valentin
ETIKETTENDRUCKSYSTEME

Operating Manual – English

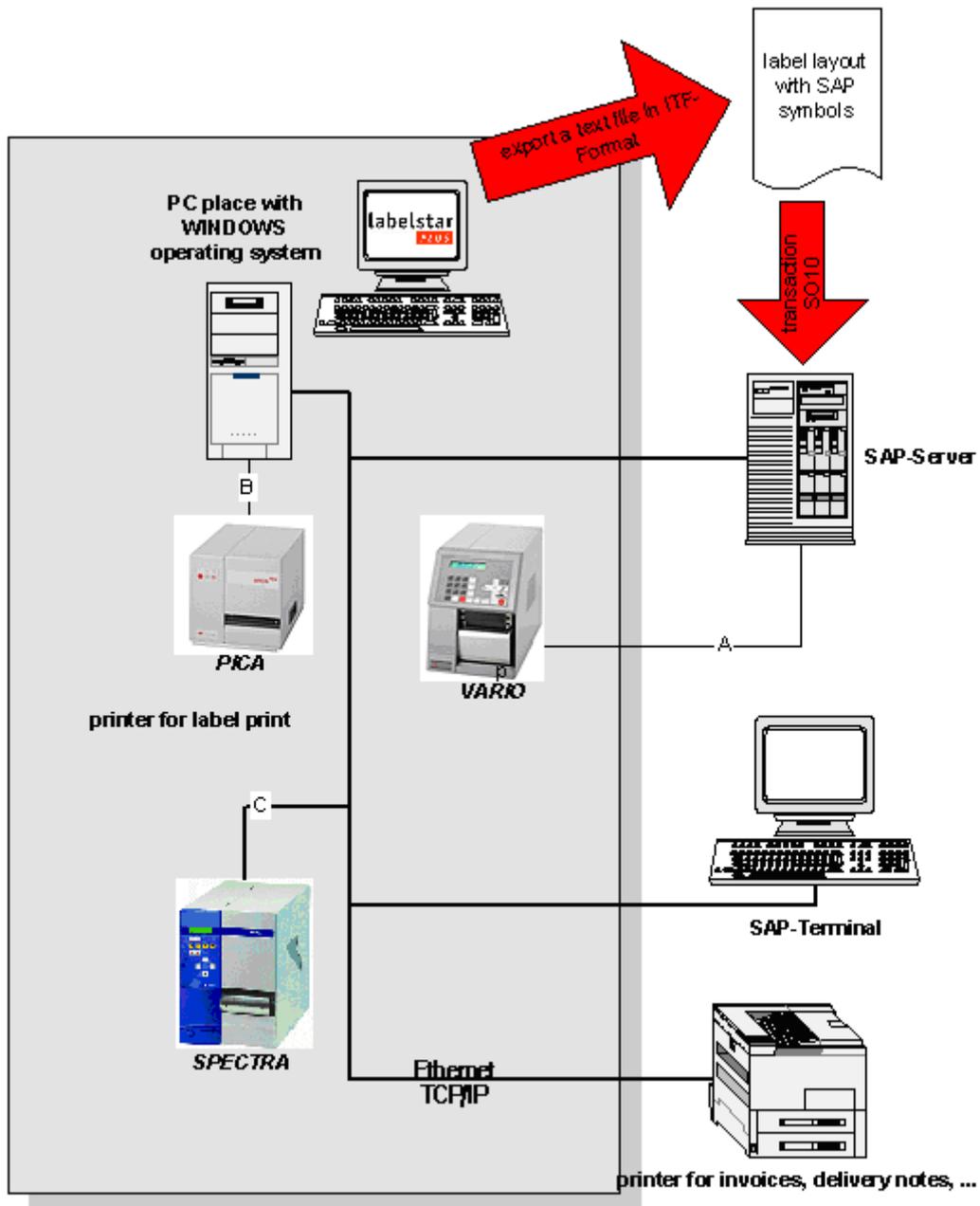# SAP Connection to Valentin Label Printers

SAP® Certified Integration

79.60.002 • March 2006

# GENERAL INFORMATION



label layout with SAP symbols

export a text file in ITF-Format

transaction SO10

PC place with WINDOWS operating system

labelstar

SAP-Server

B

PICA

VARIO

A

printer for label print

C

SAP-Terminal

SPECTRA

Ethernet TCP/IP

printer for invoices, delivery notes, ...

**Extends the application range of SAP R/3 modules by the integration of high-quality bar code label print.**

SAP R/3 supports enterprises with the accomplishment of important operations in financings, manufacturing, personnel management, sales and selling. The integrity of data which off SAP R/3 modules can now be realised in daily business by the direct integration of bar code labels.

By SAP R/3 modules mainly dynamic documents and reports are printed. However, customers desire also the print of high-quality bar code labels with graphics direct in SAP R/3 for applications such as manufacturing, dispatch, article pursuit and stock control. For the print of such labels it is necessary to have a special bar code label printer.

Customers who would like to integrate a bar code label printer in SAP R/3 can either load the printer programming language in a SAPscript layout (upload method) or to use the software for label creation together with an external service (normally Middleware on a NT or Unix server). SAP documentation in SAPnet describes how you can control a label printer direct by SAP R/3.

This documentation describes step by step how you can connect a Valentin label printer and label creation software Labelstar PLUS with a SAP system.

**Avoidance of setup and care at several locations.**

By the use of upload method by an external service the user of SAP R/3 can use the available SAP print services. This avoids the procuring, setup and administration of the application for each single server at the appropriate locations. This concept can reduce considerably the costs for the equipment, shorten the time for implementation and improve the throughput

**High performance and easy to handle SAP R/3 tool for the creation of labels for bar code label printers.**

In order to use the largest advantage from the SAP R/3 upload method, Carl Valentin GmbH with support from SAP and SAP R/3 users extended the label creation software Labelstar PLUS by the export of label data in SAP R/3 ITF format.

By the use of Labelstar PLUS users can now integrate the labelling directly into the existing SAP R/3 application.

**Plug and Print directly in SAP R/3 without programming of SAPscript.**

Labelstar PLUS has user-friendly functions for the creation of labels which support all functions and the high efficiency of Valentin labelling systems. Mentioned below you can find some advantages which result from the connection of Valentin labelling systems and Labelstar PLUS:

- Manual writing of SAPscript unnecessary. The creation of labels and editing of objects is graphically (in minutes instead of days)!

- All Valentin own bar codes are supported, including UCC/EAN 128, PDF417, DataMatrix and MAXICODE. These bar codes offer maximum performance and exactness.

- All Valentin own fonts are supported.

- All bar code and text fields can be linked with any SAP R/3 database fields res. system variables (e.g. &tablename-fieldname& or &SY-UNAME&) by a simple mouse-click.

- Variable graphics (e.g. logos, symbols etc.) can be printed if taken into consideration that data which is in a variable SAP R/3 field is printed.

- The Memory Card manager facilitates the storage of graphics, fonts and formats on printer-based PC cards. This means zero download time for a fast, first label print, and reduces the net loading to a minimum.

**No manual modification before upload in SAP R/3.**

Labelstar PLUS generates automatically SAPscript for Valentin labelling systems in SAP R/3 ITF format (Internal Text Format). A manual modification of this command is not necessary.
Maximum controlling and performance of all functions of Valentin labelling systems.

**All SAP printer drivers were conceived for printing of forms on all usual office printers.**

With exception of Labelstar PLUS, up to now forms were created by the manual entry of SAPscript command. The SAPscript requires that a special SAP R/3 printer driver is installed onto the destination device. Because of the following reasons this concept is not suitable for the print of bar code labels:

- SAP R/3 offers driver for all well-known office printers, but not for bar code label printer.

- SAP R/3 drivers were conceived for the print of forms and reports, but not for bar code labels.

- SAPscript bar code commands are complex, support few symbol statements and are principally developed as fonts. They offer even support of rotation, check digits, narrow stripes and relations and are not supported from special bar code label printers (except by emulation such as PCL etc.).

SAP R/3 supports the print with Windows® printer drivers by the device type SAPWin and SAPlpd. Because of the following reasons this concept is not suitable for the print of bar code labels and special label printers:

- The device type SAPWin does not support certain functions of bar code label printers, such as bar codes, cutter unit, Flash memory, print speed and contrast.

- The device type SAPWin and the Windows® printer drivers for bar code labels have possibly to send the whole label as graphic and have to repeat this for all labels with different data (i.e. slow print and high network loading).

- With the device type SAPwin no support of SAPscript bar codes is given, except you use bar code DLL of a third supplier. These bar codes were downloaded as Bitmap object by Windows® drivers. This can decrease the performance and exactness of bar codes (and is expensive).

- SAPWin does not support the direct print by the server (use of SAPlpd necessary).

**Labelstar PLUS is a graphic SAPscript generator. Print is made directly by SAP R/3 server.**

Labelstar PLUS is a tool for graphic creation of bar code labels which SAPscript generates for the use with Valentin labelling systems. Therefore users do not have to program manually SAPscript for the creation or print of labels.

After the label was created by means of Labelstar PLUS it can be loaded in SAP R/3 easily and fast by SAP R/3 Windows® Client. The label can be printed on any Valentin printer completely independent from location and without any additional software by any other SAP R/3 client. The print is effected directly by the SAP R/3 server. The connection is made with the standard ASCII printer driver.

**Programming of SAPscript unnecessary.**

With the  WYSIWYG software Labelstar PLUS for the creation of labels it is possible to move, change, add or delete formatting. The programming of SAPscript is unnecessary. Label size, fonts, bar code symbols, line space, alignment, logos, lines, circles, ellipses and changing data are specified in the creation. At any time a label can be changed easily and loaded again in SAP R/3 without having to make manual modifications in SAPscript.

**Also complex label applications are supported.**

Complex label applications possibly require that SAPscripts, e.g. for filling of variable fields on base of contents from other fields, must be written. The writing and saving of SAPscript variables can be effected directly by Labelstar PLUS. Label designs can be modified several times without problems without SAPscript has to be modified manually or written anew.

**Labelstar PLUS is a proven solution.**

Labelstar PLUS is already installed at some large SAP R/3 locations.

**Simply and economically with implementation and care.**

Labelstar PLUS of Carl Valentin offers a simple, fast way for printing of complex bar code labels by SAP R/3. Users can rely on the complete data integrity because the files are directly generated from SAP R/3.

Labels can be designed and updated more simple because manual modifications at SAPscript which was generated by Labelstar PLUS are unnecessary. The labels can be printed on almost any native platform directly by the server or SAPlpd, while functionalities and performance of the label creation software for PCs remain. The SAPsript composer shortens the processing time due to the simplified layout statement. By a unique download and saving of labels onto the printer the quantity of data which is to transmit in the network is decreased and the print speed increased. A fast label print can be achieved by saving label formats, graphics onto the optional available memory cards. Mentioned below you can find the most important functions and advantages of Labelstar PLUS:

| Functions | Advantages |
| --- | --- |
| User-friendly WYSIWYG tool for the creation of bar code labels. | For implementation no programming of SAPscript necessary because it is generated automatically (minutes instead of days for the creation). |
| Labelstar PLUS optimises for Valentin labelling systems. | Offers extensive functions and maximum performance with Valentin labelling systems, including maximum print speed, serialisation and variable graphics. |
| Users without programming knowledge can modify labels. | Simple and economical updating. |
| Direct print by each SAP R/3 server. | PCs or SAPlpd as print server unnecessary. This reduces costs and increases print speed. |
| Uses the advantages of existing SAP R/3 print services and SAPscript. | Faster implementation without additional learning curve. This means substantial cost savings. |
| Prints directly bySAP R/3. Procurement, implementation, setup or care of middleware is unnecessary. | Substantial cost savings with implementation at several locations and shortest possible implementation. International companies can reach savings of up to EURO 100,000 and more. |
| SAP R/3: Know-how, support and training from Valentin. | By co-operation with SAP and SAP R/3 users Valentin could gain valuable experiences with bar code printing by SAP R/3. Valentin has own software engineers (Ses), who can help end consumers and their suppliers with the implementation and training. Moreover exists a close partnership with an implementation partner of SAP AG. This is the reason why we can guarantee a competent support even in difficult cases. |

# PREPARATION OF LABEL PRINTER

## Refit option Ethernet

**Attention:** Unplug the printer!
Only experienced staff is allowed to open the printer and to equip the printer with options.
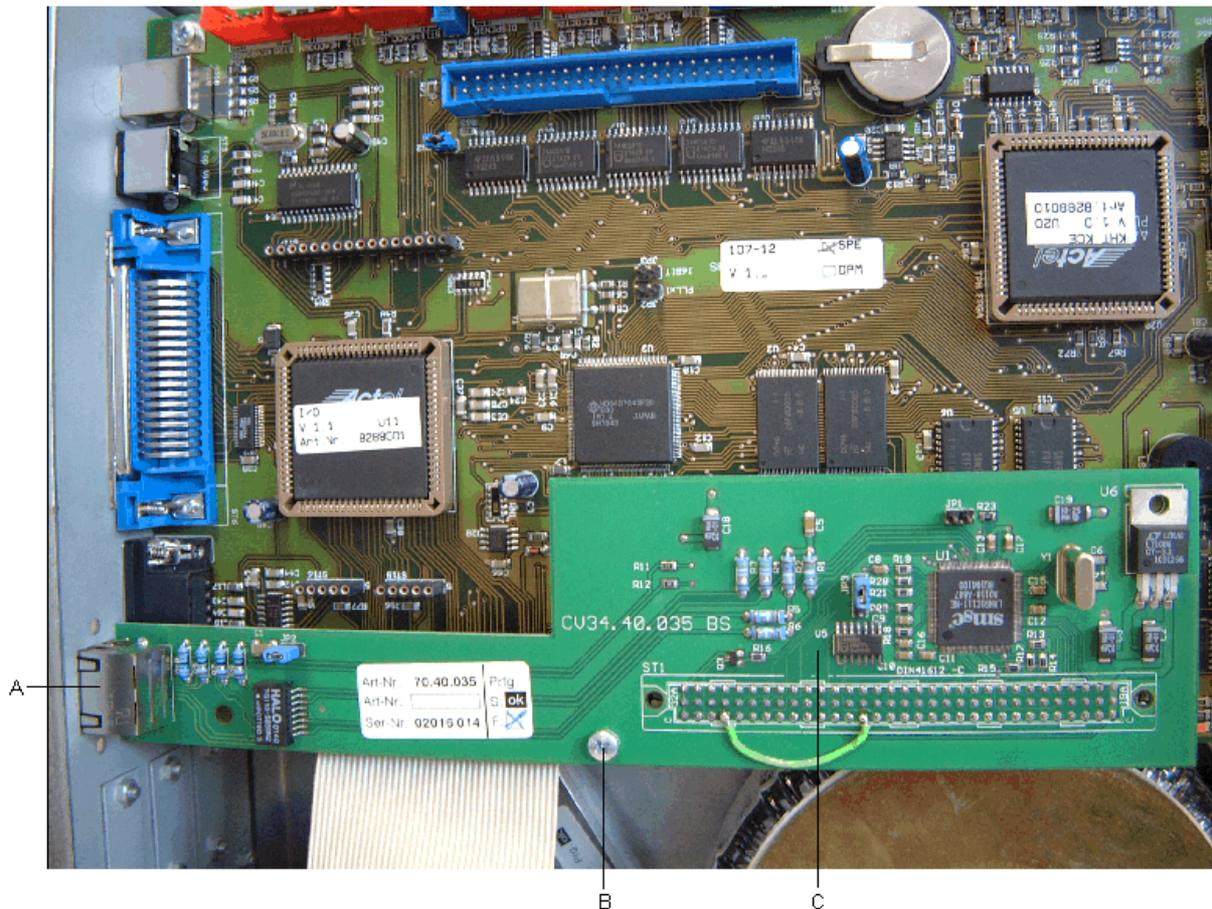


- Remove the left cover of the printer.
  Use 3 screws at the left upper printer edge and 3 screws at the upper edge of chassis.

- Remove the protective conductor at the inside of the printer cover.

- Remove the cover at the two break-through (A).

- Unscrew the fixing screw (B).

- Screw the enclosed distance bolt at this position.

- Guide the Ethernet plate (C) into the break-through (A) and connect it to ST1 onto the CPU.

- Fix the plate with the already removed screw (B) at the distance pin.

- Connect the protective conductor at the inside of the printer cover.

- Install again the printer cover.

## Settings per parameter statements

Example:

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 ... X | 9 |
|--------|---|---|---|---|---|---|---|---------|---|
| SOH | | F | C | L | A | - | - | r | C0A80015 | ETB |

All network parameters start in column 3 with 'L'. In column 4 follows the identification for the corresponding network parameter. In column can follow a further sub-identification. Contrary to other columns, column 8 can have more than 1 sign.

For each parameter exist statements which are taken the rule (limited argument size of 8 signs) into consideration.
Moreover for each parameter exists also a statement with unlimited argument size.
For statement with a limited argument size (8 signs), IP addresses (IP address, network mask, Gateway address) which consist of 32-Bit are transmitted in Hex.
For data which is transmitted in Hex (also for MAC address) capital letters as well as small letters can be used.

Contrary to the parameter settings in the other interfaces the settings of the following statements are saved immediately onto Flash, i.e. it is not necessary to force firs the saving of current configuration by the corresponding parameter statement before switching off the printer so the modifications are still available after switching on.

**Question and answer statements according to the old schema:**
The question statement is the one with 'w' instead of 'r' in column 7 and with 8 sign ID as argument.
The answer statement starts with 'A', 8 signs argument then 8 signs ID.
Statements which are not limited to the argument size of 8 signs are analogue. Argument and sign ID are separated with a semi-colon (example see printer name).

So the set modifications become active, even without a printer reset a corresponding Z statement which results in a reset of the network device.

# Parameter statements

### IP address (e.g. '192.168.0.21')

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | A | A | - | r | C0A80015 | ETB |
| SOH | F | C | L | A | B | - | r | 192.168.0.21 | ETB |

For reaction at DHCP, see statement DHCP On/Off.

### Net mask (e.g. '255.255.255.0')

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | B | A | - | r | FFFFFF00 | ETB |
| SOH | F | C | L | B | B | - | r | 255.255.255.0 | ETB |

For reaction at DHCP, see statement DHCP On/Off.

### Gateway address (e.g. '192.168.0.1')

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | C | A | - | r | C0A80001 | ETB |
| SOH | F | C | L | C | B | - | r | 192.168.0.1 | ETB |

For reaction at DHCP, see statement DHCP On/Off.

### Transmission mode (e.g. automatic recognition)

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8AB | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | D | - | - | r | 0 0------ | ETB |
| SOH | F | C | L | C | B | - | r | 192.168.0.1 | ETB |

A:      0 - Auto recognition
           1 - 10 MBit/s half duplex
           2 - 10 MBit/s full duplex
           3 - 100 MBit/s half duplex
           4 - 100 MBit/s full duplex
B:      0 – Keep-Alive-Check deactivate (at this moment only with Port 9100 possible)
           1 – Keep-Alive-Check activate (Default)
           2 – Keep-Alive-Check deactivate for this connection
           3 – Keep-Alive-Check activate for this connection (Default)

Keep-Alive-Check:   As default the printer sends after a certain period of inactivity (normally 60 seconds) of a TCP connection a Byte (Hex: 0x00) to the communication partner to check if the partner already exists. For the most programs this does not show problems. For this few exceptions it is possible to switch off this Check. In case of a not normal separation of connection (crash of partner, cut network cable, loss of routers/hubs/switches,   ) the printer cannot recognise that the partner is lost and is no longer ready to address at this port for other network clients.

**MAC address (e.g. 00-07-4A-43-19-08)**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | M | B | - | r | 00074A | ETB |
| SOH | F | C | L | M | A | - | r | 431908 | ETB |
| SOH | F | C | L | M | C | - | r | 00-07-4A:43:1908 | |

A MAC Address consists of 48 Bits and is usually indicated hexadecimal.
With the B statement it is possible to change our identification for the MAC address. As default, all our devices start with 00-07-4A. This corresponds to the Memory Pool which assigned the MAC address committee to us, to grant the MAC address is worldwide unique for all producers.
With the A statement it is possible to set any address in our Pool. As default IP addresses higher than 7F-FF-FF are not assigned. This section is reserved for later applications.
For C statement it is possible to indicate the MAC address as a whole or in pairs separated with '-' or ':'
`00074A431908, 00-07-4A-43-19-08, 00:07:4A:43:19:08`

**DHCP On/Off**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | E | - | - | r | 0------- | ETB |

0 = DHCP Off
1 = DHCP On

In case DHCP is set to 'On', the statements necessary to set IP address, network mask and Gateway address were ignored and in case of read out these values, the addresses assigned by the DHCP server were returned. If no address is assigned to the printer, there are '0' in the address fields.

**Printer name (e.g. 'Printer_EWS')**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | F | - | - | r | Printer.EWS | ETB |

The name is allowed to consist of a maximum of 15 characters, i.e. the printer cuts the name automatically after 15 signs. Allowed signs are letters 'A' to 'Z' res. 'a' to 'z', numbers '0' to '9', hyphen '-' and underscore '_'.

**Attention:** Because of the fact that the underscore is also used as ETB it must be transmitted as point '.'.
This statement interrupts the rule of limited argument size (8 signs).
Answer statement shows the following:

**Request printer name**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| SOH | F | C | L | F | - | - | w | pppppppp | ETB |

**Answer**

| Column | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| SOH | A | Printer_EWS | ; | pppppppp | ETB |

**Authentification frame**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|---|---|---|---|---|---|---|-----|-----|
| SOH | F | C | L | X | - | - | r | MAC statement | ETB |

This statement creates a frame around any other printer statement. It consists of 2 arguments: MAC address and statement.

MAC address: The statement is only processed by the printer if the correct MAC address is indicated. This is necessary in case a wrong setup printer is to be new configured by means of Broadcast. The same rules as for C statement to set MAC address (`FCLMC`) are valid.
It is also possible to use the MAC Broadcast address (FF:FF:FF:FF:FF:FF). In this case the statement is processed from all printers. However, the answer statement contains the MAC address of each printer.

Statement: Any printer statement
MAC address and statement have to be separated by a separator sign. We recommend to use blanks or hyphen '-'.

**Examples: (MAC: 00-07-4A-43-19-08)**
```
FCLX---00-07-4A-43-19-08 FCLAB-r192.168.0.21
FCLX---00:07:4A:43:19:08-FCLAA-rC0A80015
FCLX---FFFFFFFFFFFF S
FCLX---FF:FF:FF:FF:FF:FF FCLAB-w-
```

**Format of answer statements**

| Column | 1 | 2 | 3 | 4 | 5 |
|--------|---|-----|---|--------|-----|
| SOH | A | MAC | ; | answer | ETB |

**Example:**

Question statement: FCLX---FF:FF:FF:FF:FF:FF FCLAB-w-
Answer statement: A00:07:4A:43:19:08;A192.168.0.21;-

**Reset network device**

| Column | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|---|---|---|---|---|---|---|----------|-----|
| SOH | F | C | L | Z | - | - | r | -------- | ETB |

This record causes that the modifications made by the transfer of the previous records become effective.

## Check network settings

In status print which can be released in the Service Function menu, also some information about the network is indicated. Following data is to see in paragraph 'NETWORK SETTINGS':

```
NETWORK SETTINGS
================
MAC-Address          : 00:07:4a:1c:e6:85
IP-Address           : 192.168.0.21
Netmask              : 255.255.255.0
Gateway              : 0.0.0.0
Link                 : Connected
Transfer Mode        : 100Mbit/s
                     : Half Duplex (Auto)
DHCP                 : OFF
Printer Name         : LabelPrt01
```

Data which is here issued is not necessary to correspond with the data which is set in the menu. In the status print not the set values are shown but the ones which are really used. So it is e.g. possible that the net mask '0.0.0.0' was set at the printer, however the status print shows '255.255.255.0'. The setting '0.0.0.0' signifies in this case that the printer should use for the corresponding IP Address a default value. '255.255.255.0' is here the used default value.

- MAC-Address:
  The MAC address is a worldwide clear identification for a network device. By means of this identification it is possible to identify and configure printers in the network.

- IP-Address
  This is the communication address of the printer. The address by which the printer is contacted per software to the Internet standard. If this was referred by DHCP then the parentheses show ('DHCP')

- Net mask
  The network mask of IP address. If this was referred by DHCP then the parentheses show ('DHCP')

- Gateway
  The IP address of network gateway. If this was referred by DHCP then the parentheses show ('DHCP')

- Link
  The status item 'link' shows principally the same as some green LED at some printer plugs: it shows if the printer has a so-called link, a physical connection with the network. Only if here 'Connected' is showed it is possible to send data to the printer. In case 'Not Connected' is indicated so this is a message that something is wrong with the cable (defective, not inserted etc.).

- Transfer Mode
  The 'Transfer Mode' shows the transmission mode of the printer. In case in brackets '(Auto)' is indicated so the setting was automatically recognised. In case the printer has no connection and the speed is automatically to recognise so at 'Transfer Mode' is 'Auto' shown as at a missing connection it was not possible to execute the speed recognition.

- DHCP
  Indicates if DHCP is set either to on or off.

- Printer Name
  Corresponds to network name of printer (is only used with DNS or WINS)

## Printing from the command line/MS-DOS Command Prompt

It is possible to send a print order for Windows systems which are based on NT (NT/2000/XP) also from the command line via lpr command to the printer. For this procedure it is necessary to have a label as prn file. Prn files can created e.g. with Labelstar PLUS.

Example:   Send the file 'eti1.prn' to the printer with IP Address 192.168.0.21:

lpr –S192.168.0.21 -Plp1 eti1.prn

Option '-S' indicates IP Address, and '-P' the name of the waiting queue.

## In case of problems

It is possible to use the 'ping' command to check if there is really a connection to the printer. With the following call you can test in the command line/MS-DOS command prompt if the printer with IP address 192.168.0.21 answers:
ping 192.168.0.21
In case everything is correct the printer should answer with the following message:
Answer from 192.168.0.21: Bytes=32 time<10ms TTL=30
In case of error you receive timeouts:
Exceeding time of request.

In case an error occurs please check the following:

| Shining LED or display? | --No→ | Check current supply (cable, plugs, ...) |
|---|---|---|
| Yes | | |
| Is the network cable correct plugged in and has the printer a link (see status print)? | --No→ | • Is the correct cable used (perhaps a crossed cable)? <br><br>• Is the connection linked with a Hub/Switch? <br><br>• Is the Hub/Switch set to on? <br><br>• Possibly the printer cannot set print speed automatically: Set print speed at printer by hand, depending on capability of Hub/Switch |
| Yes | | |
| Answers the printer to a 'ping'? | --No→ | • Are the network parameter IP address, network mask and Gateway correct configured (please contact you network administrator)? <br><br>• DHCP: Is a IP address assigned to the printer? <br><br>• DHCP: Does the ping not function with IP address or name? If IP function but name not then there is probably an error in the name resolution (network problem). |

| | | |
|---|---|---|
| Shining LED or display? | | |
| Yes | | |
| Receives the ping an answer even the printer is switched off? | --Yes→ | There is an address conflict! The set IP address is already used from another network client! |
| No | | |
| Is the printer found in the configuration software by 'Browse'? | --No→ | Possibly switch the printer off and again on |
| Yes | | |
| Is it possible to read out the settings in the configuration software by network? | --No→ | Possibly switch the printer off and again on |
| Yes | | |
| Is it possible to save settings by the configuration software? | --No→ | Possibly switch the printer off and again on |
| Yes | | |
| The printer is full operational by the network. Check the correct setting of start/stop sign and printer type. | | |

## Start / Stop sign

It is not allowed to use control signs in SAPscript. Because of this reason it is necessary to change the control signs in the printer corresponding to the following description.

Select the menu **Interface**.

```
Start (SOH):  01
End   (ETB):  17
```

By means of the ▲ and ▼ key you can change the control signs as shown below.

```
Start (SOH):  5E
End   (ETB):  5F
```

After you have changed the control signs according to the illustration above you have to confirm the

selection by clicking the ● key as otherwise the printer does not accept the selection.

# PRINTING IN TCP/IP NETWORK

## General information

## Requirements

For printing via TCP/IP different requirements are necessary.

**Hardware**
- PC with network card
- Label printer (CV) with Option Ethernet

**Software**
- Operating condition -> Windows 9x, Windows NT 4.0, Windows 2000, Windows XP installed and configured TCP/IP protocol (Settings -> Network -> Protocols -> TCP/IP Protocol)
- local administrator rights

## Support by operating systems

Depending on Windows version there is different support for printing on network printers via TCP/IP.

| Operating system | Support from | Supported protocols |
| --- | --- | --- |
| Windows 95/98/Me | CV TCP/IP Port | Raw TCP/IP*[*] |
| Windows NT 4.0 | Microsoft TCP/IP Druckdienst[**] | LPR[***] |
| Windows 2000 | Standard TCP/IP Port | Raw TCP/IP, LPR |
| Windows XP | Standard TCP/IP Port | Raw TCP/IP, LPR |

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[*] For Windows 9x there is no and for Windows NT4.0 only limited support. For this reason we supply a port monitor for these operating system which is called 'CV TCP/IP Monitor', which supports Raw TCP/IP protocol.
[**] This service has to be installed separately by Settings/Network/Services/Add.

[***] LPR Protocol supports the unidirectional communication to the printer

## Setup printer when using Windows 95/98/Me

### Installation of CV TCP/IP Port Monitor

**Note:** As the 'Standard TCP/IP Port' is a component under Windows 2000/XP the installation is unnecessary. For the other operating systems it is necessary to install the 'CV TCP/IP Port Monitor'.

For the installation of CV TCP/IP Port Monitors there is an own installation program of the corresponding printer driver CD which installs besides the real port monitor additionally a configuration program (CV TCP/IP Port Manager) for the easy setup of corresponding printer ports.

After you have started the Setup Program the following box is displayed at the screen.

Select the desired Setup language, confirm your selection with OK and the installation wizard is started.
At the moment you can select either German or English.
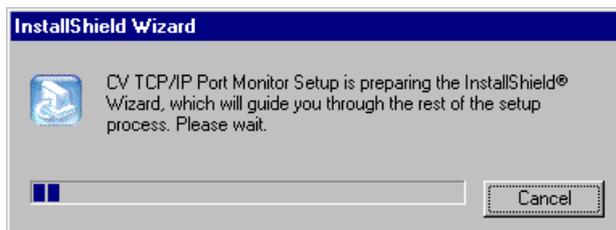
After the Setup program has prepared the InstallShield Wizard, the first page of the InstallShield Wizard is displayed.
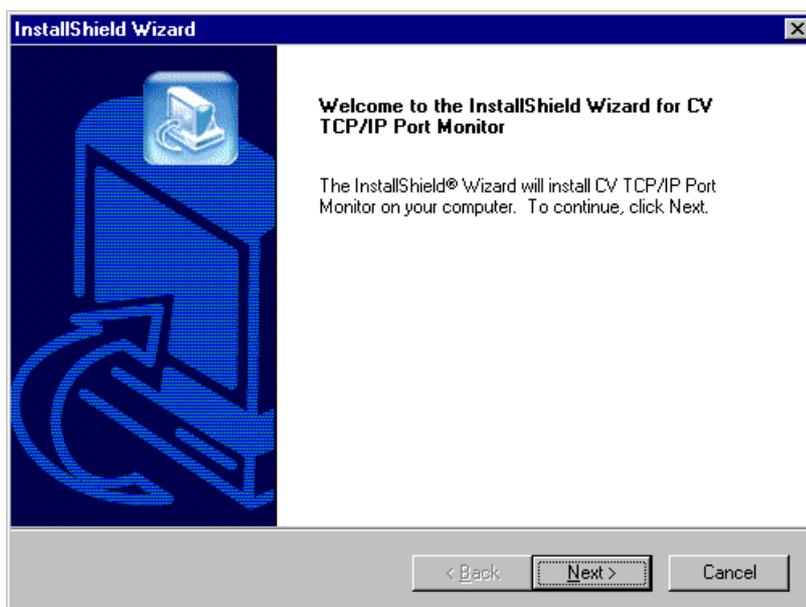
Click **Next**, to continue the installation of CV TCP/IP Port Monitors.
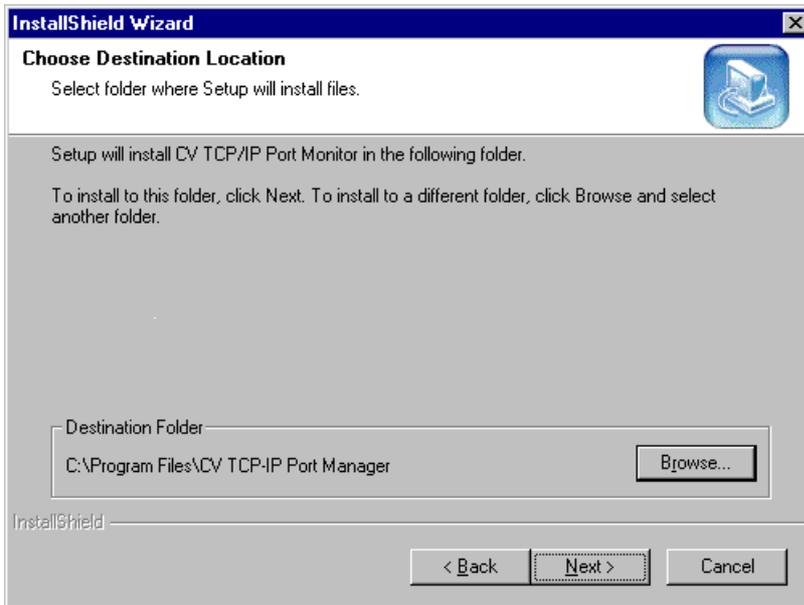


It is possible to define the directory in which the Port Manager is to install (the Port Monitor is automatically installed in the system directory). In case you select **Browse** then the following dialog for the selection of installation folder is displayed:
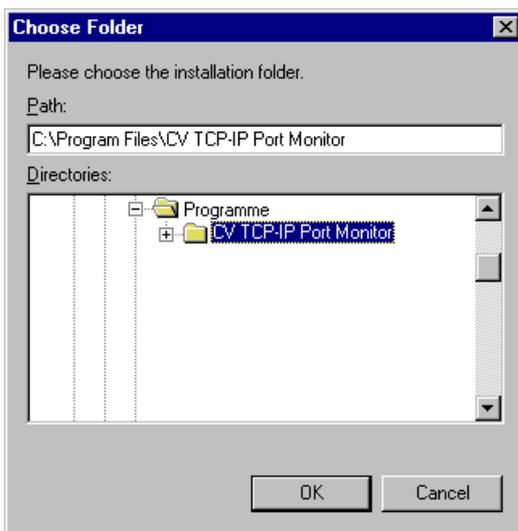


Select the desired directory, confirm your settings with OK and you return to the dialog box **Chose Destination Location**.

Confirm the selection of the desired directory with **Next** and the next dialog box appears.
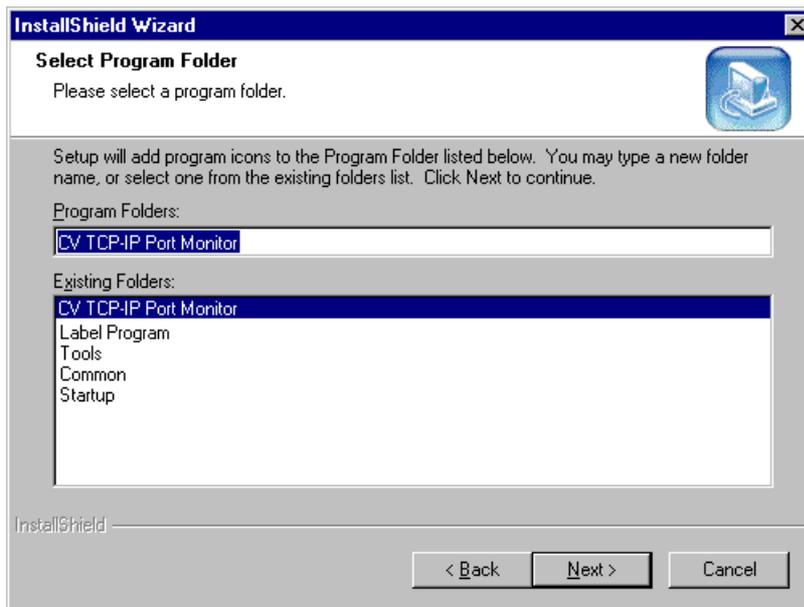
Select the program folder and confirm your selection by clicking the **Next** button.
The necessary files are copied to the harddisk.

After the corresponding files have been copied to the harddisk, the last dialog box of the InstallShield Wizard is displayed.
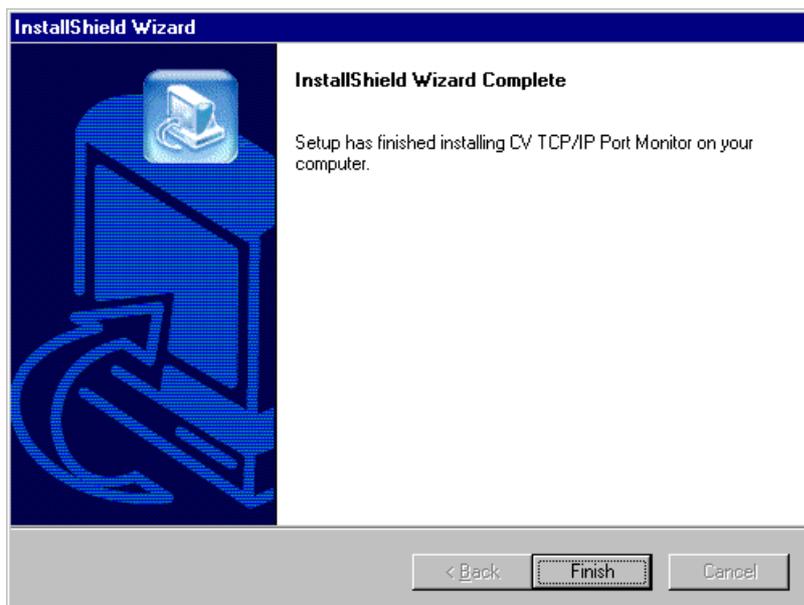


Click **Finish** to finish the installation of CV Port Monitor.

**Deinstallation of CV TCP/IP Port Monitor**

**Note:**    Deinstallation is only possible if no printer port exists which uses this port monitor.

Click the Windows button ![Start], place the mouse indicator on **Settings**, then click **Control Panel**.
Double click symbol 🖥 for **Software**.
Click the **Install/Uninstall** tab, select the program which you want to remove, then click the **Add/Remove** tab.
Follow the instructions on the screen.
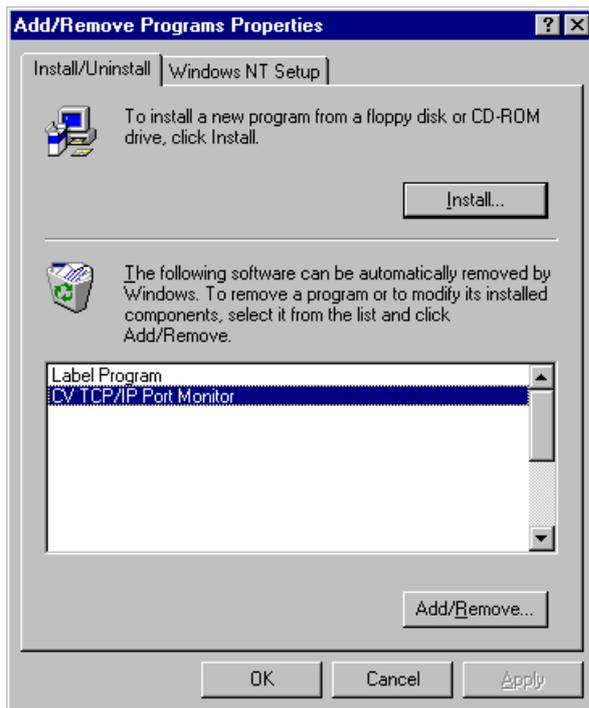


After completion of the procedure, click **OK** to close the dialog box.

**Setup printer ports when using Windows 95/98/Me**

When using this operating system the setup is only possible by the properties of an already installed printer.

Click the **Start** button, place the mouse indicator onto **Settings** and select **Printer** or select **Control Panel** and click the printer symbol.
Select the desired printer with a right mouse click, select from the context menu the menu item Properties and the following dialog box appears:
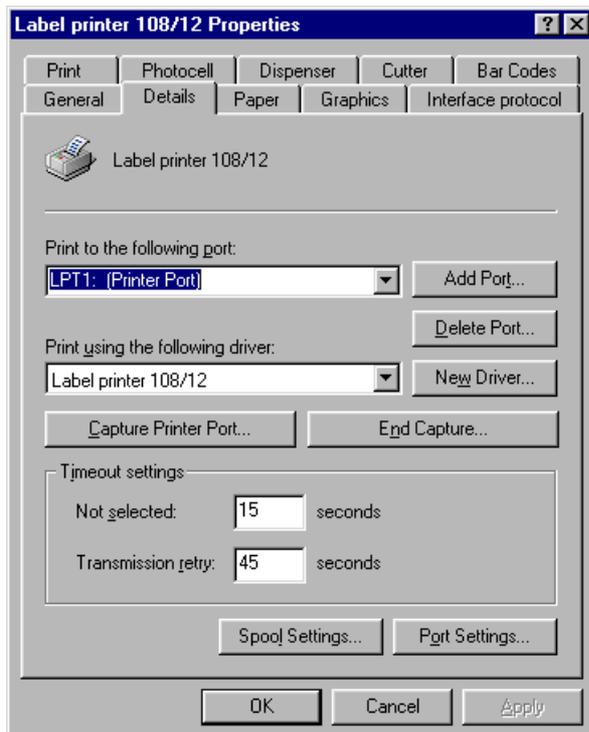


Click the Add Port button and the following dialog box appears.
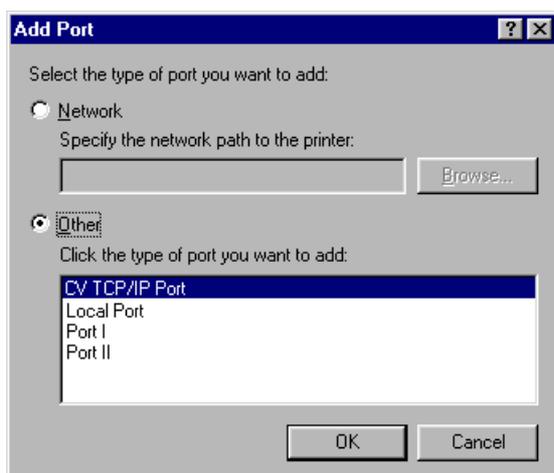


Select the type of port you want to add.
In case you select the check box **Other** and select **CV TCP/IP Port** then the InstallShield Wizard of Port Monitor is started.

# Setup printer when using Windows NT

## Installation of CV TCP/IP Port Monitor

You can find a detailed description in chapter 'Setup printer when using Windows 95/98/Me'.

## Setup printer ports when using Windows NT

### Setup at printer installation
Start the Setup program of the printer driver CD, select the desired language, printer driver and then installation and the dialog box of the **Add Printer Wizard** appears.

In case that no network printer is available, select the check box **My Computer**, confirm your selection with **Next** and the following dialog box appears.
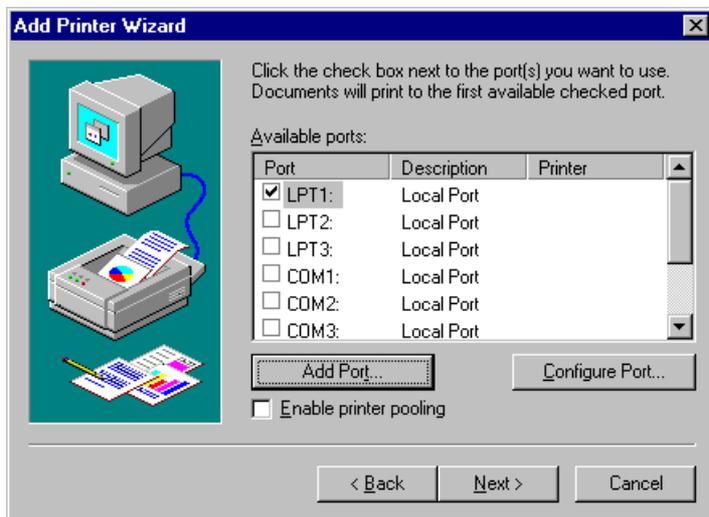


Click the **Add Port** button and select from the next window **CV TCP/IP Monitor** from the list of **Available Printer Ports**.

Activate **Add Port**, select **CV TCP/IP Port** and click the **New Port** button.

The **Add Standard TCP/IP Printer Port Wizard** appears.

**2. Setup by the properties of an already installed printer**
Click the **Start** button, place the mouse indicator onto **Settings** and select **Printer** or click on **Control Panel** and double click the printer symbol.

Click the right mouse button onto the desired printer and select from the context menu the menu item **Properties**.

Select the **Ports** tab and the following dialog appears.
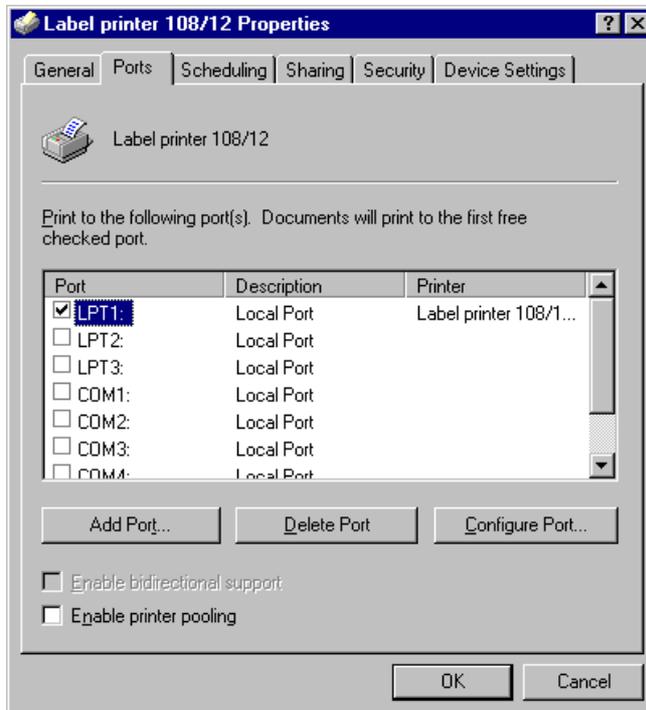


Activate the **Add Port** button and the following window is displayed at the screen.
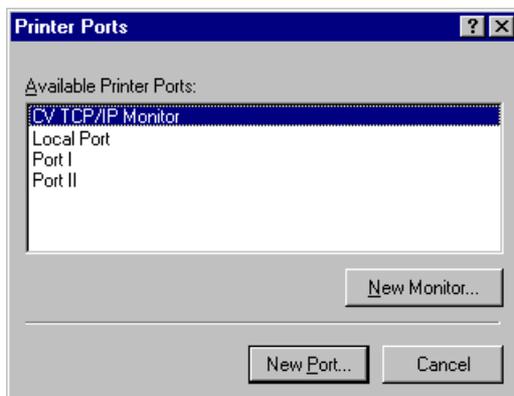


Select **CV TCP/IP Monitor** from the list of **Available Printer Ports**, activate the **New Port** button and the Wizard for adding a Standard TCP/IP Printer Ports appears.

**3. Setup by the server properties**
Click the **Start** button, place the mouse indicator onto **Settings** and select **Printer** or click on **Control Panel** and double click the printer symbol.

From the **File** menu click **Server Properties** and the following dialog box appears on the screen.
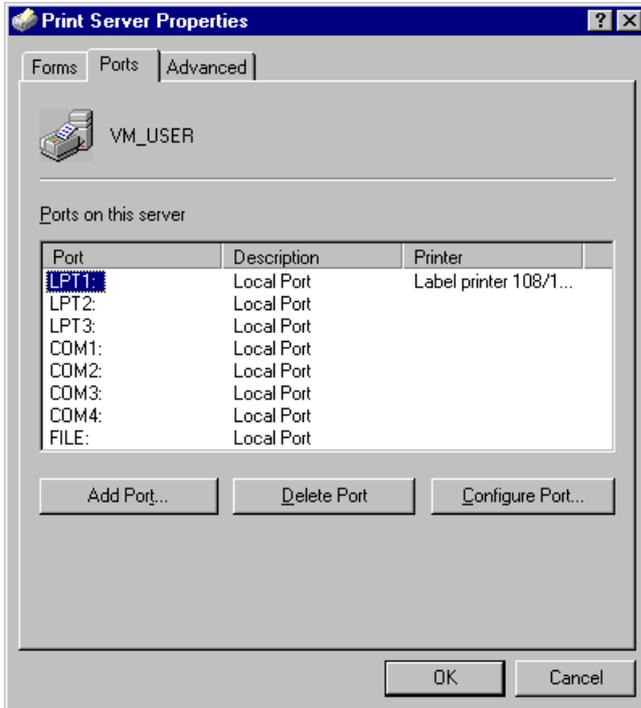


Click the **Add Port** button and the following dialog box appears:
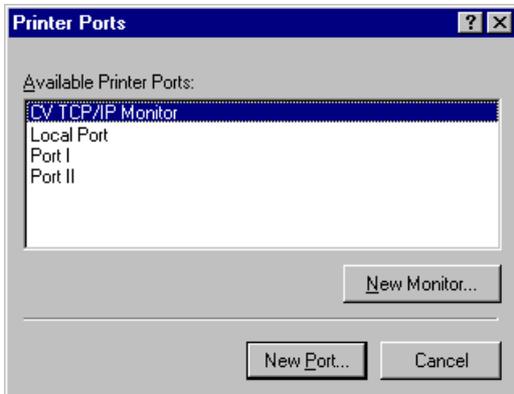


Select **CV TCP/IP Port** from the list of **Available Printer Ports**, click the **New Port** button and the **Add TCP/IP Printer Port Wizard** appears.

## Setup printer when using Windows 2000/XP

### Setup Standard TCP/IP Port

The setup of Standard TCP/IP when using Windows 2000/XP is analogue to the CV TCP/IP Port. Some differences are only in the extended configuration possibility. See the following dialog box.
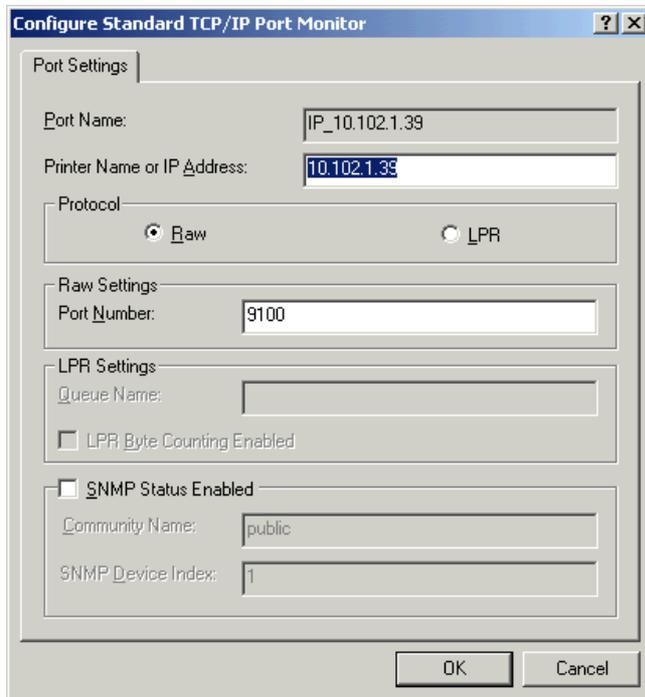


Additionally to the known settings it is also possible to the LPR protocol. In this case you have to enter the name of the print queue (see illustration).
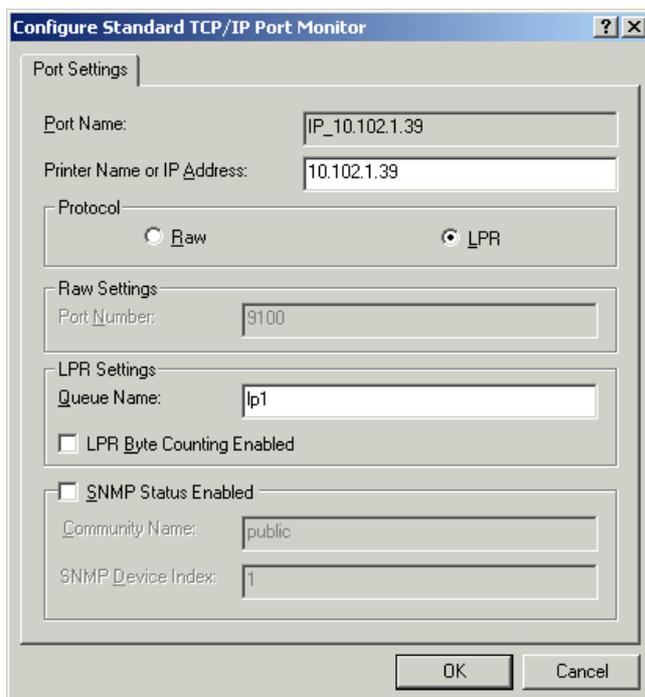


As our printers do not support the SNMP Protocol it is not allowed to select this option.

**Release printer at a Windows 2000 PC**

Click the Windows button ![Start], place the mouse indicator on **Settings**, then select **Printer** or click

**Control Panel** and double click the printer symbol .
Double click the **Add Printer** symbol and the Printer Installation Wizard appears:



Click the **Next** button and the following dialog box appears:
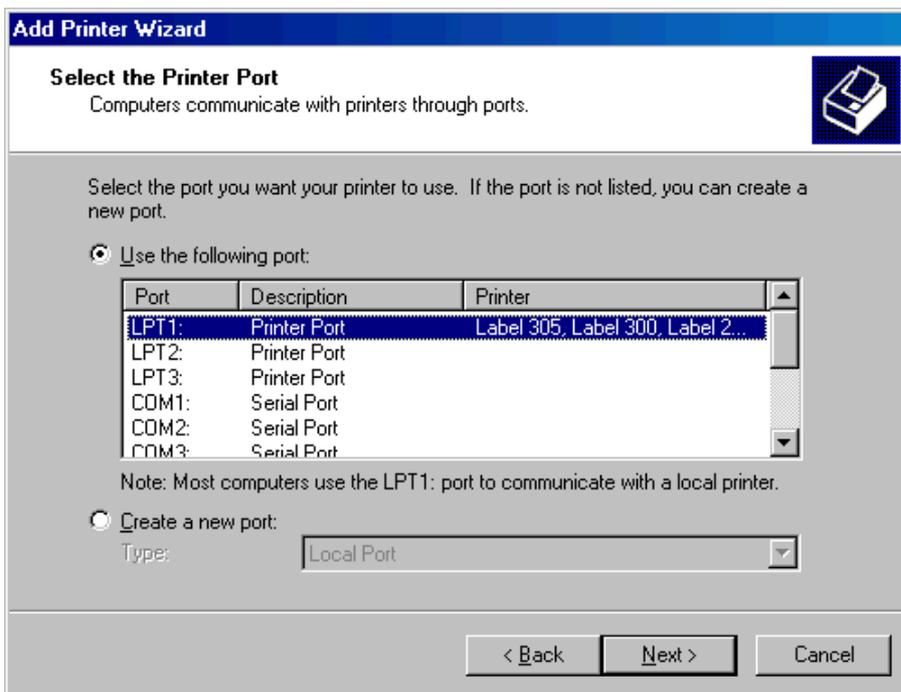


Select the desired port from the list of **Available Ports**.

Click the **Next** button and the following dialog box appears:
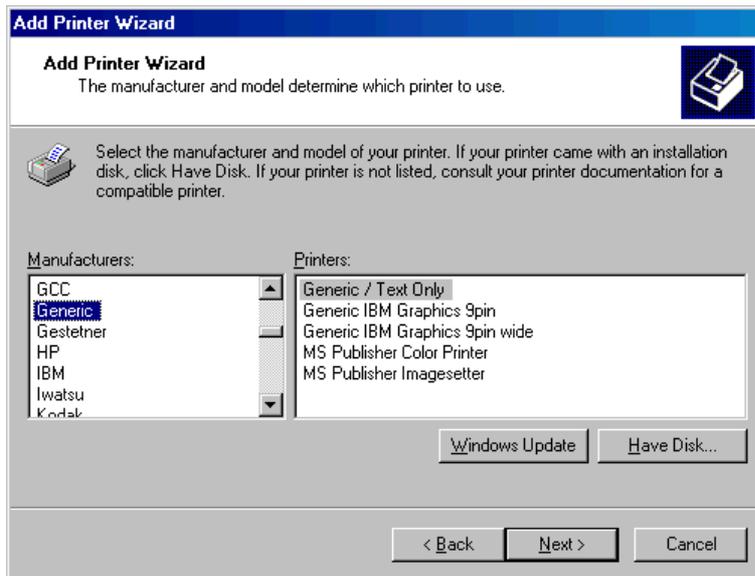


Select **Generic** from the list of **Manufacturers** and select **Generic / Text Only** from the list of **Printer**. After clicking the **Next** button, the following dialog boxes for releasing the printer in network appear at the screen:
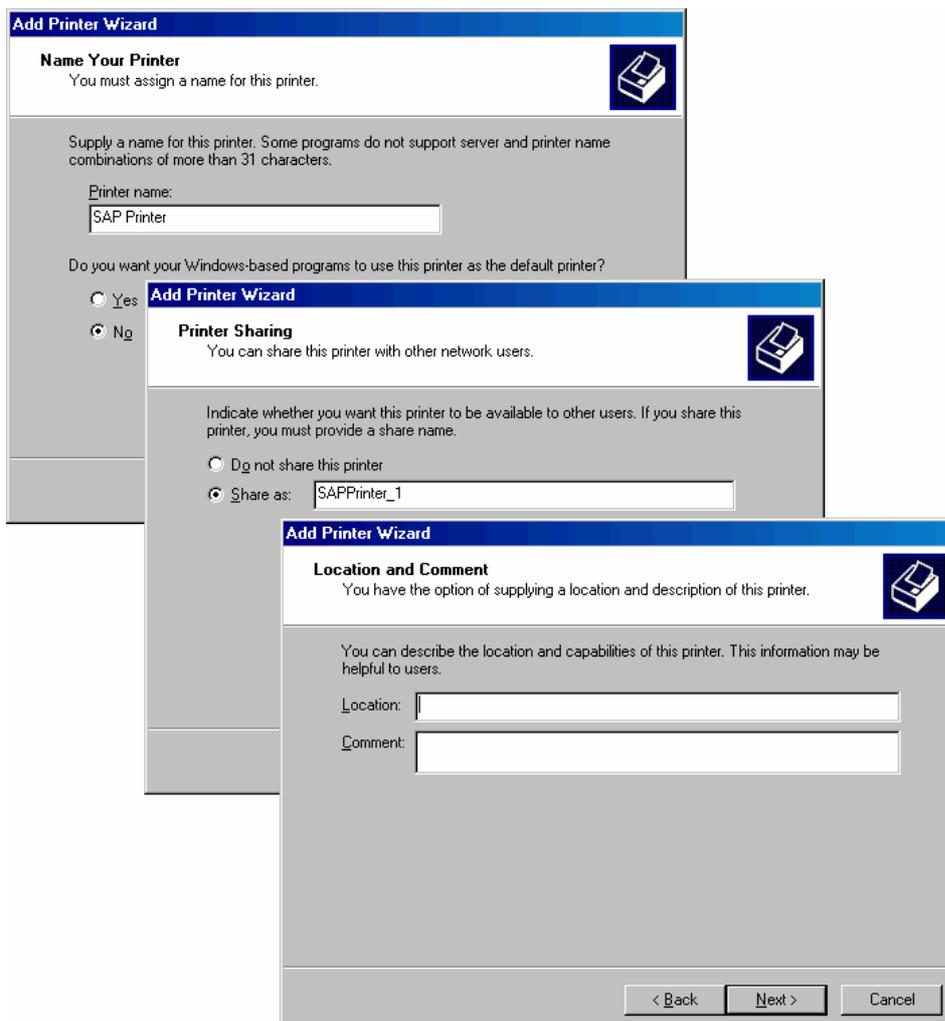
Finally you can print a test page to check the functions of the setup printer.
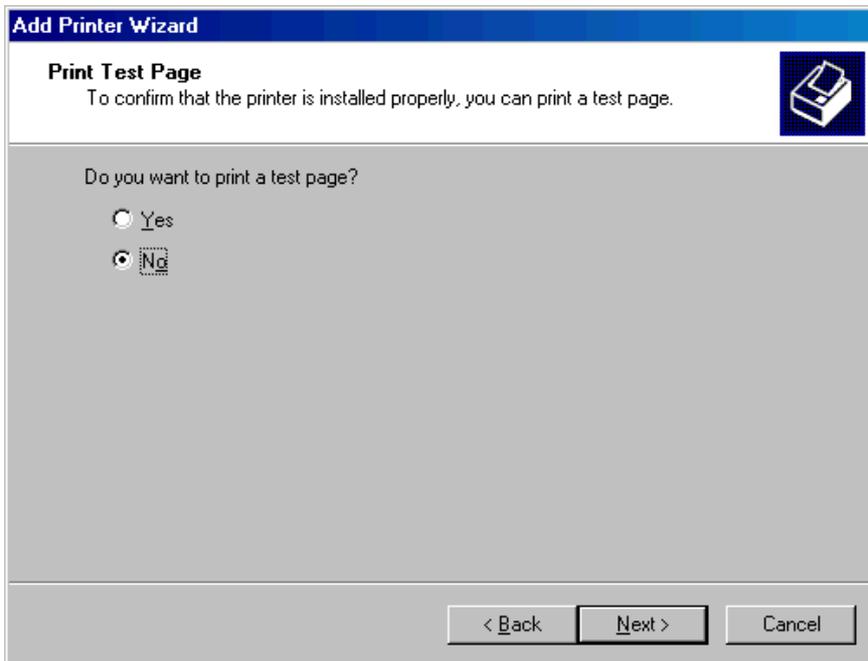


Activate the check box **Yes** if you want to print a test page and **No** if you do not want to print the test page.

Click the Next button and the following dialog box appears:
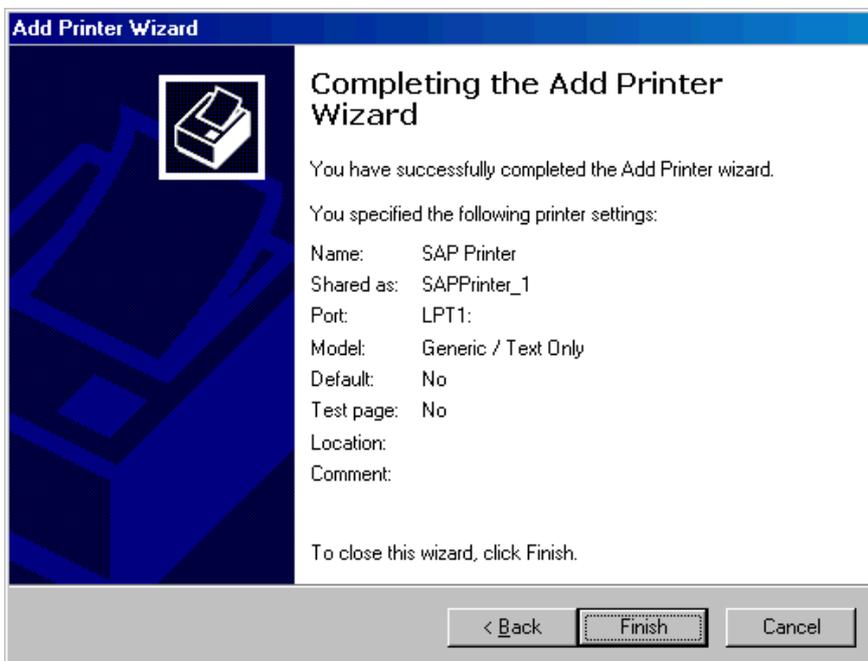


This page indicates all defined printer settings.
In case you want to modify or correct an already defined parameter, then click the **Previous** button.
If all settings are correct, click **Finish** to complete the procedure.
After finishing the copying procedure, the printer is added to the **List of available printers**.

# LABEL CREATION

## Setup output device

Start SAP R/3 and following start display appears at the screen.
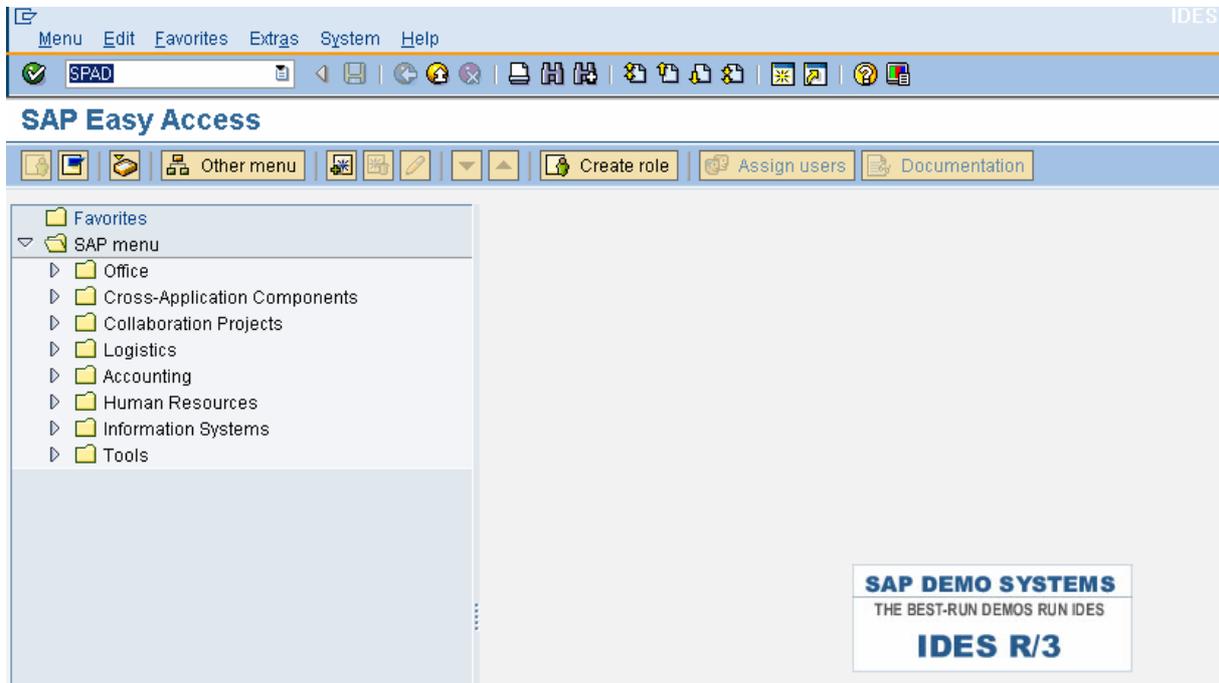


The output device has to be configured before printing a form. For the configuration procedure you have to change to "Spool Administration", Transaction SPAD.
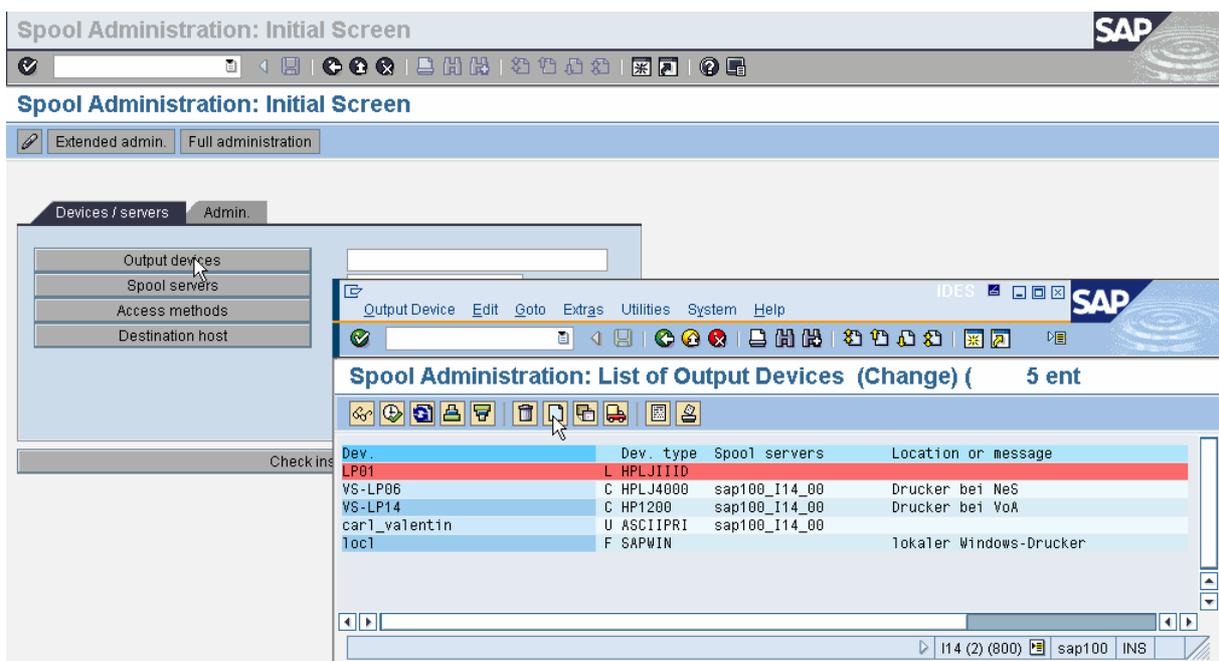


A new device is installed in the list of output devices.

Define the following settings at 'Device Attributes':
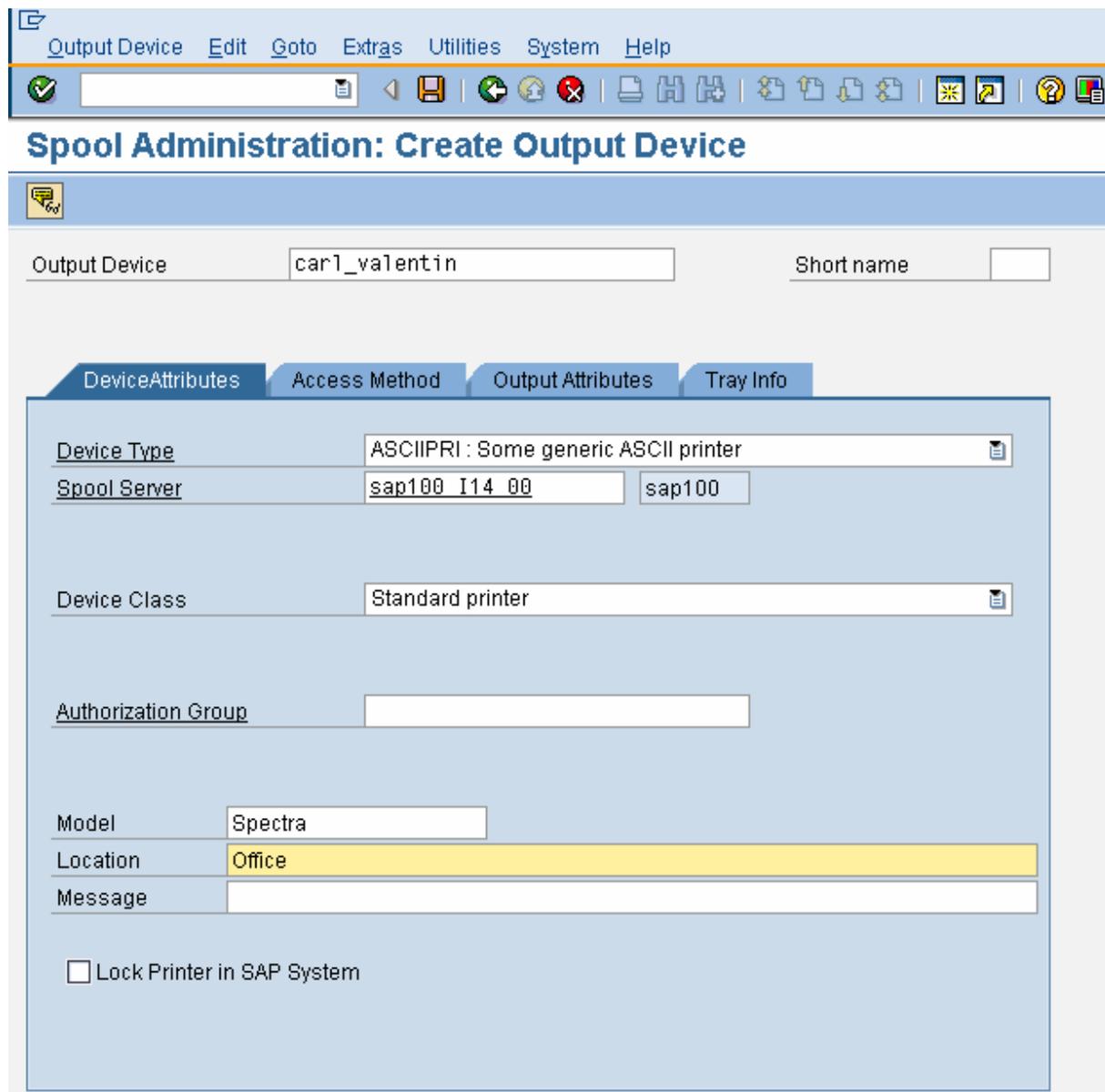


**Output device:**   Enter the printer name in system

**Short name:**   Is assigned automatically.

**Spool server:**   Is assigned automatically.

**Device type:**   As default in SAP R/3 the device type "ASCIIPRI" is available. For the label print with Valentin label printers it is possible to use this device type. You have only to suit the fonts (see below).

**Model:**   Enter the model name of the printer.

**Location:**   Enter the location of printer.

The connection type to the printer is defined by 'HostSpoolAccMethod'. Here are the following possibilities:
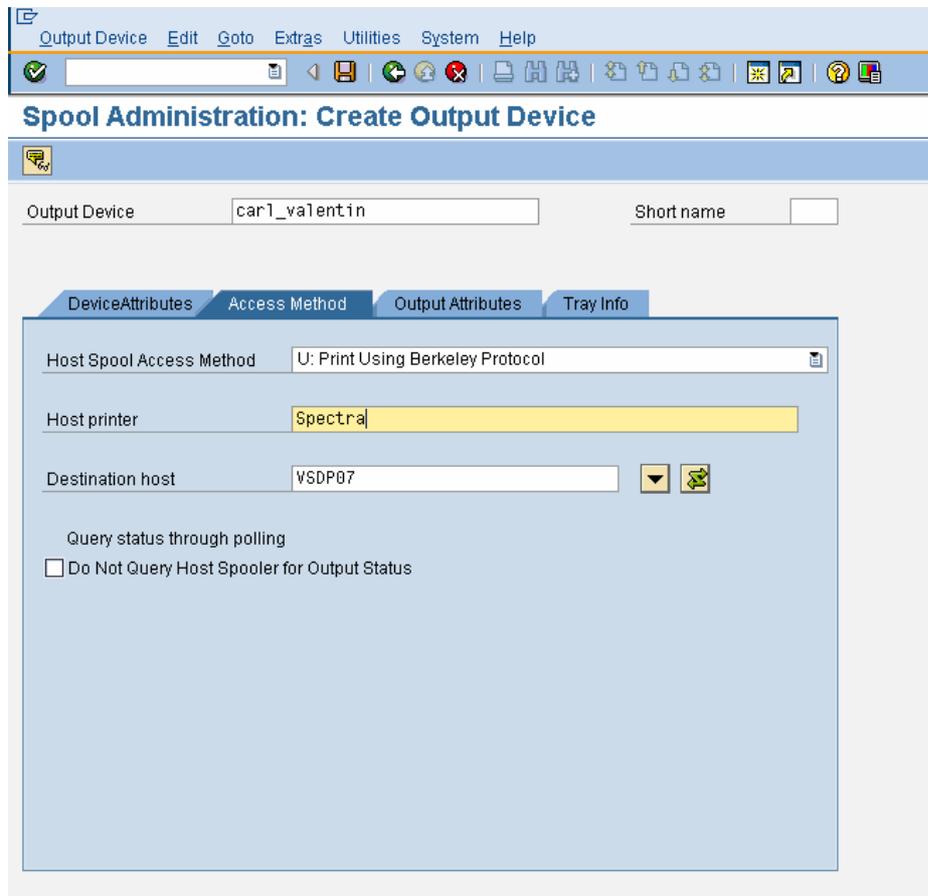


**Host spool access method**

**U:**    The SAP server operates as 'print server'. The file 'hosts' must have the printer name with the appropriate IP address.

**C:**    The printer has to be known as released printer in WINDOWS network. Onto the PC at which the printer is connected and released the user *SAPService* <SID> has to be entered and must have the corresponding rights.

**F:**    Here it is possible to print at a local printer. For this Host spool type the existing WINDOWS printer driver is used for the local installed printer. Therefore not the corresponding WINDOWS printer driver but the standard driver 'Generic Text only' has to be used for printing labels at Valentin printers.

**L:**    With host spool access method 'L' you can print at any printer which is known in network. This mode is principally used in UNIX environment.

**Host printer**

Depending on host spool access method you have to enter following indications.

C, L:    UNC directory as 'released' printer in network

U:    Comment (any text)

F:    "__default" if the current WINDOWS standard printer should be used or the corresponding printer name which is different from the standard printer.

**Destination host**

In host spool method 'U' the printer name is entered such as it is entered in SAP server in the 'hosts' file.
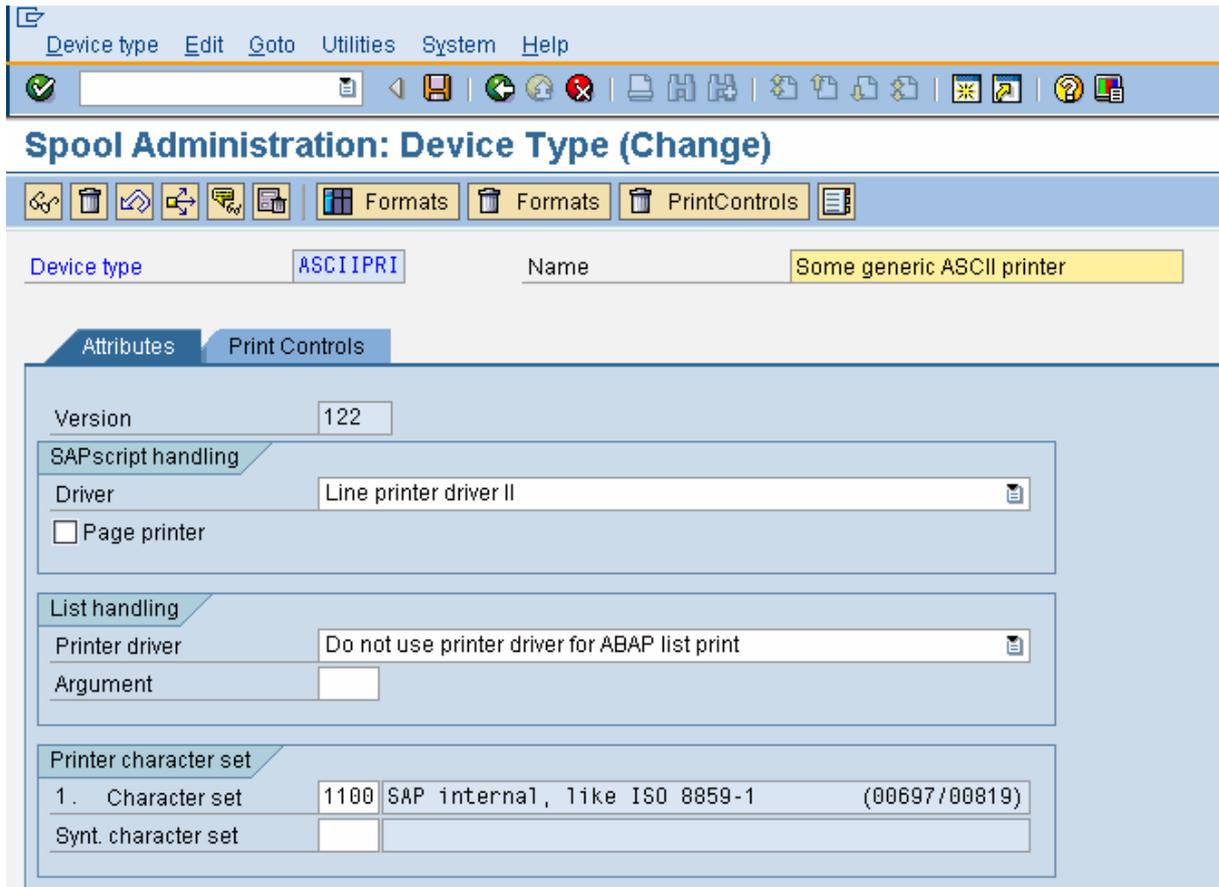
The default existing device type "ASCIIPRI" can be almost accepted invariably. Only a modification in the fonts is necessary so also umlauts res. other special characters are printed correctly.
As default the font 1105 7-Bit USA ASCII output in 3 fonts is set. However, with this font it is not possible to print umlauts.
Here it is necessary to set font 1100 SAP internal ISO 8859-1.

**Note:**    At this time only the first font is used from R/3. The others are reserved for later extensions.

## Labelstar PLUS with SAP R/3

**1. Export To Print File (SAP Format)**

**Steps at printer:**     Make sure that the start/stop signs that are used from SAP device
driver are set at the output printer. It is possible to select either
5E/5F or to define customized signs.

Create the desired label.
Insert the required SAP variables.
After definition of variable the corresponding dialog box appears.
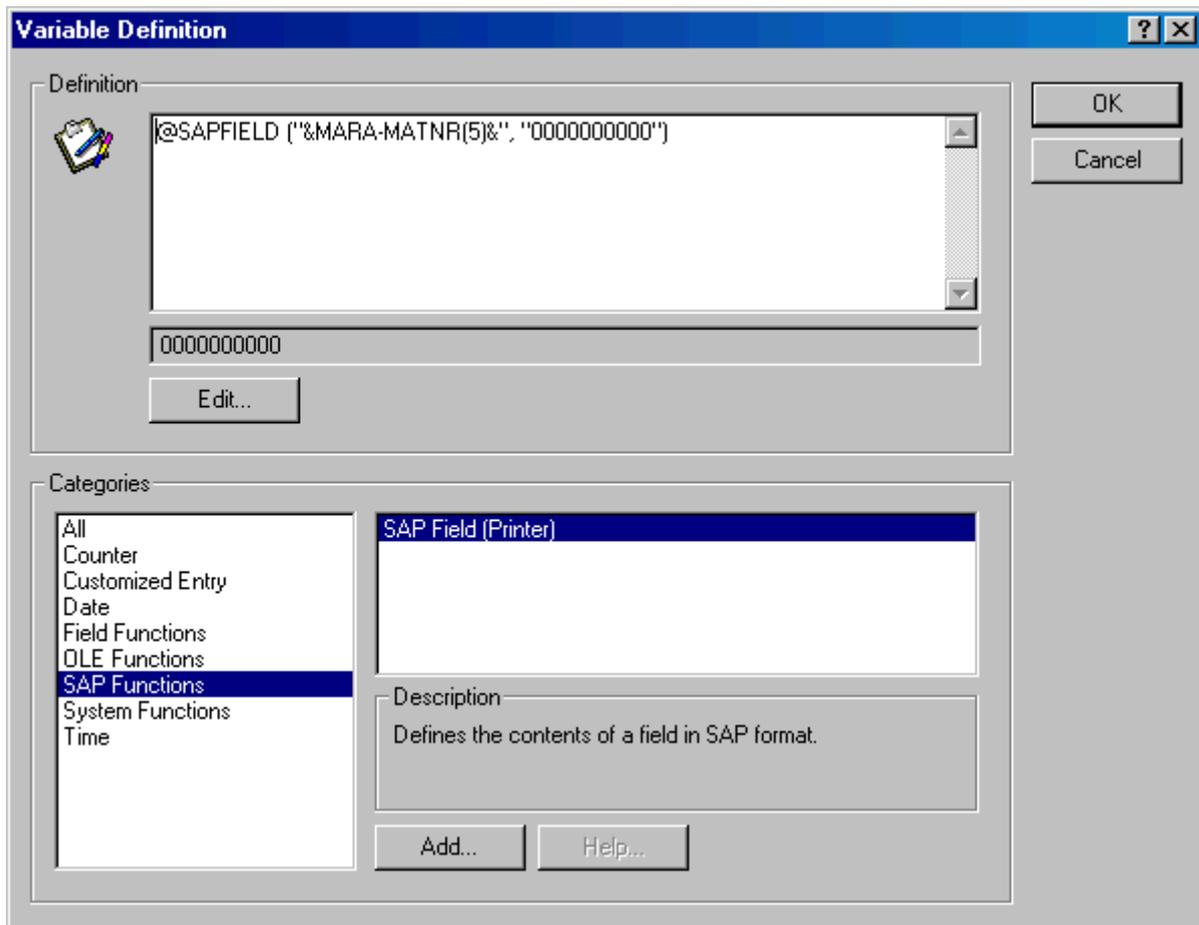


After you checked the entries, click the **OK** button and the SAP variable is displayed onto the label.
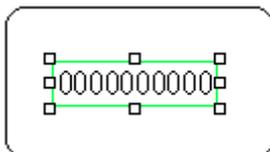


In case the label does not contain graphics and TrueType fonts, you can create the text file (*.itf) by
means of the **Export To Print File (SAP Format)** directly. The **Print to File** dialog appears to select
the desired storage location for the *itf file.

### 2. Export To Print File (Extended SAP Format)

In case you label contains graphics or TrueType fonts it is not possible to import them to SAPscript. Graphics as well as TrueType fonts have to be saved onto a Memory Card in the printer. In order to this process you have to select the function **Export To Print File (Extended SAP Format)**.

**Note:**     The printer has to be equipped with the Memory Card option.

The following dialog box appears:
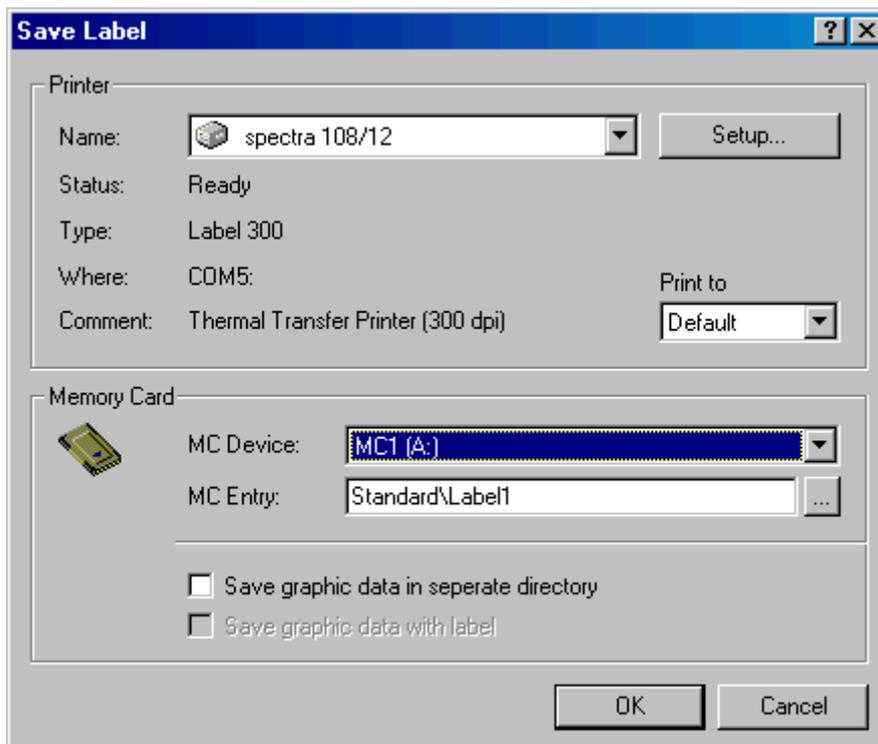


At this type of export, two independent files are created.

In the first file data from the complete label is saved onto memory card (including graphics).

In the second file only label data is saved which change and which is to import later into SAP (see following page).

After you confirmed the settings with **OK** the dialog box **Print to File** appears so you can select the desired storage location for the *itf file.

## Import in SAP standard text

With transaction SO10 it is possible to load text files in standard text **(upload)**.
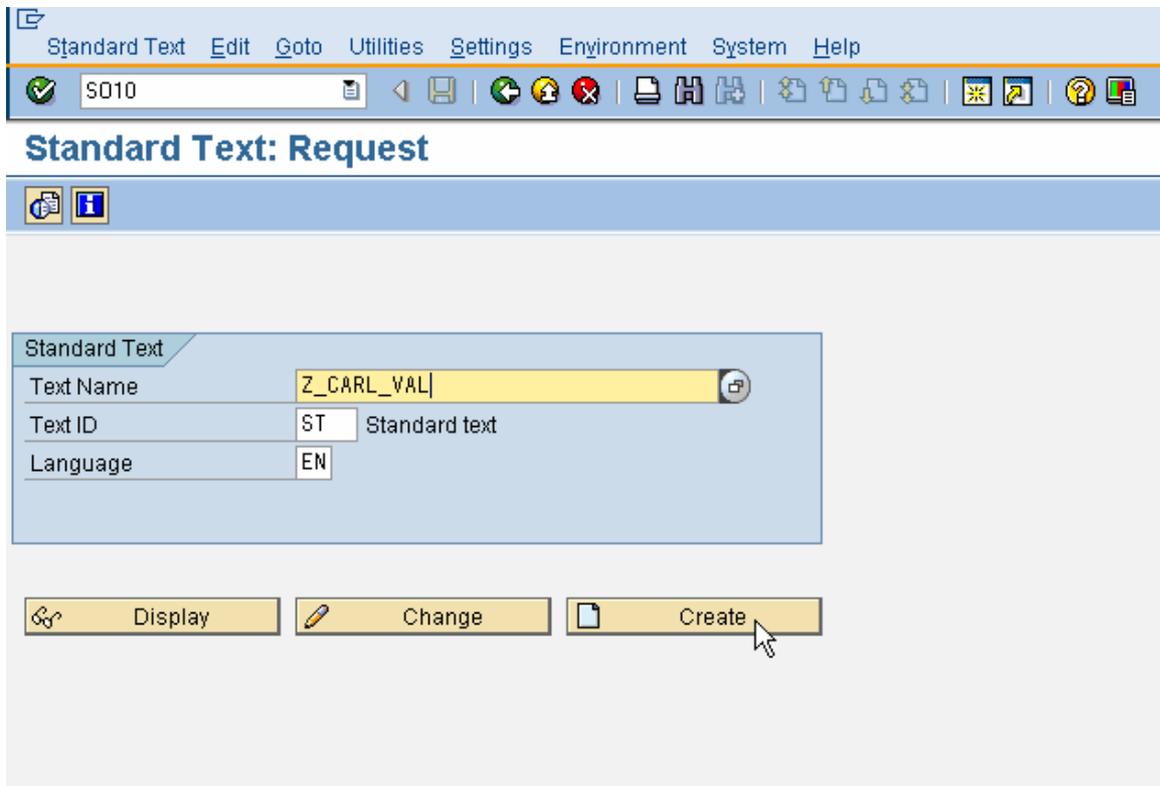


First of all the name of **Standard text** has to be entered. As **Text ID** is 'ST' used. After the standard text was created it is possible with **File -> Upload** to import a text file in ITF format.
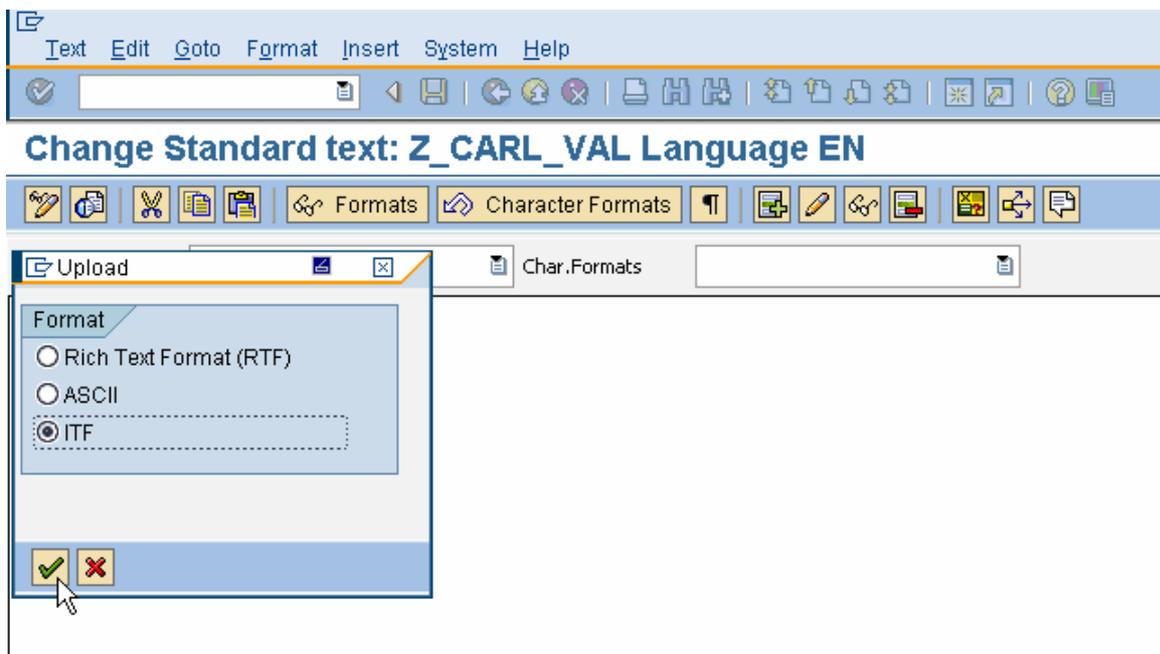


This file was created (exported) before by means of Labelstar PLUS and contains all label information, formatting, parameter settings for label printer, etc. The symbols for SAP variables are also included. After saving this standard text it is necessary to create the corresponding Format/Script.

## Insert standard text into SAPscript
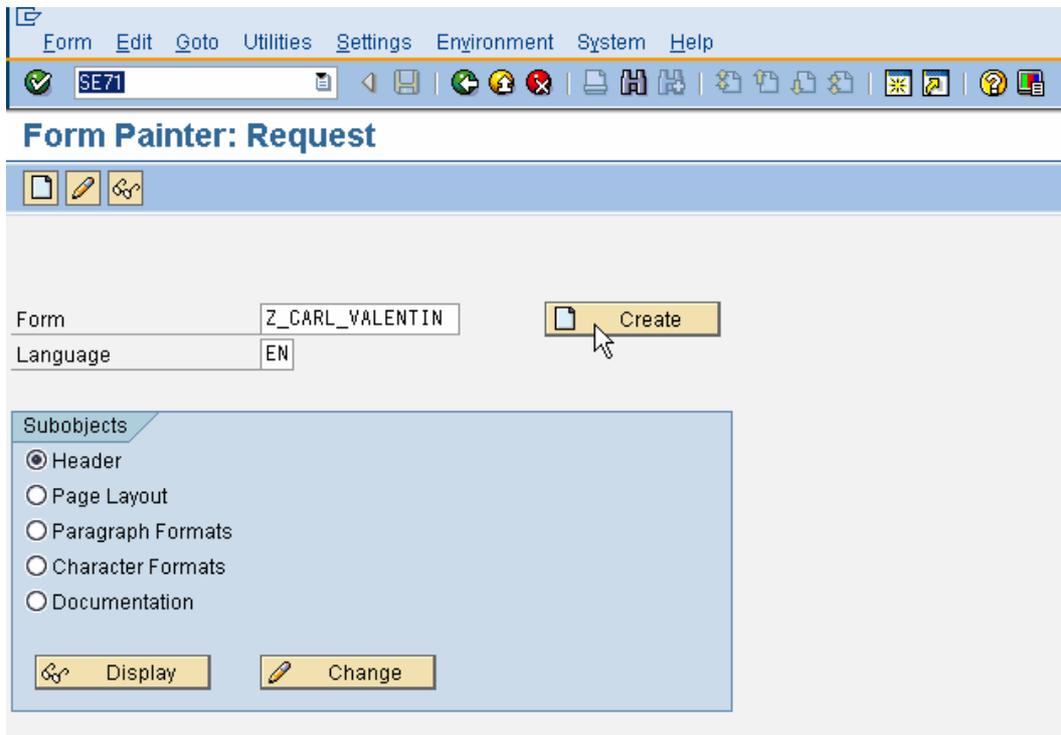
First of all the corresponding name **Form** and language of the form **Language** has to be entered. After **Create** it is possible to insert the standard text.
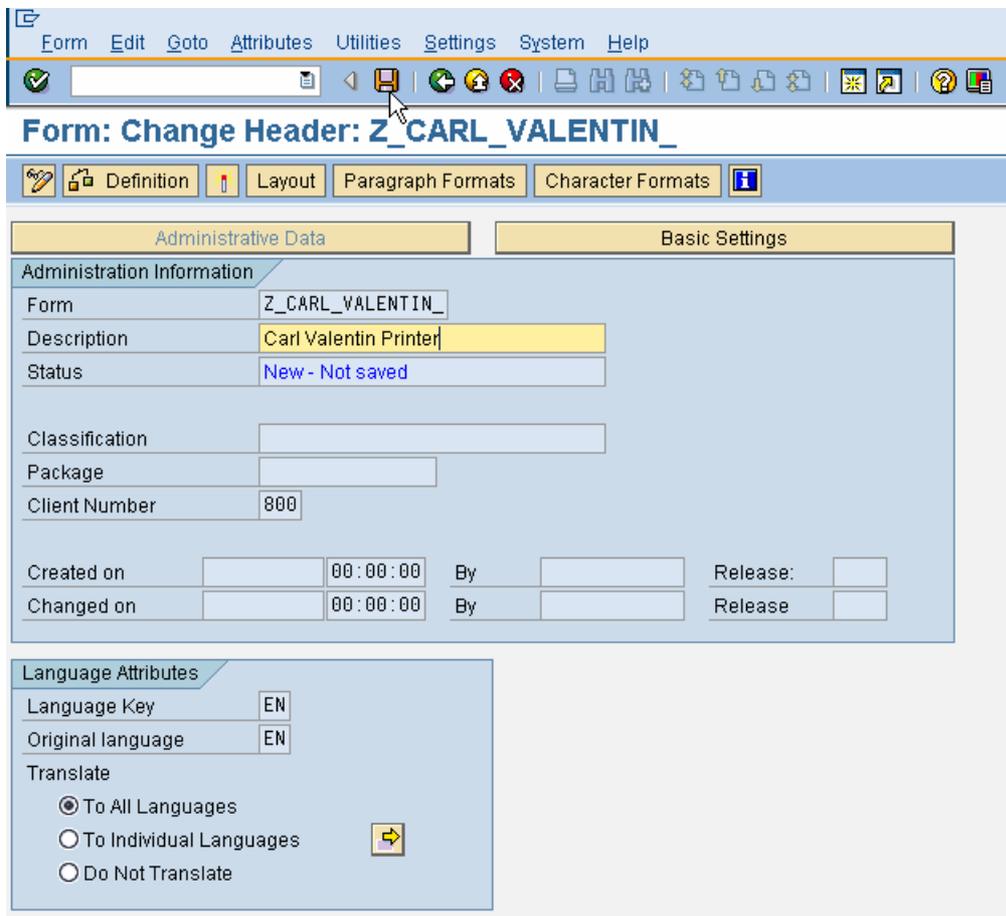
If no new page appears in MAIN window, then a new page must be created.
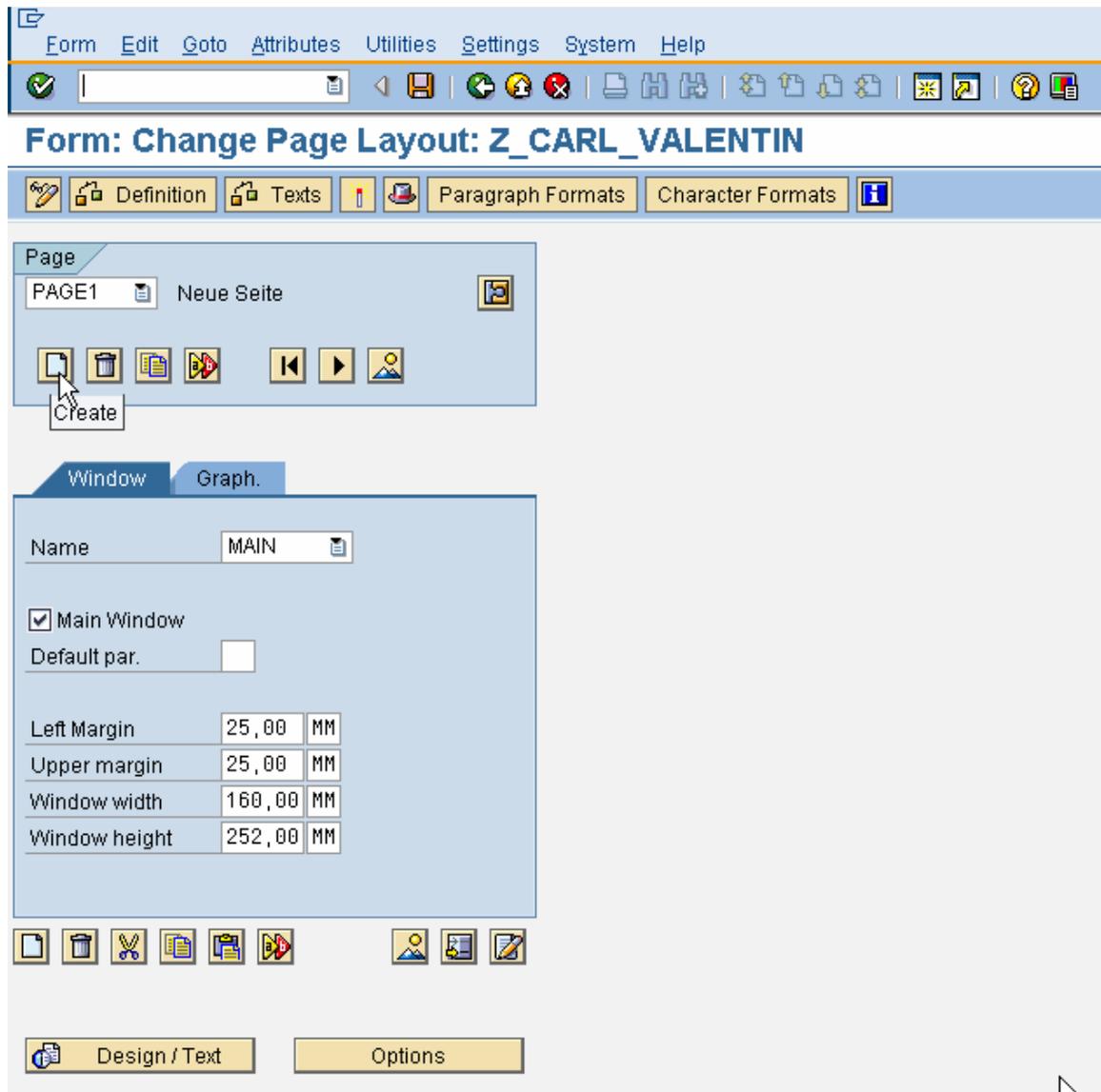


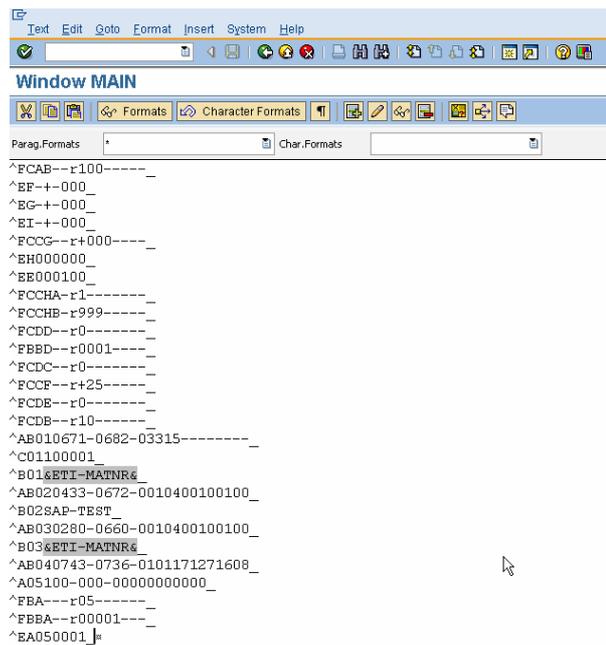**Link the previously defined text component.**
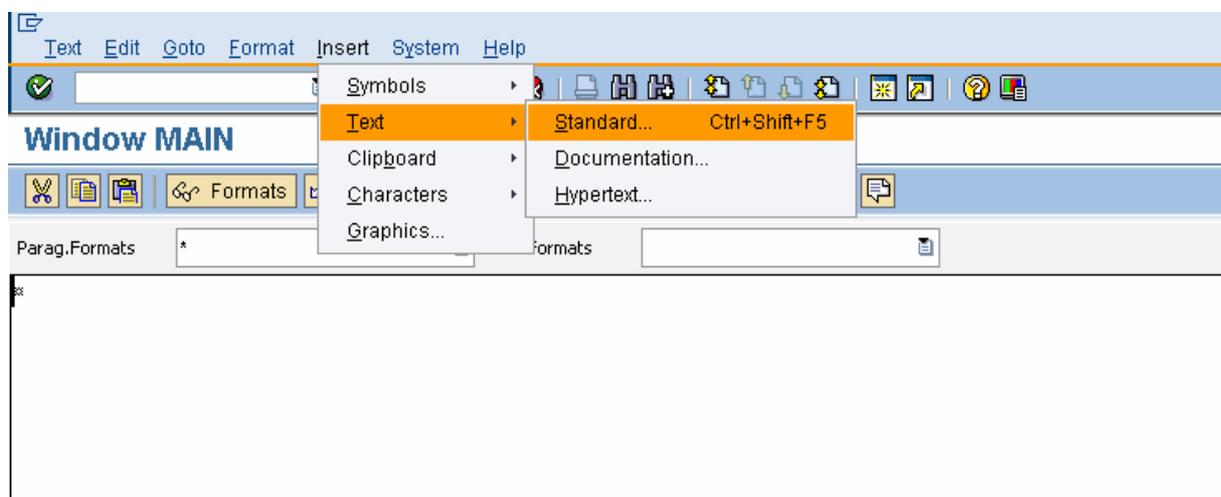
**Insert -> Text -> Standard**
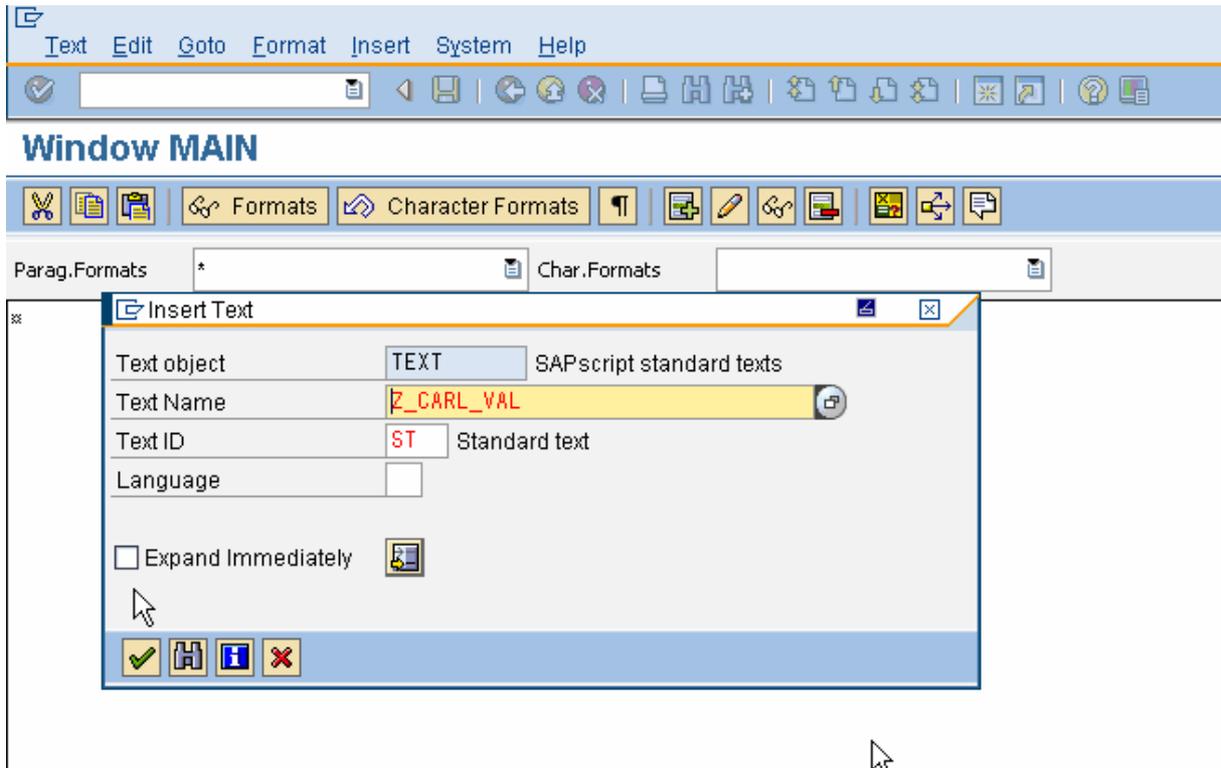


It is possible to 'resolve immediate' the standard text. This means not only a link to the standard text (INCLUDE) is entered in the script but the complete contents is copied from the standard text to the script.

**Disadvantage:**
In case the standard text (label) is modified, then you have to modify all scripts which contain this standard text.
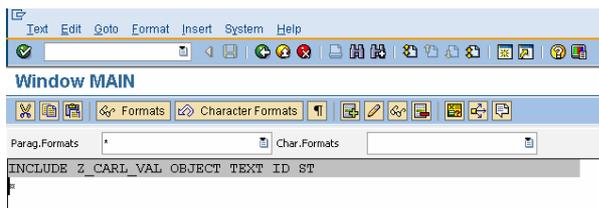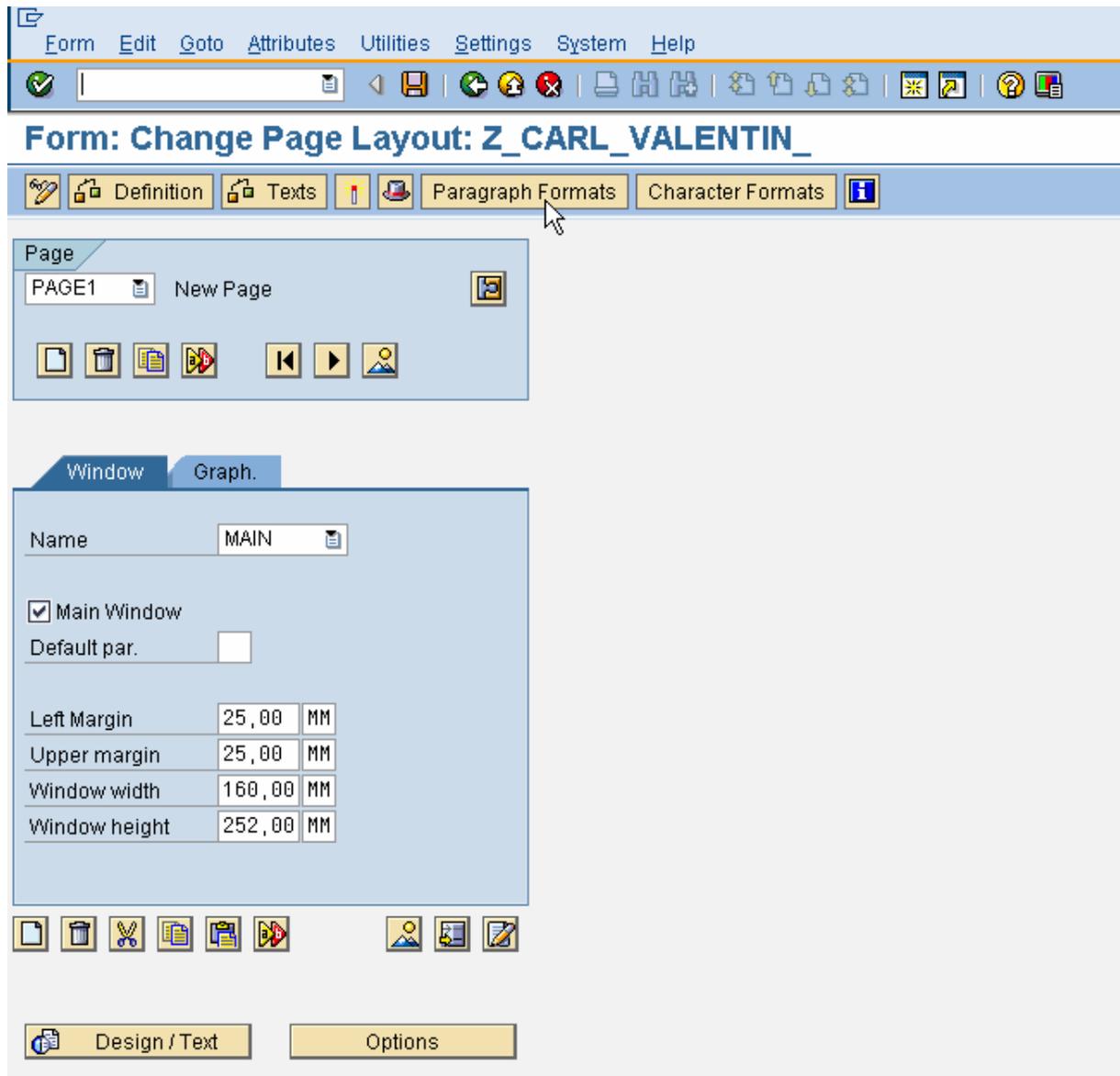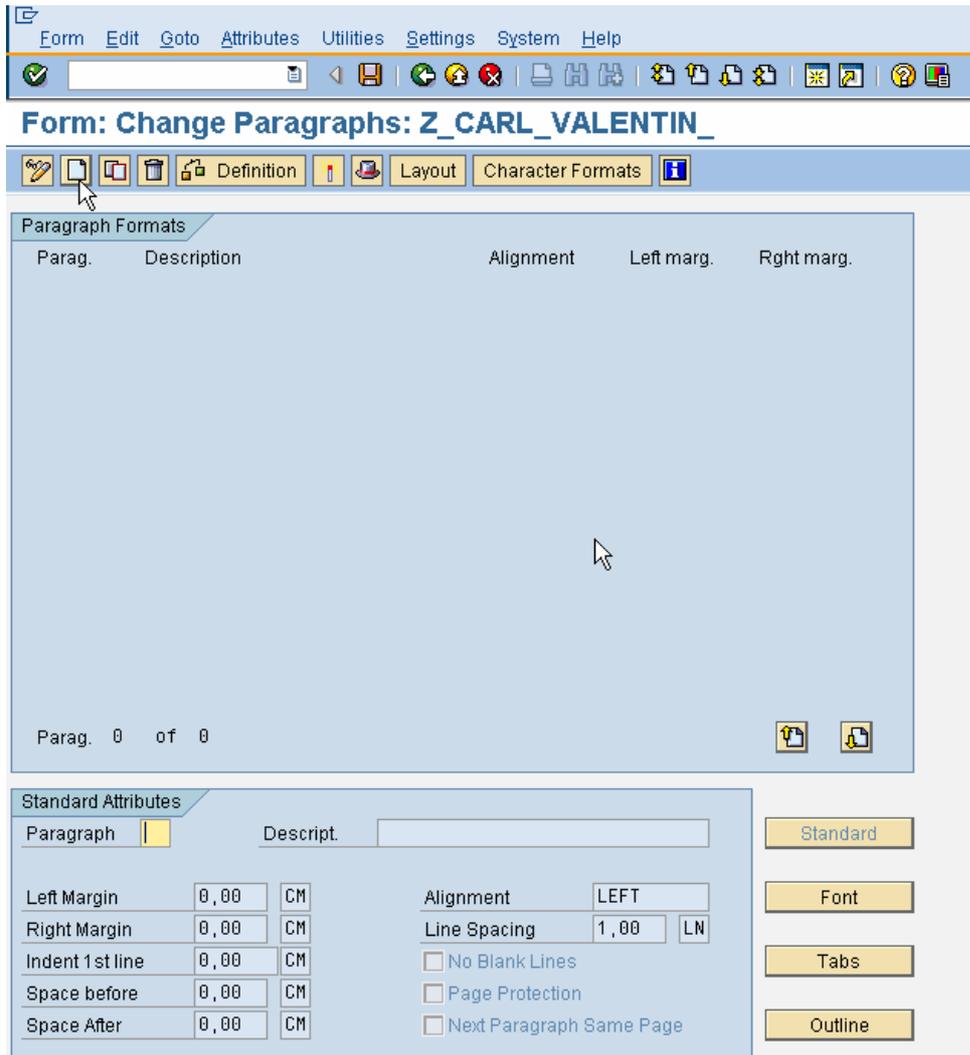


**not resolved standard text**                    **resolved standard text**
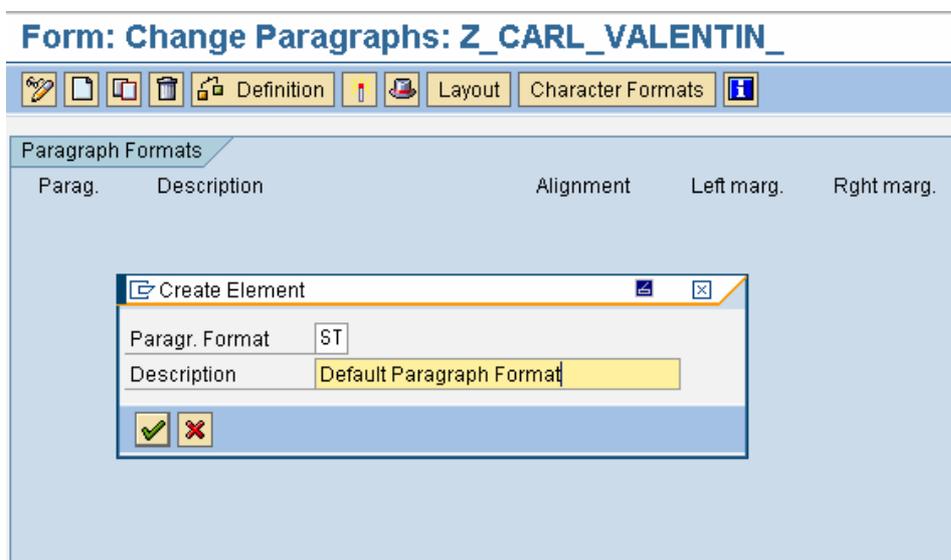
## Paragraph format

For each form at least one paragraph format has to be defined **Paragraph format**.
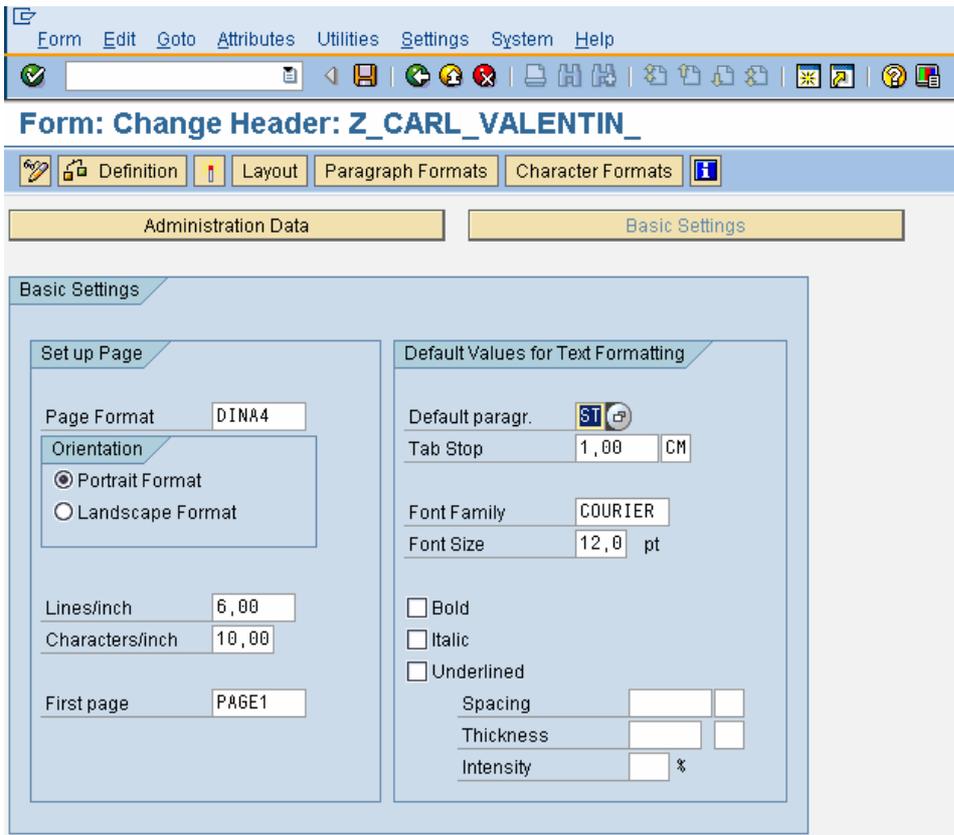From the layout of form you can change to the paragraph format.

By **'ANLEGEN'** is a new paragraph format created.



Click the **Paragraph formats** field to enter the desired format, then click the **Meaning** field to enter a describing text.

In the fomular head you have to enter a **Default paragraph**.



Saving and generating the form.