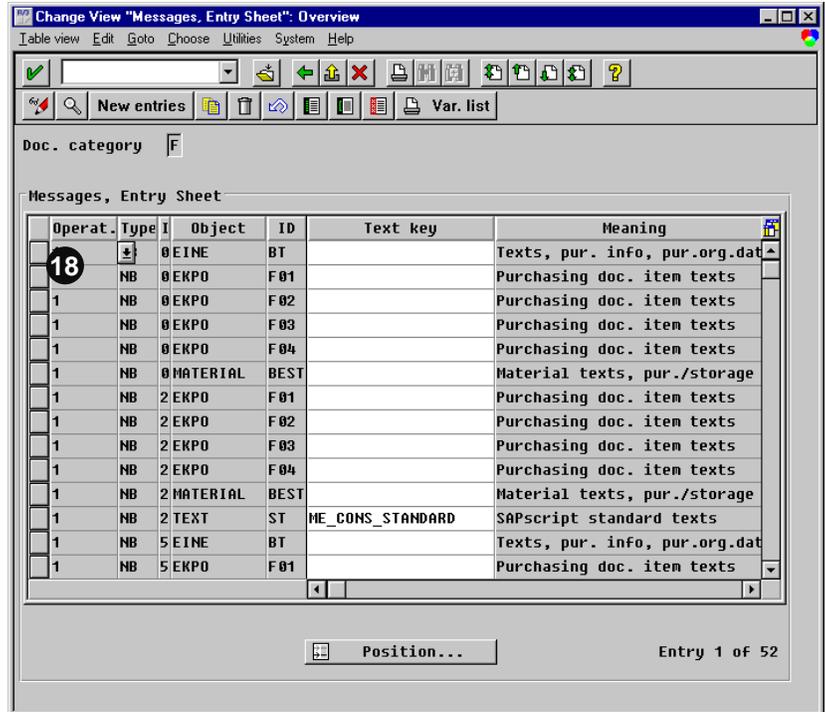
If you do not want certain texts to be output, delete them:

16. Mark the box at the beginning of those lines that you want to delete.
17. Click *Delete*.



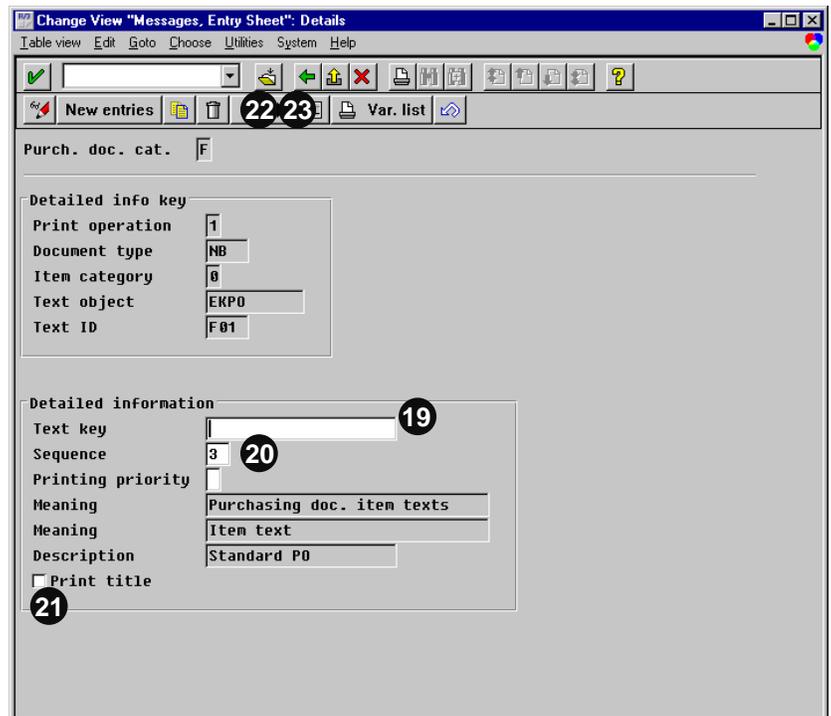
To double check the print sequence, perform the following steps for all texts.

18. Double click the texts you want on the output.



19. To print standard texts compared to all the other texts, enter the standard text name in *Text key*.

20. In *Sequence*, enter the number that determines the sequence in which the text is printed. *Printing priority* can remain empty.





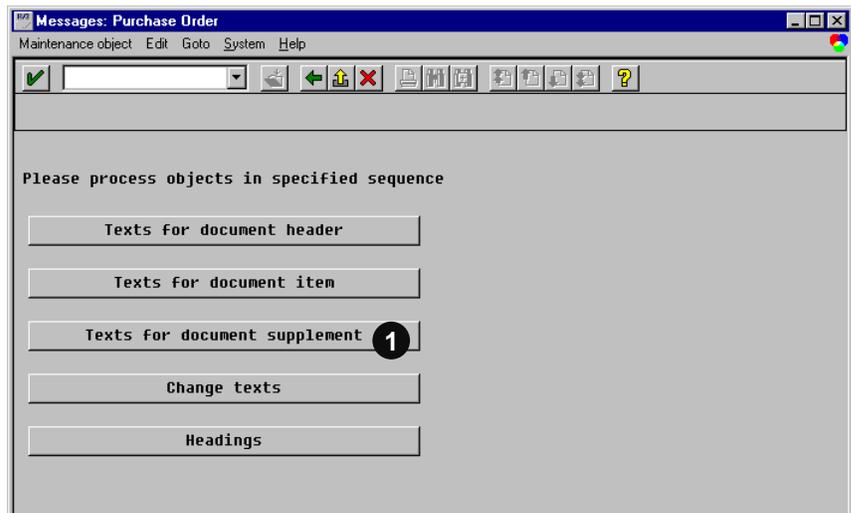
*Sequence* and *Printing priority* determine the sequence in which the texts should be printed. It is a two-level sequence. That is, if the *Sequence* input is equal for two texts, then the *Printing priority* input determines the sequence. However, *Sequence* can take up to 99 numbers, which is sufficient to determine unique text. Therefore, we recommend that *Printing priority* be left empty.

You must enter an increasing sequence in *Sequence* and *Printing priority*, but within the sequence, you may skip numbers. For example, both “1, 2, 3, 4, and 5” and “3, 5, 6, and 9” are valid sequences.

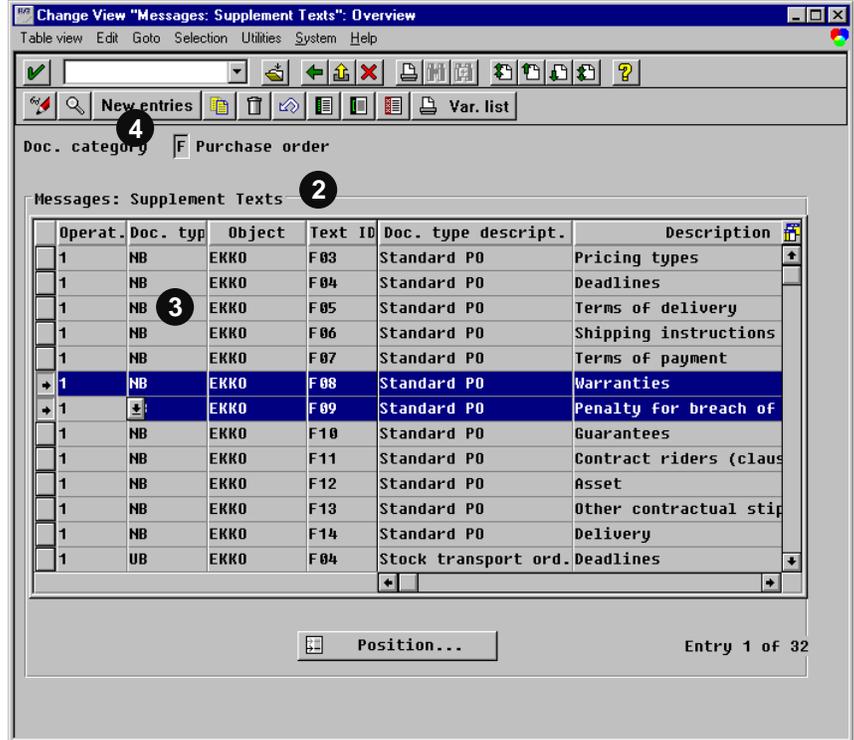
21. Select *Print title* to print the text title on top of the text. Otherwise, the text is printed without a title.
22. Click *Save*. If you use the CTS, specify a transport request after saving.
23. Click *Back* to return to the text overview screen, which will be printed.
24. Repeat steps 18 through 23 for every text that will appear on the output.
25. When you have finished, click *Back*.

### Supplement texts

1. Click *Texts for document supplement*.



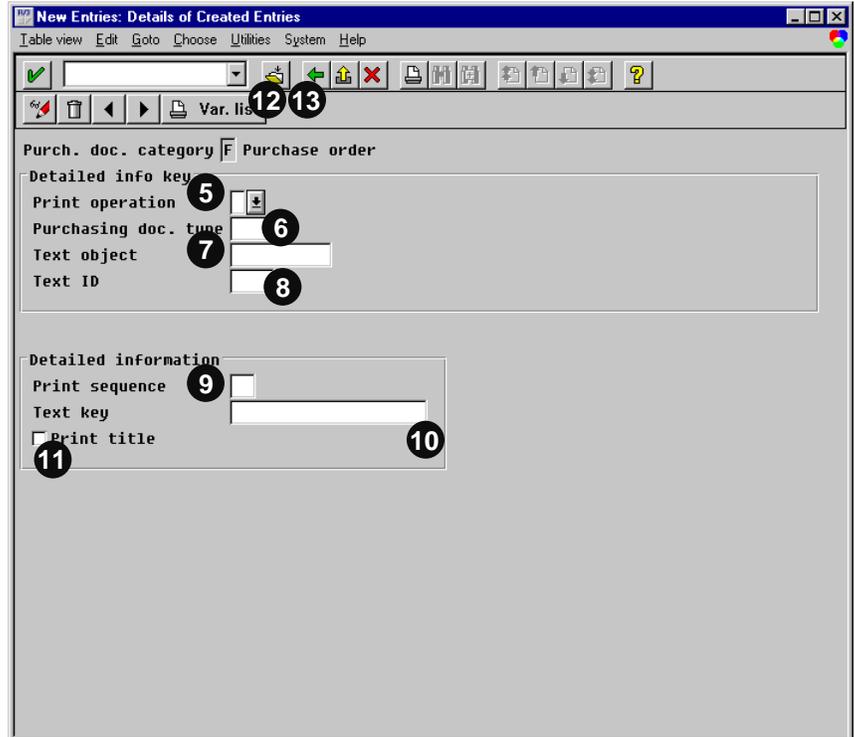
2. On the *Change View "Messages: Supplement Texts": Overview* screen, notice the texts that you defined to appear at the end of all purchase order items.
3. The most important lines are those with document type *NB* (*Standard PO*). Key operations are "1" (*New purchase order*) and "2" (*Changed purchase order*). Texts printed as supplements can come from either the purchase order header or standard texts. If they come from the purchase order header, then *EKKO* is the object and *id* is the header text id. If they are standard texts, then *TEXT* is the object and *ST* is the id.
4. Click *New entries*.



Enter information in the fields without clicking *Enter*. After you have finished, click *Save*, without hitting *Enter*.

If you accidentally click *Enter*, click *Back* and completely exit out of the procedure, without saving, and begin again. If you click *Enter* and save your entries, you will get empty customizing entries.

5. Enter the print operation (1 for *New purchase order* and 2 for *Changed purchase order*).
6. Enter *NB* (the purchasing document type) in *Standard purchase order*.
7. Enter *EKKO* (*Purchasing document header texts*) in the text object field or *TEXT* for a standard text.
8. Enter for example *F02* (*Header note*) in the text id field or *ST* for a standard text.
9. In *Print sequence*, enter the number that determines the sequence in which the text is printed.





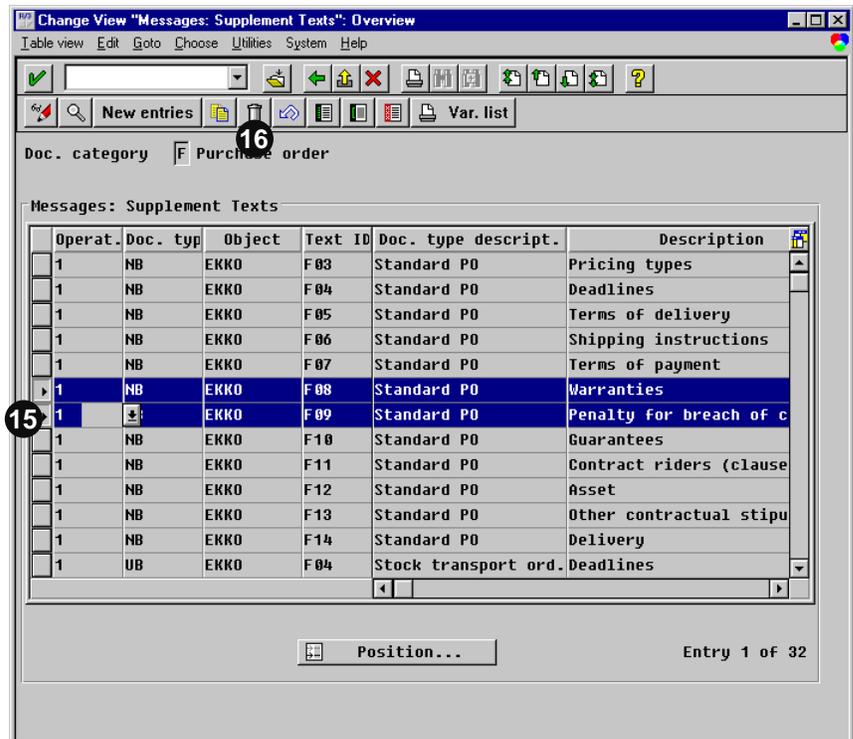
You must enter an increasing sequence, but, within the sequence, you may skip numbers. The following are sample, valid sequences:

- “1, 2, 3, 4, and 5”
- “3, 5, 6, and 9”
- “1, 3, 4, 6, and 8”

- To print standard texts compared to texts from the purchase order header, enter the standard text name in *Text key*.
- Select *Print title* to print the text title on top of the text. Otherwise the text is printed without a title.
- Click *Save*. If you use the CTS, specify a transport request after saving.
- Click *Back*.
- Repeat steps 4 through 13 for every new text that you want on the output.

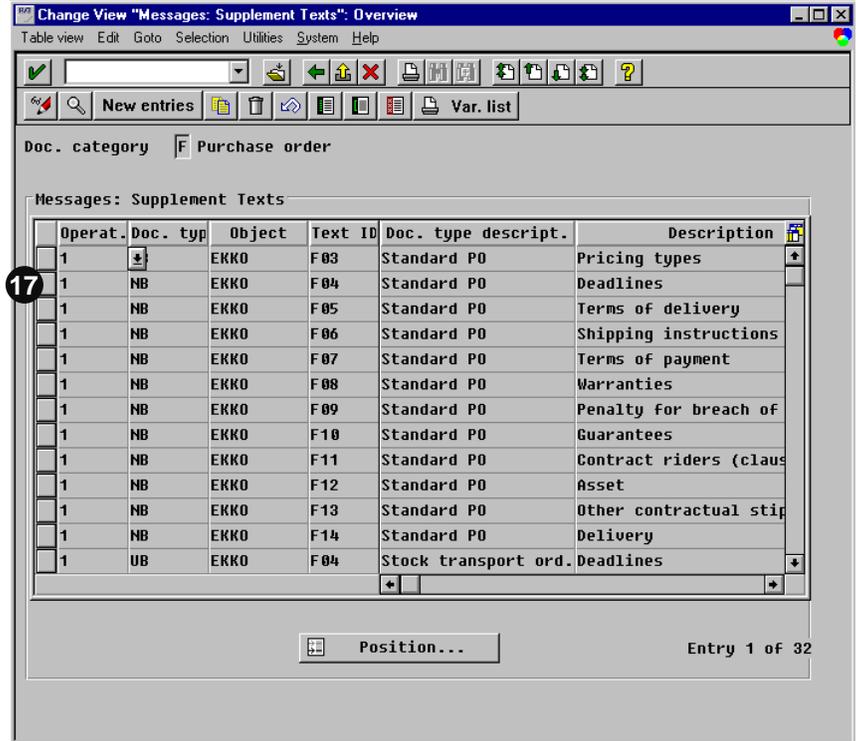
If you do not want some texts to be output, delete them:

- Select the boxes at the beginning of the lines you want to delete.
- Click *Delete*.



To double check the print sequence, perform the following steps for all texts:

17. Double click the texts you want on the output.



18. In *Print sequence*, enter the number that determines the sequence in which the text is printed on the output.

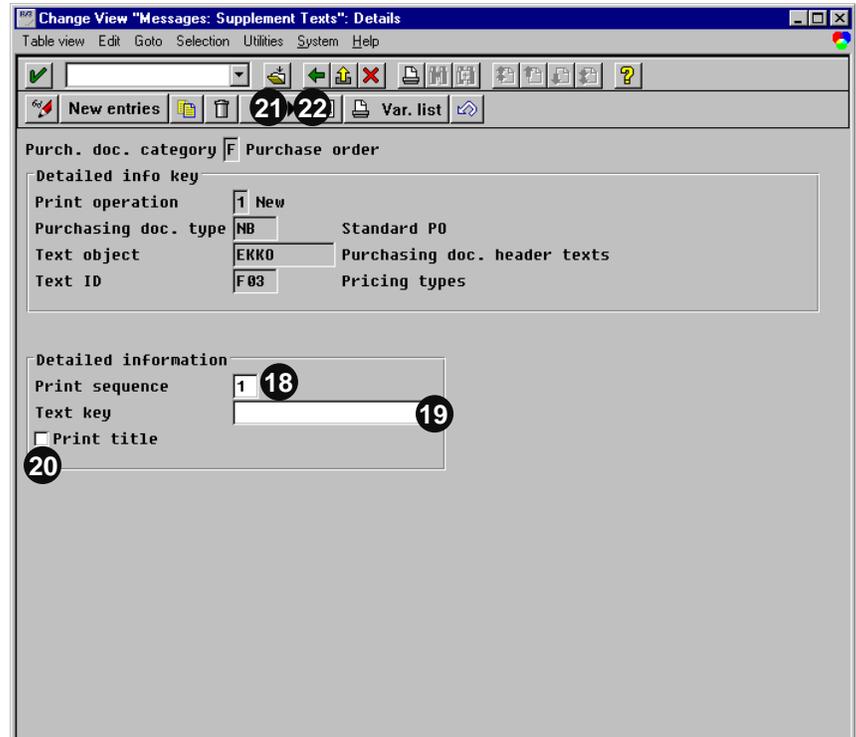


You must enter an increasing sequence but, within the sequence, you may skip numbers. Here are some sample, valid sequences:

- “1, 2, 3, 4, and 5”
- “3, 5, 6, and 9”
- “1, 3, 4, 6, and 8”

19. To print standard texts compared to texts from the purchase order header, enter the standard text name in *Text key*.

20. Select *Print title* to print the title on

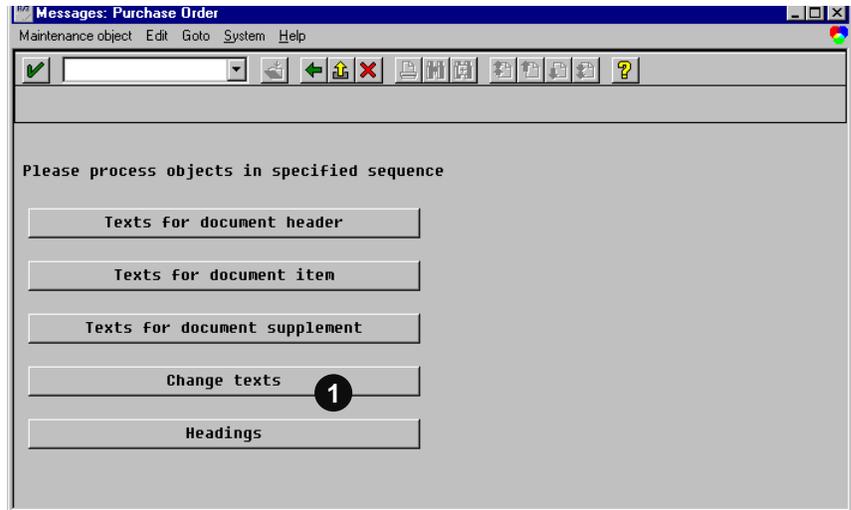


top of the text. Otherwise the text is printed without a title.

21. Click *Save*. If you use the CTS, specify a transport request after saving.
22. Click *Back* to return to the text overview screen.
23. Repeat steps 17 through 22 for every text that should appear on the output.
24. When you have finished, click *Back*.

### Change texts

1. Click *Change texts*.



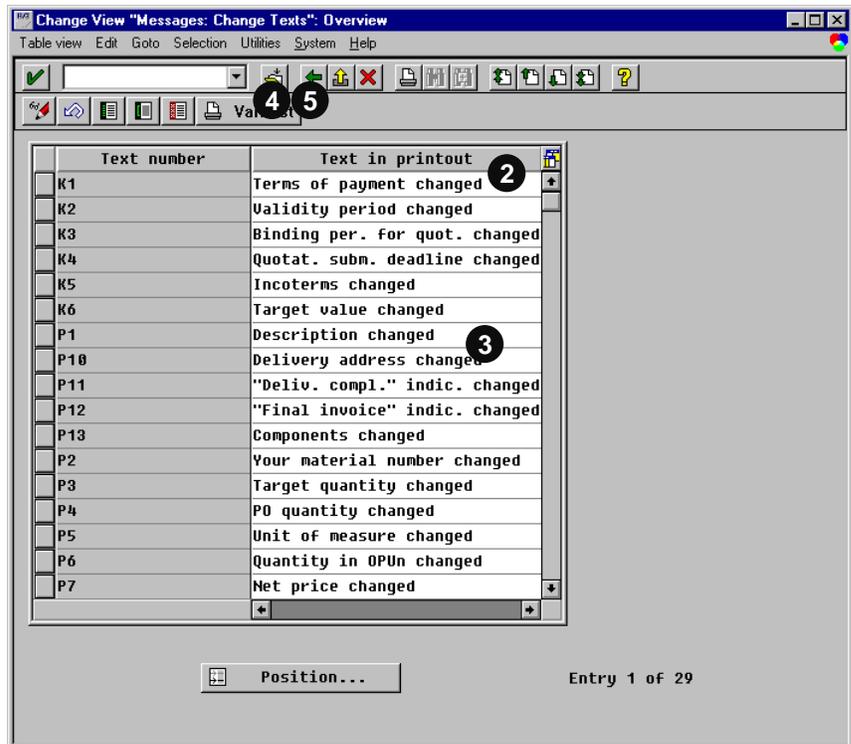
2. On the *Change View "Messages: Change Texts" Overview* screen, notice the reasons why a purchase order change makes it necessary to re-print the purchase order. If applicable, these texts appear on the output.

3. If you want them different, overwrite the texts.

4. Click *Save*.

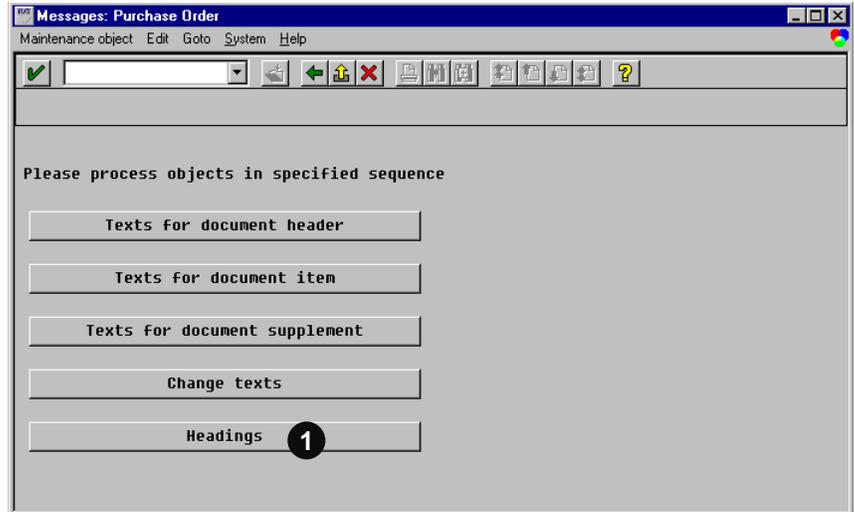
If you use the CTS, specify a transport request after saving.

5. Click *Back*.

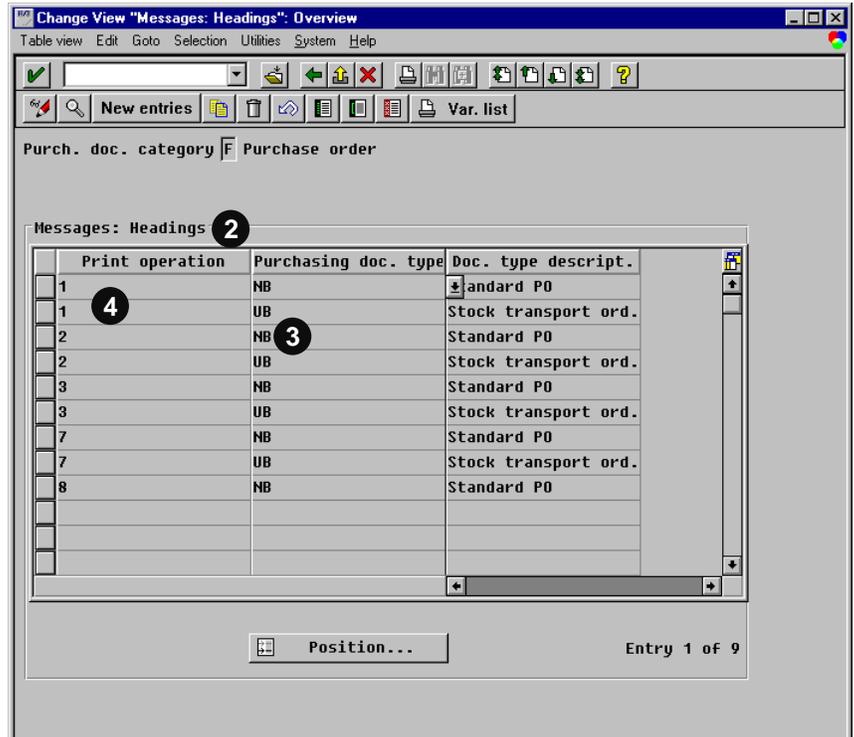


## Headings

1. Click *Headings*.



2. The title in the shaded area of the output, the field headings for the purchase order number, and purchase order date can be changed. On the sample printouts for the purchase order, these fields are in the framed area (see the appendix).
3. The most important lines are those with document type *NB* (*Standard PO*). Key operations are "1" (*New purchase order*) and "2" (*Changed purchase order*).
4. Double click the line where you want to change the headings.



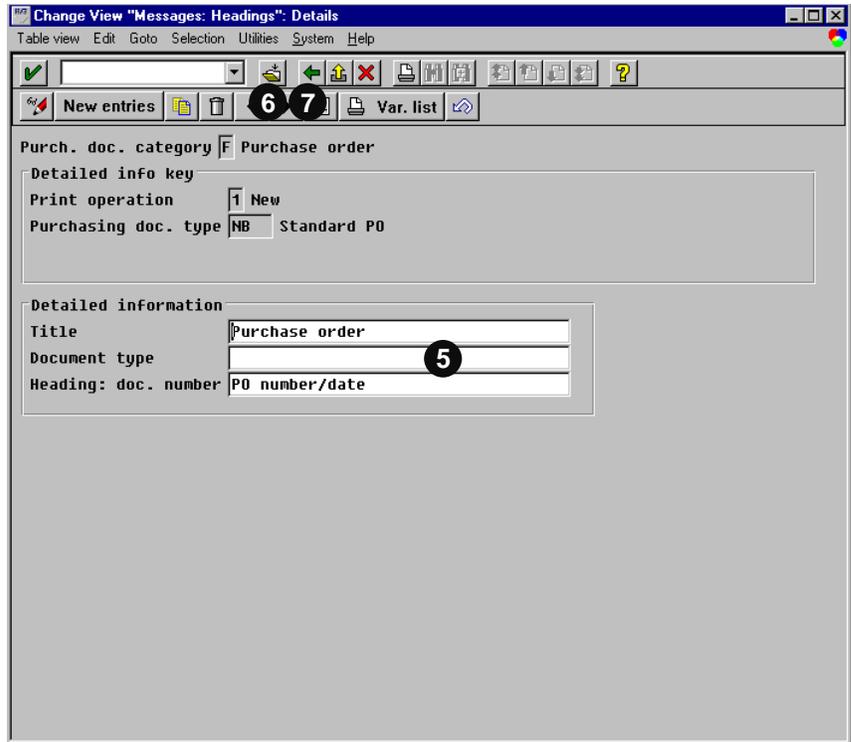
5. Overwrite the title and the heading for the document number and date.



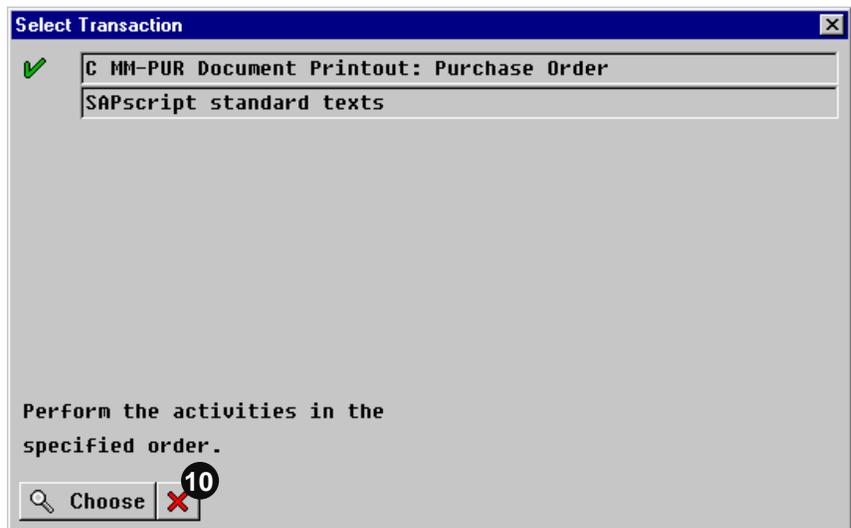
If you overwrite the heading for the document number and date, be aware that the layout set J\_9H\_MEDRUCK has the variables for the document number and the document date under this header. If you change this header, the layout set may need to be changed.

6. Click *Save*.

If you use the CTS, specify a transport request after saving.



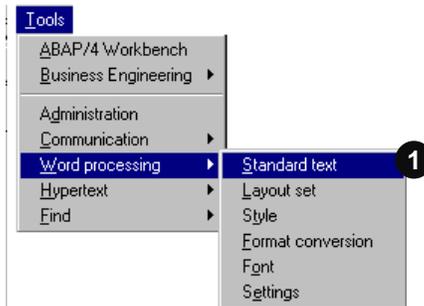
7. Click *Back* to return to the screen from step 2.
8. Repeat steps 4 through 7 for every applicable line.
9. When you have finished, click *Back* twice.
10. Click *Cancel*.
11. Click *Back* twice to completely exit.



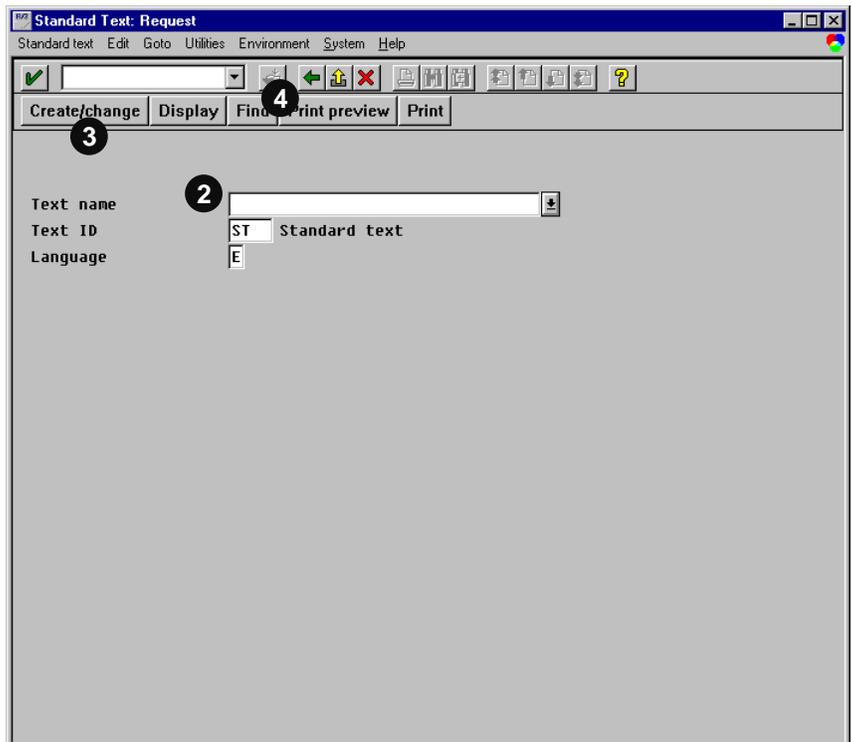
## Standard texts

To define the above-mentioned standard texts:

1. Choose *Tools* → *Word processing* → *Standard text*.



2. Enter the text name that you specified in the customizing steps above.
3. Click *Create/change*.
4. After editing, click *Save*.

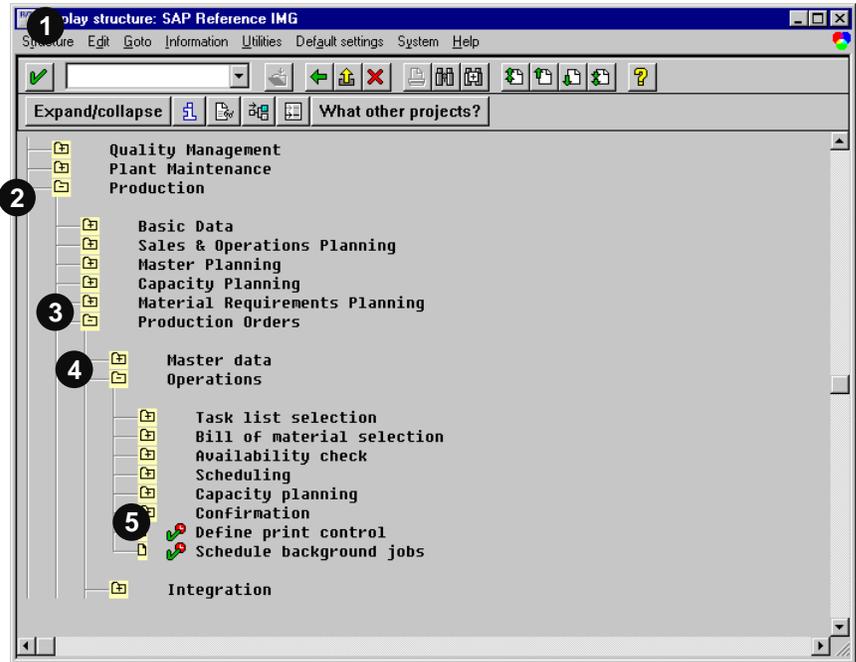


## Customizing in PP

### Assigning Print Programs and Layout Sets to Documents

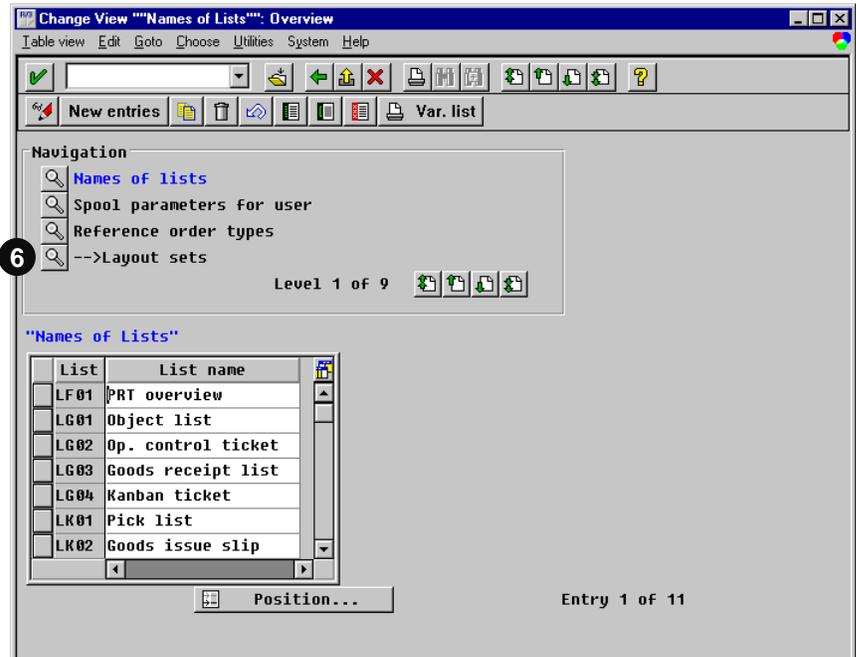
If you copied a layout set to modify it, inform the system that you want to use this new layout set for printing. To access the relevant customizing screens:

1. Access the IMG (see page 2).
2. Expand *Production*.
3. Expand *Production Orders*.
4. Expand *Operations*.
5. Execute *Define print control*.



Under *Names of Lists* you see the four-character abbreviation of the different PP document types. These are:

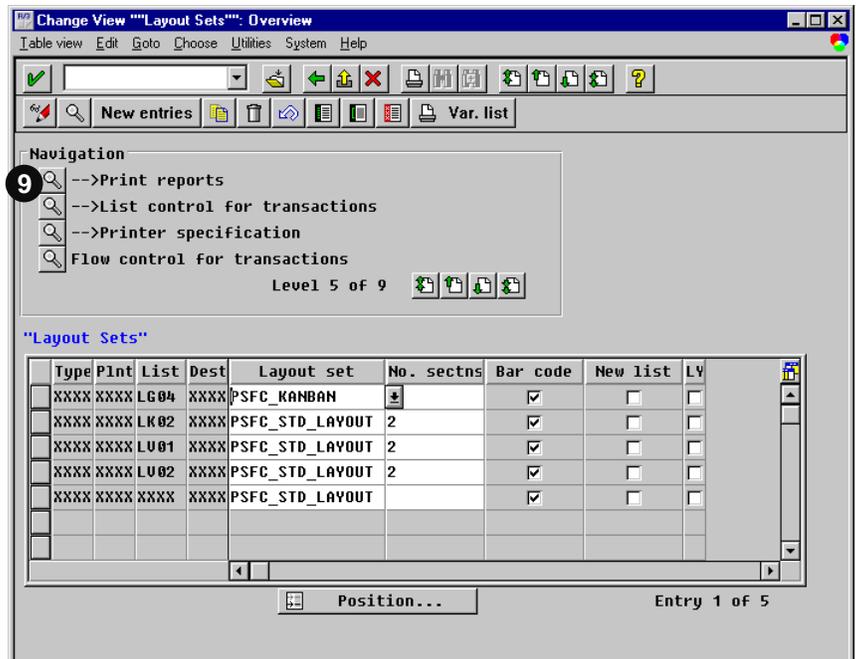
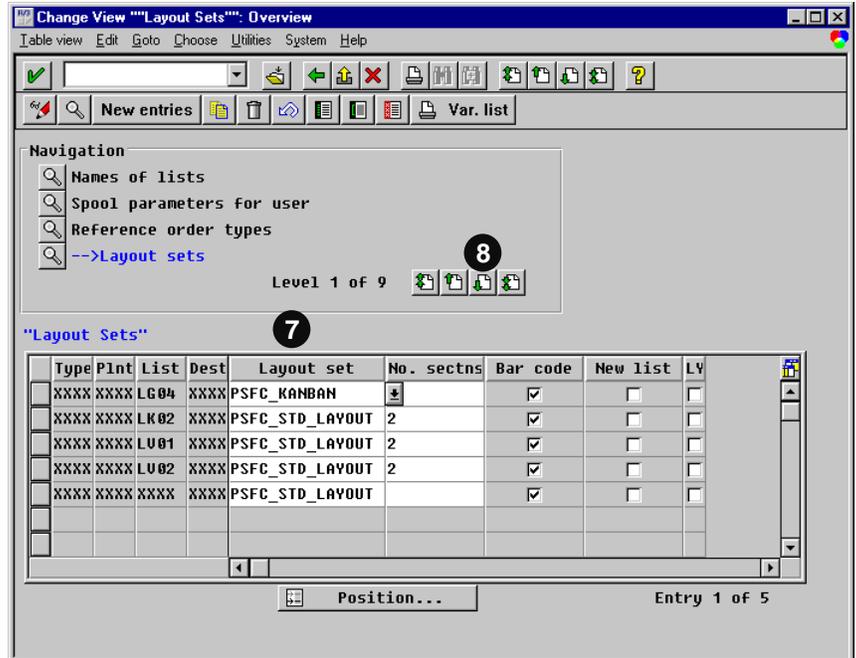
- LG01 for Object list
  - LG02 for Operations control ticket
  - LG03 for Goods receipt list
  - LG04 for Kanban card
  - LK01 for Pick list
  - LK02 for Goods issue slip
  - LV01 for Time ticket
  - LV02 for Confirmation slip
6. Click on the icon before *Layout sets*.



Layout sets are distinguished by order type, plant, document type, and output destination. All four columns may be masked with xxxxx.

The other columns indicate how many sections are allowed on a page of output, if bar code should be printed, if a new spool file has to be created for every new list, and if the list can be displayed before being printed.

7. Specify the layout set name that you want to use. You can also create new lines to replace some of the masks with values.
8. When you are ready, click *Page down*.
9. Click on the icon before *Print reports*.

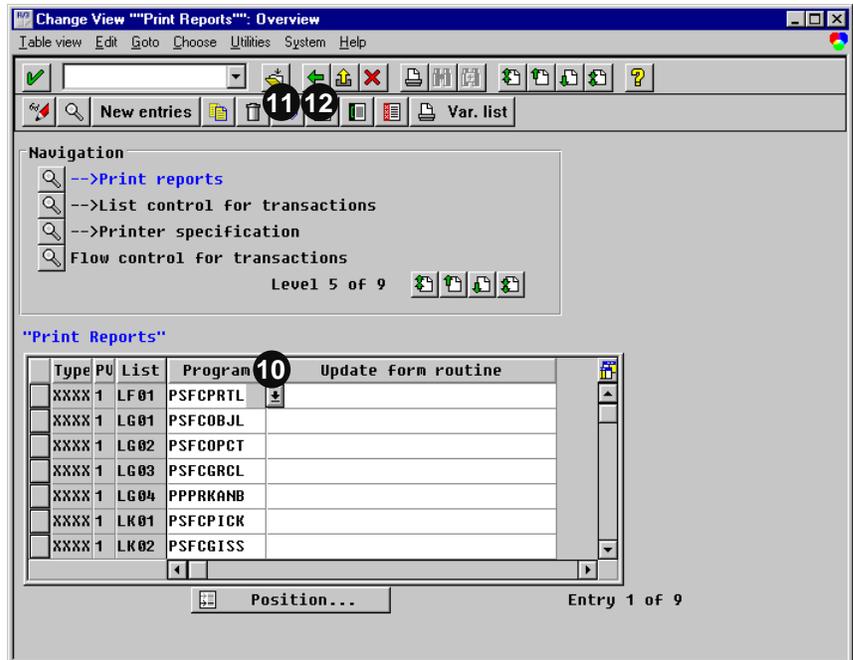


10. For each document type, specify the print program name. Note that the order type is masked.

11. When you are ready, click *Save*.

If you use the CTS, specify a transport request after saving.

12. Click *Back* twice to return to the IMG.



13. Click *Back* twice to completely exit.

## Layout Set Text Elements and Document Types

Although standard PP uses only two layout sets, PSFC\_STD\_LAYOUT and PSFC\_KANBAN, PSFC\_STD\_LAYOUT is used for seven different document types by seven print programs. It is, therefore, difficult to find out which text elements are used for which document type, and changing the content of one text element for one particular document type affects the output of other document types.

The following table illustrates which text elements of PSFC\_STD\_LAYOUT are used for which document type:

Document type	Name of text element	Remarks	Condition
Goods issue slip (Page MAIN is used)	HDR_RES	Header	
	BARCODE_RSNUM_RSPOS		If bar code checked in Customizing
	CMP_DATA_HDR	Header for components	
	CMP_DATA	Components	
	CMP_INST		
	CMP_VAR_SIZED		If item variable-sized
	LINE_EMPTY		

Pick list (Page PAG_RES is used)	NET_ROOT		If collective order
	NET_DATA		If collective order
	BARCODE_AUFNR_MATNR		If bar code checked in Customizing
	BARCODE_RSNUM		If bar code checked in Customizing
	ORD_TEXT	Order header text	If header text available at order
	ORD_TEXT_SHORT		If header text not available at order and short text available
	CMP_DATA_HDR	Header for components	If bar code not checked in Customizing
	BARCODE_RSNUM		If bar code checked in Customizing
	CMP_DATA_BC_HDR	Header for components	If bar code checked in Customizing
	CMP_DATA	Components	If bar code not checked in Customizing
	CMP_DATA_BC	Components	If bar code checked in Customizing
	CMP_TEXT	Component text	If component long text available
	CMP_TEXT_SHORT	Component text	If component long text not available and short text available
	Confirmation slip (Page MAIN is used)	HDR_STD	Header
OPR_DATA_HDR		Operations header	
OPR_DATA		Operations	If bar code not checked in Customizing
OPR_DATA_BC		Operations	If bar code checked in Customizing
OPR_TEXT_SHORT		Operations text	
OPR_ACT_TYP		Activities	If activities available
	OPR_MASK	Operations mask for	

Time ticket (Page MAIN is used)	HDR_STD	manual entry Header	
	OPR_SPLT_HDR	Operations split header	
	OPR_SPLT	Operations split	If bar code not checked in Customizing
	OPR_SPLT_BC	Operations split	If bar code checked in Customizing
	OPR_TEXT_SHORT	Operations text	
	OPR_ACT_TYP	Activities	If activities available
	OPR_TYP_MACH		If machine-split
	OPR_TYP_PERS		If person-split
	OPR_MASK	Operations mask for manual entry	
	HDR_STD	Header	
	OPR_DATA_HDR	Operations header	
	OPR_DATA	Operations	If bar code not checked in Customizing
	OPR_DATA_BC	Operations	If bar code checked in Customizing
	OPR_TEXT_SHORT	Operations text	
	OPR_ACT_TYP	Activities	If activities available
OPR_MASK	Operations mask for manual entry		
Goods receipt list (Page PAG_STD is used)	NET_ROOT		If collective order
	NET_DATA		If collective order
	BARCODE_AUFNR_MATNR		If bar code checked in Customizing
	ORD_TEXT	Order header text	If header text available at order

Operations control ticket (Page PAG_STD is used)	ORD_TEXT_SHORT		If header text not available at order and short text available
	CMP_GRL_HDR		
	CMP_GRL_HDR2		
	CMP_GRL_HDR3		
	CMP_GRL_RESBD		
	CMP_GRL_AFPOD		
	NET_ROOT		If collective order
	NET_DATA		If collective order
	BARCODE_AUFNR_MATNR		If bar code checked in Customizing
	ORD_TEXT	Order header text	If header text available at order
	ORD_TEXT_SHORT		If header text not available at order and short text available
	CONFIG_DATA_HDR	Configuration header	If configurable material
	CONFIG_DATA	Configuration	If configurable material
	LINE_DOUBLE		
	PROD_NOTE	Production note	If production note available
	ROU_TEXT	Routing text	If routing text available
	ROU_TEXT_SHORT	Routing text	If routing text not available and short text available
	PAGE_NEW		
	SEQ_HDR_1	Sequence header	
	SEQ_HDR_2	Sequence header	
LINE			
OPR_DATA_HDR	Operations header		
OPR_DATA	Operations	If bar code not checked in Customizing	

Object list (Page PAG_RES is used)	OPR_DATA_BC	Operations	If bar code checked in Customizing
	OPR_TEXT_SHORT	Operations text	
	OPR_ACT_TYP	Activities	If activities available
	LINE_DOTTED		
	PRT_OPR_HDR		
	PRT_DATA_HDR		
	PRT_DATA		
	PRT_TEXT		If long text available
	PRT_TEXT_SHORT		If long text not available and short text available
	LINE		
	NET_ROOT		If collective order
	NET_DATA		If collective order
	BARCODE_AUFNR_MATNR		If bar code checked in Customizing
	BARCODE_RSNUM		If bar code checked in Customizing
	ORD_TEXT	Order header text	If header text available at order
	ORD_TEXT_SHORT		If header text not available at order and short text available
	CONFIG_DATA_HDR	Configuration header	If configurable material
	CONFIG_DATA	Configuration	If configurable material
	LINE_DOUBLE		
	PROD_NOTE	Production note	If production note available
ROU_TEXT	Routing text	If routing text available	
ROU_TEXT_SHORT	Routing text	If routing text not available and short text available	
PAGE_NEW			
SEQ_HDR_1	Sequence header		

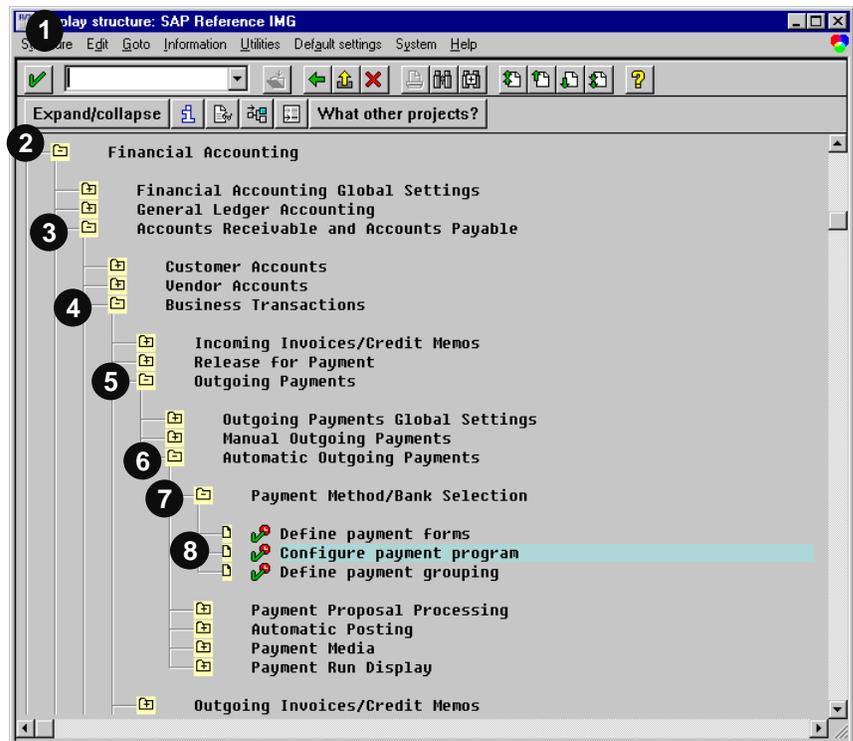
SEQ_HDR_2	Sequence header	
LINE		
OPR_DATA_HDR	Operations header	
OPR_DATA	Operations	If bar code not checked in Customizing
OPR_DATA_BC	Operations	If bar code checked in Customizing
OPR_ACT_TYP	Activities	If activities available
LINE_DOTTED		
CMP_OPR_HDR	Operations component header	
CMP_DATA_HDR	Header for components	If bar code not checked in Customizing
CMP_DATA_BC_HDR	Header for components	If bar code checked in Customizing
CMP_DATA	Components	If bar code not checked in Customizing
CMP_DATA_BC	Components	If bar code checked in Customizing
CMP_TEXT	Component text	If component long text available
CMP_TEXT_SHORT	Component text	If component long text not available and short text available
LINE_DOTTED		
PRT_OPR_HDR		
PRT_DATA_HDR		
PRT_DATA		
PRT_TEXT		If long text available
PRT_TEXT_SHORT LINE		If long text not available and short text available

## Customizing in FI

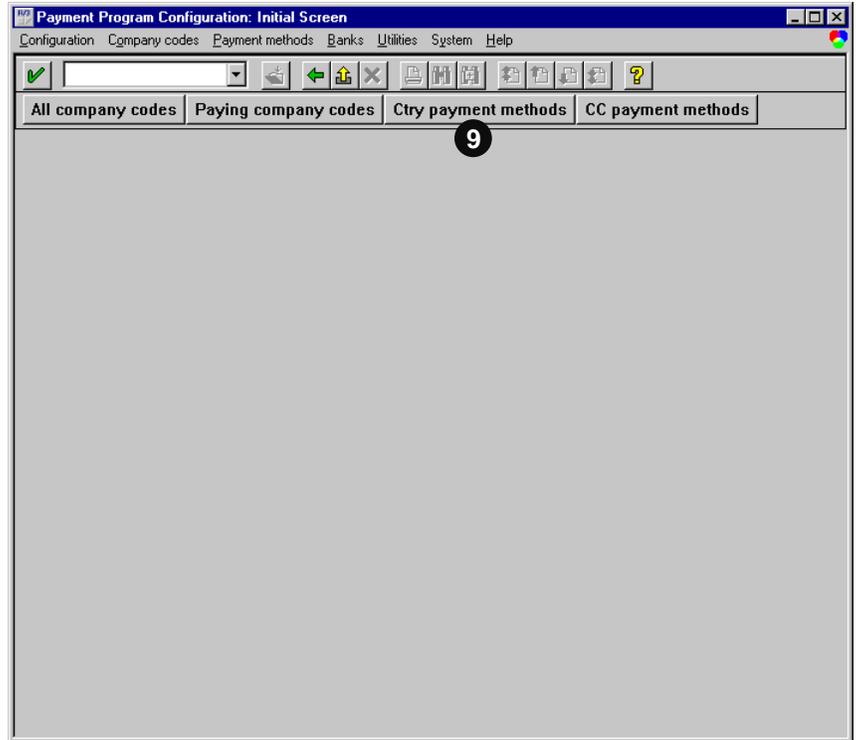
### Assigning Print Program and Layout Set to Checks

If you have copied a layout set to modify it, inform the system that you want to use this new layout set for printing. The following procedure shows how to access the relevant customizing screens. In addition, you have to specify a second print program to collect data and printing. However, the print program does not have to be changed.

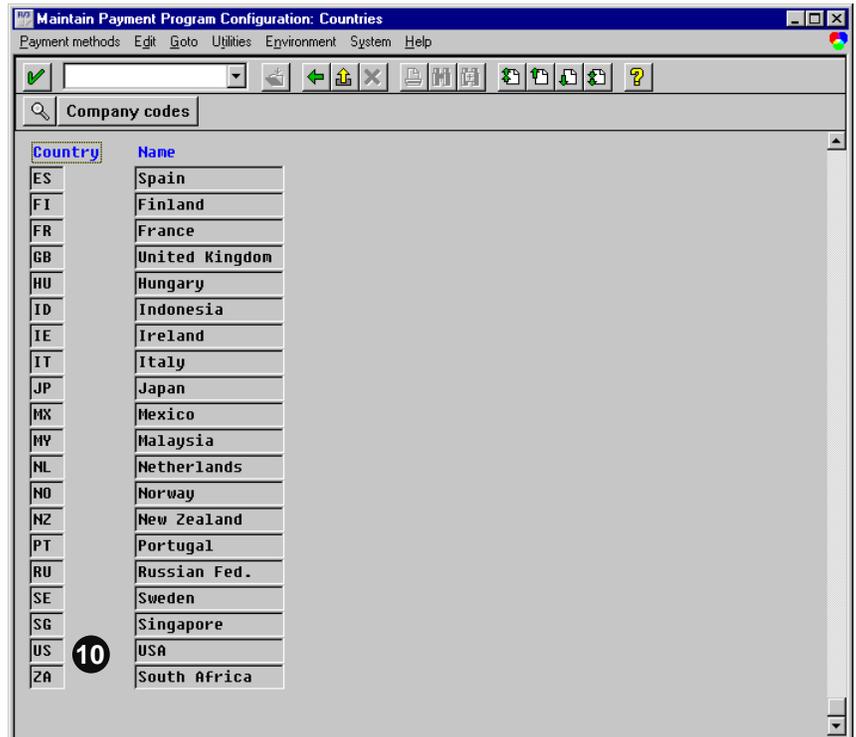
1. Access the IMG (page 2).
2. Expand *Financial Accounting*.
3. Expand *Accounts Receivable and Accounts Payable*.
4. Expand *Business Transactions*.
5. Expand *Outgoing Payments*.
6. Expand *Automatic Outgoing Payments*.
7. Expand *Payment Method/Bank Selection*.
8. Execute *Configure payment program*.



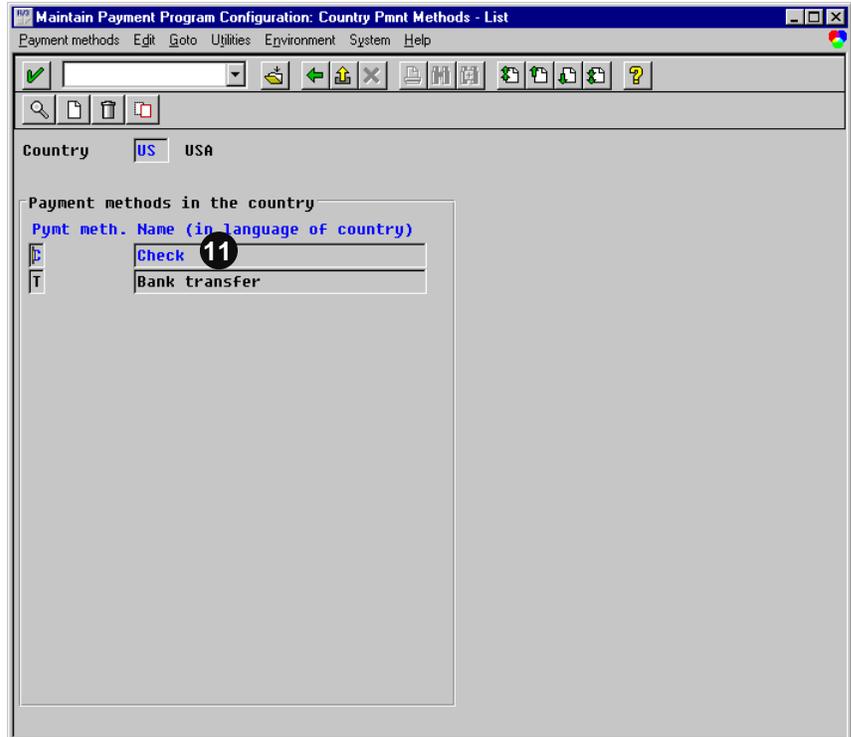
9. Click *Ctry payment methods*.



10. Double click the appropriate country.



11. Double-click on the appropriate payment method.

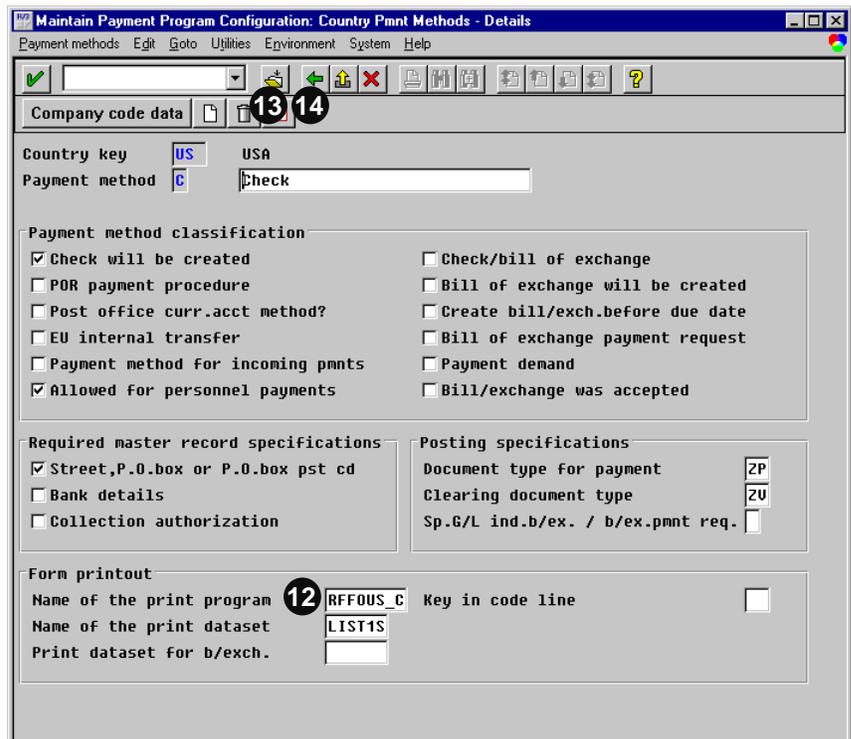


12. If you copied and changed the print program, enter the new print program in *Name of the print program* in the *Form printout* frame.

13. Click *Save*.

If you use the CTS, specify a transport request after saving.

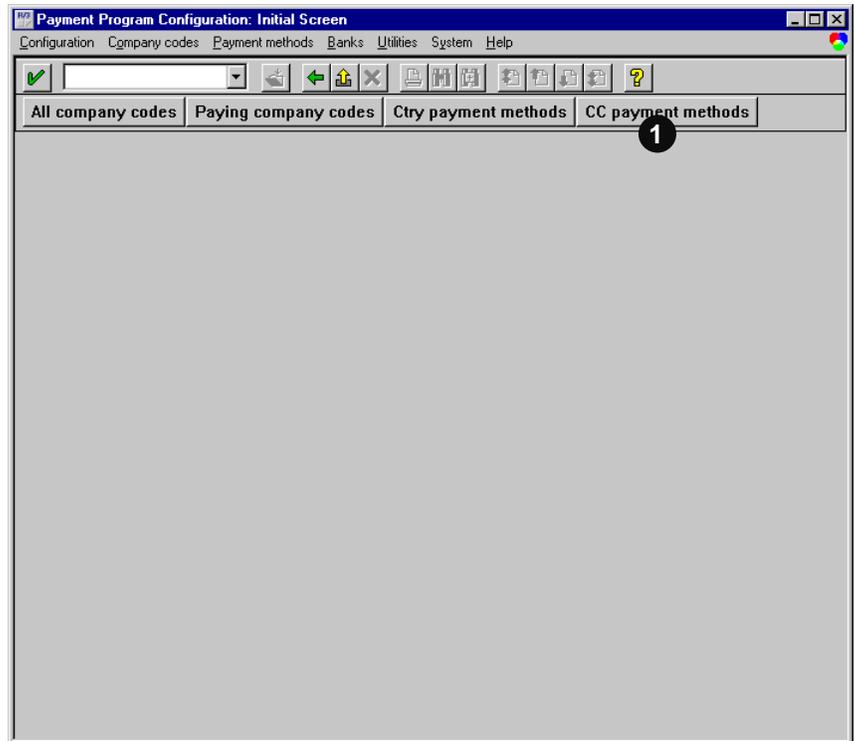
14. Click *Back* three times to return to the initial payment program customizing screen in step 9.



## Entering Another Layout Set

To enter another layout set from the initial *Payment Program Configuration* screen:

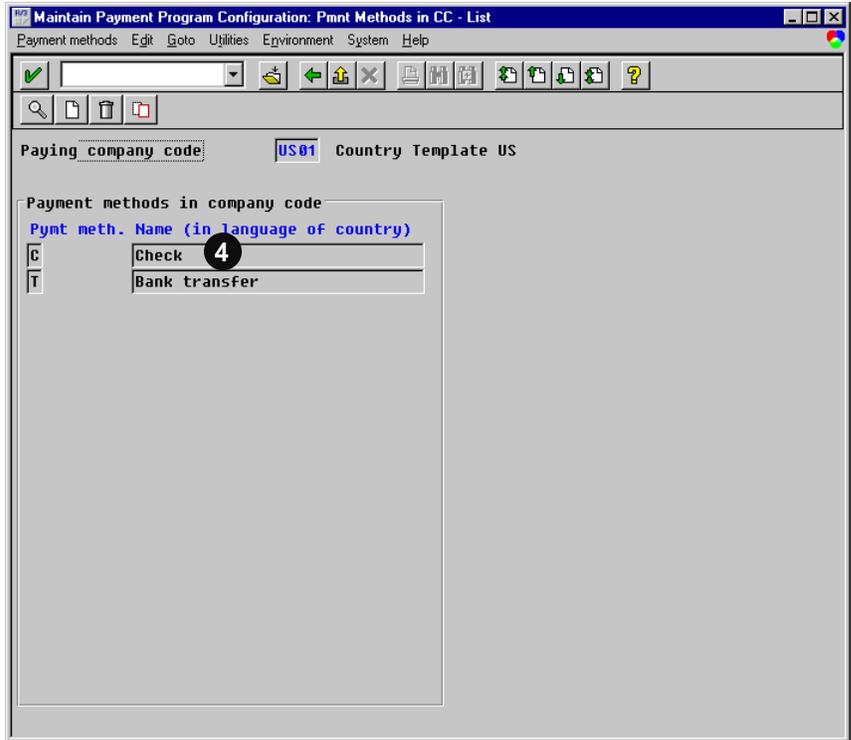
1. Click *CC Payment methods*.



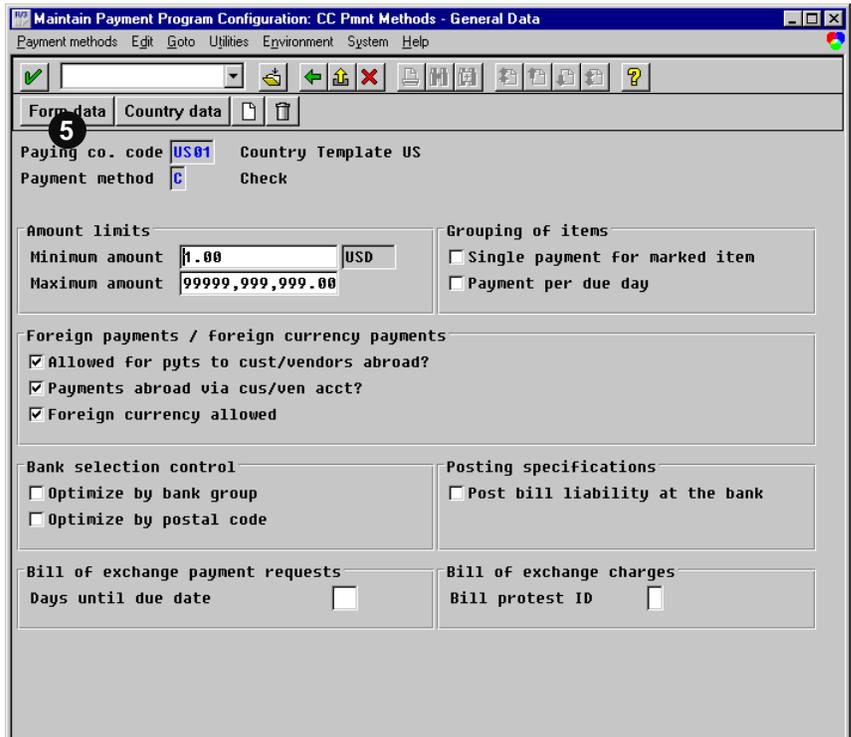
2. The *Maintain Payment Program Configuration: Company Codes* screen displays the company codes.
3. Double click each company code.



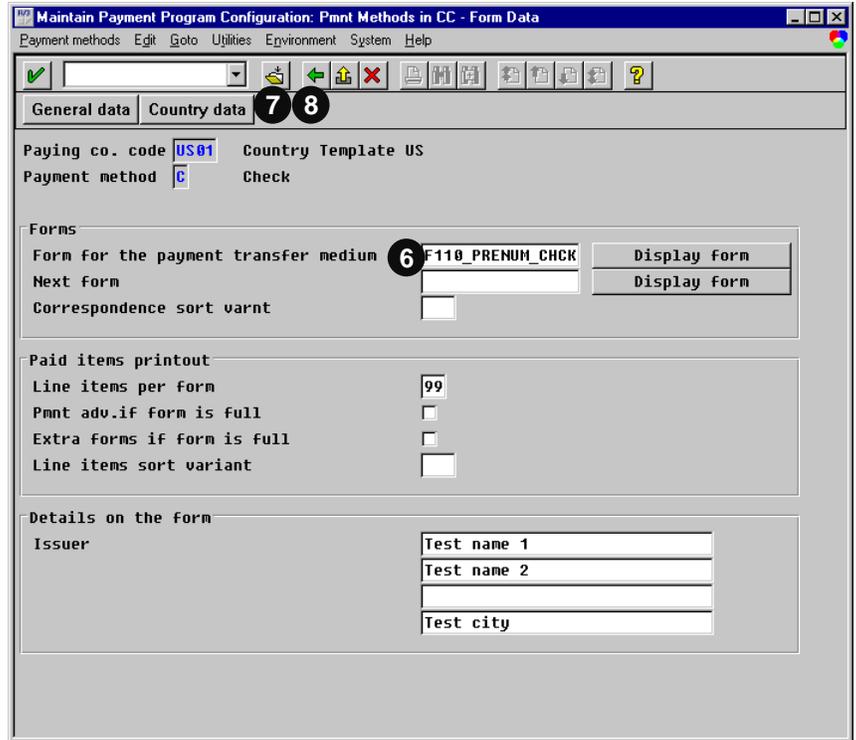
4. Double-click on the payment method.



5. Click *Form data*.



6. If you copied and changed the layout set, enter the new layout set name in *Form for the payment transfer medium* in the frame *Forms*.
7. Click *Save*. If you use the CTS, specify a transport request after saving.
8. Click *Back* three times to return to the initial payment program customizing screen in step 9.



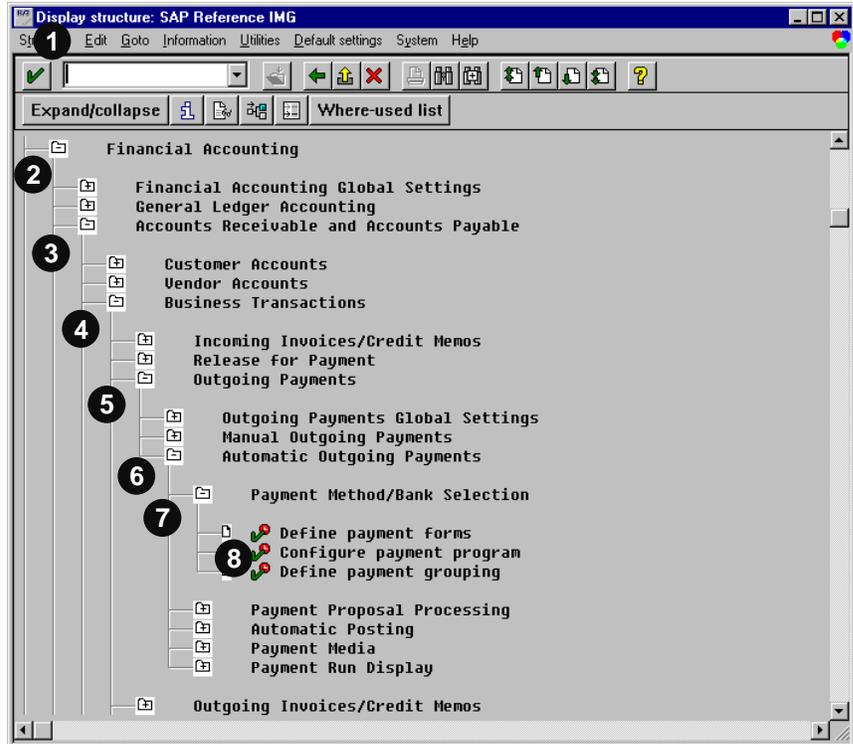
9. Either click *Back* three times to completely exit or continue with step 9 of the next section.

## Specifying Standard Texts for Header, Footer, Signature and Sender

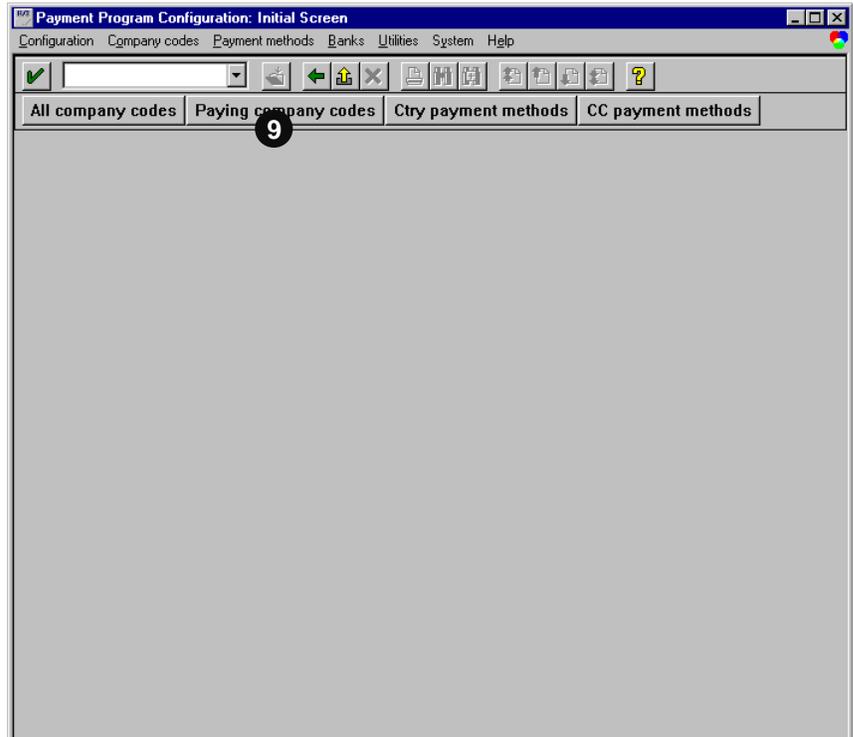
You can specify standard texts to appear on output. The layout set for the check is only prepared to print standard texts such as *letter header*, but the commands to print standard texts for *footer*, *signature*, and *sender* can be easily added. Please see the end of this chapter for the commands.

The header is printed at the top of the check, and checks can use different standard texts per company code. Not specifying a standard text is specified or if the specified standard texts do not exist, does not lead to an error.

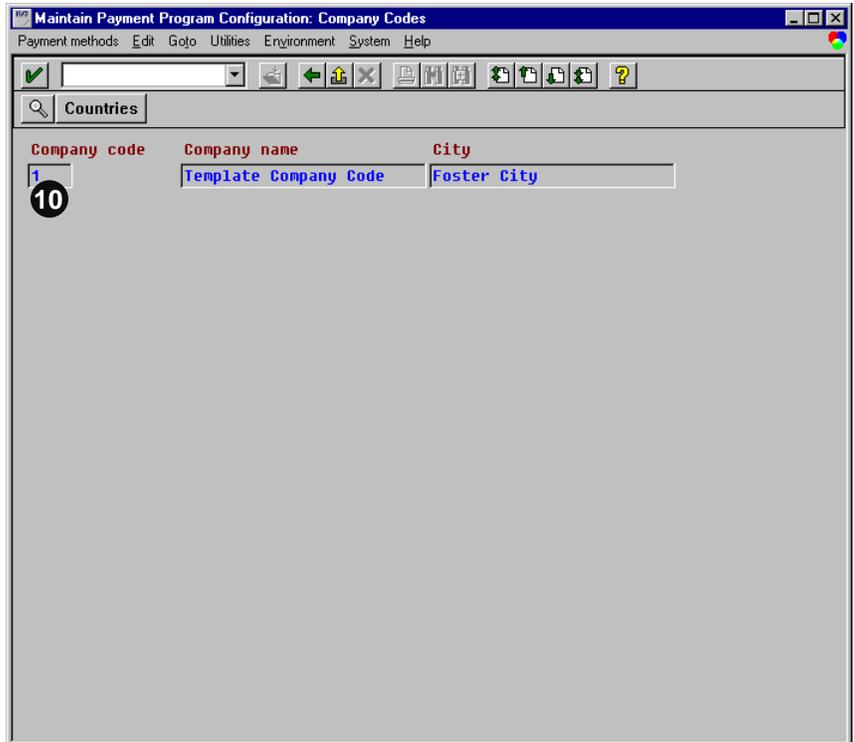
1. Access the IMG (see page 2).
2. Expand *Financial Accounting*.
3. Expand *Accounts Receivable and Accounts Payable*.
4. Expand *Business Transactions*.
5. Expand *Outgoing Payments*.
6. Expand *Automatic Outgoing Payments*.
7. Expand *Payment Method/Bank Selection*.
8. Execute *Configure payment program*.



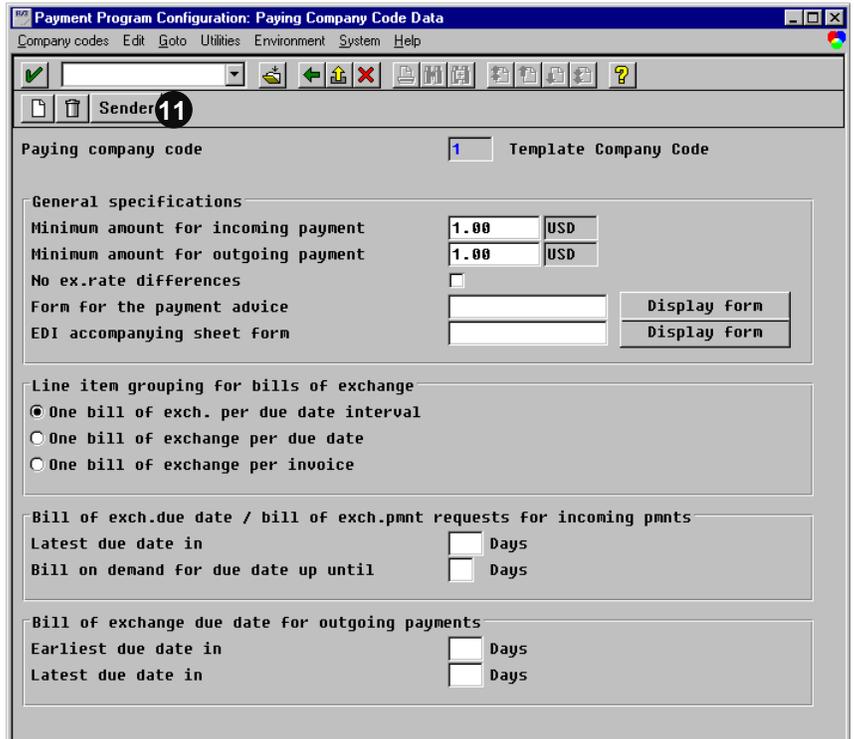
9. Click *Paying company codes*.



10. Double click *Company code*.



11. Click *Sender*.



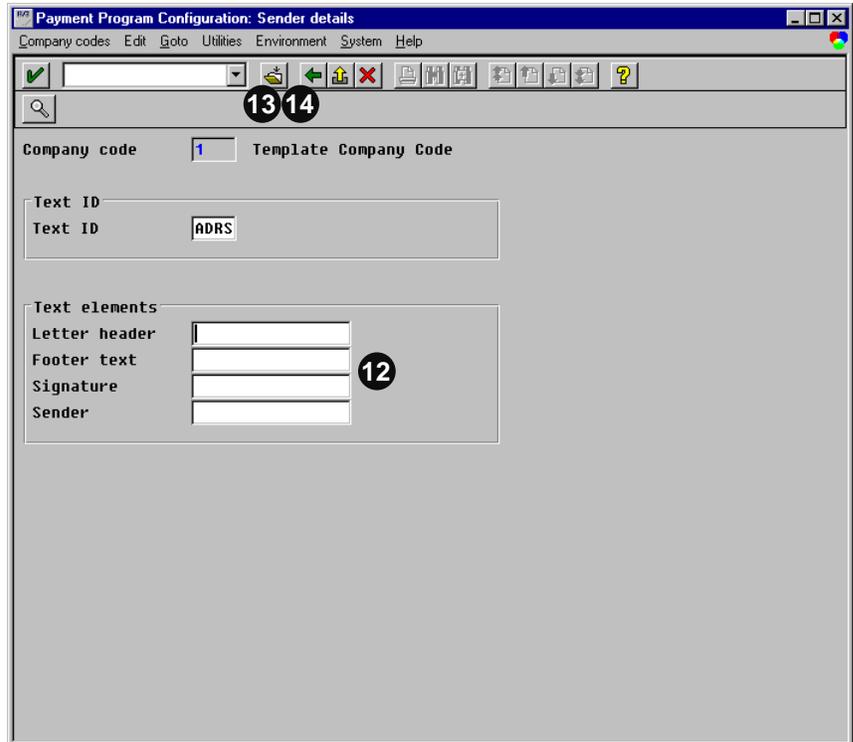
12. Enter the names of the standard texts on the *Payment Program Configuration: Sender Details* screen.

13. Click *Save*.

If you use the CTS, specify a transport request after saving.

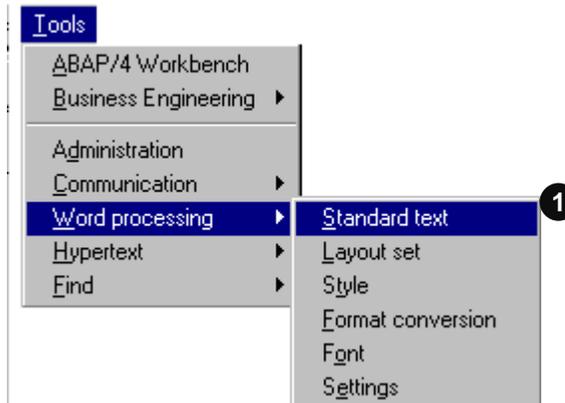
14. Click *Back* three times to return to the initial payment program customizing screen in step 9.

15. Either click *Back* three times to completely exit or continue with step 9 in the next section.



To define the above-mentioned standard texts:

1. Choose *Tools* → *Word processing* → *Standard text*.

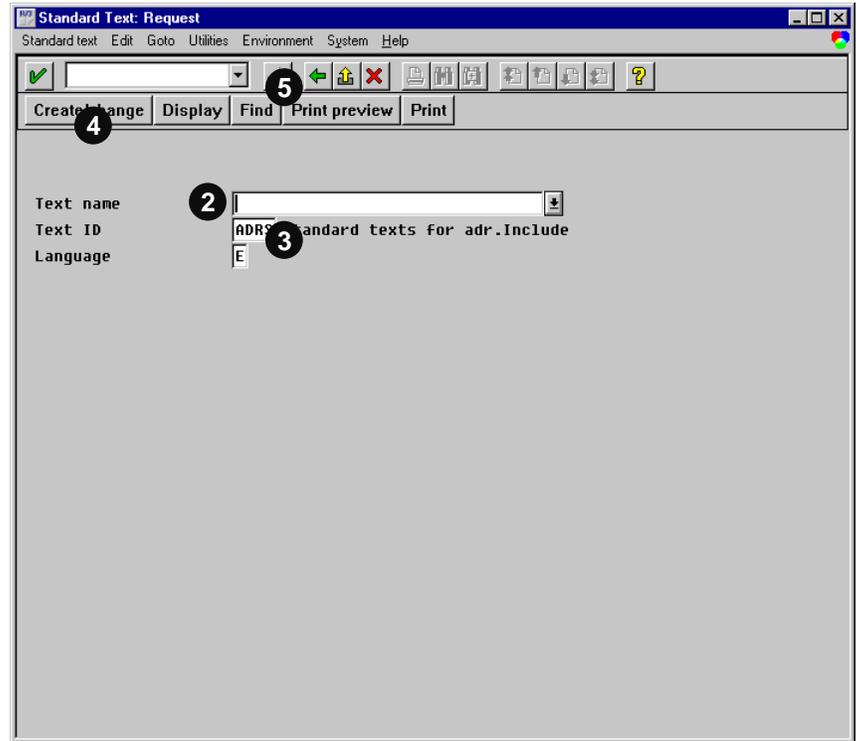


2. Enter the text name that you specified in the customizing steps above.
3. Enter **ADRS**.



The text id is less important. Since **ADRS** is used in the layout sets, it is also the easiest to use. If you use another text id, the corresponding command line in the text editor of the layout sets would have to be changed.

4. Click *Create/change*.



5. After editing, click *Save*.

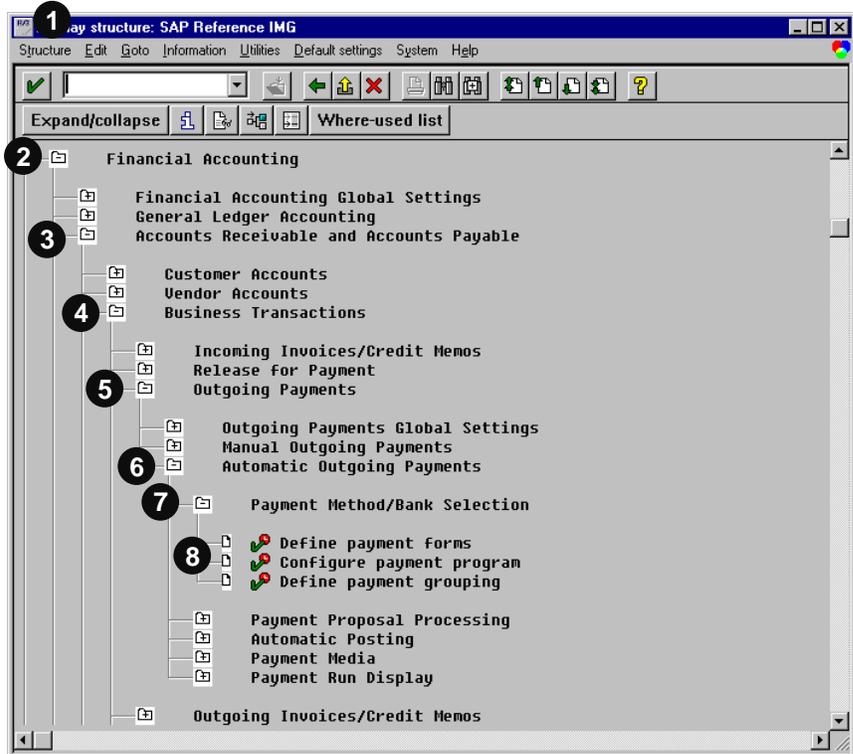
If you want the standard texts for the footer, signature, and sender printed, use the following commands in the text editor of the page window:

- Footer:  
/: INCLUDE &REGUD-TXTFU& OBJECT TEXT ID ADRS
- Signature:  
/: INCLUDE &REGUD-TXTUN& OBJECT TEXT ID ADRS
- Sender:  
/: INCLUDE &REGUD-TXTAB& OBJECT TEXT ID ADRS

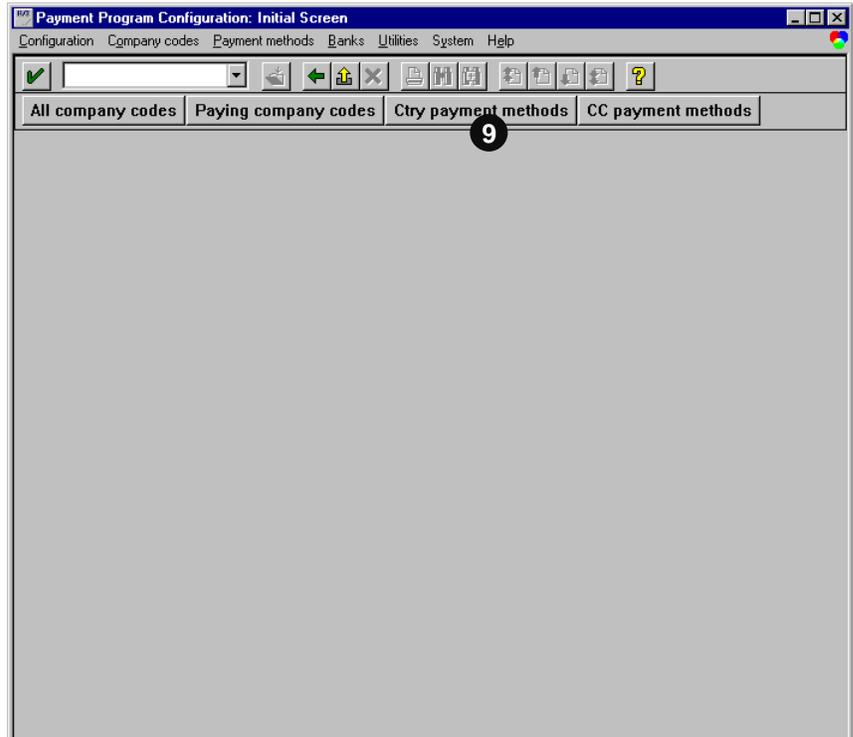
## Specifying the Number of Test Prints before a Check Run

At the beginning of every check run, to adjust your printer, specify the number of test prints. This specification is done in the variant of the print program where you can print the checks and the summary of the check run on different printers. This topic is described in the next section, but step 15 from the next section can be incorporated into step 15 of this section to perform both procedures at once.

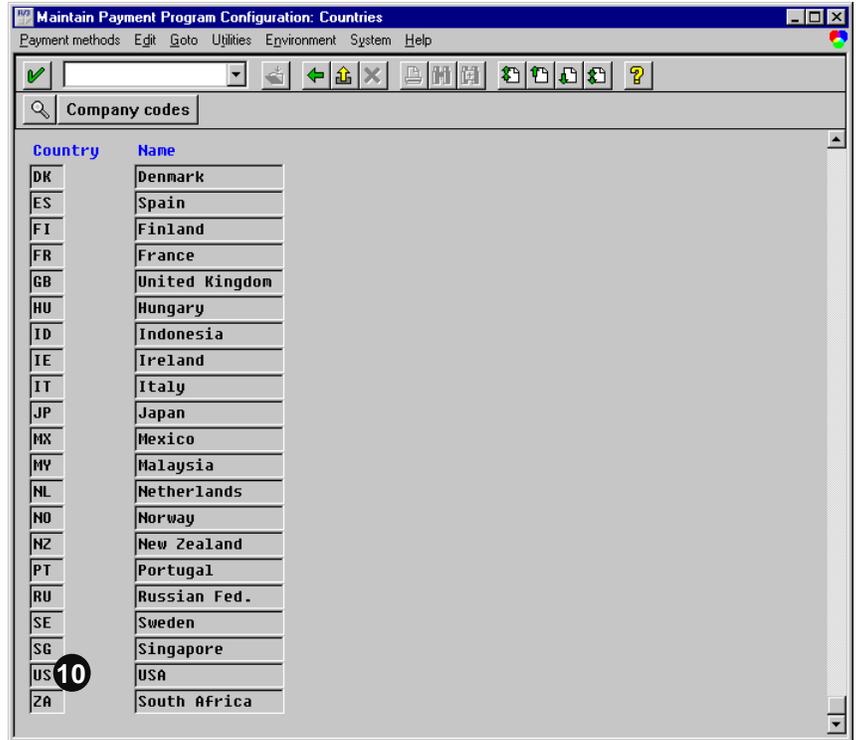
1. Access the IMG (see page 2).
2. Expand *Financial Accounting*.
3. Expand *Accounts Receivable and Accounts Payable*.
4. Expand *Business Transactions*.
5. Expand *Outgoing Payments*.
6. Expand *Automatic Outgoing Payments*.
7. Expand *Payment Method/Bank Selection*.
8. Execute *Configure payment program*.



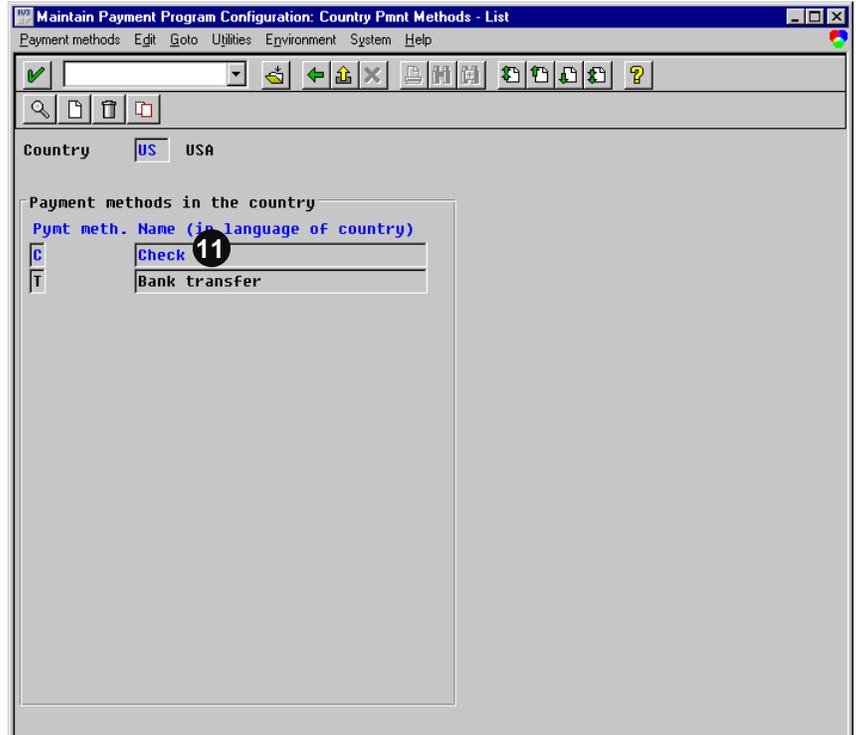
9. Click *Ctry payment methods*.



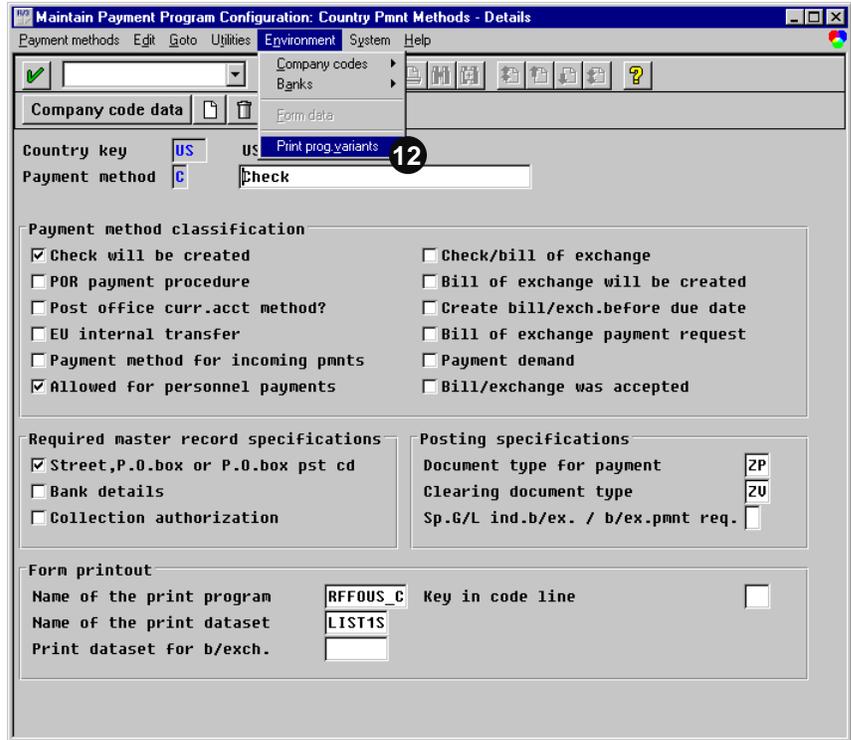
10. Double click the appropriate country.



11. Double click the appropriate payment method.

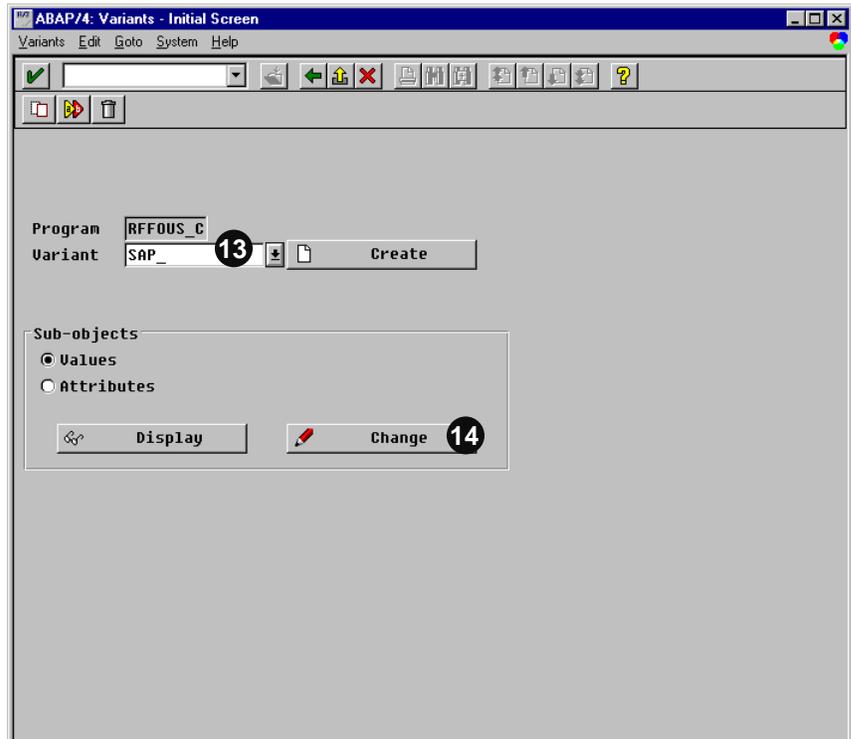


12. Choose *Environment* → *Print prog. variants*.



13. Enter the name of your variant (z1) in *Variant*.

14. Click *Change*.



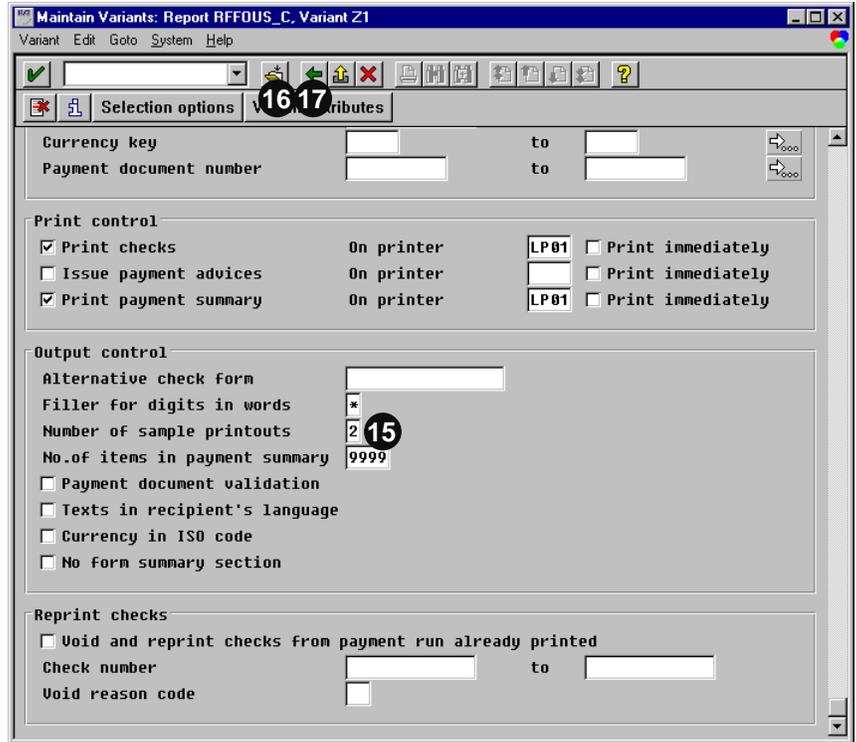
Here you see the bottom of the *Maintain Variants: Report RFFOUS\_C, Variant Z1* screen.

15. Enter the number of desired test prints in the *Number of sample printouts* in the *Output control* frame.

16. Click *Save*.

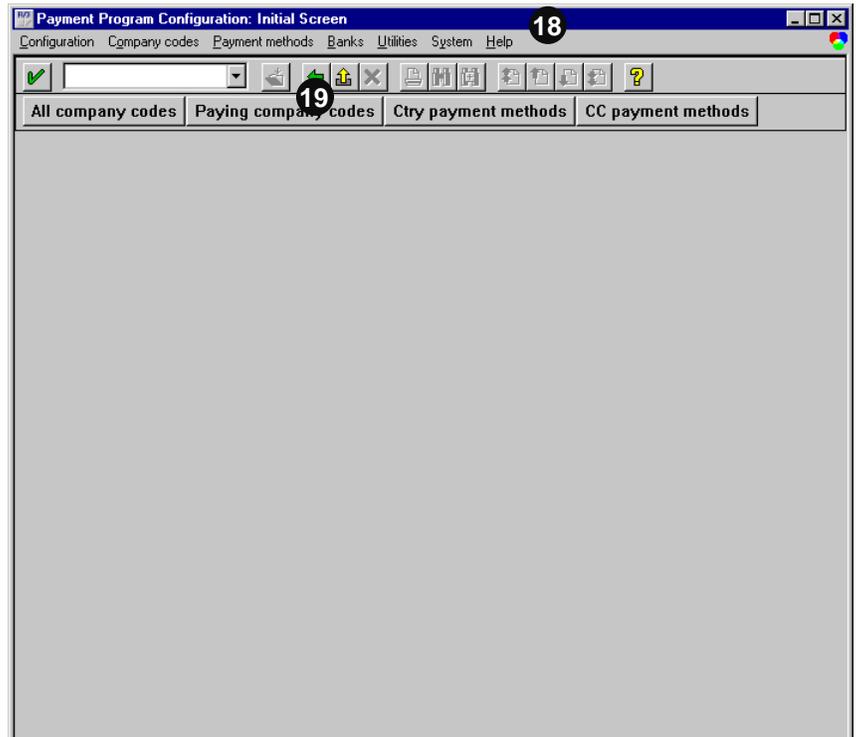
If you use the CTS, specify a transport request after saving.

17. Click *Back* five times.



18. You will now be back on the initial screen of the payment program customizing from step 9.

19. Click *Back* three times to completely exit.

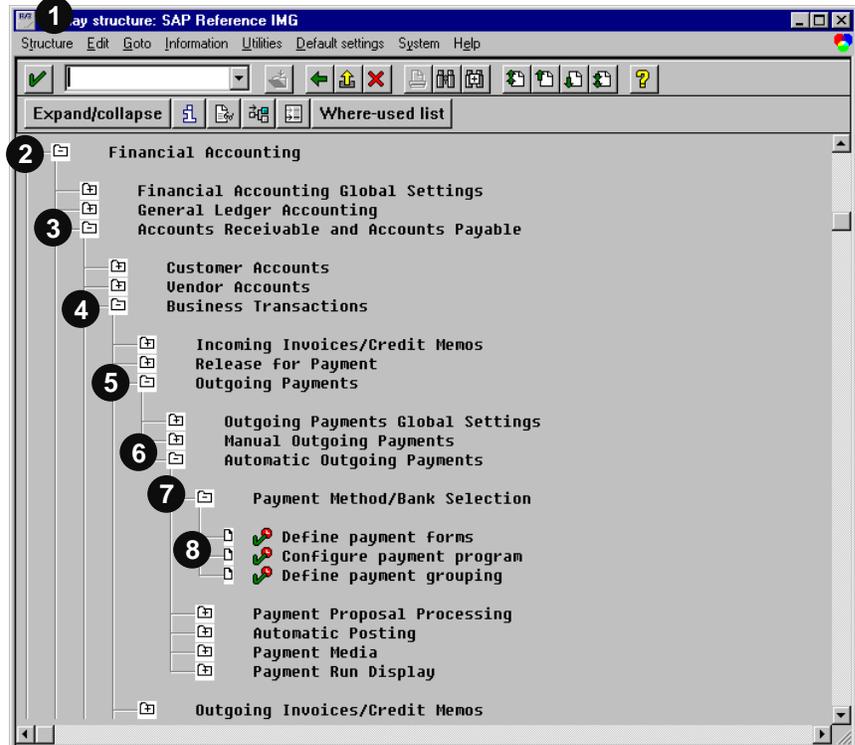


## Specifying Printers for Both Checks and Check Run Summary

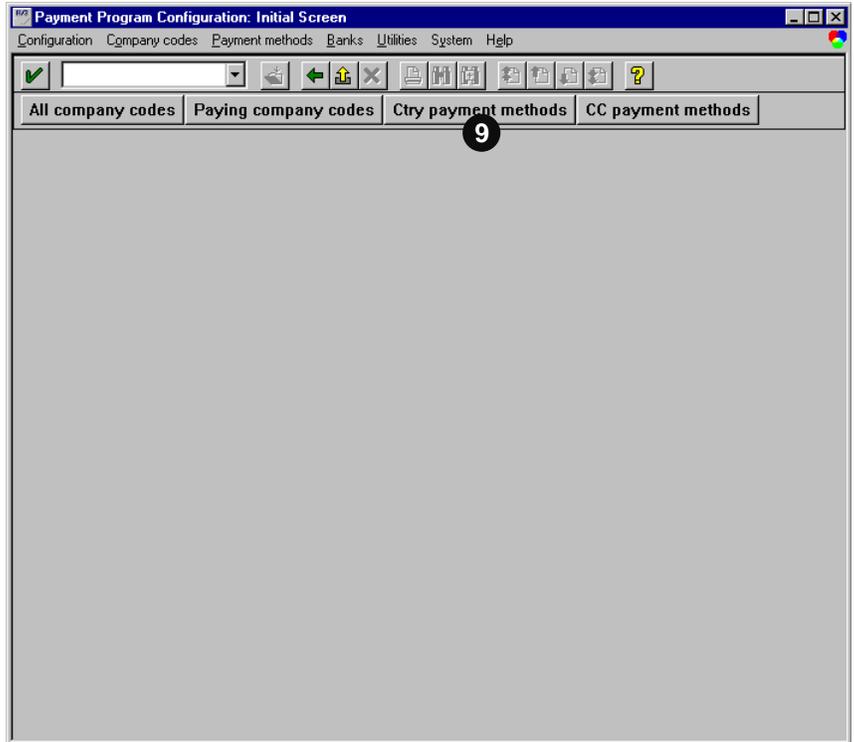
You can specify different printers for the checks and the check run summary. This specification makes sense if you have preprinted checks and do not want to waste these forms for a summary, or if you want the summary to be printed from a laser printer instead of a dot-matrix printer.

Specify printers in the variant of the print program (e.g., program RFFOUS\_C, variant Z1). At the beginning of every check run, to adjust your printer, specify the number of test prints. This topic is described in the previous section, but you can include step 15 from the previous section into step 15 of this section and perform both procedures at once.

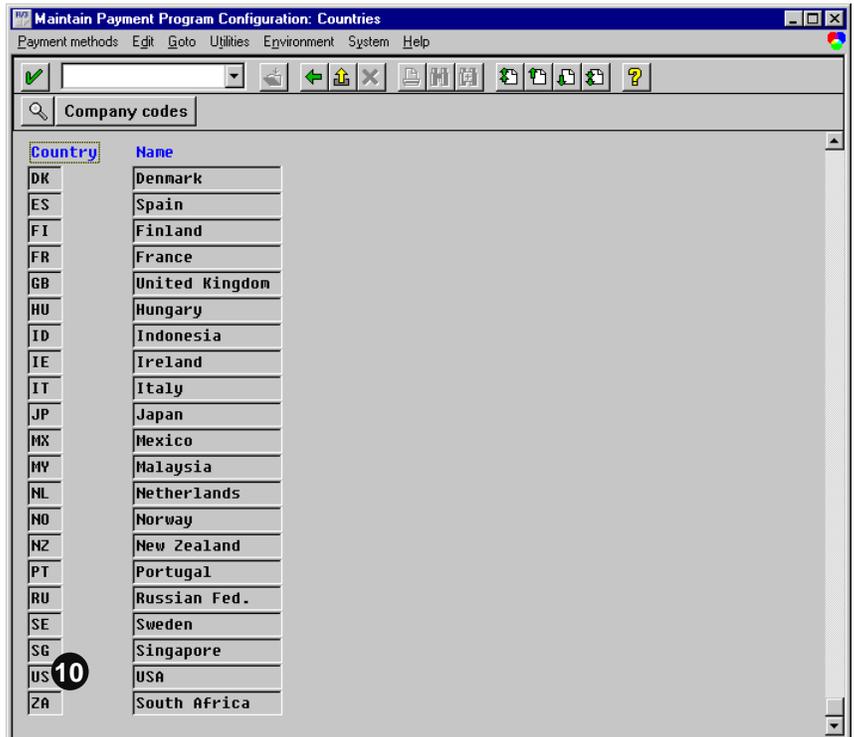
1. Access the IMG (see page 2).
2. Expand *Financial Accounting*.
3. Expand *Accounts Receivable and Accounts Payable*.
4. Expand *Business Transactions*.
5. Expand *Outgoing Payments*.
6. Expand *Automatic Outgoing Payments*.
7. Expand *Payment Method/Bank Selection*.
8. Execute *Configure payment program*.



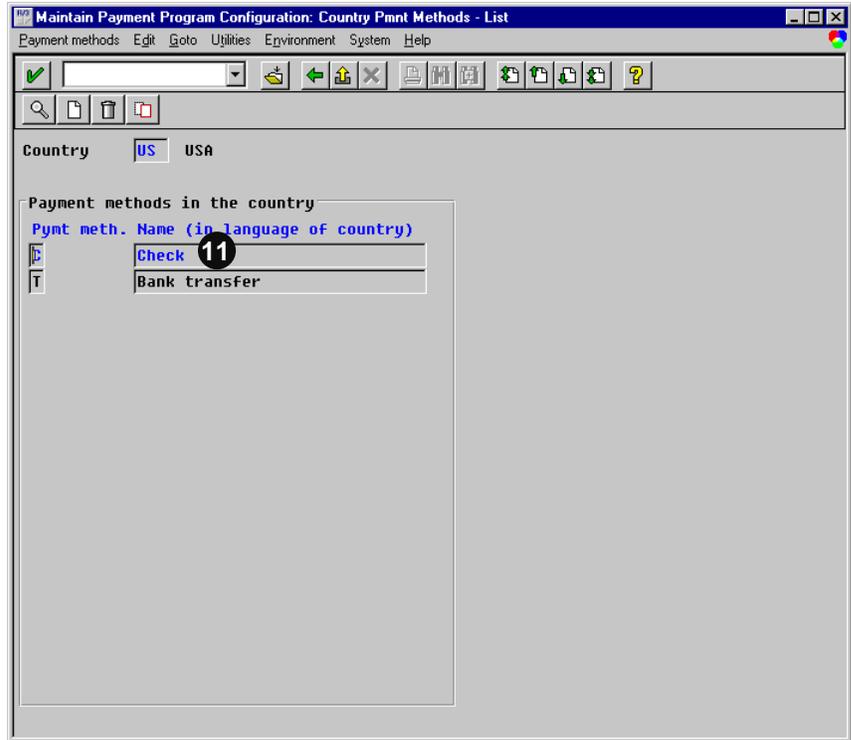
9. Click *Ctry payment methods*.



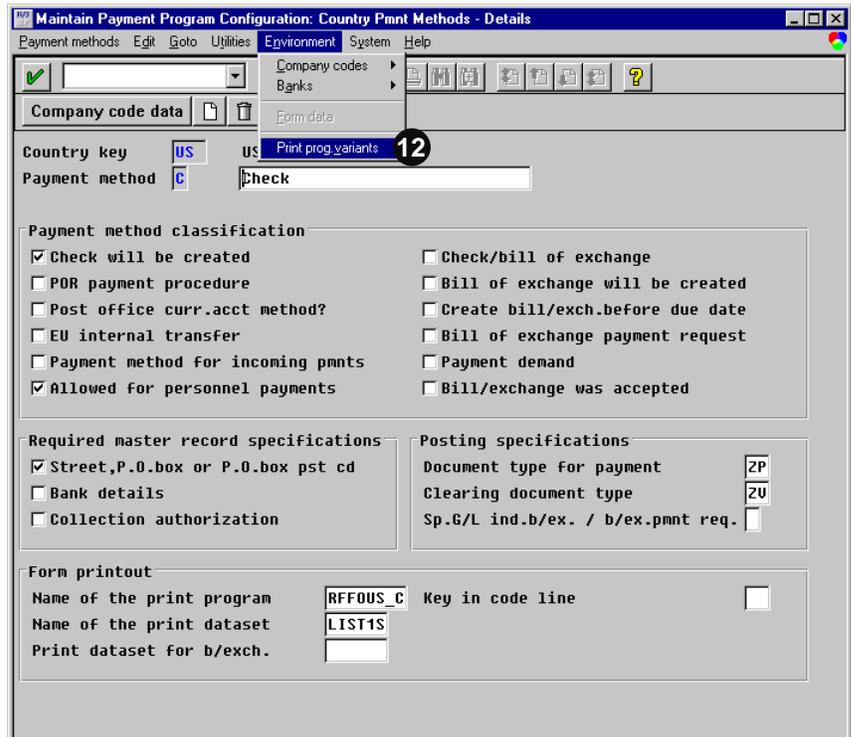
10. Double click the appropriate country.



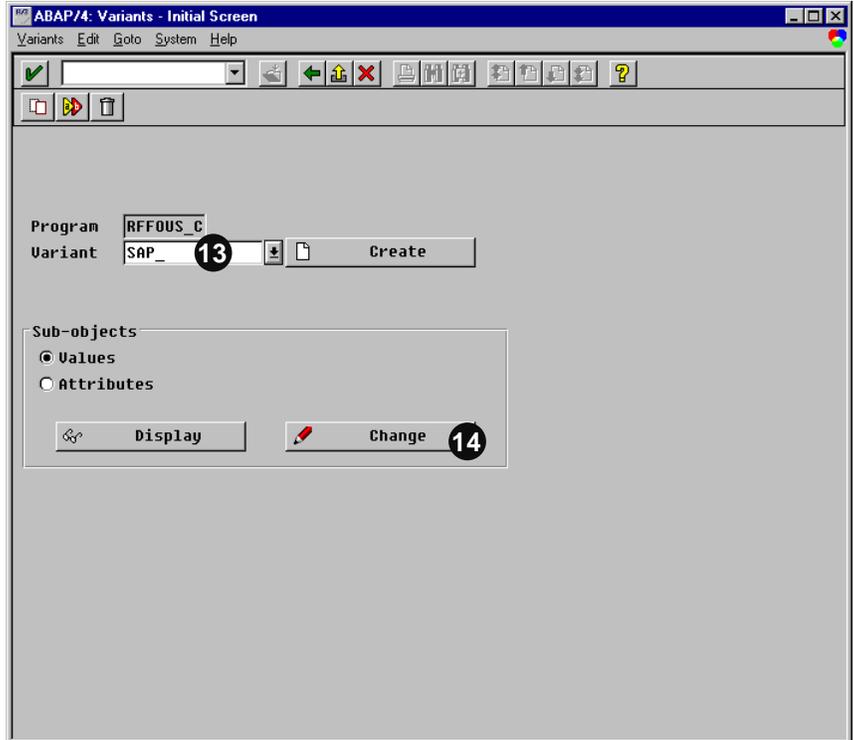
11. Double click the appropriate payment method.



12. Choose *Environment* → *Print prog. Variants*.



13. Enter the name of your variant (z1).
14. Click *Change*.

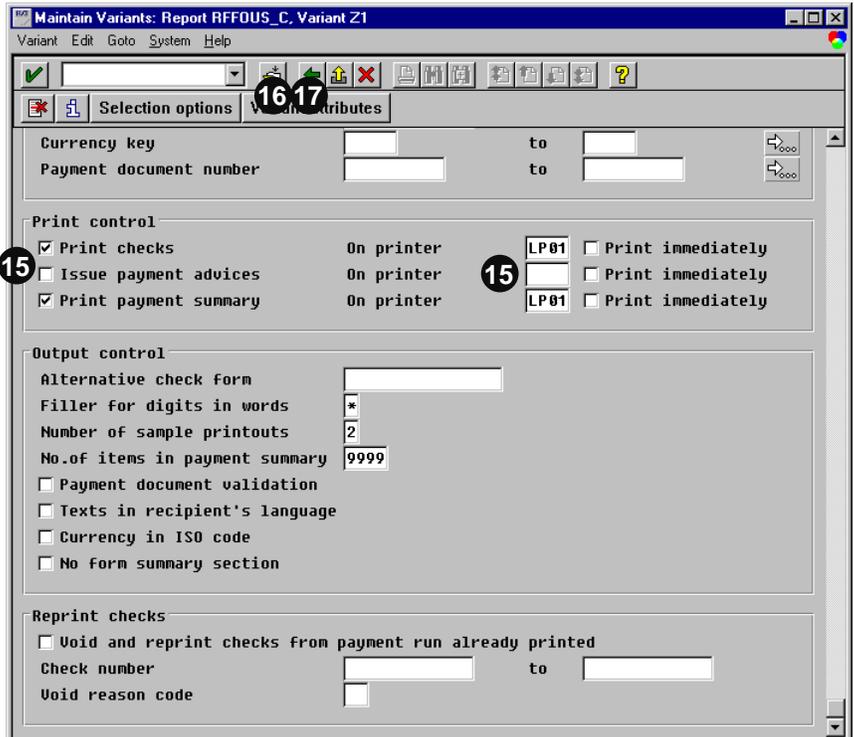


Here you can see the bottom of the *Maintain Variants: Report RFFOUS\_C, Variant Z1* screen.

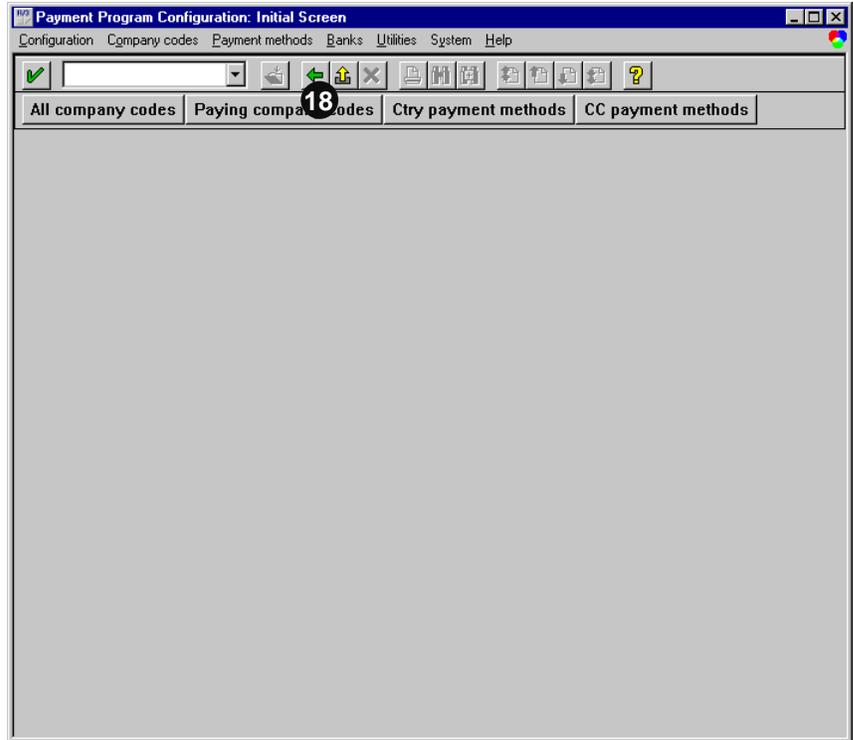
15. Select *Print checks* and *Print payment summary* to get the checks and the summary. Enter different printer names in the corresponding *On printer* fields.
16. Click *Save*.

If you use the CTS, specify a transport request after saving.

17. Click *Back* five times to return to the initial payment program customizing screen in step 9.



18. Click *Back* three times to completely exit.



# Chapter 8: SAPscript Control Commands

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The functionality of the SAPscript editor is determined by a number of commands, which you can either choose from the menu or call with function keys. These commands edit the text in the editor based on your requirements, and commands are immediately executed.

In contrast, SAPscript recognizes another type of commands, the control commands, which:

- Correspondingly influence the output formatting
- Are not interpreted by the SAPscript editor
- Only affect the SAPscript Composer

The Composer is a program that converts text from the editor display into the print display. This program formats the line and pages where symbols are replaced by their current values and text formatting is based on the paragraph and the character style formats.

## Overview of SAPscript Control Commands

ADDRESS	Formatting of addresses
BOTTOM, ENDBOTTOM	Define footer text in a window
BOX, POSITION, SIZE	Boxes, lines and shading
CASE, ENDCASE	Case distinction
DEFINE	Value assignment to text symbols
HEX, ENDHEX	Hexadecimal values
IF, ENDIF	Conditional text output
INCLUDE	Include other texts
NEW-PAGE	Explicit forms feed
NEW-WINDOW	Next window MAIN
PRINT-CONTROL	Insert print control character
PROTECT, ENDPROTECT	Protect from page break
RESET	Initialize outline paragraphs
SET COUNTRY	Country-specific formatting
SET DATE MASK	Formatting of date fields
SET SIGN	Position of +/- sign
SET TIME MASK	Formatting of time fields
STYLE	Change style
SUMMING	Summing variables
TOP	Set header text in window MAIN

## Overview of Formatting Options

Formatting options format variables and override the format described in the *Dictionary*. Formatting options are always specified within &-& variable brackets.

Exponent for floating point numbers	Specifying an exponent for floating point values
Fill characters	Replacing leading spaces with fill characters
Ignoring conversion rules	Ignoring conversion rules from Dictionary
Leading sign to the left	Leading sign of numeric values is on the left
Leading sign to the right	Leading sign of numeric values is on the right
Number of decimals	Specifying the number of decimal places
Offset	Specifying an offset of n characters
Omitting leading zeros	Omitting the leading zeros
Omitting the leading sign	Omitting the leading sign of numeric values
Omitting the separator for 'Thousands'	Omitting the separator for "Thousands" in numeric values
Output length	Specifying the output length
Preceding and subsequent text	Specifying preceding and subsequent text for variables
Right-justified output	Right-justified output within a specified output length
Space compression	Reducing spaces between words of one variable
Suppressing initial values	Suppressing output of initial values

## Syntax of Control Commands

SAPscript control commands are entered, changed, or deleted in the SAPscript editor in the same way as other text lines. However, they differ from normal lines in the following ways:

- In the tag column, indicate control commands with the paragraph format /:
- Enter the command in the line.  
All key words and specifications, not defined in quotes as literal, are automatically converted to upper case.
- Enter the complete control command and the necessary parameters on one line.
- Enter only one control command per line.
- Editor formatting does not affect lines with control commands.

If the control command is unknown or syntactically incorrect, the command line is treated as a comment line, and is not interpreted or printed.



If a parameter of a control command is written in parentheses, [], on the following pages, then this parameter is optional for the command.



Some of the control commands are global settings, which are valid until they are explicitly switched off. Therefore it is important to know that, on a page, the MAIN window is always processed first. For example, if you want to set the date format with the control command SET DATE FORMAT and this format must be valid for the entire layout set, then specify this command at the top of MAIN.

## ADDRESS: Formatting of addresses

The command ADDRESS - ENDADDRESS formats an address according to the postal standards of the destination country defined in the parameter COUNTRY. The reference fields are described in the structure ADRS. Both constants and symbols can be assigned to the parameters.

### Syntax:

```
/: ADDRESS [DELIVERY] [PARAGRAPH a] [PRIORITY p] [LINES l]
/: TITLE title
/: NAME name1[ ,name2[ ,name3[ ,name4]]]
/: STREET street
/: POBOX PO box [CODE zip code]
/: POSTCODE zip code
/: CITY town1[ ,town2]
/: REGION region
/: COUNTRY country
/: FROMCOUNTRY from country
/: ENDADDRESS
```

Both formatting data and address data are parameters. Address data is formatted for output based on the COUNTRY, PRIORITY and LINES parameters. As the default, the P.O. Box is used, if it is available, rather than the street address.

- **DELIVERY** defines the street address.  
If this parameter is selected, the system prints the street address on the layout output instead of the P.O. Box.
- **PARAGRAPH** defines in which paragraph format the address is output.  
If the parameter is not defined, the address is output in the default paragraph format.
- **PRIORITY** defines which address lines can be omitted if there is not enough space on the output.  
You can enter a combination of the following values:
  - A form of address

- P mandatory blank line 1
  - Q mandatory blank line 2
  - 2 name2
  - 3 name3
  - 4 name4
  - L country name
  - S line for the street
  - O line for the city
- *LINES* define how many lines are available to format the address.  
If the address data cannot be completely formatted due to an insufficient number of lines, the data entered in the parameter *PRIORITY* is omitted. If the *LINES* specification is missing and this command is in a layout set window whose type is not *MAIN*, the lines available for the address layout are automatically calculated with the current output line item and window size.
  - *TITLE* is a required form of address.
  - *NAME* means that up to four separate names, separated by commas, can be defined.
  - *STREET* means the street specification, including address number.
  - *POBOX* is the Post Office box number.
  - *CODE* is the P.O. box, postal, or zip code, if this code is different from the postal code of the city.
  - *POSTCODE* is city's postal, or zip, code.
  - *CITY* means that up to two place names can be defined.
  - *REGION* determines the administrative area.
  - *COUNTRY* specifies the country based on specific postal standards and the address format.
  - *FROMCOUNTRY* defines in which language the destination country's name is formatted. In EEC countries, only the international country identification letter is placed, with a hyphen, before the postal code.

**Example:**

```
/: ADDRESS
/: TITLE 'Company'
/: NAME 'Widget Technology, Inc.', 'All Kind of Widgets'
/: STREET '1005 Lido Lane'
/: POBOX '2935' CODE '94400'
/: POSTCODE '94404'
/: CITY 'Foster City'
/: REGION 'CA'
/: COUNTRY 'USA'
/: FROMCOUNTRY 'USA'
/: ENDADDRESS
```

This list generates the following address:

Company  
Widget Technology, Inc.  
All Kind of Widgets  
PO box 2935  
Foster City, CA 94400

If the DELIVERY supplement is specified for the ADDRESS command, then the street, not the P.O. Box, is entered.

Company  
Widget Technology, Inc.  
All Kind of Widgets  
1005 Lido Lane  
Foster City, CA 94404



SAPscript calls the ADDRESS\_INTRO\_PRINTFORM function module to format the address. If the display is not in the required form, check the settings that are valid for this function module (see the documentation on the function module).

## BOTTOM: Define footer text in a window

For MAIN, determine the lines, also known as footer texts, which are always automatically output at the bottom of that window.

Syntax:

```
/: BOTTOM  
:  
:  
/: ENDBOTTOM
```

The text lines between the two commands are output at the bottom of MAIN.

To switch a footer text off, enter the command pair BOTTOM .. ENDBOTTOM with no text lines in between:

```
/: BOTTOM  
/: ENDBOTTOM
```

Footer text no longer appears at the bottom of the page from and including this page.



If there is sufficient space in the window, a footer text is output on the current page.

Only use footer texts in texts that are not printed with application programs, such as dunning texts, ordering texts. These application programs also work with footer texts with the layout set interface, which can lead to unwanted

results.

## BOX, POSITION, SIZE: Boxes, lines, shading

The BOX, POSITION and SIZE commands draw boxes, lines, and shadows. Within any particular layout set, these commands specify window or passage of window text can be output in a frame or with shadowing. The SAP printer drivers based on page-oriented printers (the HP LaserJet PCL-5 driver HPLJ4, the Postscript driver POST, the Kyocera Prescribe driver PRES) use these commands when creating output. Line printers and non-supported page-oriented printers ignore these commands. The resulting output may be viewed in the SAPscript print previewer.

Syntax:

1. `/: BOX [XPOS] [YPOS] [WIDTH] [HEIGHT] [FRAME] [INTENSITY]`
2. `/: POSITION [XORIGIN] [YORIGIN] [WINDOW] [PAGE]`
3. `/: SIZE [WIDTH] [HEIGHT] [WINDOW] [PAGE]`

### BOX

Syntax:

`/: BOX [XPOS] [YPOS] [WIDTH] [HEIGHT] [FRAME] [INTENSITY]`

This command draws a box of the specified size at the specified position. For each parameter (XPOS, YPOS, WIDTH, HEIGHT, and FRAME), both a measurement and a unit of measure must be specified. The INTENSITY parameter should be entered as a percentage between 0 and 100.

- XPOS, YPOS specify the upper left corner of the box, relative to POSITION command values. Default is the values specified in the POSITION command.  
The following calculation is performed internally to determine the absolute output position of a box on the page:  
 $X(\text{abs}) = X\text{ORIGIN} + X\text{POS}$   
 $Y(\text{abs}) = Y\text{ORIGIN} + Y\text{POS}$
- WIDTH determines the width of the box.  
Default: WIDTH value of the SIZE command.
- HEIGHT determines height of the box.  
Default: HEIGHT value of the SIZE command.
- FRAME determines the thickness of frame.  
Default: 0 (no frame).
- INTENSITY determines the box contents as a grayscale percentage.  
Default: 100 (full black)

When determining the measurements, use decimal numbers to specify literal values (like ABAP/4 numeric constants) and enclose these values in inverted commas. Use a period for the decimal point character. See also the examples listed below.

Use the following units of measure:

- TW (twip)

- PT (point)
- IN (inch)
- MM (millimeter)
- CM (centimeter)
- LN (line)
- CH (character).

The following conversion factors apply:

- 1 TW = 1/20 PT
- 1 PT = 1/72 IN
- 1 IN = 2.54 CM
- 1 CM = 10 MM
- 1 CH = height of a character relative to the CPI specification in the layout set header
- 1 LN = height of a line relative to the LPI specification in the layout set header

**Examples:**

```
/: BOX FRAME 10 TW
```

Draws a frame around the current window with a frame thickness of 10 TW (= 0.5 PT).

```
/: BOX INTENSITY 10
```

Fills the window background with shadowing having a gray scale of 10 %.

```
/: BOX HEIGHT 0 TW FRAME 10 TW
```

Draws a horizontal line across the complete top edge of the window.

```
/: BOX WIDTH 0 TW FRAME 10 TW
```

Draws a vertical line along the complete height of the left hand edge of the window.

```
/: BOX WIDTH '17.5' CM HEIGHT 1 CM FRAME 10 TW INTENSITY 15
```

```
/: BOX WIDTH '17.5' CM HEIGHT '13.5' CM FRAME 10 TW
```

```
/: BOX XPOS '10.0' CM WIDTH 0 TW HEIGHT '13.5' CM FRAME 10 TW
```

```
/: BOX XPOS '13.5' CM WIDTH 0 TW HEIGHT '13.5' CM FRAME 10 TW
```

Draws two rectangles and two lines to construct a table of three columns with a highlighted heading.

## POSITION

Syntax:

```
/: POSITION [XORIGIN] [YORIGIN] [WINDOW] [PAGE]
```

This command sets the origin for the coordinate system used by the XPOS and YPOS parameters of the BOX command. When a window is first started, the POSITION value is set to refer to the upper left corner of the window (default setting). If a parameter value does not have a leading sign, then its value is interpreted as an absolute value, which is a value that specifies an offset from the upper-left corner of the output page. If a parameter value is specified with a leading sign, then the new value of the parameter is calculated relative to the old value. If a parameter specification is missing, then this parameter is unchanged.

- XORIGIN, YORIGIN is the origin of the coordinate system.
- WINDOW sets the values for the left and upper edges to be the same of those of the current window (default setting).
- PAGE sets the values for the left and upper edges to be the same as the current output page (XORIGIN = 0 cm, YORIGIN = 0 cm).

### Examples:

```
/: POSITION WINDOW
```

Sets the origin for the coordinate system to the upper-left corner of the window.

```
/: POSITION XORIGIN 2 CM YORIGIN '2.5 CM'
```

Sets the origin for the coordinate system to a point 2 cm from the left edge and 2.5 cm from the upper edge of the output page.

```
/: POSITION XORIGIN '-1.5' CM YORIGIN -1 CM
```

Shifts the origin for the coordinates 1.5 cm to the left and 1 cm up.

## SIZE

Syntax:

```
/: SIZE [WIDTH] [HEIGHT] [WINDOW] [PAGE]
```

This command sets the values of the WIDTH and HEIGHT parameters used in the BOX command. When a window is first started, the SIZE value is set to the same values as the window (default setting). If one of the parameter specifications is missing, then no change is made to its current value. If a parameter value does not have a leading sign, then its value is interpreted as an absolute value. If a parameter value is specified with a leading sign, then the new value of the parameter is calculated relative to the old value.

- WIDTH, HEIGHT sets the dimensions of the rectangle or line.
- WINDOW sets the values for the width and height relative to the values of the current window (default setting).
- PAGE sets the values for the width and height to the values of the current output page.

### Examples:

```
/: SIZE WINDOW
```

Sets WIDTH and HEIGHT to the current window dimensions.

```
/: SIZE WIDTH '3.5' CM HEIGHT '7.6' CM
```

Sets WIDTH to 3.5 cm and HEIGHT to 7.6 cm.

```
/: POSITION WINDOW
```

```
/: POSITION XORIGIN -20 TW YORIGIN -20 TW
```

```
/: SIZE WIDTH +40 TW HEIGHT +40 TW
```

```
/: BOX FRAME 10 TW
```

A frame is added to the current window. The frame edges extends beyond the window itself, to avoid obscuring the leading and trailing text characters.

### CASE: Case distinction

The CASE command is a special case of multi-level case distinction with IF commands. As a condition for the different cases, only one symbol can be queried for equality with different values.

Syntax:

```
/: CASE symbol
```

```
/: WHEN value1
```

```
:
```

```
/: WHEN value2
```

```
:
```

```
/: WHEN value n
```

```
:
```

```
/: WHEN OTHERS.
```

```
:
```

```
/: ENDCASE
```

The symbol entered in the CASE line is formatted. If it has a value specified in the individual WHEN lines, the text following the valid WHEN line is output. If none of the listed values apply, the lines between the WHEN-OTHERS line and ENDCASE are output. The WHEN-OTHERS case is optional. Comparison is always carried out as a literal comparison as for the IF command.



ENDCASE must end a CASE command, but the WHEN-OTHERS command is optional.

## DEFINE: Value assignment to text symbols

Text symbols receive their value through an explicit assignment. This assignment can be made interactively in the editor by choosing *Include* → *Symbols* → *Text*. This step lists all the text symbols of a text module and those of the allocated layout set. If the transaction is exited, the contents defined in this way are lost. To continue printing the text module, you would have to enter the symbol values again.

The DEFINE command allows you to anchor this value assignment in the text and to have it available when you next call up the text. Furthermore, you can allocate another value to a text symbol in the course of the text.

Syntax:

```
/: DEFINE &symbolname& = 'value'
```

**Example:**

```
/: DEFINE &re& = 'Your correspondence of 3/17/94'
```

**Example:**

```
/: DEFINE &symbol1& = 'xxxxxxx'  
/: DEFINE &symbol2& = 'yyy&symbol1&'  
/: DEFINE &symbol1& = 'zzzzzzz'
```

Result: &symbol2& → yyyzzzzzzz

The assigned value may have a maximum of 60 characters, but it can also contain more symbols. When a symbol is defined using DEFINE, symbols which occur in the value are not immediately replaced by their value. They are replaced only when the target symbol is output. If operator := is used in DEFINE, the symbols that occur in the value to be assigned are immediately replaced by their current values. The resulting character string is only then assigned to the target symbol when all occurring symbols have been replaced. The length of the value is limited to 80 characters, and the target symbol must be a text symbol.

Syntax:

```
/: DEFINE &symbolname& := 'value'
```

## HEX: Hexadecimal Data

This command sends printer commands in a printer language directly to a printer that supports that language. SAPscript does not interpret the data enclosed by the HEX and ENDHEX command pair, but inserts unchanged data into the output stream. This technique allows objects with a pixel-oriented format to be printed as part of a SAPscript text. The HEX and ENDHEX command pair enclose the printer commands and data as hexadecimal text, so that the printer formatting routines interpret each successive pair of characters as a single hexadecimal value in the 0..255 range.

The characters 0..9 and A..F to represent the values 10..15 are valid hexadecimal characters. The text may also include comment lines (these begin with /\* in the format column), which will not be interpreted as hexadecimal data but are simply passed over by the formatting routines.

**Syntax:**

```
/: HEX [TYPE printer_language]
      :
      :
/: ENDHEX
```

HEX denotes the start of the hexadecimal data. Subsequent text lines are interpreted as described above. If the TYPE parameter is present, the data will be sent to the printer only if the printer understands the specified printer language. The following printer languages are currently supported:

- POST (Postscript)
- PRES (Kyocera Prescribe)
- PCL (HP Printer Control Language)

```
/: HEX [TYPE printer_language] [XPOS x_position] [YPOS y_position]
```

Before the hexadecimal data is output, the output cursor is set to the absolute position indicated by the specified X and Y position parameters. If either the X or the Y position is not specified, then 0 will be assumed for this parameter.

```
/: HEX [TYPE printer_language] [HEIGHT height] [LEFT left_indentation]
```

The HEIGHT parameter determines the amount of space to be reserved on the page for the output of the hexadecimal data. Any text after ENDHEX will be output below this point. If the LEFT parameter is also specified, then the output of the hexadecimal data will be indented from the left margin by the specified amount.

**Examples:**

```
/: HEX TYPE PCL HEIGHT '7.5' CM LEFT '2.25' CM
/* Creator: report ZQVNT30 date 19940705 time 125129 user SAPSCRIPT
/= 1B2A7230461B2A743735521B2A7231411B2A62304D1B2A62343057FFFFFFFFFFFF
/= FF1B2A62343057FFFFFFFFFFFFC0007D00DFC0F7D00000000000000000000017
/: ENDHEX
```

This data will be printed only by an HP PCL printer (7.5 cm of space will be allocated on the page for the output of the data and the output cursor will be indented 2.25 cm to the right of the layout set window edge).



The RSTXLDMC program uploads correctly formatted pixel data to the R/3 system and prepares it as a HEX-ENDHEX control command. This data can then be saved as normal SAPscript text.

## IF: Conditional text output

With the IF control command, define those lines that are output under certain conditions. If the logical expression entered for the IF command is fulfilled, the lines parenthesized by IF ... ENDIF are output. If this expression is not enclosed in parentheses, the commands are ignored.

Syntax:

```
/: IF Condition
   :
   :
/: ENDIF
```

In the condition, the following relational operators are possible:

- = or *EQ* equals
- < or *LT* less than
- > or *GT* greater than
- <= or *LE* less than or equal to
- >= or *GE* greater than or equal to
- <> or *NE* not equal

As logical link operators use:

- *NOT*
- *AND*
- *OR*

The sequence of processing the logical operations and the sequence of processing the conditions is always from left to right. There is no order of binding, and bracketing is not allowed.

Comparison is always carried out as a literal comparison, that is, symbols are compared in their formatted form as a character string and not with their internal representation. This comparison must be taken into account for program symbols whose format depends on different parameters. Examples include currency fields that are output with different number of places after the decimal point depending on the currency key, or that use a comma or a period as the decimal separator depending on the setting.

The IF command can be extended to make a two-sided case distinction with the ELSE command. If the specified IF condition is true, then the lines listed between IF and ELSE are formatted, otherwise the lines between ELSE and ENDIF are formatted.

Syntax:

```
/: IF Condition
   :
/: ELSE
   :
/: ENDIF
```

A multi-level case distinction is possible using the ELSEIF command.

Syntax:

```
/: IF Condition
  :
/: ELSEIF Condition
  :
/: ELSE
  :
/: ENDIF
```

You can use as many ELSEIF commands as required. The specification of an ELSE command is optional in this case.



- The condition must not extend over several lines, and must be contained in one line with the IF or ELSEIF command.
- IF commands can also be nested.
- An IF command must always end with ENDIF. If this command is forgotten, and if the condition is not true, nothing more is output after the IF command.
- If a syntax error is found when interpreting these commands, the corresponding command is not executed. This can have various effects on the following text output. If, for example, the IF statement is incorrectly structured, since IF is missing, the following ELSEIF or ELSE commands are ignored. All lines are output.

## INCLUDE: Include other texts

Use INCLUDE to include the contents of another text into your text. The text to be included exists separately from yours and is only copied at the time of the output formatting. With INCLUDE, since the text is only read and inserted during the output formatting, the most current version of the required text is always available.

Syntax:

```
/: INCLUDE name [OBJECT o] [ID i] [LANGUAGE l] [PARAGRAPH p] [NEW-PARAGRAPH np]
```

The name of the text to be inserted must be specified and can have up to 70 characters. If the text name contains blanks, put it in quotes as a literal. It can also be specified with a symbol. All further parameters of INCLUDE are optional. If these parameters are missing, SAPscript uses default values based on the respective call environment for them.

**Examples:**

```
/: INCLUDE MYTEXT
```

The text MYTEXT is included in the language of the calling text.

```
/: INCLUDE MYTEXT LANGUAGE 'E' PARAGRAPH 'A1'
```

The text with the name MYTEXT and the language E is included, regardless of the language in which the calling text is created. The paragraph format A1 is valid as the standard paragraph for this call.

Optional specifications:

- **LANGUAGE**  
If a language is unspecified, the calling text's language or the layout set is set for the text to be included. If a language is specified, the text is always loaded in this language, regardless of the language of the calling text.
- **PARAGRAPH**  
The text to be included is formatted with its style allocation. With this parameter, the standard paragraph of this style can be redefined for the current call. All \* paragraphs of the inserted text are formatted with the paragraph specified here.
- **NEW-PARAGRAPH**  
The first line of the included text has this format flag, provided it is not a command or comment line. If the optional entry PARAGRAPH (see above) is empty, all \* paragraphs of the included text are formatted with the paragraph np specified with NEW-PARAGRAPH.
- **OBJECT**  
To completely specify a text, create additional specifications about the text object. There are different rules and restrictions for this specification that depends on the calling text's object type. All texts can be included in a layout set. If no object is entered here, TEXT is used (standard texts). With a documentation text (object DOKU), you can only include documentation texts. This object is assumed even if no object is specified in this environment.

Only hypertext or documentation text can be included into a hypertext (object DSYS). If the OBJECT specification is missing, DSYS is set as a default value.

Only standard text (object TEXT), documentation text or hypertext can be included in any other type of text. The default object is TEXT if nothing is entered.

- **ID**  
The text ID allows further text types within an object, is a further part of the text key. If the ID is not entered, the default *Include ID* from table TTXID is used to call text. If the specification is not in this table, the text ID of the calling text is used.

The ID and the object are now the basis of a further consistency check:

- All text IDs are allowed for a layout set.
- Only documentation texts with the text IDs TX (general texts), UO (authorization objects), and documentation texts (with the same text ID as the calling documentation text) may be included in documentation texts.
- All DSYS texts may be included in DSYS texts, regardless of their ID. Documentation texts that will be inserted may only have IDs TX and UO.
- Standard texts with the allowed text IDs, DSYS texts with IDs, and documentation texts with IDs TX and UO may be included in the text types.

## NEW-PAGE: Explicit form feed

SAPscript automatically inserts a page break if MAIN of one page is filled. Using NEW-PAGE, a page break can be forced at any point. The text after this command is written on a new page. The form feed is independent of any conditions. The command now outputs the current page.

If you have entered NEW-PAGE without additional parameters, the page defined in the layout set as the next page is accessed. If, however, there are various pages in your layout set, you can jump to any particular next page by specifying the page name.

Syntax:

```
/: NEW-PAGE [page name]
```

### Examples:

```
/: NEW-PAGE
```

The current page is completed and the text in the following lines is written on the next page as determined in the layout set.

```
/: NEW-PAGE S1
```

Same as before, but S1 is accessed as the next page.



If an explicitly specified page for NEW-PAGE is not in the layout set, this page specification is ignored. Make sure that there are no blank lines immediately before a NEW-PAGE command. If an implicit form feed was carried out within these blank lines, this step could lead to an unwanted empty page being printed.

## NEW-WINDOW: Next window MAIN

You can have up to 99 MAIN windows on one page. These windows are distinguished by a serial number (0..98) and assigned in this order. So, with SAPscript, it is possible to print labels or to output text in multiple columns. If one MAIN window is filled, then the next MAIN window on the page is automatically accessed. A page break is inserted at the end of the final MAIN window.

Using NEW-WINDOW, even if the current window is not completely filled, you can explicitly call the next window MAIN. If you are currently in the last MAIN window of the page, the command works as a NEW-PAGE.

Syntax:

```
/: NEW-WINDOW
```

## PRINT-CONTROL: Insert print control character

This command allows you call certain printer functions from SAPscript text. The control characters for the printer cannot be directly entered into your text. First, with the spool transaction SPAD, define a print control that contains the required printer commands. This print control can now be called with the SAPscript command PRINT-CONTROL.

Syntax:

**/: PRINT-CONTROL *name***

The name of the required print control can be entered with or without quotes.



SAPscript has no idea of what is contained in the print control. It cannot check whether the printer commands hidden behind it are functional. If problems result when printing such a text, first print the text without the print controls, and then activate each PRINT-CONTROL command to help you locate the error more easily.

On completion, make sure that the defined print control sequences restore the printer to a defined status. When printing subsequent texts, SAPscript assumes that certain settings are still valid (type font, current page). If these settings are changed by the called printer commands, this change can have unwanted effects.

After performing PRINT-CONTROL, SAPscript inserts a blank at the start of the following line. If this is not required, this line must have the paragraph format “=.”

## PROTECT: Protect from page break

You can determine whether a paragraph should or should not be separated by a page break in the style or layout set. If the attribute page protection is set, then all the lines of this paragraph are always output together on one page. This attribute is linked to the respective paragraph.

It is not beneficial to provide all paragraphs with a page protection attribute to neutralize unwanted page breaks. This event is too dynamic and only results from the current text. Furthermore, you may also want to protect only parts of a paragraph from a page break.

In principle, this problem could be solved with NEW-PAGE by explicitly starting a new page before the affected parts of the text. However, it is complicated to change this procedure. Using NEW-PAGE, if your text is formatted to have no unwanted page breaks, and new lines are inserted and existing ones are deleted, the NEW-PAGE commands inserted after this point will have to be checked and can result in the movement of page breaks.

With the command pair PROTECT .. ENDPROTECT, SAPscript offers the option to individually define protection from a page break. If you parenthesize text with these commands, SAPscript automatically guarantees that all of its lines are printed on one page. If the lines fit on the current output page, they are output there, as if PROTECT was not used. If, however, the space is not sufficient, PROTECT works like a NEW-PAGE and generates a form feed.

So, you can view PROTECT/ENDPROTECT are conditional NEW-PAGE commands, that determine whether the included lines fit into the current window MAIN or not.

Syntax:

```
/: PROTECT  
    :  
    :  
/: ENDPROTECT
```

The lines to be protected lie between the two commands.



- An ENDPROTECT command without a preceding PROTECT command is ineffective.
- If the last ENDPROTECT is missing, it is implicitly assumed at the end of the text.
- PROTECT .. ENDPROTECT commands cannot be nested. If a second PROTECT command is recognized while another is active, the second is ignored.
- If the text between PROTECT and ENDPROTECT is so extensive that it would not fit on an empty page, then only one form feed is generated and the text is normally output. Thus, in this case, the section to be protected is separated by a page break.

## RESET: Initialize outline paragraphs

The RESET command resets the numbering of an outline paragraph to its initial value. If the user does not use RESET, all the outline paragraphs of a text are sequentially numbered. If the name of an outline paragraph is entered in RESET, the numbering of this paragraph, is initialized with subordinate outline levels.

Syntax:

`/: RESET paragraph format`

The paragraph format specifies the outline paragraph to be initialized.

### Example:

Assume that paragraph N1 is defined in the style that you are using. This paragraph should be used for listings and it each time generates an output of a list number. This is the SAPscript editor:

- AS If you want to work with the SAP R/3 System, proceed as follows:
- N1 Make sure that you have a PC
- N1 Switch on the PC
- N1 Click on the SAP icon.
- AS You then reach the SAP logon screen. To log on, you must carry out the following steps:
- `/: RESET N1`
- N1 Enter your user ID
- N1 Enter your password
- N1 Choose the application you require

This text would give the following output:

If you want to work with the SAP R/3 System, proceed as follows:

1. Make sure that you have a PC
2. Switch on the PC
3. Click on the SAP icon.

You then reach the SAP logon screen. To log on, you must carry out the following steps:

1. Enter your user ID
2. Enter your password
3. Choose the application you require

If the RESET command between the two lines is missing, then both of the listings would be sequentially numbered:

If you want to work with the SAP R/3 System, proceed as follows:

1. Make sure that you have a PC
2. Switch on the PC
3. Click on the SAP icon.

At the SAP logon screen, to log on:

4. Enter your user ID
5. Enter your password
6. Choose the application you require

## SET COUNTRY: Country-specific formatting

Some field types are formatted to be country-specific. This includes the display of a date, the decimal point, or the thousands separator. Normally, the display types defined in the user master record are used here. With the control command SET COUNTRY, a format alternative to that in the user master record can be chosen, which is stored country-specifically in table T005X.

Syntax:

```
/: SET COUNTRY Country key
```

This country key can be entered either directly in quotes or with a symbol.

**Example:**

```
/: SET COUNTRY 'CAN'
```

```
/: SET COUNTRY &country key&
```

By entering an empty country name, you can return to the values set in the user master record.

```
/: SET COUNTRY ' '
```

The corresponding ABAP/4 command is called internally by SAPscript.



If the required formats are incorrect, check the settings in table T005X.

## SET DATE MASK: Formatting of date fields

Formatting date fields can be defined with the SAPscript command SET DATE MASK. After executing this command, all the date fields are output with this display.

Syntax:

```
/: SET DATE MASK = 'date mask'
```

In the date mask, the following edit formats can be used:

- DD Day (two-digit)
- DDD Day name abbreviated
- DDDD Day name in full
- MM Month (two-digit)
- MMM Month name abbreviated
- MMMM Month name in full
- YY Year (two-digit)
- YYYY Year (four-digit)

All other characters in the mask are interpreted as text and copied correspondingly.

### Example:

Assume that the current system date is March 1<sup>st</sup> 1994.

```
/: SET DATE MASK = 'Walldorf, DD.MM.YY'
```

&DATE&

Result: Walldorf, 01.03.94

```
/: SET DATE MASK = 'MMMM, DD. YYYY'
```

&DATE&

Result: March, 01. 1994

By specifying an empty string as the date mask, you can switch back to the default display:

```
/: SET DATE MASK = ' '
```

The texts for the month and day names, shortened or in full, are stored language-dependently in table TTDTG under the following arguments:

- %%SAPSCRIPT\_DDD\_dd abbreviated day name
- %%SAPSCRIPT\_DDDD\_dd full day name
- %%SAPSCRIPT\_MMM\_mm abbreviated month name

- %%SAPSCRIPT\_MMMM\_mm      full month name  
  with      dd: day number      01 = Monday,...., 07 = Sunday  
            mm: month number     01 = January,...., 12 = December

## SET SIGN: The Position of +/-

For commercial applications, it is common for the “+/-“ signs to be displayed to the right of the number value. In certain cases, however, it is necessary for these signs to be displayed to the left of the number value. This position can be determined with the control command SET SIGN. All program symbols formatted using this command and that have a “+/-“ sign are displayed in the required fashion.

Syntax:

```
/: SET SIGN LEFT
```

The +/- sign is displayed to the left of the number.

```
/: SET SIGN RIGHT
```

The +/- sign is displayed to the right of the number.

## SET TIME MASK: Formatting of time fields

With the SAPscript command SET TIME MASK, time fields can be alternatively formatted to the standard display.

Syntax:

```
/: SET TIME MASK = 'time mask'
```

The following edit formats can be used in the time mask:

- HH      hours (two-digit)
- MM      minutes (two-digit)
- SS      seconds (two-digit)

All other characters in the mask are interpreted as text and printed correspondingly.

### Example:

Assume that the current time is 10:08:12.

```
/: SET TIME MASK = 'HH:MM'
```

```
&TIME&
```

Result: 10:08

```
/: SET TIME MASK = 'HH hours MM minutes'
```

```
&TIME&
```

Result: 10 hours 08 minutes

By specifying an empty string as a time mask, you can switch back to the default display:

```
/: SET TIME MASK = ' '
```

## STYLE: Change style

The control command STYLE changes style within a text. This other style is used until a new STYLE command is entered. If \* is entered as a style name, switch back to the original style.

Syntax:

```
/: STYLE style
```

```
/: STYLE *
```

If another text module is inserted by choosing *Include* → *Text* and immediately deleted, STYLE is automatically set in the editor. The same occurs if the text contents included in INCLUDE are copied into the text by choosing *Edit* → *Selected area* → *Delete INCLUDE*.

## SUMMING

Program symbols can be added with the SUMMING command. The command needs to be defined only once. Each time that the specified symbol is edited, its current value is added to the sum field. Several program symbols can also be added in a sum field.

Syntax:

```
/:SUMMING program symbol INTO sum symbol
```

Since SAPscript can not dynamically define sum fields, the sum symbol must be in a calling program structure that was declared with TABLES.

## TOP: Set header text in MAIN

In MAIN, lines that are always automatically output at the top of the window, called header texts, can be determined. Header texts can automatically repeat the table heading at the top of every page for an extensive tabular list.

Syntax:

```
/: TOP
```

```
:
```

```
:
```

```
/: ENDTOP
```

Those text lines between the two commands will be output at the top of MAIN.

To switch a header text off, re-enter the command pair TOP .. ENDTOP, with no lines in between:

```
/: TOP
```

```
/: ENDTOP
```

Header text will not appear on subsequent pages.



- If the document window contains text, then the header text is effective from the next page.
- The same applies to deleting a header text. That is, a header text that has already been output can no longer be canceled on the current page.
- Only use header texts in texts that are not printed with application programs, such as dunning texts and ordering texts. These application programs can also work with header texts in the layout set interface, which can lead to unwanted results.

## Syntax of Formatting Options

### Exponent for floating point numbers

How a floating point number is formatted depends on whether an exponent is specified. The mantissa is adjusted by shifting the decimal point and, if necessary, introducing leading zeros, based on the chosen exponent. An exponent value of 0 means that the exponent representation will not be used to display the symbol.

Syntax:

`&symbol (En)&`

Example:

In this example the PLMK-SOLLWERT field is assumed to have the value 123456.78 and to be of data type FLTP.

<code>&amp;PLMK-SOLLWERT&amp;</code>	<code>+1.23456780000000E+05</code>
<code>&amp;PLMK-SOLLWERT (E3)&amp;</code>	<code>+123.456780000000E+03</code>
<code>&amp;PLMK-SOLLWERT (E6)&amp;</code>	<code>+0.12345678000000E+06</code>
<code>&amp;PLMK-SOLLWERT (E0)&amp;</code>	<code>+123456.78000000</code>
<code>&amp;PLMK-SOLLWERT (E)&amp;</code>	<code>+123456.78000000</code>

### Fill characters

Leading spaces in a value can be replaced with a fill character. The character immediately following the F in the specification is used as the fill character.

Syntax:

`&symbol (Ff)&`

Example:

The figure for customer sales in the KNA1-UMSAT field is \$700. The *Dictionary* description of the field specifies an output length of eight.

&KNA1-UMSAT&	700.00
&KNA1-UMSAT ( F* )&	**700.00
&KNA1-UMSAT ( F0 )&	00700.00

## Ignoring conversion rules

SAPscript conversion routines specified in the *Dictionary* are automatically recognized and used when program symbols are formatted. These conversions can be prevented with the K option.

Syntax:

&symbol (K)&

## Leading sign to the left

The leading sign is normally displayed to the right of a numeric value, except when using a floating point number. This option allows you to specify that the leading sign is placed to the left of the number.

Syntax:

&symbol (<)&

Example:

&ITCDP-TDULPOS&	100.00-
&ITCDP-TDULPOS (<)&	-100.00



The SET SIGN LEFT control command specifies that all subsequent symbols with a numeric value should have a left-justified leading sign. Using this control command means that there is then no need to repeat the < option for each individual symbol.

## Leading sign to the right

The default setting outputs the leading sign to the right of a numeric value. If you used the SET SIGN LEFT to specify that the leading sign should be output before the value, this specification can be overridden for individual symbols to enable these values to be output with the leading sign to the right.

Syntax:

&symbol (>)&



Use the SET SIGN RIGHT control command to switch back to the default setting to output the leading sign.

## Number of decimals

A program symbol of one of the data types DEC, QUAN and FLTP can contain decimal place data. This option overrides the *Dictionary* definition for the number of decimal places to format this symbol value.

Syntax:

```
&symbol(.n)&
```

Example:

The EKPO-MENGE field contains the value 1234.56. The *Dictionary* definition specifies three decimal places and an output length of 17.

```
&EKPO-MENGE&                1,234.560
&EKPO-MENGE(.1)&             1,234.6
&EKPO-MENGE(.4)&             1,234.5600
&EKPO-MENGE(.0)&             1,235
```

## Offset

Specifying an offset of “n” causes the “n” left-most characters of the symbol value will not be displayed. If the offset specified is greater than the length of the value, nothing is output.

Syntax:

```
&symbol+n&
```

Example:

If symbol has the value 123456789, the following will be displayed:

```
&symbol&                    123456789
&symbol+3&                  456789
&symbol+7&                  89
&symbol+12&                 123456789
&symbol+0&                  123456789
```

## Omitting leading zeros

Certain symbol values are output with leading zeros. To suppress these values use the Z option.

Syntax:

```
&symbol(Z)&
```

Example:

Assuming the current date is 1/1/1994.

```
&DAY&                       01
&DAY(Z)&                     1
```

## Omitting the leading sign

Program symbols with numeric values can have a leading sign, which usually appears at the right of the numeric value as a space for positive numbers, or as a minus sign for negative numbers. The S option ensures that the value is formatted without the sign.

Syntax:

```
&symbol ( S ) &
```

Example:

The ITCDP-TDULPOS field contains the value -100.00. The *ABAP/4 Dictionary* definition for this field includes a leading sign.

```
&ITCDP-TDULPOS&                100.00-  
&ITCDP-TDULPOS ( S ) &        100.00
```

## Omitting the separator for "Thousands"

Symbols of the DEC, CURR, INT and QUAN data types are normally formatted with the "thousands" separator character. The T option allows you to specify that this separator character should be omitted.

Syntax:

```
&symbol ( T ) &
```

Example:

The EKPO-MENGE field contains the value 1234.56. The *Data Dictionary* definition specifies three decimal places and the output length is set to 17.

```
&EKPO-MENGE&                    1,234.560  
&EKPO-MENGE ( T ) &            1234.560
```

## Output length

If you need only a part of the symbol value, or if the output has to fit in an on-screen box or field without overlapping the edges of this area, use an output length specification to define how many character positions should be copied from the value.

If a length is specified that is greater than the current value length, then spaces are appended to the symbol value.

The character \* specifies the program symbol length. This specification causes the symbol value to be output based on the output length defined in the *ABAP/4 Dictionary*.

Syntax:

```
&symbol ( l ) &
```

Example:

If symbol has the value 123456789.

```
&symbol ( 3 ) &                123  
&symbol ( 7 ) &                1234567
```

An output length specification can be combined with an offset specification. The specified length is then counted from the specified offset position.

```
&symbol+4(3)&           567
```

The SYST-UNAME field contains the logon name of a user called Einstein. The *Dictionary* entry for this field contains an output length of 12.

```
&SYST-UNAME&...        Einstein...
&SYST-UNAME(9)&...     Einstein ...
&SYST-UNAME(*)&...    Einstein  ...
```

## Preceding and subsequent text

In addition to using initial symbol values, additional texts that are output only when the symbol value is no longer the initial value can be specified. You can specify a text to be output immediately before the symbol value (the pre-text), and text to be output immediately after it (the post-text). If the symbol has its initial value, these texts are suppressed.

Syntax:

```
& 'pre-text' symbol 'post-text' &
```



Ensure that the symbol, the pre-text and the post-text, all appear on a single line of the editor. This may mean that you have to use a long line (paragraph attribute = or /=) in the editor.

The apostrophe character delimits these texts. If this character also appears as part of one of these texts, then it must be written twice at this point to avoid misinterpretation. A pre-text or post-text may contain symbols in addition to normal text. These symbols are subject to the restriction that these symbols may not have a pre-text or a post-text.

Example:

The KNA1-PFACH field contains a customer PO Box number. Since “PO Box” is not stored in the field with the value, you would normally write the following for the PO Box line of an address:

```
PO Box &KNA1-PFACH&
```

However, if no “P.O. Box” has been specified then “PO Box” would still appear on its own in the address. Prevent this step by using pre-text and/or post-text (in this case pre-text).

```
PO Box &KNA1-PFACH&           PO Box
&'PO Box 'KNA1-PFACH&
```

If “P.O. Box” is specified, then this information will be displayed with the appropriate text in the usual way.

```
&'PO Box 'KNA1-PFACH&        PO Box 123456
```

## Right-justified output

Symbol values other than numeric values are normally formatted to be left-justified. Right-justified formatting can be specified with the R option. This option has to be used with an output length specification.

Syntax:

```
&symbol(R)&
```

Example:

If symbol has the value 1234.

```
&symbol&                1234  
&symbol(8R)&            1234
```

## Space compression

The symbol value is viewed as a sequence of “words,” each separated from the next by either one or a string of space characters. The C option replaces each string of space characters with a single space and shifting “words” to the left to close gaps. Leading spaces are completely removed. The results are the same as if the *ABAP* command CONDENSE was used.

Syntax:

```
&symbol(C)&
```

Example:

Assuming ' Albert Einstein ' is the symbol value.

```
&symbol&                Albert Einstein  
&symbol(C)&            Albert Einstein
```

## Suppressing initial values

The I option suppresses the output of symbols that still contain their initial value.

Syntax:

```
&symbol(I)&
```

Example:

Assuming KNA1-UMSAT contains the value 0 and the currency is USD.

```
&KNA1-UMSAT&                0.00  
&KNA1-UMSAT(I)&
```

If the field contains an amount other than 0, this value will be output in the usual way.

```
&KNA1-UMSAT&                700.00  
&KNA1-UMSAT(I)&            700.00
```

## System Variables

### &SAPSCRIPT-SUBRC&

After executing an INCLUDE statement, this contains a value that indicates whether the INCLUDE was found or not. This value can be queried with IF....

INCLUDE found = 0 and INCLUDE not found = 4

### &SAPSCRIPT-FORMPAGES&

This contains the total number of pages output in a SAPscript layout set (all output between the functions START\_FORM and END\_FORM). The state of the page counter on the individual form pages (START,HOLD,INC) is not taken into account.



Using this symbol impairs performance, since all output data for every layout set must be retained internally to fill the symbol.



The CONDENSE option cannot be used on the program icon SAPSCRIPT-FORMPAGES (C) without an explicit length specification. This symbol is replaced with a value only after the form has been completely edited, since the total number of pages of a form is first known in the program function END\_FORM or CLOSE\_FORM.

However, the symbol size (number of characters) is reserved correctly when the symbol first occurs, with the current page number. Therefore, only one character is reserved for option C (CONDENSE) on pages 1-9, two characters on pages 10-99, and so on.

### &SAPSCRIPT-JOBPAGES&

This contains the total number of pages output in a SAPscript print run (all output between the functions OPEN\_FORM and CLOSE\_FORM). The state of the page counter on the individual form pages (START,HOLD,INC) is not taken into account.



Using this symbol impairs performance, since all output data for every print job must be retained internally to fill the symbol.

**&SAPSCRIPT-TELELAND&**

This contains the country identifier for the fax destination with fax output with SAPscript (field ITCPO-TDTELELAND for the parameter OPTIONS of function OPEN\_FORM).

**&SAPSCRIPT-TELENUM&**

This contains the local fax number for the fax destination with fax output with SAPscript (field ITCPO-TDTELENUM for the parameter OPTIONS of function OPEN\_FORM).

**&SAPSCRIPT-TELENUME&**

This contains the complete fax number for the fax destination with fax output with SAPscript (field ITCPO-TDTELENUME for the parameter OPTIONS of function OPEN\_FORM).

**Variables of Structure SYST**

All variables of structure SYST, called system variables, can be used in the layout set. Of particular interest are the variables for the system date and time. These variables indicate the date and time that the output was created. For the system date, use SYST-DATUM variable, for the system time, use SYST-UZEIT. Note that you have the formatting options for date and time variables.

# Glossary

<b>Term</b>	<b>Definition</b>
<b>ABAP/4</b>	Advanced Business Applications Programming language.
<b>Access key</b>	The number which that is entered to modify SAP objects. This number is retrieved from the Online Service System (OSS).
<b>Application server</b>	Server where the SAP System runs. The CPU of this computer is used for the applications that you run.
<b>Bar code</b>	Form of representation of numbers and text. Text and numbers are printed with bars of different width.
<b>Character string</b>	Part of a layout set containing formatting information for words within a paragraph.
<b>Client</b>	A client is a legally and organizationally independent subscriber to the system where all business management data is protected against access by other clients.
<b>Correction and Transport System (CTS)</b>	Functionality of the SAP System in order to be able to keep track of modifications to SAP objects as well as on customer objects. The CTS also supports transports between a development system and a productive system.
<b>Customer name range</b>	Range of names that a customer can use for own objects. SAP promises not to deliver any objects within this name range.
<b>Customizing</b>	Adapting the R/3 System to the business processes and business functions of a SAP customer.
<b>Device type</b>	Type of an output device, (e.g., types of printers).
<b>DIN A4</b>	Page format used in Germany and Australia (et al.). DIN is the German abbreviation for the German Institute of Standards. The format is 210 x 279 mm.
<b>GUI</b>	Graphical User Interface. This is how an application is presented on the screen.
<b>Header</b>	<ol style="list-style-type: none"> <li>1. General part of a layout set.</li> <li>2. General part of a document.</li> </ol>
<b>Implementation Guide (IMG)</b>	The IMG is used to guide you through the customizing of your system during implementation or any further changes. For these reasons it provides you with structured views on all customizing activities, the corresponding documentation and some project management facilities.
<b>Item</b>	Part of a document. Items are the positions of a document. Theoretically, the

<b>Term</b>	<b>Definition</b>
	number of items is not limited.
<b>Layout set</b>	A layout set describes the layout of output documents. It contains information about where on a page you want to have which text and variables from the R/3 System.
<b>Layout set element</b>	Part of a layout set.
<b>LETTER</b>	Page format used in USA and Canada (et al.). The format is 8 ½ x 11 inches.
<b>Line spacing</b>	Distance between the top of a line and the top of the following line.
<b>Macro</b>	Set of commands executable by one command.
<b>OSS</b>	SAP's Online Service System. You can get the access key for maintaining objects in your SAP System as well as notes about the R/3 System.
<b>Page</b>	The portion of a layout set or view on a layout set where the names of the pages with a different layout are listed.
<b>Page window</b>	The portion of a layout set or view on a layout set that describes an area on a page layout.
<b>Paragraph</b>	The portion of a layout set or view on a layout set that contains formatting information for a paragraph of text.
<b>Preconfigured client</b>	Client of the R/3 System provided by SAP. This client contains customizing for smaller companies.
<b>Preprinted form</b>	Paper on which the output of the SAP System should be printed. The paper already contains most of the information that is not coming off the SAP System. The form can be a multi-layer form, already containing a company logo or other constant text.
<b>Print control</b>	Sequence of control characters sent to the printer (e.g., a sequence to switch to another font).
<b>Program variant</b>	Named set of preset variables that can be used to start a program with filled parameters.
<b>Report</b>	A program used to read and evaluate data in database tables.
<b>SAPscript</b>	SAP's tool to describe layouts (et al.). With this tool it is possible to create, display and change layout sets.
<b>SAPscript editor</b>	Special editor used by SAPscript.
<b>Standard layout set</b>	Layout set included in the standard R/3 System.
<b>Standard text</b>	Fix text stored in the SAP System.
<b>Structure</b>	Object defined in the Data Dictionary which groups fields together.

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<b>Term</b>	<b>Definition</b>
<b>Sub-structure</b>	Structure which is part of another structure.
<b>Table</b>	Database table defined in the Data Dictionary similar to a structure.
<b>Test print</b>	Output of a layout set with simulated data in order to check the layout.
<b>Text element</b>	<ol style="list-style-type: none"><li>1. Part of the window where the text of a window is defined.</li><li>2. Whole text of a window can be divided in text elements. This is a named fraction of the text of a window.</li></ol>
<b>Transaction</b>	<p>A transaction covers a logical process in the R/3 System. Transaction examples include:</p> <ul style="list-style-type: none"><li>• Generating a list of customers</li><li>• Changing the address of a customer</li><li>• Booking a flight reservation for a customer</li><li>• Executing a program</li></ul> <p>From the user's point of view, it represents a self-contained unit. In dialog programming, it is a complex object that consists of a module pool, screens, etc. It is called with a transaction code.</p>
<b>Transaction Code</b>	<p>The sequence of four characters identifying a transaction.</p> <p>To call a transaction in the R/3 System, enter the transaction code in the command field. For example, SA38 is the code to directly start SAP programs.</p>
<b>Upload layout sets</b>	Inserts layout sets into the R/3 System. The layout sets must exist in a file in ASCII format.
<b>Window</b>	Part of a layout set or view on a layout set containing text and variables. Together with window coordinates a window becomes an area on a page layout.



## **Appendix A: Sample Printouts of the Nine Layout Sets**

The following pages show sample printouts for the layout sets provided on the diskette.

Customer One  
San Francisco, CA 94404

Ship-to address  
Customer One  
1005 Lido Lane  
San Francisco, CA 94404

Order confirmation	
Repeat printout	
Number/Date	6 / 02/07/1996
Reference number/Date	Frank's PO / 02/21/1995
Delivery date	02/07/1996
Customer No.	2

We deliver according to the following terms and conditions: Currency USD  
 Terms of payment    Within 14 days 3.0 % cash discount  
                           Within 30 days 2.0 % cash discount  
                           Within 45 days without deduction  
 Terms of delivery    FOB from plant  
 Weight (gross/net) - Volume - Marking  
 Gross weight            130.000 KG Net weight            130.000 KG

Item	Material	Qty	Description	Price	Price unit	Value
000010	MAT-001	20.000 PC	SL Test1	15.00	USD 1 PC	300.00
000020	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000030	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000040	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000050	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000060	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000070	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000080	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00
000090	MAT-001	10.000 PC	SL Test1	15.00	USD 1 PC	150.00

Customer One  
San Francisco, CA 94404

Number/Date  
6 / 02/07/1996

Page  
2

Item	Material	Qty	Description	Price	Price unit	Value
000100	MAT-001		SL Test1			
		10.000	PC	15.00	USD 1 PC	150.00
000110	MAT-001		SL Test1			
		10.000	PC	15.00	USD 1 PC	150.00
000120	MAT-001		SL Test1			
		10.000	PC	15.00	USD 1 PC	150.00
Items total						1,950.00
Freight		120.00	USD	1	KG 130.000	15,600.00
Percentage Disc		2.000	- %		17,550.00	351.00-
State Sales Tax		0.000			17,199.00	0.00
Final amount						17,199.00

Customer One  
 1005 Lido Lane  
 San Francisco CA 94404

Packing List	
Repeat printout	
Packing List Number/Date	
80000000 / 02/07/1996	
Purchase Order Number/Date	
Frank's PO / 02/21/1995	
Sales Order Number/Date	
6 / 02/07/1996	
Customer Number	
2	

Transport details

Conditions

Shipping conditions: As soon as possible  
 Terms of delivery: FOB from plant  
 Weights (gross/net) - Volume - Marking  
 Gross weight: 130.000 KG  
 Net weight: 130.000 KG

Item	Material Description	Qty	Weight
000010	MAT-001 SL Test1	20.000 PCE	20.000 KG
000020	MAT-001 SL Test1	10.000 PCE	10.000 KG
000030	MAT-001 SL Test1	10.000 PCE	10.000 KG
000040	MAT-001 SL Test1	10.000 PCE	10.000 KG
000050	MAT-001 SL Test1	10.000 PCE	10.000 KG
000060	MAT-001 SL Test1	10.000 PCE	10.000 KG
000070	MAT-001 SL Test1	10.000 PCE	10.000 KG
000080	MAT-001 SL Test1	10.000 PCE	10.000 KG
000090	MAT-001 SL Test1	10.000 PCE	10.000 KG
000100	MAT-001 SL Test1	10.000 PCE	10.000 KG
000110	MAT-001 SL Test1	10.000 PCE	10.000 KG

Customer One  
1005 Lido Lane  
San Francisco CA 94404

Number / Date  
80000000 / 02/07/1996

Page  
2

Item	Material Description	Qty	Weight
000120	MAT-001 SL Test1	10.000 PCE	10.000 KG

Customer One  
San Francisco, CA 94404

**Picking list**

Delivery number/Date  
80000004 / 02/12/1996  
Ship-to party  
2

Shipping information

Shipping point 1  
Plant/Warehouse 1/1

Dates

Picking date 02/12/1996  
Loading date 02/12/1996

Weight - Volume

Gross weight 32.000 KG  
Volume 74.000 FT3

Item	Material	Description	Quantity
000070	MAT-001	SL Test1	1.000 PC
	test line		
	test line		
000080	MAT-001	SL Test1	2.000 PC
	test line		
	test line		
000090	MAT-001	SL Test1	5.000 PC
	test line		
	test line		
000100	MAT-001	SL Test1	1.000 PC
	test line		
	test line		
000110	MAT-001	SL Test1	2.000 PC
	test line		
	test line		
000120	MAT-001	SL Test1	5.000 PC
	test line		
	test line		
000010	MAT-001	SL Test1	1.000 PC
	test line		
	test line		
000020	MAT-001	SL Test1	2.000 PC
	test line		
	test line		
000030	MAT-001	SL Test1	5.000 PC
	test line		
	test line		

Customer One  
San Francisco, CA 94404

Delivery number/Date  
80000004 / 02/12/1996

Page  
2

Item	Material	Description	Quantity
000040	MAT-001	SL Test1	1.000 PC
test line			
test line			
000050	MAT-001	SL Test1	2.000 PC
test line			
test line			
000060	MAT-001	SL Test1	5.000 PC
test line			
test line			

Customer One  
San Francisco, CA 94404

Invoice	
Number/Date	90000000 / 02/07/1996
Reference number/Date	Frank's PO / 02/21/1995
Delivery note no./Date	80000000 / 02/07/1996
Order number/Date	6 / 02/07/1996
Customer number	2

Conditions Currency USD  
 Terms of payment Up to 02/21/96 you receive 3.0 % discount  
 Up to 03/08/96 you receive 2.0 % discount  
 Up to 03/23/96 without deduction  
 Terms of delivery FOB from plant  
 Weights (gross/net) - Volume - Marking  
 Gross weight 130.000 KG Net weight 130.000 KG

Item	Material	Qty	Description	Price	Price unit	Value
000010	MAT-001		SL Test1			
		20.000 PC	15.00	USD	1 PC	300.00
000020	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000030	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000040	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000050	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000060	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000070	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000080	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00
000090	MAT-001		SL Test1			
		10.000 PC	15.00	USD	1 PC	150.00

Customer One  
San Francisco, CA 94404

Invoice no./Date  
90000000 / 02/07/1996

Page  
2

Item	Material	Qty	Description	Price	Price unit	Value
000100	MAT-001	10.000	SL Test1	15.00	USD 1 PC	150.00
000110	MAT-001	10.000	SL Test1	15.00	USD 1 PC	150.00
000120	MAT-001	10.000	SL Test1	15.00	USD 1 PC	150.00
Items total						1,950.00
Freight		120.00	USD	1	KG 130.000	15,600.00
Percentage Disc		2.000	%		17,550.00	351.00
State Sales Tax		0.000			17,901.00	0.00
Final amount						17,901.00
Amount qualifying for cash discount						17,901.00

ACME Bicycle Parts Company  
 1929 Lombard Street  
 Suite 111  
 San Francisco, CA 94133

Purchase order	
PO number/date	100002 / 02/07/1996

Please deliver to:  
 Plant 1  
 950 Tower Lane  
 Foster City, 94404  
 United States

Delivery date: 03/18/1996

Item	Material Order qty.	Unit	Description	Price per unit	Net value
00010	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00020	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00030	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00040	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00050	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00060	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00070	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00080	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00
00090	DMW-1 1,000	Each	Bicycle handle bars	10.00	10,000.00

ACME Bicycle Parts Company  
 1929 Lombard Street  
 San Francisco, CA 94133

PO number/date  
 100002 / 02/07/1996

Page  
 2

Item	Material Order qty.	Unit	Description	Price per unit	Net value
00100	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00110	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00120	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00130	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00140	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00150	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00160	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00170	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00180	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00190	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00200	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
00210	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00

ACME Bicycle Parts Company  
1929 Lombard Street  
San Francisco, CA 94133

PO number/date  
100002 / 02/07/1996

Page  
3

---

Item	Material Order qty.	Unit	Description	Price per unit	Net value
00220	DMW-1	1,000 Each	Bicycle handle bars	10.00	10,000.00
Total net value excl. tax USD					220,000.00

---

=====

Test print

Please accept this check as settlement for the items listed below subject to the goods and services supplied and the invoice therefore being correct.

Document	Your document	Date	Gross	Deductions	Net
XXXXXXXXXX	XXXXXXXXXXXXXXXXXX	01/01/1900	0.00	0.00	
0.00	XX				
Check total					0.00

Document	Check number	Date	Currency	Payment amount
XXXXXXXXXX	000005	02/08/1996	XXXXX	XXXXXXXXXXXXXXXXXXXX

Check number                      Payment date                      Vendor  
 000005                              02/08/1996                      XXXXXXXXX

XX  
 XX  
 XX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 P.O. Box XXXXXXXXXXXX  
 XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXX

Test print

Please accept this check as settlement for the items listed below subject to the goods and services supplied and the invoice therefore being correct.

Document	Your document	Date	Gross	Deductions	Net
XXXXXXXXXX	XXXXXXXXXXXXXXXXXX	01/01/1900	0.00	0.00	
0.00	XX				
Check total					0.00

Document	Check number	Date	Currency	Payment amount
XXXXXXXXXX	000006	02/08/1996	XXXXX	XXXXXXXXXXXXXXXXXXXX

Check number	Payment date	Vendor
000006	02/08/1996	XXXXXXXXXX

XX  
 XX  
 XX

XX  
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 P.O. Box XXXXXXXXXXXX  
 XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX

Please accept this check as settlement for the items listed below subject to the goods and services supplied and the invoice therefore being correct.

Document	Your document	Date	Gross	Deductions	Net
19000001		02/08/1996	2,467.45	0.00	2,467.45
19000002		02/08/1996	5,831.77	0.00	5,831.77
19000003		02/08/1996	67,457.88	0.00	67,457.88
19000004		02/08/1996	4,566.90	0.00	4,566.90
19000005		02/08/1996	56.66	0.00	56.66
19000006	PRIV. FRAN	02/08/1996	67,888.99	0.00	67,888.99
19000007	6436456	02/08/1996	4,667.34	0.00	4,667.34
19000008	RUURYHJGJG	02/08/1996	767,575.00	0.00	767,575.00
Carry forward				0.00	920,511.99

Check number	Payment date	Vendor
000014	02/08/1996	1

XX  
 XX  
 XX

ACME Bicycle Parts Company  
 1929 Lombard Street Suite 111  
 San Francisco, CA 94133

Document	Your document	Date	Gross	Deductions	Net
Carry forward				0.00	920,511.99
19000009	45YTY	02/08/1996	5,677.30	0.00	5,677.30
19000010	777567567	02/08/1996	67,567.00	0.00	67,567.00
19000011	FGHFGNNG	02/08/1996	99,965.00	0.00	99,965.00
19000012	FGHRHERYR	02/08/1996	23,423.00	0.00	23,423.00
19000013		02/08/1996	236.12	0.00	236.12
19000014	543645666	02/08/1996	457.33	0.00	457.33
19000015		02/08/1996	78.77	0.00	78.77
19000016		02/08/1996	9.98	0.00	9.98
19000017	645654654B	02/08/1996	6,657.79	0.00	6,657.79

Check total 1,124,584.28

Document	Check number	Date	Currency	Payment amount
17000001	000015	02/08/1996	USD	*****1,124,584.28*

Check number                      Payment date                      Vendor  
 000015                                      02/08/1996                                      1

\*\*\* ONE MILLION ONE HUNDRED TWENTY-FOUR  
 THOUSAND FIVE HUNDRED EIGHTY-FOUR USD  
 and 28/100 \*\*\*

ACME Bicycle Parts Company  
 1929 Lombard Street Suite 111  
 San Francisco, CA 94133

Summary		Check
Bank 1	Company code 1	Payment type C
<hr/>		
Number of created checks		*****1*
Forms with advice notes		*****0*
Printed checks	Sequence	Check number
from	0001	000005
to	0001	000010
Total net amount in USD		*****1,124,584.28*
<hr/>		

Check number	Payment date	Vendor
000010	02/08/1996	1

```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
    
```

**Company Inc.**  
 2505 Main Street  
 Toronto, ON L5N 5R7

Vendor: 209  
 Computer Pro  
 PO box 4711  
 SAN FRANCISCO CA 94169

Page 1 / 1  
 Cheque 0001/9  
 Date 11/12/1996  
 Document 17000015

Invoice No.	Invoice Date	Gross Amount	Discount	Net Amount
	11/12/1996	2,000.00	0.00	2,000.00
<b>Totals:</b>		2,000.00	0.00	2,000.00

ogo

**Company Inc.**  
 2505 Main Street  
 Toronto, ON L5N 5R7

Cheque date	Cheque No.
Date de Cheque	No de Cheque
11/12/1996	1-409 260
	9

Royal Bank of Canada  
 Argientia & Kitimat Branch  
 340 Argientia Road  
 Mississauga, ON L5N 1P9

PAYABLE IN UNITED STATES CURRENCY THROUGH THE MANHATTAN BRONX AND BROOKLYN  
 COLLECTION ARRANGEMENT AT THE ROYAL BANK OF CANADA NEW YORK AGENCY.

\*\* \*TWO  
 THOUSAND\*\*\*\*\*  
 \*\*\*\*\*  
 TO THE ORDER OF  
 PAYEZ A L'ORDRE DE  
 Computer Pro  
 PO box 4711  
 SAN FRANCISCO CA 94169

\*\*\*\*\*2,000.00\* USD  
 Company Inc.

First signature

Second signature

9 026004093;03212-0599-7



**Object list Duplicate**

Date printed: 12/16/1997 16:57  
Page: 001/001

Order: 100000040  
Plant: 0001 - Werk 0001  
Material: 000000000000000010  
Description: Pump



Order status: REL PRT PRC CSER SETC  
MRP Controller: 001 - PERSON 1  
Prod. Scheduler: -  
Reservation No.: 0000000082

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997

Order 100000040 Material 000000000000000010



Reservation 0000000082



Routing header text: Pump  
Seq: 0 Cat: Std.seq.

Confirmation	Work Center	Plant	Oper	Sub op.	Cost Center	Sched. start date/time	Sched. end date/time	Qty to produce	UoM
0000000201	1111	0001	0010		SC-1	12/18/1997 12:37	12/29/1997 16:00	100	EA



assembly of pump

Activity types for operation 0010 Seq. 0	ATyp	Qty	UM	ATyp	Qty	UM
		60	MIN		3,000	MIN
		3,000	MIN			

Components for operation 0010 Seq. 0

Rout	Material No.	IC Date	Unit Qty	SLoc. Batch Plant	Alt Dis	Pha MPI	BK LT	Seqn Oper	Resv
------	--------------	---------	----------	-------------------	---------	---------	-------	-----------	------

0001	000000000000000011	L 12/18/1997	EA					0	
	Cast iron spiral casing		100	0001				0010	



0002	000000000000000012	L 12/18/1997	EA					0	
	Fly wheel CI		100	0001				0010	



**Op. control ticket Duplicate**

Date printed: 12/16/1997 16:58

Page: 001/001

Order: 100000040  
 Plant: 0001 - Werk 0001  
 Material: 000000000000000010  
 Description: Pump



-----  
 Order status: REL PRT PRC CSER SETC  
 MRP Controller: 001 - PERSON 1  
 Prod. Scheduler: -  
 Reservation No.: 0000000082  
 -----

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
 Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997  
 -----

Order 100000040 Material 000000000000000010



-----  
 Routing header text: Pump  
 Seq: 0 Cat: Std.seq.  
 -----

Confirmation	Work Center	Plant	Oper	Sub op.	Cost Center	Sched. start date/time	Sched. end date/time	Qty to produce	UoM
0000000201	1111	0001	0010		SC-1	12/18/1997 12:37	12/29/1997 16:00	100	EA



assembly of pump  
 -----

Activity types for operation 0010 Seq. 0

ATyp	Qty	UM	ATyp	Qty	UM
	60	MIN		3,000	MIN
	3,000	MIN			

-----

**Pick list Duplicate**

Date printed: 12/16/1997 15:48  
Page: 001/001

Order: 100000040  
Plant: 0001 - Werk 0001  
Material: 000000000000000010  
Description: Pump



-----  
Order status: REL PRT PRC CSER SETC  
MRP Controller: 001 - PERSON 1  
Prod. Scheduler: -  
Reservation No.: 0000000082  
-----

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997  
-----

Order 100000040 Material 000000000000000010



-----  
Reservation 0000000082



Rout Item#	Material No. Description	IC Date	Unit Qty	SLoc. Plant	Batch	Alt Dis	Pha MPI	BK LT	Seqn Oper	Resv
0001	000000000000000011 Cast iron spiral casing	L 12/18/1997	EA 100	0001					0 0010	
0002	000000000000000012 Fly wheel CI	L 12/18/1997	EA 100	0001					0 0010	

**Goods issue slip Duplicate**

Date printed: 12/16/1997 15:48

Page: 001/001

Order: 100000040  
 Plant: 0001 - Werk 0001  
 Material: 000000000000000010  
 Description: Pump



Order status: REL PRT PRC CSER SETC  
 MRP Controller: 001 - PERSON 1  
 Prod. Scheduler: -  
 Reservation No.: 0000000082

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
 Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997

Reservation 0000000082 Item 0001



Rout	Material No.	IC Date	Unit	SLoc. Batch	Alt	Pha BK	Seqn
Item#	Description		Qty	Plant	Dis	MPI LT	Oper
0001	000000000000000011	L 12/18/1997	EA				0
	Cast iron spiral casing		100	0001			0010

Goods issue with movement type 261

**Goods issue slip Duplicate**

Date printed: 12/16/1997 15:48

Page: 001/001

Order: 100000040  
 Plant: 0001 - Werk 0001  
 Material: 000000000000000010  
 Description: Pump



Order status: REL PRT PRC CSER SETC  
 MRP Controller: 001 - PERSON 1  
 Prod. Scheduler: -  
 Reservation No.: 0000000082

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
 Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997

Reservation 0000000082 Item 0002



Rout	Material No.	IC Date	Unit	SLoc. Batch	Alt	Pha BK	Seqn
Item#	Description		Qty	Plant	Dis	MPI LT	Oper
0002	000000000000000012	L 12/18/1997	EA				0
	Fly wheel CI		100	0001			0010

Goods issue with movement type 261

**Goods receipt list Duplicate**

Date printed: 12/16/1997 15:48

Page: 001/001

Order: 100000040  
Plant: 0001 - Werk 0001  
Material: 000000000000000010  
Description: Pump



-----  
Order status: REL PRT PRC CSER SETC  
MRP Controller: 001 - PERSON 1  
Prod. Scheduler: -  
Reservation No.: 0000000082  
-----

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997  
-----

Order 100000040 Material 000000000000000010



-----  
*Product:*  

Material	Plant	Date	StorLoc	Qty rec'd	UoM
000000000000000010	0001			100	EA

**Time ticket Duplicate**  
 Date printed: 12/16/1997 15:48  
 Page: 001/001

Order: 100000040  
 Plant: 0001 - Werk 0001  
 Material: 000000000000000010  
 Description: Pump



-----  
 Order status: REL PRT PRC CSER SETC  
 MRP Controller: 001 - PERSON 1  
 Prod. Scheduler: -  
 Reservation No.: 0000000082  
 -----

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
 Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997  
 -----

Confirmation	Work Center	Plant	Oper	Sub op.	Cost Center	Sched. start date/time	Sched. end date/time	Qty to produce	UoM
0000000201	1111	0001	0010		SC-1	12/18/1997 12:37	12/29/1997 16:00	100	EA



assembly of pump  
 -----

Activity types for operation 0010 Seq. 0

ATyp	Qty	UM	ATyp	Qty	UM
	60	MIN		3,000	MIN
	3,000	MIN			

PersNo: Date: Time: Signature:  
 Bulk: Reason: Text:

**Confirmation slip Duplicate**

Date printed: 12/16/1997 15:48

Page: 001/001

Order: 100000040  
 Plant: 0001 - Werk 0001  
 Material: 000000000000000010  
 Description: Pump



-----  
 Order status: REL PRT PRC CSER SETC  
 MRP Controller: 001 - PERSON 1  
 Prod. Scheduler: -  
 Reservation No.: 0000000082  
 -----

Order quantity: 100 EA Scheduled Start Date: 12/18/1997  
 Order type: PP01 - Standard Production Order Scheduled Finished Date: 12/29/1997  
 -----

Confirmation	Work Center	Plant	Oper	Sub op.	Cost Center	Sched. start date/time	Sched. end date/time	Qty to produce	UoM
0000000201	1111	0001	0010		SC-1	12/18/1997 12:37	12/29/1997 16:00	100	EA



assembly of pump  
 -----

Activity types for operation 0010 Seq. 0

ATyp	Qty	UM	ATyp	Qty	UM
	60	MIN		3,000	MIN
	3,000	MIN			

PersNo: Date: Time: Signature:

Bulk: Reason: Text:

Kanban plant 0001

FULL



Material: **SZ-RAW**  
sz-raw

Container: **003**                      Content:                      **100.000 EA**

Supp.area: **BEREICH 1**  
SAP area 1

EMPTY





---

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