

A CP2000 Center

Network	A.1.1
1 Workflow	A.1.3
1.1 Overview	A.1.3
1.2 Hardware prerequisites	A.1.5
1.3 Software prerequisites	A.1.6
1.4 Installation guidelines Windows NT 4.0 for the PC Plate Image Reader Online/PrepressInterface A.1.7	
1.5 Installation sequence	A.1.8
2 Network variants	A.1.9
2.1 General	A.1.9
2.2 Variant 1	A.1.9
2.3 Variant 2	A.1.10
2.4 Variant 3	A.1.11
2.5 Variant 4	A.1.12
2.6 Variant 5	A.1.13
3 Setting up the server	A.1.14
3.1 Hardware and software requirements	A.1.14
3.2 Setting up the DHCP server (for network versions 4 and 5)	A.1.15
3.3 Setting up the DHCP Server (additional step, only for network version 5)	A.1.19
3.4 Setting up the DHCP client	A.1.21
3.5 Setting up the WINS server (for network versions 4 and 5)	A.1.22
3.6 Setting up the router (for network version 5)	A.1.24
3.7 TCP/IP accessories	A.1.26
PresetLink	A.2.1
1 Set up the Plate Image Reader online connection	A.2.3
1.1 Installation sequence	A.2.3
1.2 Connect Plate Image Reader to the PC	A.2.3
1.3 Installing the Plate Image Reader Online software	A.2.3
1.4 Enabling directory CPC31Dir	A.2.4
1.5 Activating the user account "Guest"	A.2.6
1.6 Checking the installation	A.2.7

1.7	Making a note of the path for CP2000	A.2.10
1.8	Checking the network connection to the CP2000 Center	A.2.10
1.9	Troubleshooting	A.2.10
1.10	General	A.2.10
2	Setting up the PC PrepressInterface	A.2.11
2.1	General	A.2.11
2.2	Procedure for PPF files/end devices	A.2.11
2.3	Procedure with cdk files	A.2.15
3	Setting up the CP2000 Center	A.2.19
3.1	Overview of possible configurations	A.2.19
3.2	Installation sequence	A.2.20
3.3	Checking whether switched clear	A.2.20
3.4	Setting up a "new data base in the network"	A.2.21
3.5	Designation of the print jobs	A.2.22
3.6	Troubleshooting	A.2.23
3.7	Documentation for installation	A.2.24
	ManagementGate	A.3.1
1	Overview	A.3.3
1.1	General information	A.3.3
1.2	Linking CP2000 ManagementGate to the Management Information System MIS (trade-specific software system)	A.3.4
1.3	Linking CP2000 ManagementGate to DataControl	A.3.5
1.4	Configuring CP2000 ManagementGate	A.3.5
2	Connection of CP2000 Center to the trade-specific software	A.3.12
2.1	Overview	A.3.12
2.2	Transferring job data from MIS to CP2000 Center	A.3.13
2.3	Transferring CP2000 Center production data to the MIS	A.3.19
3	Connection of CP2000 Center to DataControl	A.3.22
3.1	Presetting Data from DataControl to CP2000 ManagementGate	A.3.22
3.2	Process Messages from CP2000 ManagementGate to DataControl	A.3.23

Network

1	Workflow	A.1.3
1.1	Overview	A.1.3
1.2	Hardware prerequisites	A.1.5
1.3	Software prerequisites	A.1.6
1.4	Installation guidelines Windows NT 4.0 for the PC Plate Image Reader Online/PrepressInterface A.1.7	
1.5	Installation sequence	A.1.8
2	Network variants	A.1.9
2.1	General	A.1.9
2.2	Variant 1	A.1.9
2.3	Variant 2	A.1.10
2.4	Variant 3	A.1.11
2.5	Variant 4	A.1.12
2.6	Variant 5	A.1.13
3	Setting up the server	A.1.14
3.1	Hardware and software requirements	A.1.14
3.2	Setting up the DHCP server (for network versions 4 and 5)	A.1.15
3.3	Setting up the DHCP Server (additional step, only for network version 5)	A.1.19
3.4	Setting up the DHCP client	A.1.21
3.5	Setting up the WINS server (for network versions 4 and 5)	A.1.22
3.6	Setting up the router (for network version 5)	A.1.24
3.7	TCP/IP accessories	A.1.26

1 Workflow

1.1 Overview

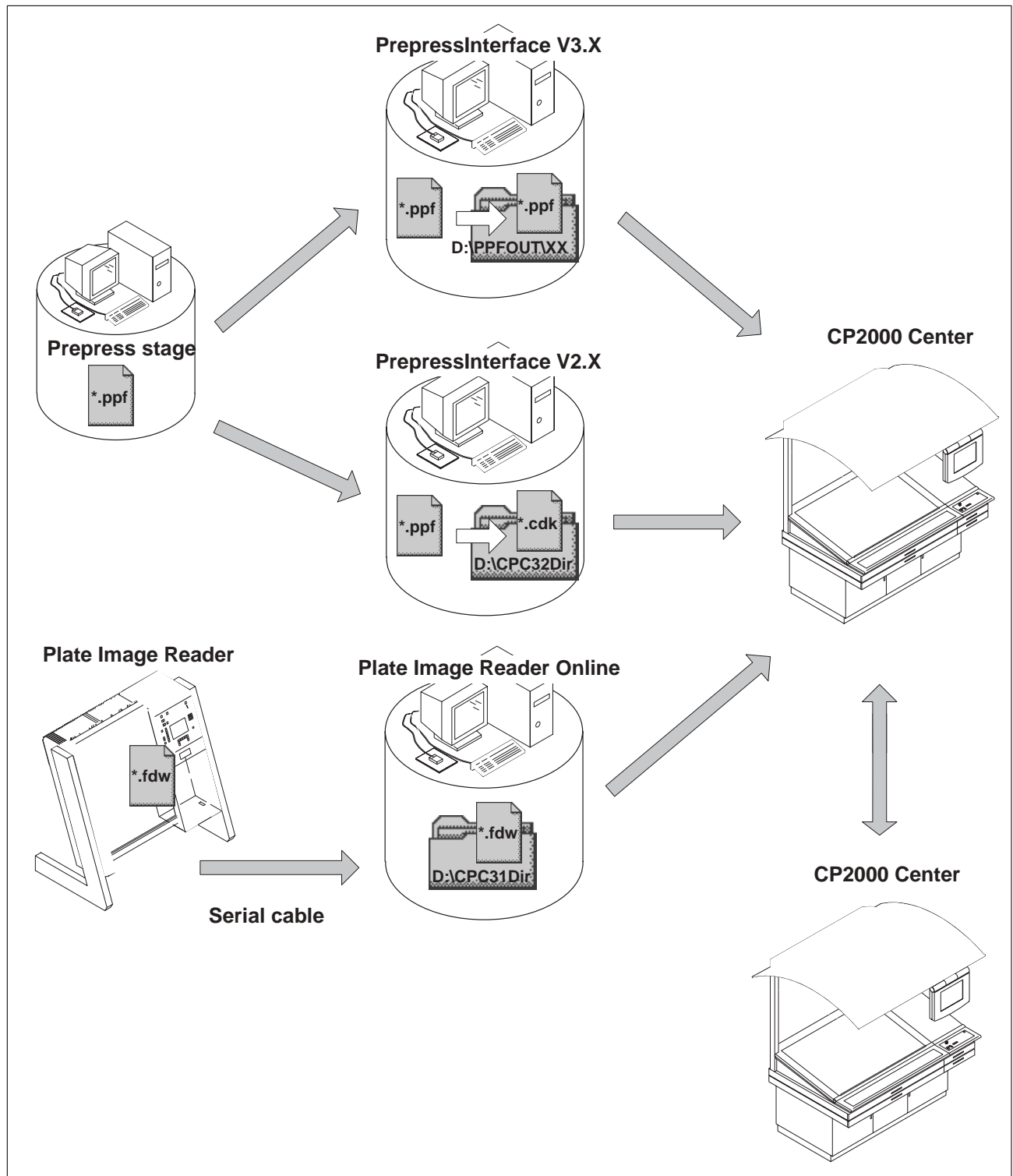


Fig. 1 Overflow

Prepress stage

At the prepress stage a ppf file is generated for the print job and transferred to the hard disk of the PC PrepressInterface.

PC with PrepressInterface V2.X

PrepressInterface-V2.X calculates the area coverage per ink zone for all colors and writes these values automatically to the cdk file (directory D:\CPC32Dir).

PC with PrepressInterface V3.X

PrepressInterface V3.X calculates the area coverage per ink zone for all colors and writes these values automatically to the ppf file (directory D:\PPFOUT\SMXX).

Plate Image Reader

With the plate image reader a printing plate is measured, an fdw file (area coverage per ink zone for all colors) is generated and the latter is transferred to the hard disk of the PC Plate Image Reader.

PC with Plate Image Reader Online

The fdw files (area coverage per ink zone for all colors) from the Plate Image Reader are filed on the hard disk (directory D:\CPC31Dir) and are available to the CP2000 Center of the printing press.

CP2000

The CP2000 Center of the printing press has direct access to the hard disks of the PC's with Plate Image Reader Online (fdw files), PrepressInterface V2.X (cdk files) and PrepressInterface V3.X (ppf files) and can thus "fetch" the requisite area coverage per ink zone for the relevant print job. In addition the CP2000 Center has access to the print jobs of other CP2000 Centers in the network.

1.2 Hardware prerequisites

Hardware	PrepressInterface (exclusive installation)	Plate Image Reader Online (exclusive installation)	PrepressInterface and Plate Image Reader Online (joint installation)
Processor	Pentium processor, clock frequency at least 100 MHz, recommended 333 MHz	Pentium processor, clock frequency at least 100 MHz, recommended 333 MHz	Pentium processor, clock frequency at least 100 MHz, recommended 333 MHz
Main memory	At least 128 MByte RAM, recommended 256 MByte RAM	At least 64 MByte RAM	At least 128 MByte RAM, recommended 256 MByte RAM
Graphic display adaptor	At least 4 Mbyte memory, resolution at least 1024 x 768 pixels with 32768 colors	VGA graphic display adaptor	At least 4 Mbyte memory, resolution at least 1024 x 768 pixels with 32768 colors
Hard disk	At least 4 GByte for operating system, application and utility data	At least 4 GByte for operating system, application and utility data	At least 4 GByte for operating system, application and utility data
Network board	Ethernet adapter for connection to the prepress stage and to the printing presses	Ethernet adapter for connection to the printing presses	Ethernet adapter for connection to the prepress stage and to the printing presses
Monitor	Monitor with a resolution of at least 1024 x 768 pixels	VGA monitor	Monitor with a resolution of at least 1024 x 768 pixels
Interfaces	A parallel interface for connection of the external CPC job memory card drive and of the PrepressInterface dongle	A serial interface (RS232) for online connection of the Plate Image Reader	A parallel interface for connection of the external CPC job memory card drive and of the PrepressInterface dongle and a serial interface (RS232) for online connection of the Plate Image Reader
Other equipment	Keyboard, mouse, 3.5" disk drive, CD ROM disk drive	Keyboard, mouse, 3.5" disk drive, CD ROM disk drive	Keyboard, mouse, 3.5" disk drive, CD ROM disk drive

Tab. 1



Information

All hardware components must comply with the MS Windows NT Hardware Compatibility List.

1.3 Software prerequisites

PrepressInterface CIP3 (exclusive installation)	Plate Image Reader Online (exclusive installation)	PrepressInterface CIP3 and Plate Image Reader Online (joint installation)
Windows NT 4.0 Server and service pack 3 (or higher)	Windows NT 4.0 Workstation and service pack 3 (or higher)	Windows NT 4.0 Server and service pack 3 (or higher)
Windows 2000 Professional or Server	Windows 2000 Professional or Server	Windows 2000 Professional or Server

Tab. 2

**Information**

No other programs are allowed to be installed on the PC.

1.4 Installation guidelines Windows NT 4.0 for the PC Plate Image Reader Online/PrepressInterface

Partitioning of the hard disk

The hard disk is subdivided into two parts:

- Partition C:\, max. 1 GB, for the system software.
- Partition D:\, for the application software.

Both partitions must be formatted as per the **NTFS** file system.

PC name

Use the following designations as PC names.



Information

The PC name always consists of 15 characters.
"XXXXXX" stands for the press serial number.

- Plate Image Reader Online only on the PC:
HDE31_ _ _ _XXXXXX
- PrepressInterface CIP3 only on the PC:
HDE32_ _ _ _XXXXXX
- Plate Image Reader Online and Prepress-Interface CIP3 on the PC:
HDE3X_ _ _ _XXXXXX

The PC has to be allocated to the work group HDM (not to a domain).

User

Set up three users:

- User with administrator rights for the system administrator of the print shop (user name and customer's freely selectable password).
- User with administrator rights for the HDM service (user name: **HD_Service**, password: **HDM**).
- User for the operator (user rights only, user name and customer's freely selectable password).

Operating system

If the NT 4.0 Server version is installed, the PC must be set up as a "stand-alone server".

If Windows 2000 is installed, the PC is set up as standard as a "stand-alone server".

Protocols

- For network variants 1...3 use the protocol NETBEUI.
- For network variants 4 and 5 use protocols NETBEUI and TCP/IP, protocol NETBEUI being required only for name resolution.
For these variants the PC must be set up as a DHCP client.

A fixed IP address can also be input on the CP2000 Center (from software CPT 034.0 onwards).

1.5 Installation sequence

- ① Install and start Plate Image Reader Online and/or PrepressInterface CIP3
- ② Perform function test on Plate Image Reader Online and/or PrepressInterface CIP3.
- ③ Make and test network connections between PC Plate Image Reader Online/Prepressinterface CIP3 and CP2000 Center of the printing press.
- ④ On CP2000 Center of the printing press perform the PresetLink setting.
- ⑤ Perform PresetLink function test.

2 Network variants

2.1 General

The five network variants are described in detail in the Technical Information **SM 102**.

A short list of the most important features of the network variants can be found on the following pages.

2.2 Variant 1

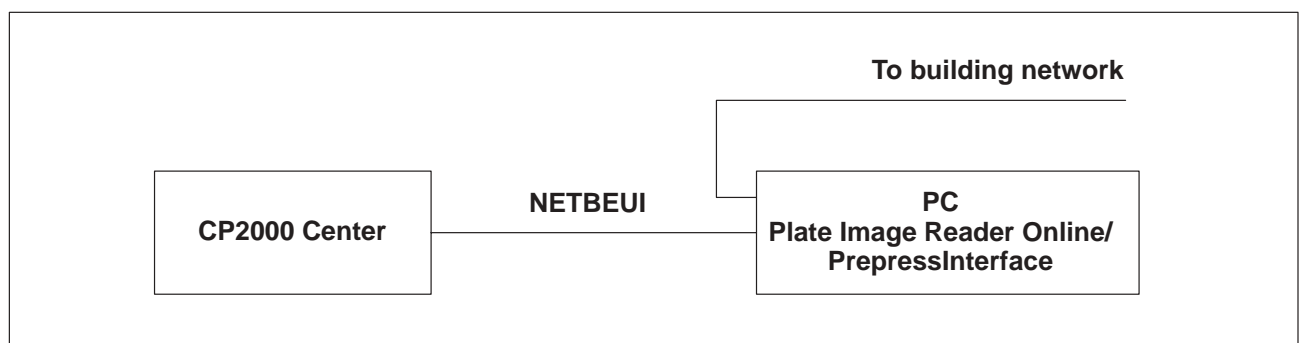


Fig. 2 Variant 1

A maximum of two HDM devices reside in the print shop, these being erected in the immediate vicinity (max. 100 m) of one another. They are connected by a **"reversed"** Ethernet cable (with RJ45 connectors).

Communication between the devices is effected via the **NETBEUI** protocol.

Only Plate Image Reader Online and/or Prepress-Interface CIP3 may be installed on the PC.

If PrepressInterface-CIP3 is installed, via a second network board in the PC Plate Image Reader Online/PrepressInterface a connection to the building network can be made (the protocol is prespecified by the building network).

2.3 Variant 2

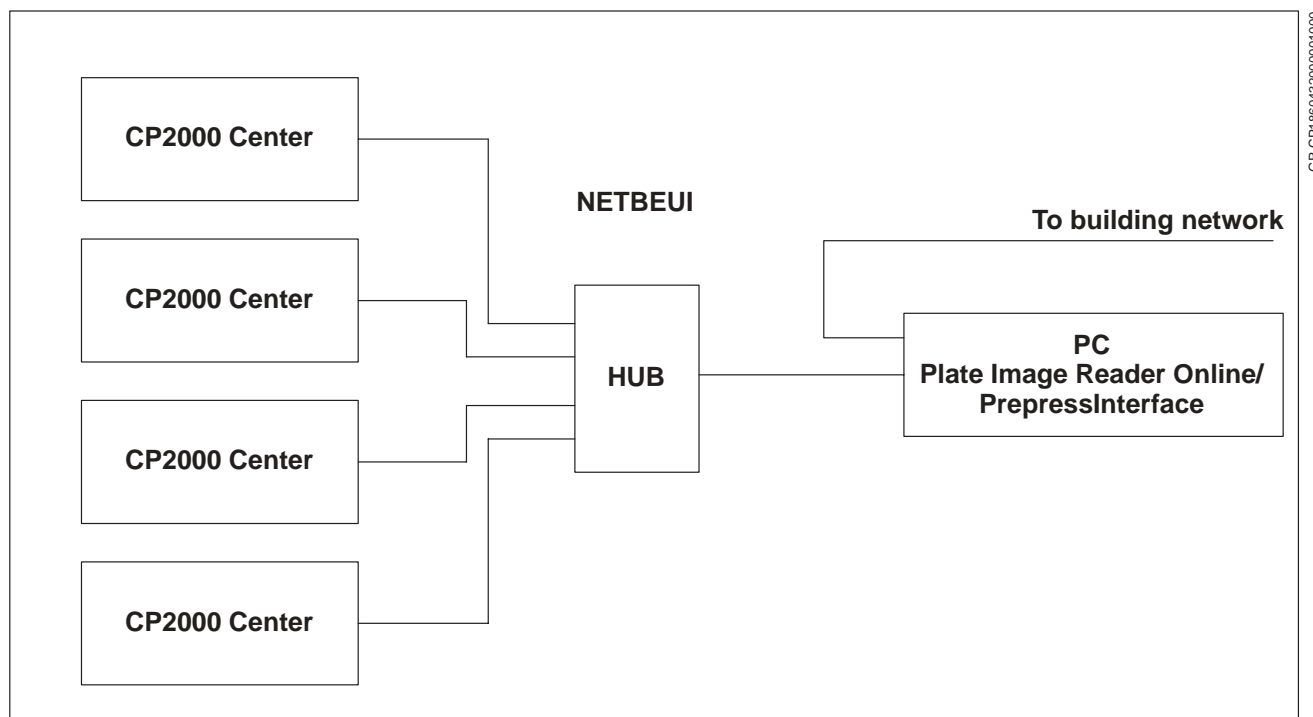


Fig. 3 Variant 2

Several HDM devices are located in the print shop, these being erected in the immediate vicinity (max. 100 m) of one another. They are connected via a HUB with Ethernet cables (**1:1, i.e. "non-reversed"**).

Communication between the devices is effected via the **NETBEUI** protocol.

Only Plate Image Reader Online and/or Prepress-Interface CIP3 may be installed on the PC.

If PrepressInterface-CIP3 is installed, via a second network board in the PC Plate Image Reader Online/PrepressInterface a connection to the building network can be made (the protocol is prespecified by the building network).

2.4 Variant 3

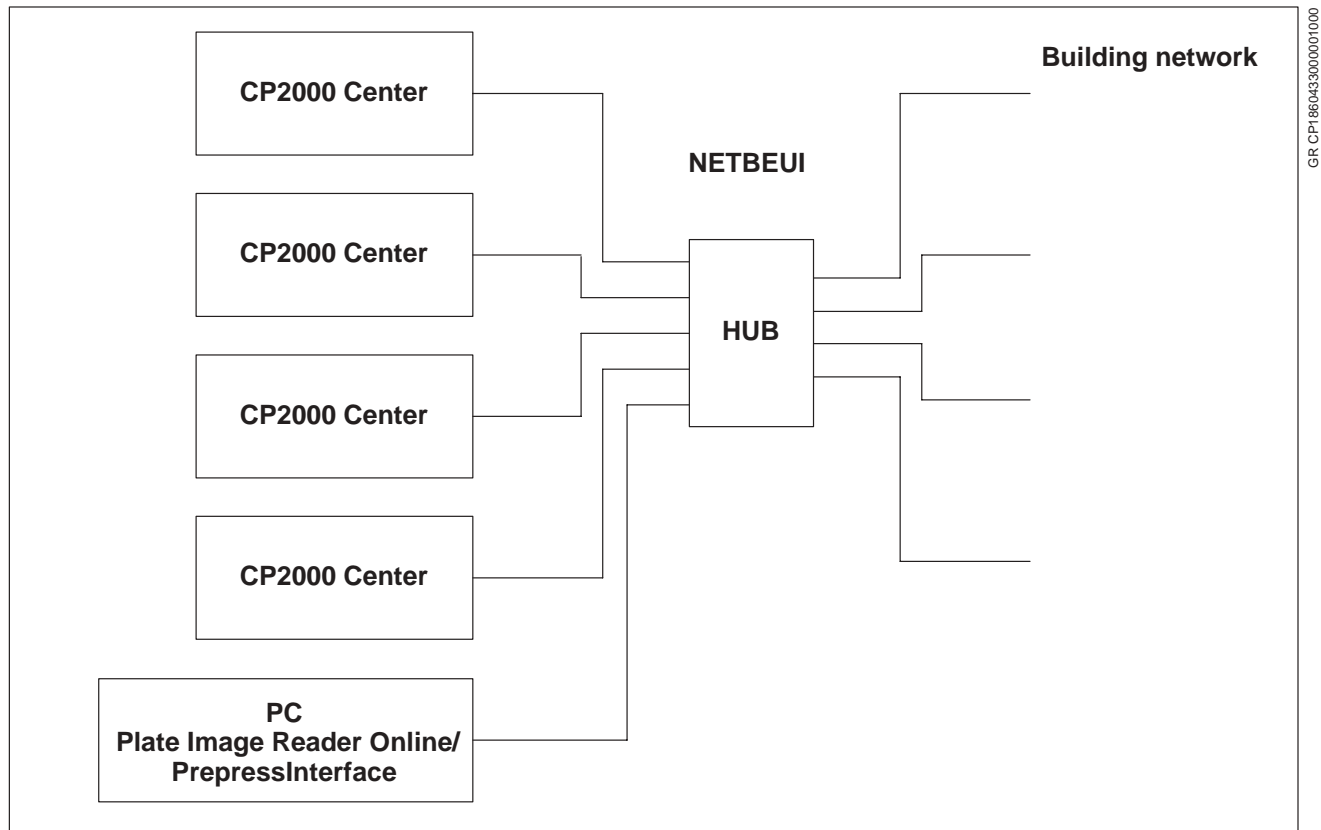


Fig. 4 Variant 3

Already existent in the print shop is a network into which the HDM devices are directly integrated.

Communication between the devices is effected via the **NETBEUI** protocol.

All HDM devices must be linked in a network segment, because the protocol NETBEUI is not routing-capable (i.e. communication via different segments is not possible).

In addition other protocols can be installed for the network board in the PC Plate Image Reader Online/ PrepressInterface. Communication with Prepress devices is rendered possible by this means.

2.5 Variant 4

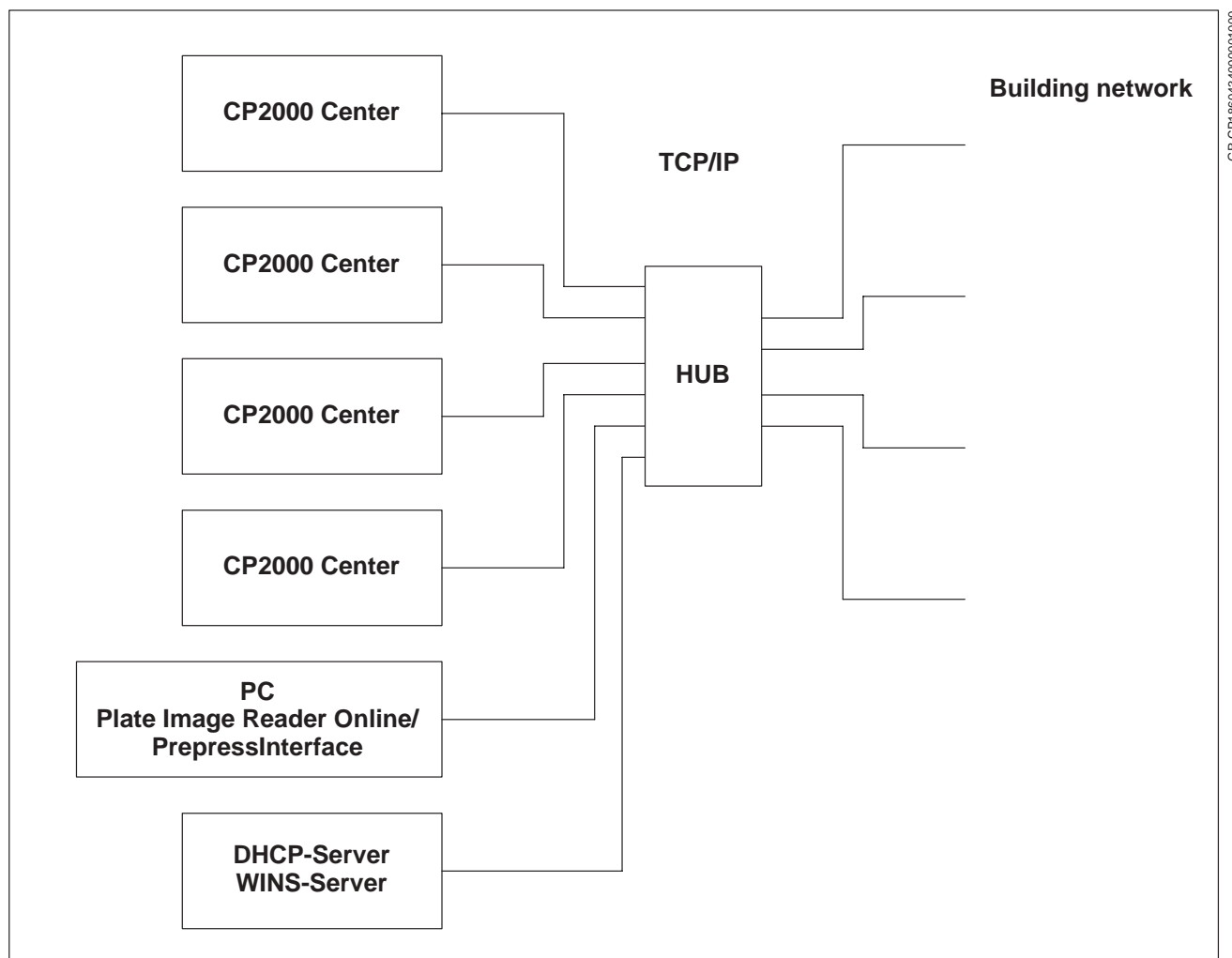


Fig. 5 Variant 4

Already existent in the print shop is a network into which the HDM devices are directly integrated.

Communication between the devices is effected via the **TCP/IP** protocol.

As the press CP2000 Centers are set up as DHCP clients, a **DHCP** server must be present or be set up in the network.

Besides this a **WINS** server must be provided or be set up in the network.

DHCP and WINS server can be set up together on one PC.

2.6 Variant 5

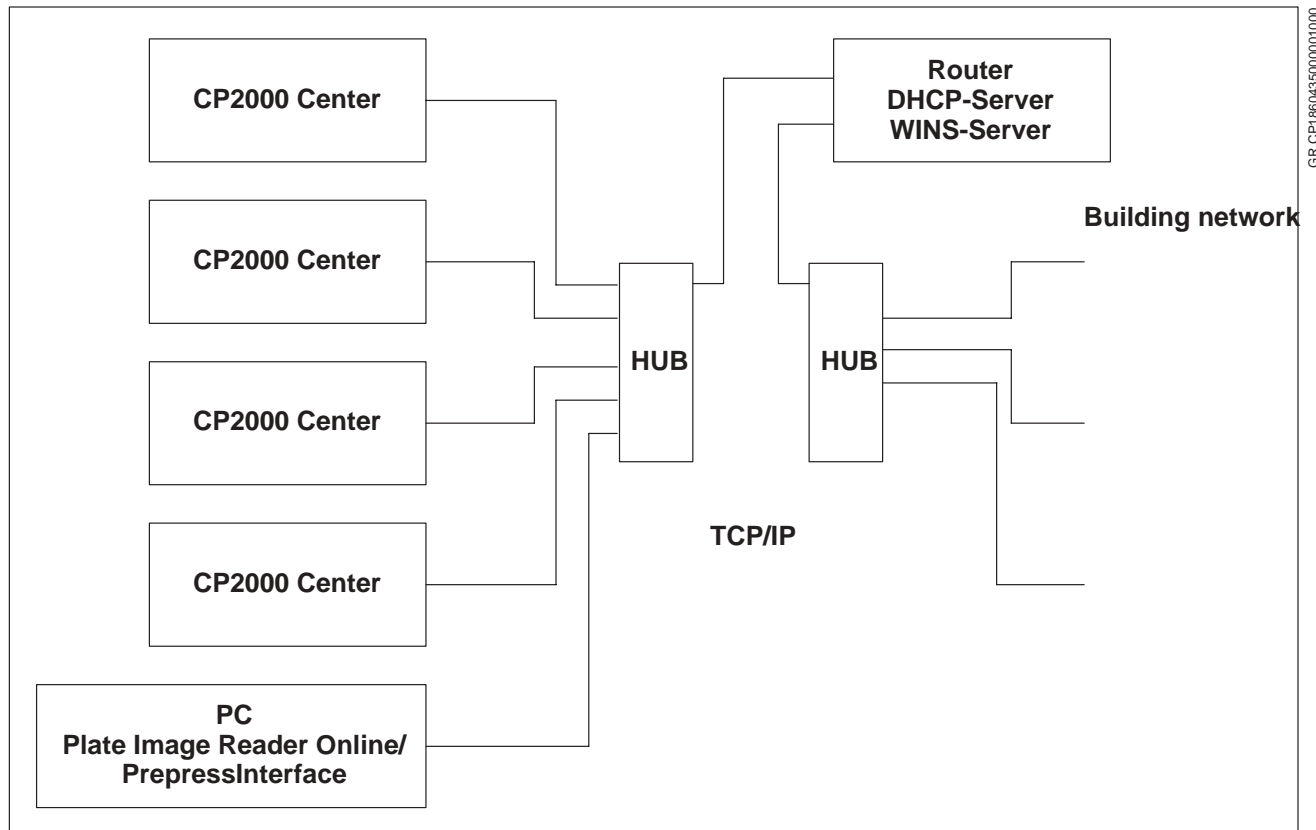


Fig. 6 Variant 5

One or several HDM devices are separated from an already existent printer network by an in-line **Router**.

Communication between the devices is effected via the **TCP/IP** protocol.

As the press CP2000 Centers are set up as DHCP clients, a **DHCP** server must be present or must be set up (on the router PC).

Besides this a **WINS** server must be present or must be set up (on the router PC).

3 Setting up the server

3.1 Hardware and software requirements

UTKCP1860118001000000

Operating system

Microsoft Windows NT 4.0, English server version with service pack 5 or higher.

Hardware	
Processor	Pentium II processor, minimum clock frequency: 200 MHz, recommended: 400 MHz
Main memory	Minimum: 64 MByte RAM, Recommended: 128 MByte RAM
Graphic display adaptor	VGA graphic display adaptor
Hard disk	Minimum: 4 GByte
Network card(s)	Ethernet adapter
Monitor	VGA monitor
Other equipment	Keyboard, mouse, 3.5" disk drive, CD ROM disk drive

Tab. 3



Information

All hardware components must comply with the MS Windows NT Hardware Compatibility List.

3.2 Setting up the DHCP server (for network versions 4 and 5)

- 1 Switch on the PC, push the buttons **Ctrl**, **Alt** and **Del** simultaneously when prompted and register as **user with administrator rights**.
- 2 Insert the **NT4.0** CD into the disk drive.

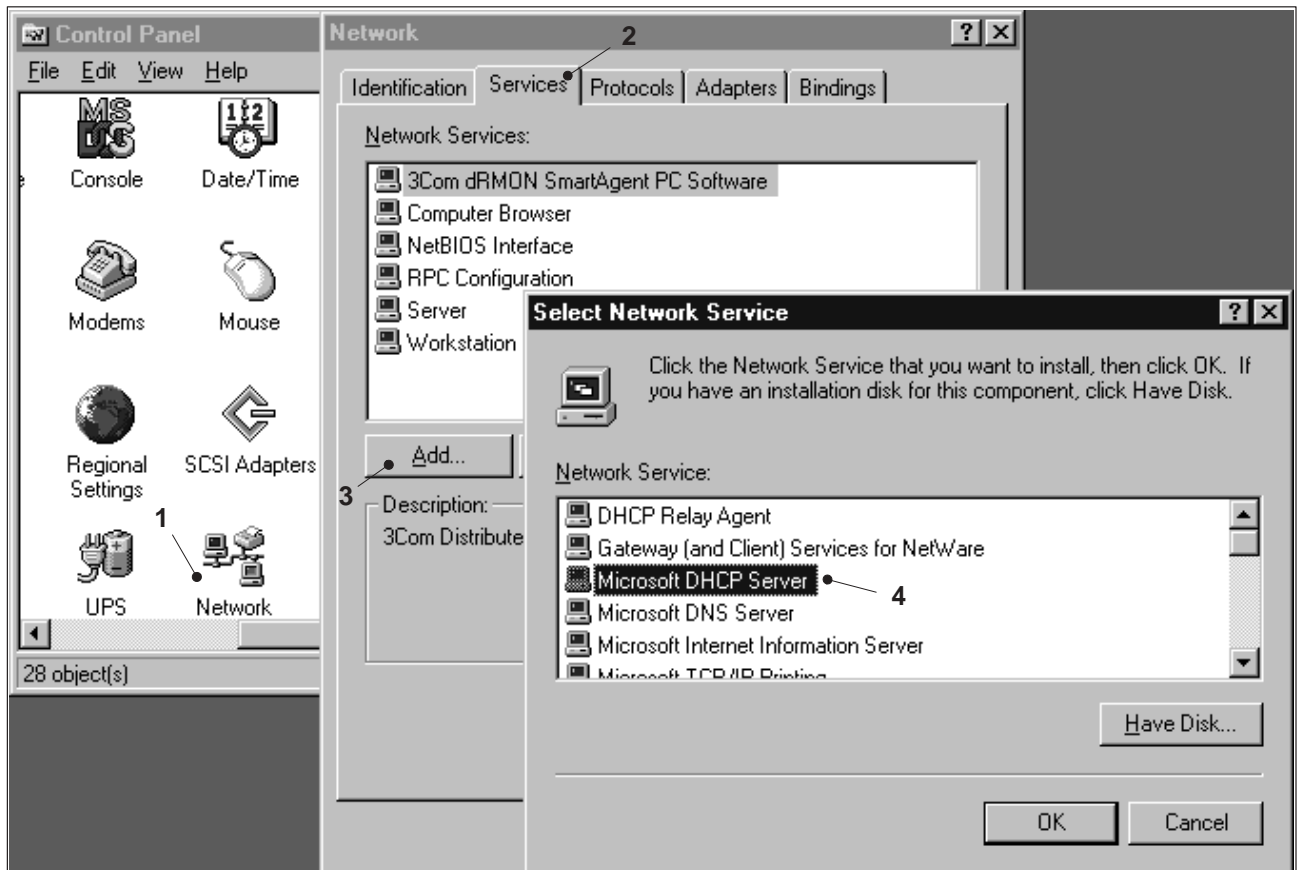


Fig. 7 Network Service

- 3 Open the "Control Panel" dialog box by clicking the buttons **Start>Settings>Control Panel**.
- 4 Click on the **Network** symbol (Fig.7/1).
- 5 Click **Services** on the property tab (Fig.7/2).
- 6 Click on the **Add** button (Fig.7/3).
- 7 Click on the **Microsoft DHCP Server** line (Fig.7/4).
- 8 Click on the **OK** button.
- 9 Click on the **Continue** button.
- 10 Confirm the appearing message by clicking the **OK** button.

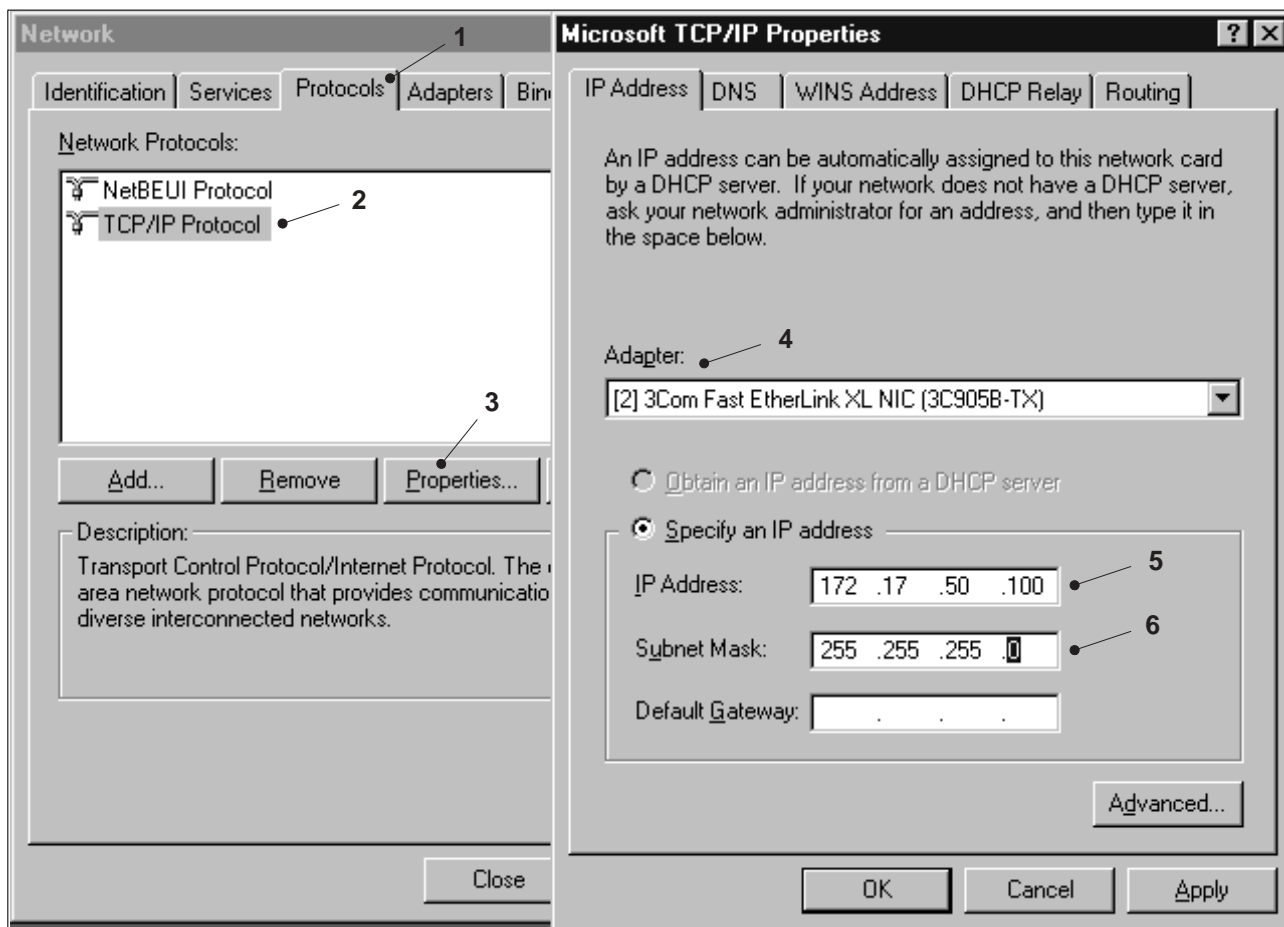


Fig. 8 TCP/IP Properties

- 11 Click **Protocols** (Fig. 8/1) on the registration card.
- 12 Click on the line **TCP/IP Protocol** (Fig. 8/2).
- 13 Click on the **Properties** button (Fig. 8/3).
- 14 If two network boards are installed in the PC (network version 5), click on the 84 button in the drop-down list box "Adapter" and then click on the network board to the HDM network [1].

► **Information**

The network board to the HDM net must be installed as the first [1] network board and the network board to the in-house network must be installed as the second [2] one

- 15 Input on the line "IP address" (Fig. 8/5):
172.17.50.100
Input on the line "Subnet Mask" (Fig. 8/6):
255.255.255.0
- 16 Click on the **OK** button.

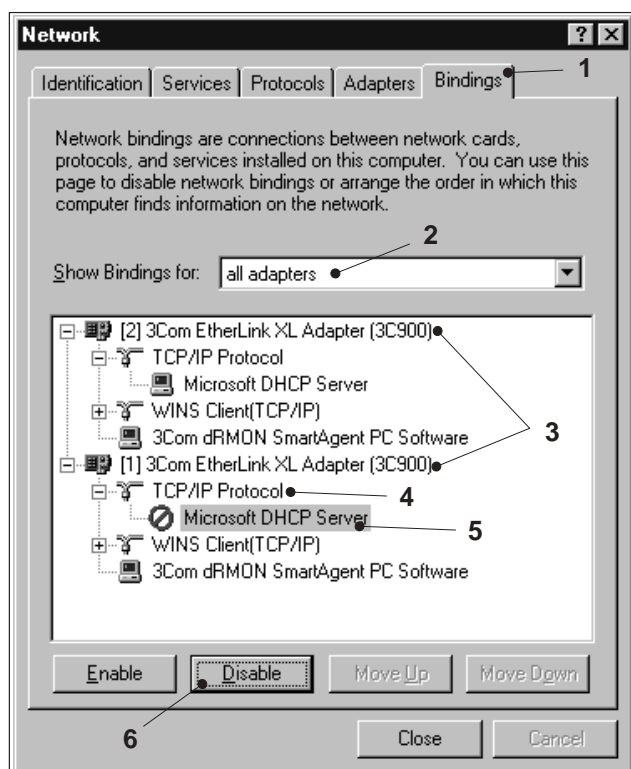


Fig. 9 Bindings

► **Information**
The steps 17...22 must only be carried out for the network version 5 (PC with two network boards).

- 17 Click on the property tab **Bindings** (Fig. 9/1).
- 18 Click on the button in the line "Show Bindings" and then click on the line **all adapters** (Fig. 9/2).
- 19 Double click both network boards (Fig. 9/3).
- 20 Regarding the network board to the in-house network, click on the line **TCP/IP Protocol** (Fig. 9/4).
- 21 Click on the **Microsoft DHCP Server** line (Fig.9/5).
- 22 Click on the **Disable** button (Fig. 9/6).
- 23 Click on the **Close** button.
- 24 Click on the **Close** button.
- 25 Remove the **NT4.0** CD from the disk drive.
- 26 Click on the **Yes** button.

► **Information**
The PC is restarted.

- 27 Upon request, push the buttons **Ctrl**, **Alt** and **Del** simultaneously and register as a **user with administrator rights**.

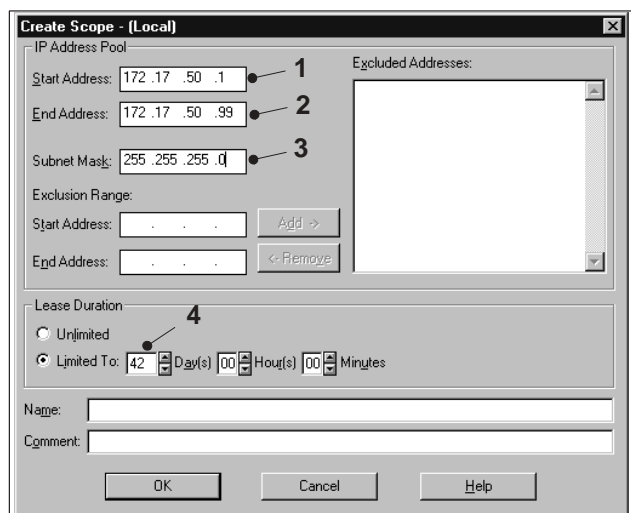



Fig. 10 Create Scope

- 28 Open the "DHCP Manager" dialog box by clicking the buttons **Start>Programs>Administrative Tools>DHCP-Manager**.
- 29 Double Click on the line **local press**.
- 30 Click **Scope>Create** in the menu bar.
- 31 Input on the line "Start Address" (Fig. 10/1): **172.17.50.1**
Input on the line "End Address"(Fig. 10/2): **172.17.50.99**
Input on the line "Subnet Mask"(Fig. 10/3): **255.255.255.0**
- 32 Set **Limited to 42 Days** in the field "Lease Duration" (Fig. 10/4).
- 33 Click on the **OK** button.
- 34 Click on the **Yes** button.
- 35 The following display may appear: "No more data available". Confirm this message by clicking on the **OK**button.

► **Information**
In case of network version 5 the steps in the following chapter must be carried out additionally.

- 36 Close the "DHCP Manager" dialog box by clicking the  button.

3.3 Setting up the DHCP Server (additional step, only for network version 5)

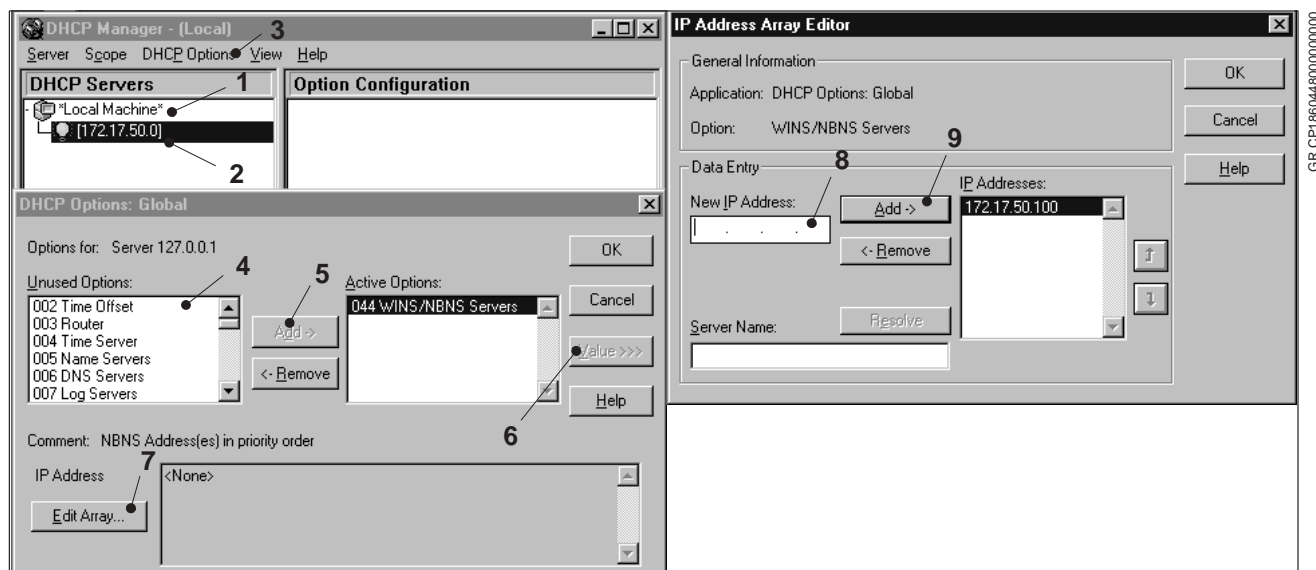


Fig. 11 DHCP Options, WINS/NBNS

- 37 Click **DHCP Options>Global** in the menu bar (Fig. 11/3).
- 38 In the window "DHCP Options: Global" click on the option **044 WINS/NBNS Servers** (Fig. 11/4).
- 39 Click on the **Add** button (Fig. 11/5).
- 40 Confirm the appearing message by clicking the **OK** button.
- 41 Click on the **Value** button (Fig. 11/6).
- 42 Click on the **Edit Array** button (Fig. 11/7).
- 43 Enter **172.17.50.100** (Fig. 11/8) in the line New IP Address.
- 44 Click on the **Add** button (Fig. 11/9).
- 45 Click on the **OK** button.

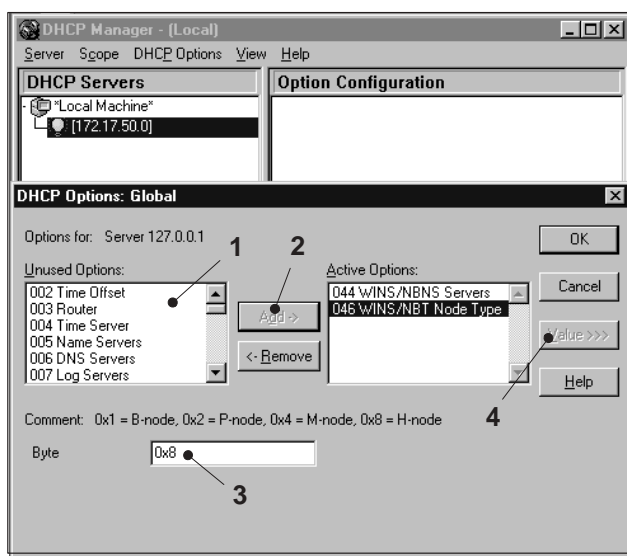


Fig. 12 DHCP Options, WINS/NBT

- 46 In the window "DHCP Options: Global" click on the option **046 WINS/NBT Node Type** (Fig. 12/1).
- 47 Click on the **Add** button (Fig. 12/2).
- 48 Click on the **Value** button (Fig. 12/4).
- 49 In the line Byte, enter **0x8** (Hybrid-node, Fig. 12/3).
- 50 Click on the **OK** button.

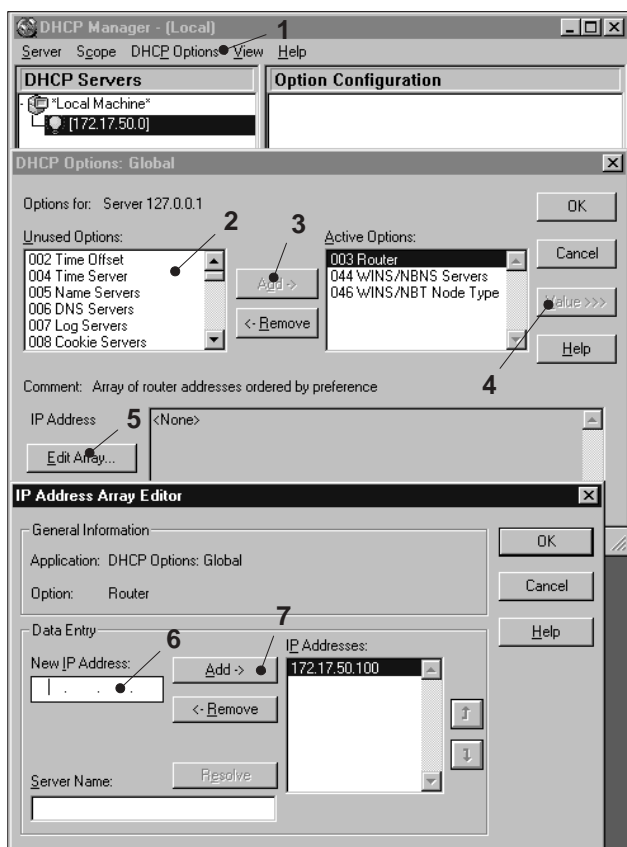


Fig. 13 DHCP Options, Router

- 51 Click **DHCP Options>Global** in the menu bar (Fig. 13/1).
- 52 In the window "DHCP Options: Global" click on the option **003 Router** (Fig. 13/2).
- 53 Click on the **Add** button (Fig.13/3).
- 54 Click on the **Value** button (Fig.13/4).
- 55 Click on the **Edit Array** button (Fig.13/5).
- 56 Enter **172.17.50.100** (IP address of the router) (Fig.13/6) in the New IP Address line.
- 57 Click on the **Add** button (Fig.13/7).
- 58 Click on the **OK** button.
- 59 Click on the **OK** button.
- 60 Close the "DHCP Manager" dialog box by clicking the ☐ button.

3.4 Setting up the DHCP client

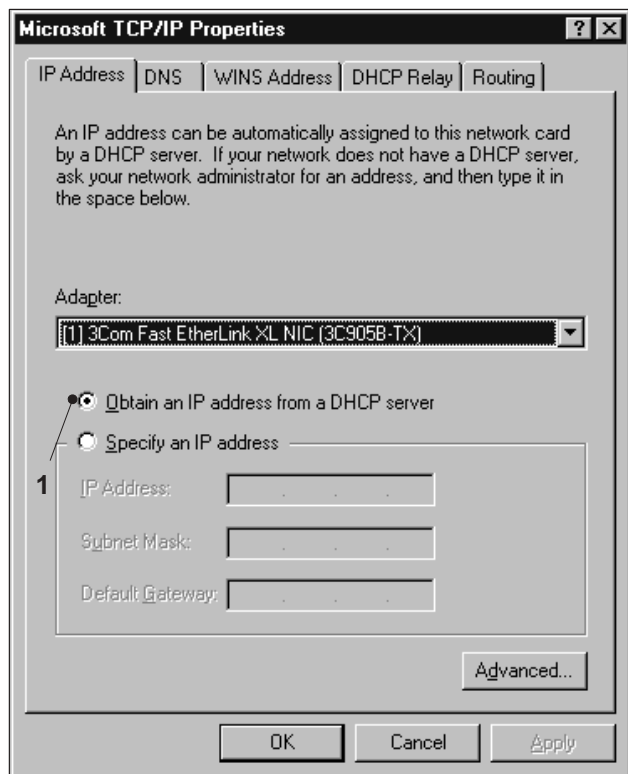


Fig. 14 TCP/IP Properties

- 1 Insert the **NT4.0** CD into the disk drive.
- 2 Open the "Control Panel" dialog box by clicking the buttons **Start>Settings>Control Panel**.
- 3 Click on the **Network** symbol.
- 4 Click on the property tab **Protocols**.
- 5 Click on the **Add** button.
- 6 Click on the line **TCP/IP Protocol**.
- 7 Click on the **OK** button.
- 8 Display: "Do you wish to use DHCP?"
Click on the **Yes** button.
- 9 Click on the **Continue** button.
- 10 Click on the **Close** button.
- 11 Click on the circle in front of the line "Obtain an IP address from a DHCP Server" (Fig. 14/1).
 - **Information**
A point must appear in the circle.
- 12 Display: Do you want to enable DHCP?
Click on the **Yes** button.
- 13 Click on the **OK** button.
- 14 Remove the **NT4.0** CD from the disk drive.
- 15 Click on the **Yes** button.
 - **Information**
The PC is restarted.

3.5 Setting up the WINS server (for network versions 4 and 5)

- ❶ Switch on the PC, push the buttons **Ctrl**, **Alt** and **Del** simultaneously upon request and register as **user with administrator rights**.
- ❷ Insert the **NT4.0** CD into the disk drive.

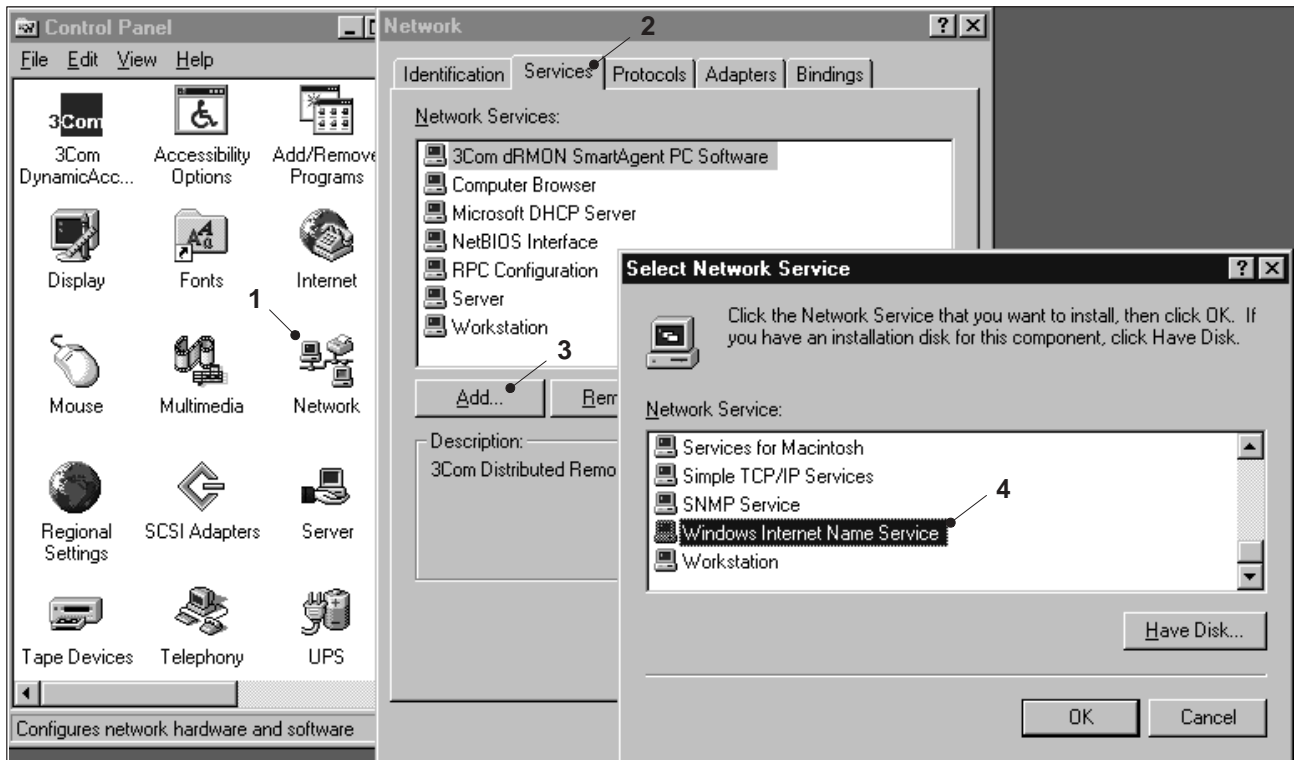


Fig. 15 Network Service

- ❸ Open the "Control Panel" dialog box by clicking the buttons **Start>Settings>Control Panel**.
- ❹ Click on the **Network** symbol (Fig. 15/1).
- ❺ Click **Services** (Fig. 15/2) on the property tab.
- ❻ Click on the **Add** button (Fig. 15/3).
- ❼ Click on the line **Windows Internet Name Service** (Fig. 15/4).
- ❽ Click on the **OK** button.
- ❾ Click on the **Continue** button.
- ❿ Click on the **Close** button.
- ⓫ Remove the **NT4.0** CD from the disk drive.
- ⓬ Click on the **Yes** button.

► **Information**
The PC is restarted.

**Information**

The address of the WINS server (TCP/IP Properties/WINS Address) must be entered in all the PCs in the in-house network which have access to the HDM network. Moreover, the router address must be defined on all these PCs (only for the network version 5).

3.6 Setting up the router (for network version 5)

- ① Switch on the PC, push the buttons **Ctrl**, **Alt** and **Del** simultaneously upon request and register as **user with administrator rights**.

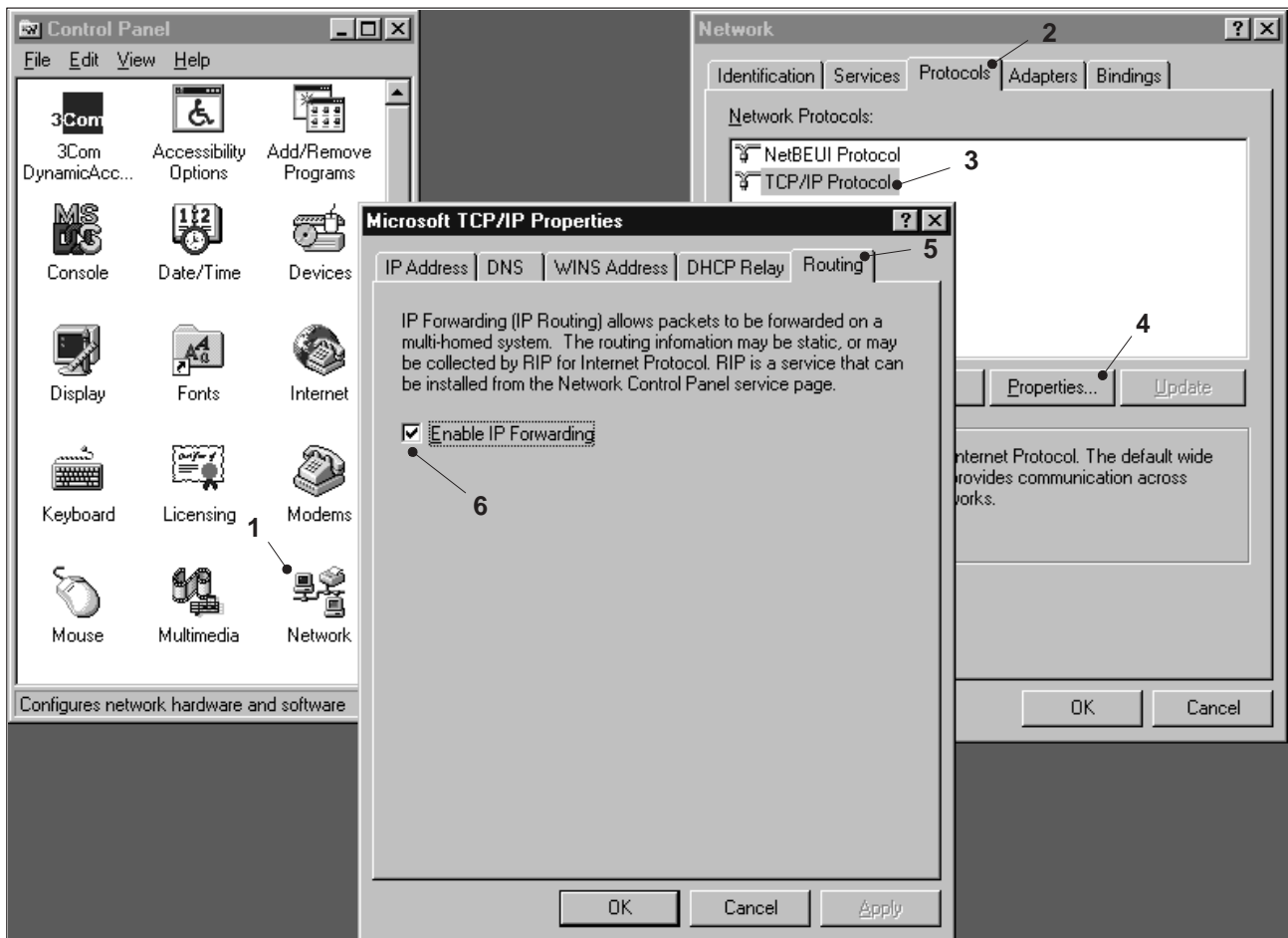


Fig. 16 TCP/IP Properties

- ② Open the "Control Panel" dialog box by clicking the buttons **Start>Settings>Control Panel**.
- ③ Click on the **Network** symbol (Fig. 16/1).
- ④ Click **Protocols** (Fig. 16/2) on the property tab.
- ⑤ Click on the line **TCP/IP Protocol** (Fig. 16/3).
- ⑥ Click on the **Properties** button (Fig. 16/4).
- ⑦ Click **Routing** (Fig. 16/5) on the property tab.
- ⑧ Click on the rectangle in front of the line **Enable IP Forwarding** (Fig. 16/6).

► **Information**

A check mark must appear in the rectangle.

- ⑨ Click on the **OK** button.
- ⑩ Click on the **Close** button.

- 11 Click on the **Yes** button.



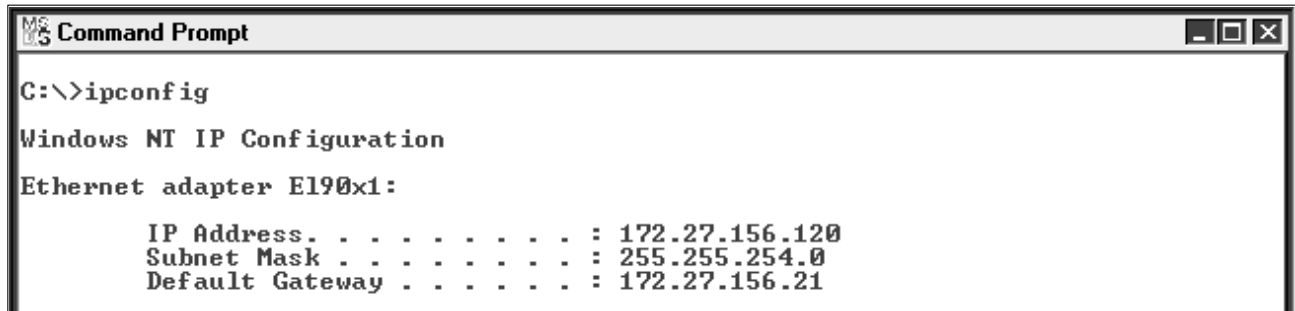
Information

The PC is restarted. No CD must be in the disk drive.

3.7 TCP/IP accessories

The following TCP/IP utility programs can be used for checking the network (start via the MS DOS input window).

3.7.1 ipconfig



```
MS-DOS Command Prompt
C:\>ipconfig

Windows NT IP Configuration

Ethernet adapter El90x1:

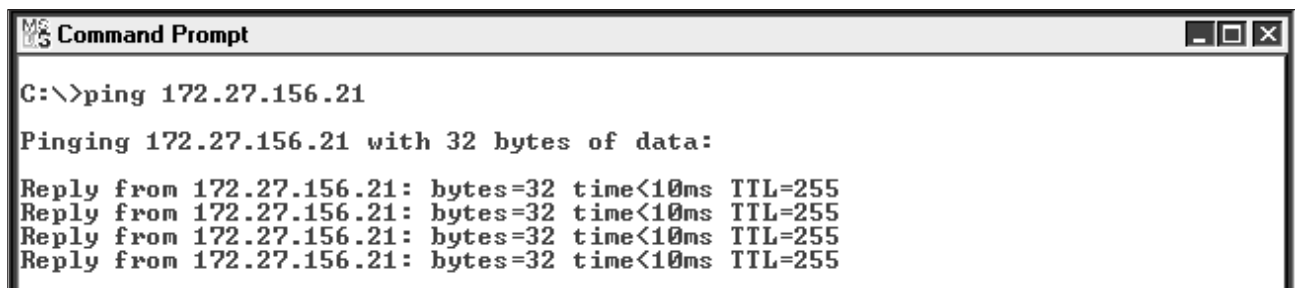
    IP Address. . . . . : 172.27.156.120
    Subnet Mask . . . . . : 255.255.254.0
    Default Gateway . . . . . : 172.27.156.21
```

Fig. 17 ipconfig

The utility program **ipconfig** serves to display the IP configuration of the installed network boards (Fig. 17):

- IP Address
- Subnet Mask
- Default Gateway

3.7.2 ping

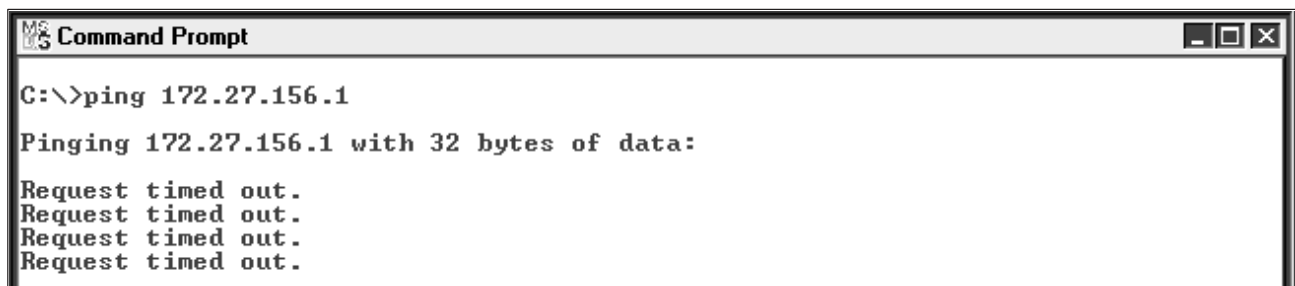


```
MS-DOS Command Prompt
C:\>ping 172.27.156.21

Pinging 172.27.156.21 with 32 bytes of data:

Reply from 172.27.156.21: bytes=32 time<10ms TTL=255
Reply from 172.27.156.21: bytes=32 time<10ms TTL=255
Reply from 172.27.156.21: bytes=32 time<10ms TTL=255
Reply from 172.27.156.21: bytes=32 time<10ms TTL=255
```

Fig. 18 ping / connection ok.



```
MS-DOS Command Prompt
C:\>ping 172.27.156.1

Pinging 172.27.156.1 with 32 bytes of data:

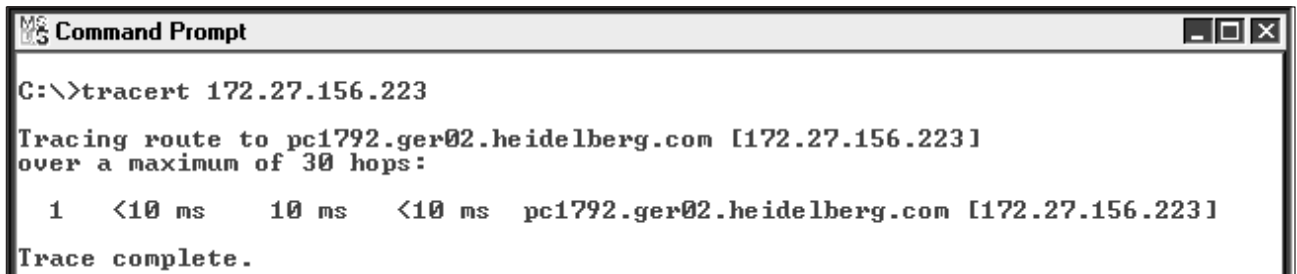
Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

Fig. 19 ping / no connection

The utility program **ping** serves to check the connection (only for the TCP/IP protocol) to other computers in the network.

- Fig. 18: Connection OK.
- Fig. 19: No connection could be made.

3.7.3 tracert



```
MS-DOS Command Prompt
C:\>tracert 172.27.156.223

Tracing route to pc1792.ger02.heidelberg.com [172.27.156.223]
over a maximum of 30 hops:
  1  <10 ms    10 ms    <10 ms    pc1792.ger02.heidelberg.com [172.27.156.223]
Trace complete.
```

Fig. 20 tracert

The utility program **tracert** serves to check the path (via Router) of a data packet to a specific computer (Fig. 20).

PresetLink

1	Set up the Plate Image Reader online connection	A.2.3
1.1	Installation sequence	A.2.3
1.2	Connect Plate Image Reader to the PC	A.2.3
1.3	Installing the Plate Image Reader Online software	A.2.3
1.4	Enabling directory CPC31Dir	A.2.4
1.5	Activating the user account "Guest"	A.2.6
1.6	Checking the installation	A.2.7
1.7	Making a note of the path for CP2000	A.2.10
1.8	Checking the network connection to the CP2000 Center	A.2.10
1.9	Troubleshooting	A.2.10
1.10	General	A.2.10
2	Setting up the PC PrepressInterface	A.2.11
2.1	General	A.2.11
2.2	Procedure for PPF files/end devices	A.2.11
2.3	Procedure with cdk files	A.2.15
3	Setting up the CP2000 Center	A.2.19
3.1	Overview of possible configurations	A.2.19
3.2	Installation sequence	A.2.20
3.3	Checking whether switched clear	A.2.20
3.4	Setting up a "new data base in the network"	A.2.21
3.5	Designation of the print jobs	A.2.22
3.6	Troubleshooting	A.2.23
3.7	Documentation for installation	A.2.24

1 Set up the Plate Image Reader online connection

1.1 Installation sequence

- ➊ Connect Plate Image Reader to the PC.
- ➋ Install the software Plate Image Reader Online.
- ➌ Enable directory CPC31Dir.
- ➍ Activate user account "Guest".
- ➎ Check installation.
- ➏ Make a note of the path for CP2000.
- ➐ Check the network connection to the CP2000 Center.

1.2 Connect Plate Image Reader to the PC

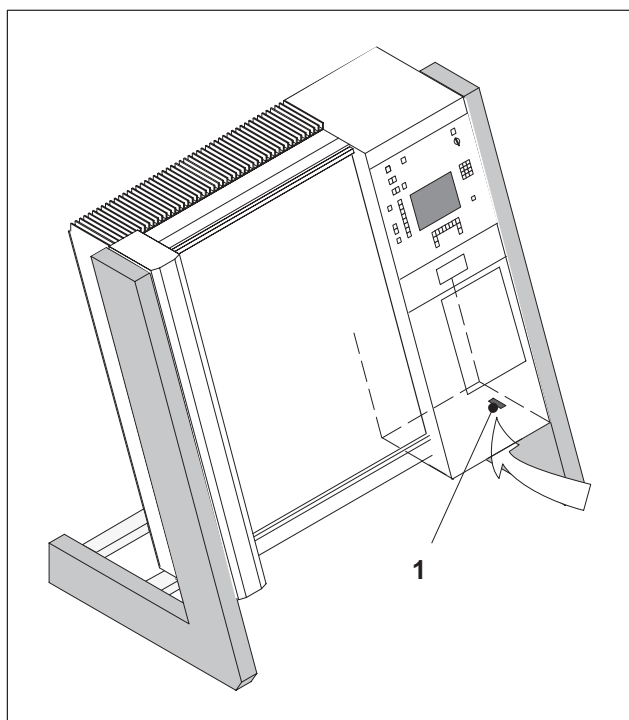


Fig. 1 Plate Image Reader

- ➊ Plug the connection cable into the serial interface (RS 232) on the underside of the Plate Image Reader (Fig. 1/1).



Information

The connection cable is included in the supply scope of the Plate Image Reader Online kit.

- ➋ Plug the connection cable into a serial interface (RS 232), COM1 or COM2 of the PC.



Information

The Plate Image Reader can now be switched on. The Plate Image Reader detects the connection to the PC as soon as the Plate Image Reader Online is started on the PC.

1.3 Installing the Plate Image Reader Online software

The software installation is described in the operating manual **Plate Image Reader Online Kit**.

1.4 Enabling directory CPC31Dir

The directory CPC31Dir is generated during installation of the online kit and must be enabled for CP2000 Center access to the fdw files.

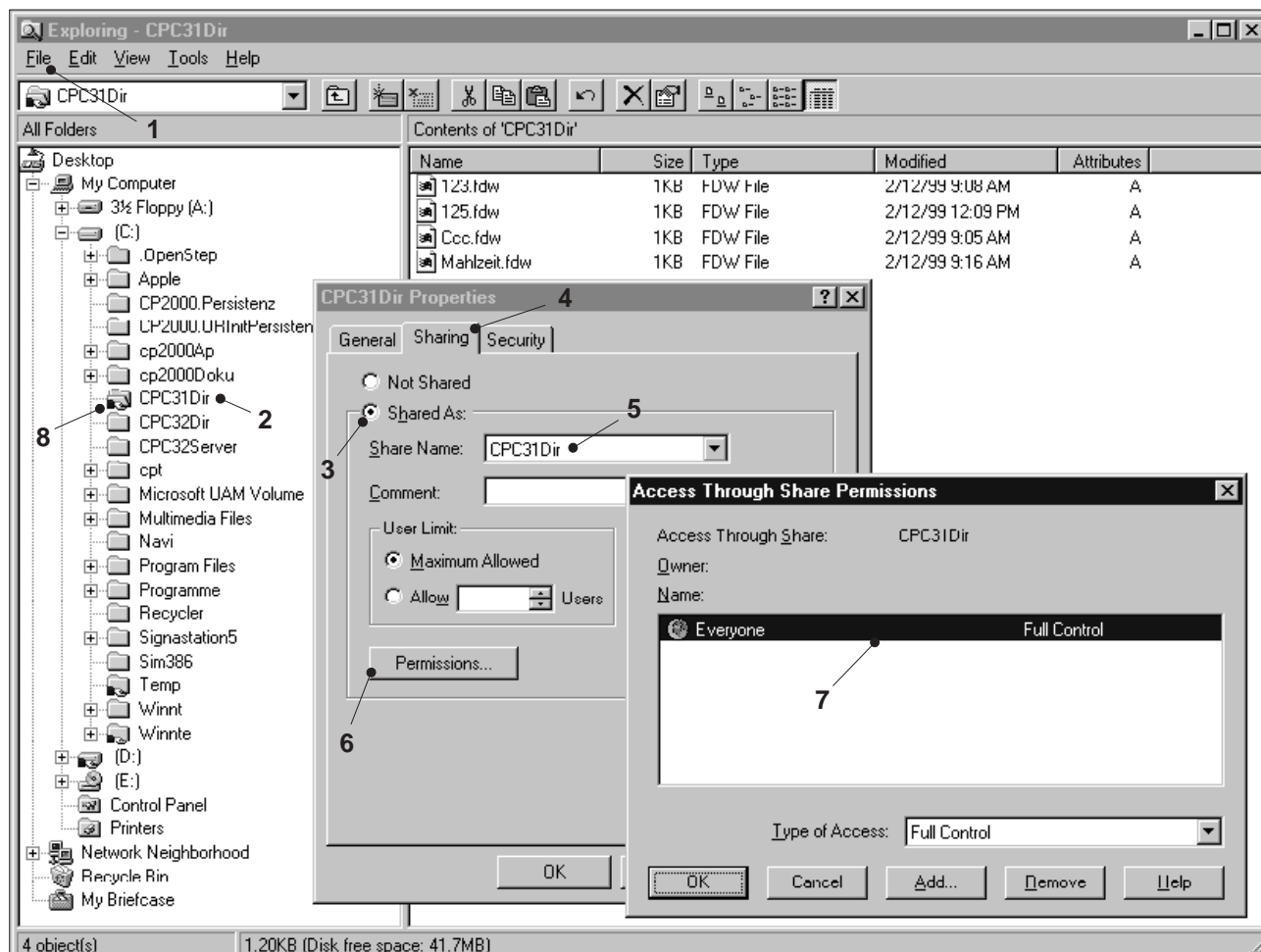


Fig. 2 Enabling the directory

- 1 In Explorer click on the directory CPC31Dir (Fig. 2/2).



Information

The directory must be backed up.

② On the menu bar click on **File>Properties** (Fig. 2/1).

③ Click on the tab **Sharing** (Fig. 2/4).

④ Click on the circle in front of **Shared As** (Fig. 2/3).

► **Information**
A dot must appear in the circle.

► **Information**
The "Share Name" (directory) specified here must later be entered for Preset-Link (CP2000).

⑤ Click on the **Permissions...** button (Fig. 2/6).

⑥ Checking the setting:
in the window "Access Through Share Permissions" the group **Everyone** must be allocated the access type **Full Control** (Fig. 2/7).

⑦ Click on the **OK** button.

⑧ Click on the **OK** button.

► **Information**
The directory CPC31Dir must now display a hand (Fig. 2/8).

1.5 Activating the user account "Guest"

The user account "Guest" must be activated for the CP2000 Center to access the fdw files (area coverage per ink zone).

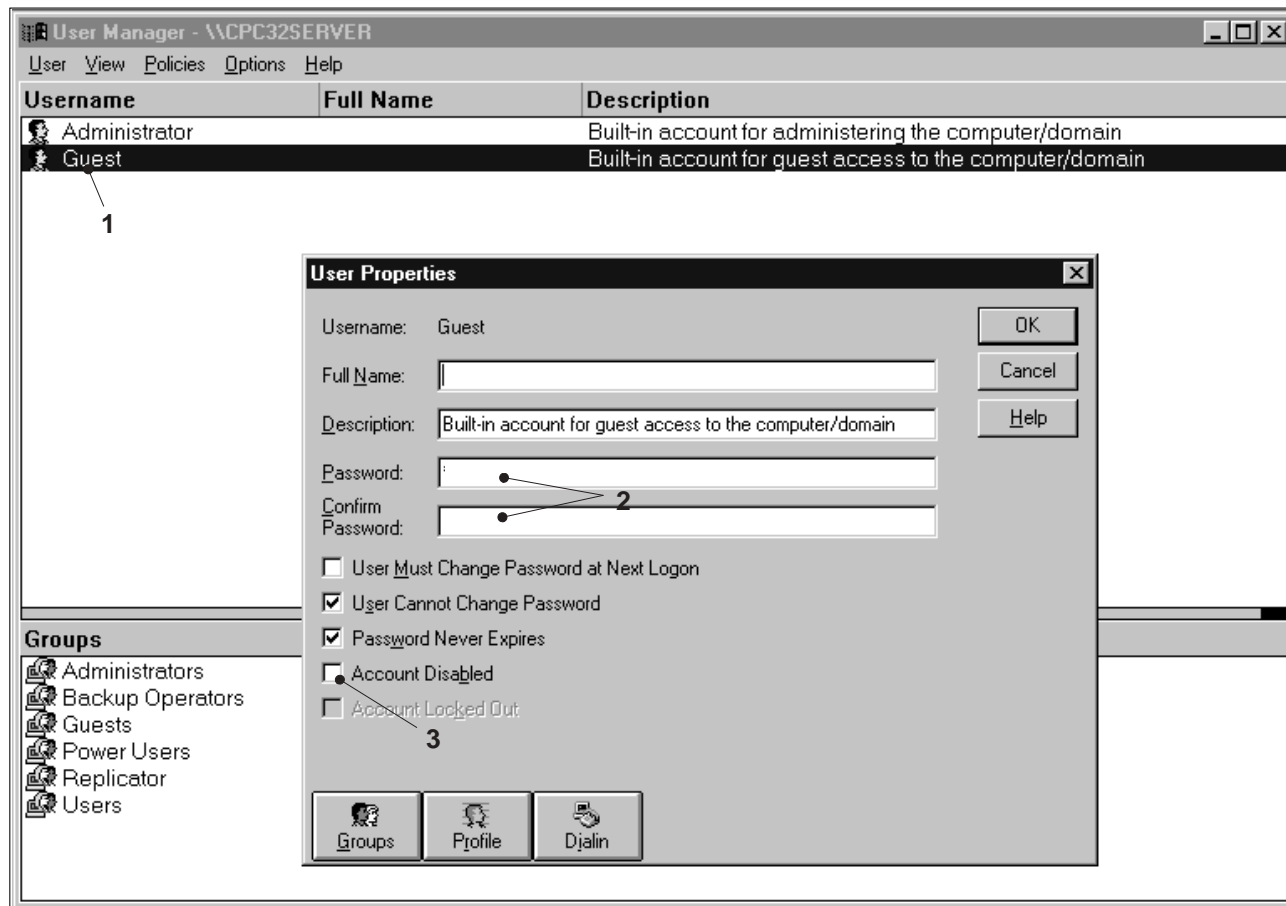


Fig. 3 User manager


- ① By clicking on the buttons **Start>Programs>Administrative Tools> User Manager for Domains** open the window "User Manager".
- ② Double click on the line **Guest** (Fig. 3/1).
- ③ Delete the entries on the lines **Password** and **Confirm Password** (Fig. 3/2).

- 4 By clicking on the rectangle in front of the line **Account Disabled** (Fig. 3/3) remove the tick.



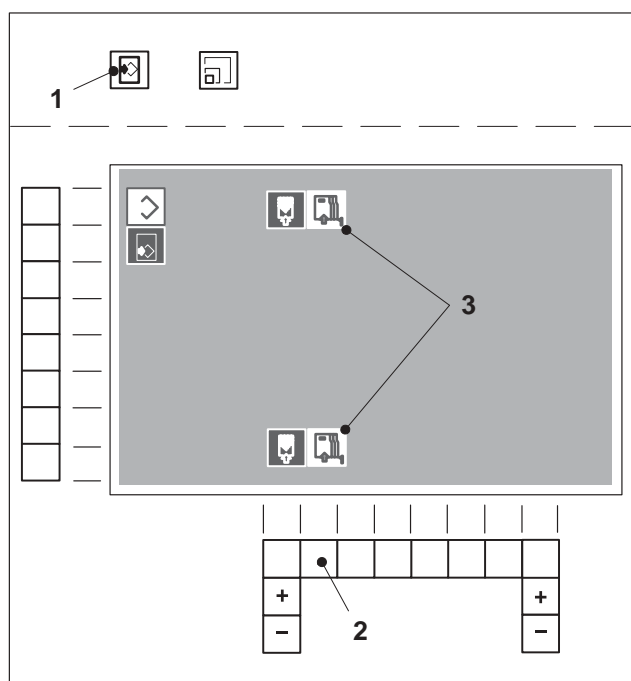
Information

The CP2000 Center cannot access the PC Plate Image Reader Online/Prepress-Interface as long as the "Guest" account is deactivated.

- 5 Click on the **OK** button.
- 6 Close the window "User Manager" by clicking on the  button.

1.6 Checking the installation

1.6.1 Checking the data transfer



- 1 Start Plate Image Reader Online on the PC.
- 2 Switch on the Plate Image Reader.
- 3 Press the button **Job preparation** (Fig. 4/1).
- 4 Press the button for **PC memory** (Fig. 4/2).



Information

The symbol PC memory (Abb. 4/3) must have a highlighted background and is not allowed to be flashing.

- 5 Perform a measuring run and transfer the **fdw file** to the PC memory.



Information

See operating manual Plate Image Reader Online.

- 6 Check the file:
Start Explorer, the relevant **fdw file** must be filed in the directory **CPC31dir**.

Fig. 4 Plate Image Reader control console

1.6.2 Checking the entries in the registry

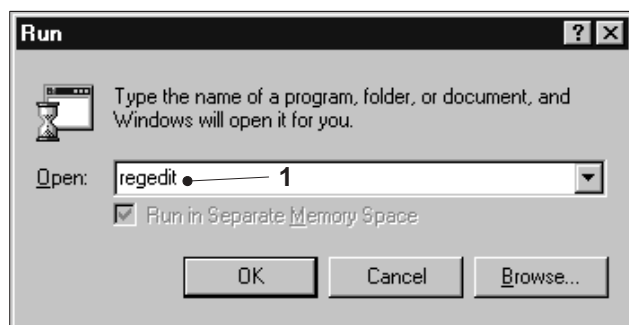


Fig. 5 Run

- ① By clicking on the buttons **Start>Run** open the window "Run".
- ② Input: **regedit**
- ③ Click on the OK button.

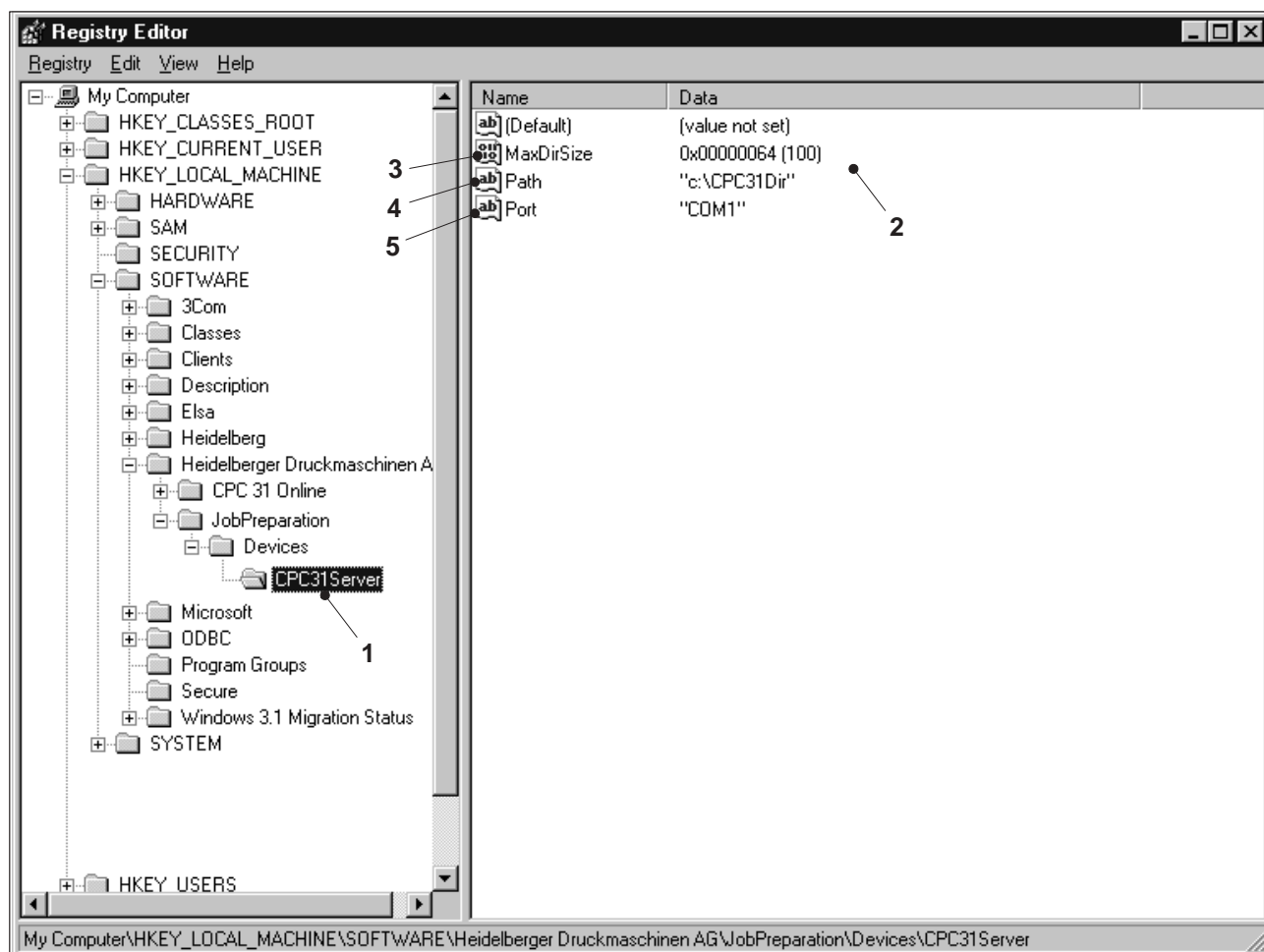


Fig. 6 Registry editor

- ④ In the registry editor open the directory **CPC31Server** (Fig. 6/1) (path: HKEY_LOCAL_MACHINE\SOFTWARE\Heidelberg Druckmaschinen AG\JobPreparation\Devices).
- ⑤ Check entries in accordance with Fig. 6/2.

1.6.3 Effecting changes in the registry

If any changes in the registry are required, proceed as follows:



Be careful

Thoughtless changes can prevent the perfect operation of the PC.
All changes are effective immediately (i.e. without an 'Are you sure' query).

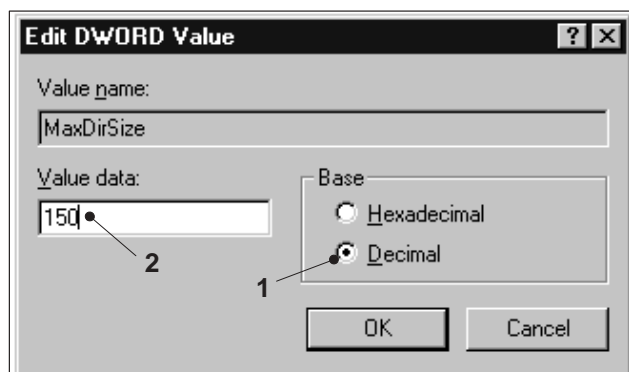


Fig. 7 Edit PUORD value

- 1 Terminate the program Plate Image Reader On-line before the changes.

Changing the quantity of files in the directory

- 2 Double click on the line **MaxDirSize** (Fig. 6/3).
- 3 Click on the circle in front of **Decimal** (Fig. 7/1).



Information

A dot must appear in the circle.

- 4 On the line **Value Data** (Fig. 7/2) enter the appropriate value.



Information

As only eight files (jobs) can be displayed simultaneously on the CP2000 user interface in the submenu "Memory management", this value should be set to a max. of 100 to provide a better overview.

- 5 Click on the **OK** button.

Path input

The path input change for the export directory of the **fdw** files (C:\CPC31Dir) can be effected here (Fig. 6/4).

Changing the port (serial interface)

- 1 Double click on the line **Port** (Fig. 6/5).
- 2 On the line **Value Data** change the entry to **COM1** or **COM2** (Fig. 8/1).
- 3 Click on the **OK** button.
- 4 After the changes start the program Plate Image Reader Online.

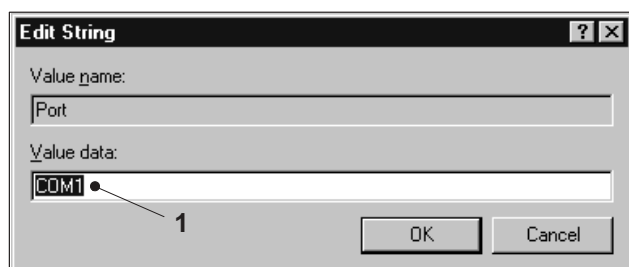


Fig. 8 Edit string

1.7 Making a note of the path for CP2000

- ① Making a note of the path for CP2000 (CPC31Dir)



Information

On the CP2000 Center the path in which the fdw files are filed must later be specified. The path consists of the name of the PC and the enable name of the directory:

\\PC_name\enable_name

1.8 Checking the network connection to the CP2000 Center

- ① On the PC Plate Image Reader Online via the window "Network Neighborhood" check the connection to the CP2000 Center.



Information

All CP2000 Centers must be displayed in the work group HDM.

1.9 Troubleshooting

Error symptom	Possible cause	Error elimination
Symbol PC memory on Plate Image Reader flashing (connection to Plate Image Reader is interrupted).	Plate Image Reader Online on the PC has not started.	Start Plate Image Reader Online on the PC.
	Serial cable on the PC not connected or wrongly plugged in (wrong serial interface).	Check connection of the serial cable to the PC.
	Wrong serial interface set in the registry.	Check the registry (serial interface).
Symbol PC memory does not appear on the Plate Image Reader.	Plate Image Reader does not detect that the serial interface is occupied. Serial cable on the Plate Image Reader is not connected or is incorrectly connected.	Check the serial cable to the PC, internal serial cable in the Plate Image Reader, Plate Image Reader expansion board PEK in the Plate Image Reader and all plug connections.
On the PC Plate Image Reader Online in the directory CPC31Dir no fdw files exist or the fdw files are filed in the wrong directory.	No path specification exists or there is a wrong path specification.	Check the path specification in the registry.

Tab. 1

1.10 General

The Plate Image Reader does not have to be switched on again, if the serial interface (COM1/COM2) is changed over.

2 Setting up the PC PrepressInterface

UTKCP1860106001000000

2.1 General

See chapter "Setting up the CP2000 Center, overview of the possible configurations"

2.2 Procedure for PPF files/end devices

2.2.1 Installation sequence

- ❶ Install the PrepressInterface software (V3.X).
- ❷ Set up the end devices.
- ❸ Enable the directory PPFOUT or end device directory (e.g. PPFOUT\SM74).
- ❹ Activate the user account "Guest".
- ❺ Check the installation.
- ❻ Make a note of the path for the CP2000 Center.
- ❼ Check the network connection to the CP2000 Center.

2.2.2 Installing the PrepressInterface software (V3.X)

The software installation is described in the operating manual **PrepressInterface (V3.X)**.

2.2.3 Setting up the end devices

- ❶ Start the process editor.

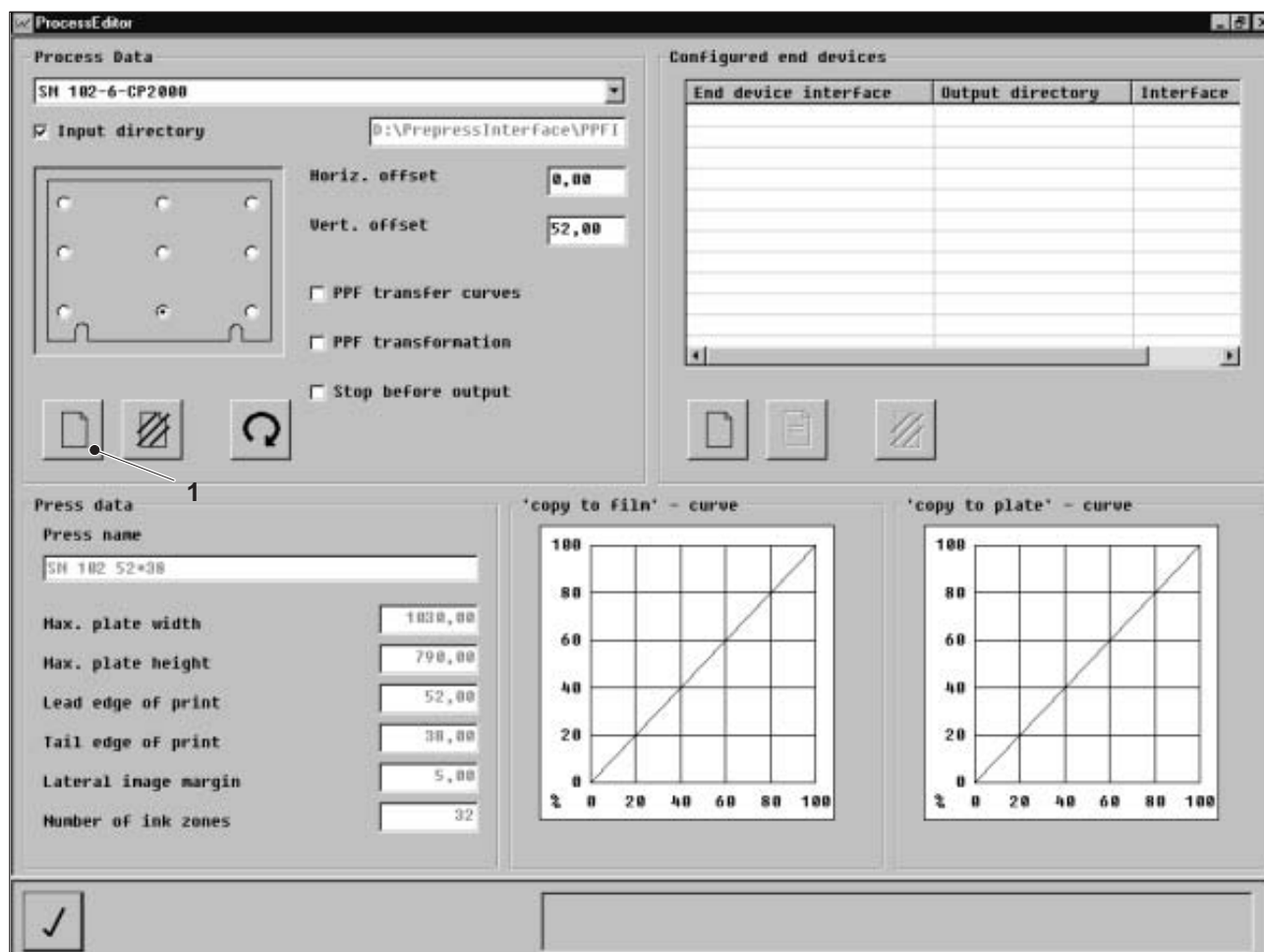


Fig. 9 Process editor

- 2 In the box Process Data select an existing input directory or a new input directory.
 - To draw up a new input directory click on the button New (Fig. 9/1).

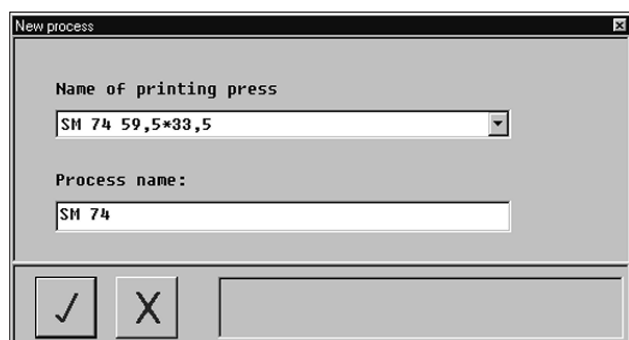
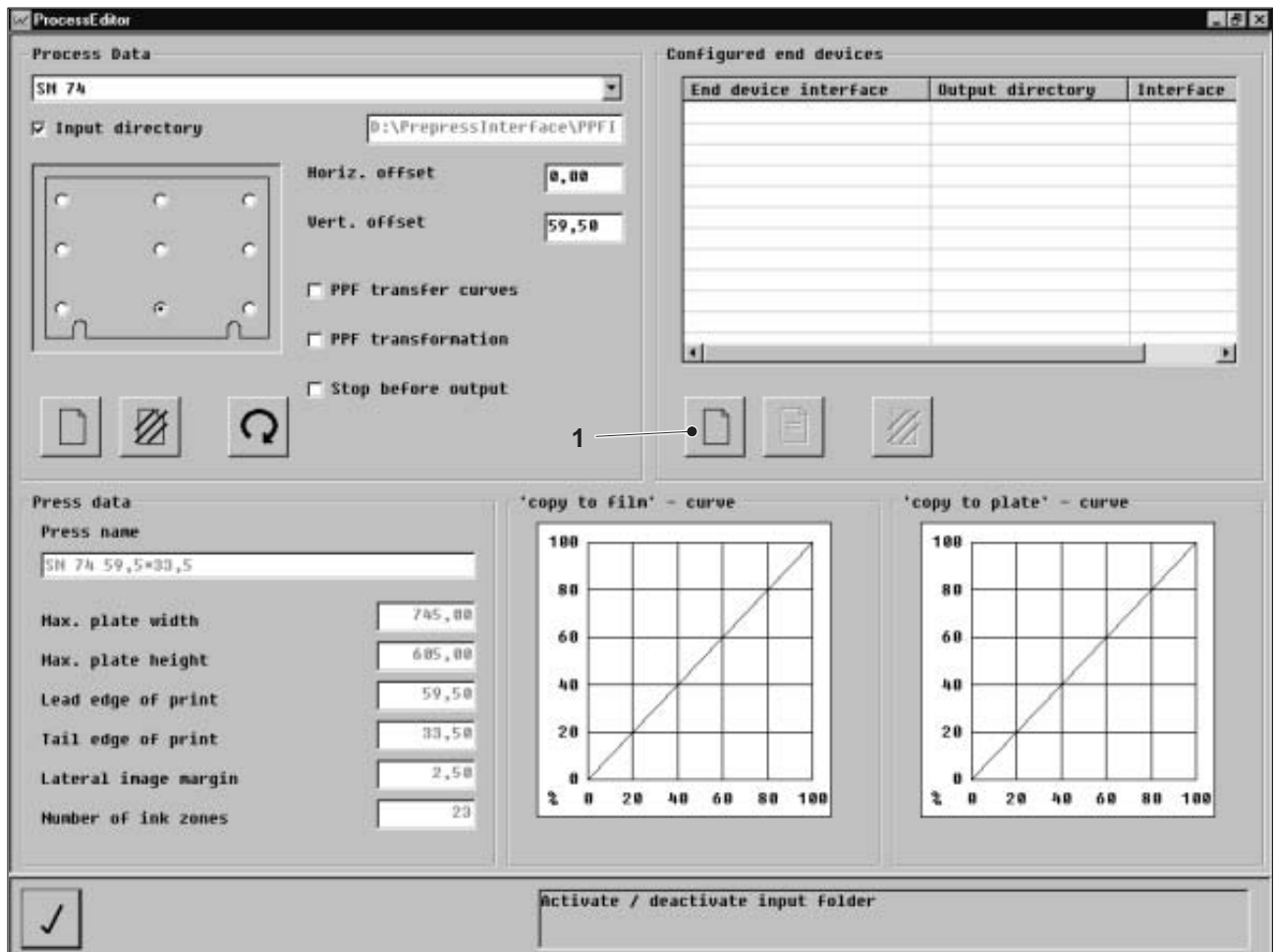


Fig. 10 New input directory

- 3 Enter the name of the new input directory and save it by clicking on the ✓ button.



GR CP1860794000000000

Fig. 11 Process editor

- 4 In the box "Configured end devices" click on the button "New" (Fig. 11/1).

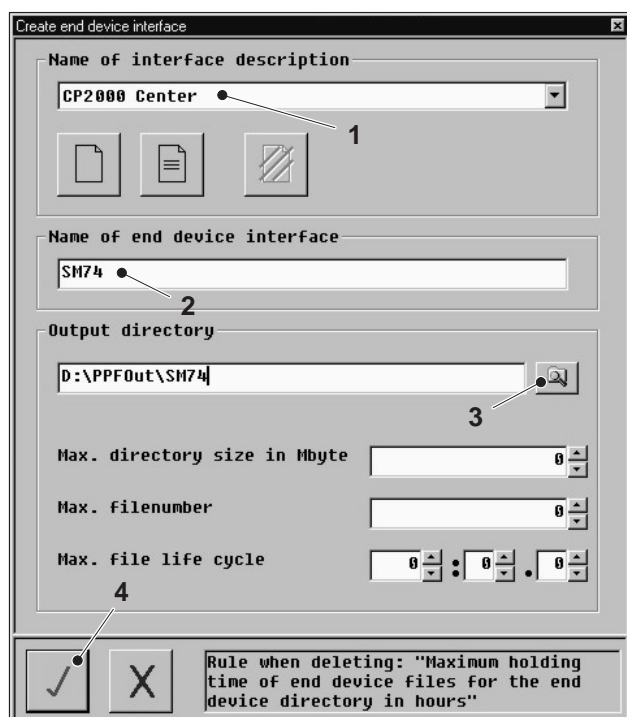


Fig. 12 Defining an interface

- 5 Select the name of the interface description (CP2000 Center or ImageControl, Fig. 12/1))
 - 6 Enter the name of the end device (e.g. designation of the printing press, SM 74) (Fig. 12/2).
 - 7 In Explorer create the directory D:\PPFOUT\SM74.
- **Information**
When setting up the CP2000 enter the appropriate paths for each press.
- 8 Open window (Fig. 12/3).
 - 9 Open directory D:\PPFOUT\SM74 and confirm with the ☒ button.
 - 10 Save input with the ☒ button (Fig. 12/4).

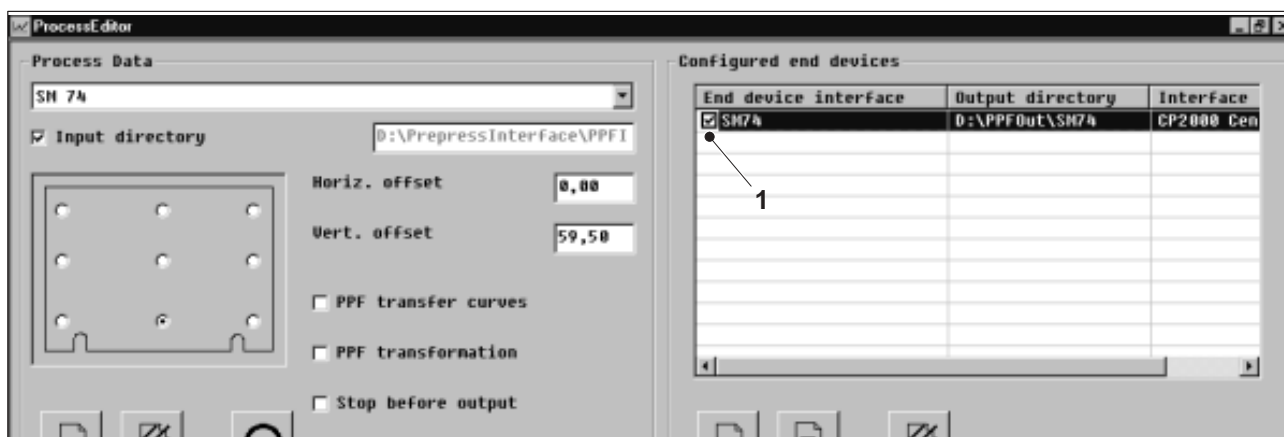


Fig. 13 Activating the end device interface

- 11 Activate the end device interface by clicking on the rectangle (active with tick, Fig. 13/1).

2.2.4 Enable directory PPFOUT or end device directory (e.g. PPFOUT\SM74)

See chapter "Setting up the Plate Image Reader on-line connection, enabling the directory CPC31Dir".

2.2.5 Activating the user account "Guest"

See chapter "Setting up the Plate Image Reader on-line connection, activating the user account "Guest".

2.2.6 Checking the installation

- ❶ Start the program PrepressInterface by clicking on the buttons **Start>Programs>Prepress-Interface**
- ❷ Process the **ppf file**.
- ❸ Check the file:
Start Explorer, the appropriate **ppf file** must be filed in the directory for the end device (e.g. \.\SM74).

► **Information**
The file can be identified on the basis of the date and time.

2.2.7 Making a note of the path for CP2000

- ❶ Make a note of the directory path PPFOUT\SM74 for CP2000.

► **Information**
The path must later be specified on the CP2000 Center in which the ppf files are filed. The path consists of the PC name and the directory enable name:
\\PC_name\enable_name

2.2.8 Check the network connection to the CP 2000 Center

- ❶ Check the connection to the CP 2000 Centers on the PC PrepressInterface via the window "Network Neighborhood".

► **Information**
All CP2000 Centers must be displayed in the work group HDM.

2.3 Procedure with cdk files

2.3.1 Installation sequence

- ❶ Install the PrepressInterface software (V3.X).
- ❷ Create a directory for cdk files.
- ❸ Enable the directory CDK_FILES.
- ❹ Activate the user account "Guest".
- ❺ Enter the directory in the registry.
- ❻ Check the installation.
- ❼ Make a note of the path for CP2000.
- ❽ Check the network connection to the CP2000 Center.
- ❾ Activate the DataControl-PresetImage/preview mask

2.3.2 Installing the PrepressInterface software (V3.X)

The software installation is described in the operating instructions **PrepressInterface (V3.X)**.

2.3.3 Creating the directory for cdk files

- 1 In Explorer set up the directory D:\CDK_FILES (menu bar, **File>New>Folder**).

2.3.4 Enabling the directory CDK_FILES

See chapter "Setting up the Plate Image Reader on-line connection, enabling the directory CPC31Dir".

2.3.5 Activating the user account "Guest"

See chapter "Setting up the Plate Image Reader on-line connection, activating the user account "Guest"".

2.3.6 Entering the directory in the PrepressInterface RegistryEditor

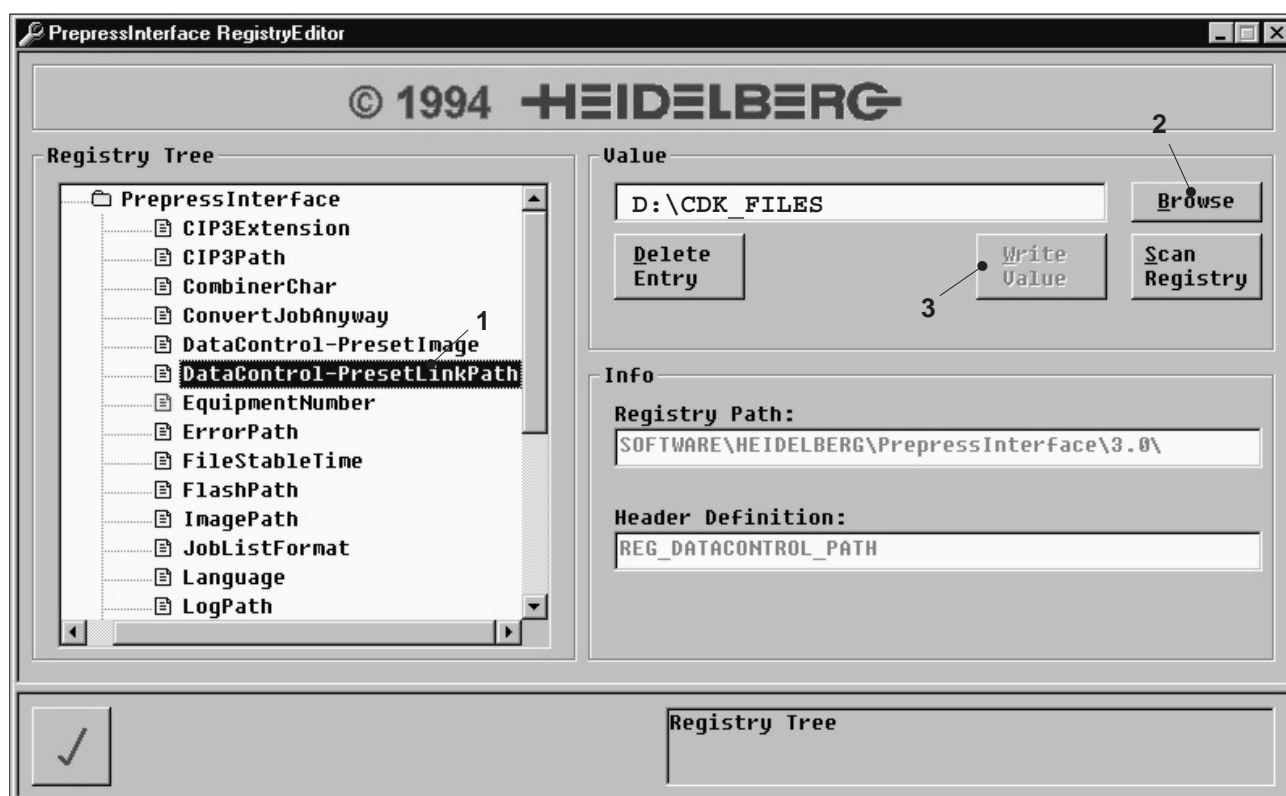


Fig. 14 RegistryEditor

- 1 To start the program RegistryEditor: click on the buttons **Start>Programs>Prepress-Interface>Administration>RegistryEditor**.

- ② In the directory **PrepressInterface** click on the entry **DataControl-PresetLinkPath** (Fig. 14/1).
- ③ Click on the **Browse** button (Fig. 14/2).
- ④ Double click on the directory **D:\CDK_FILES**.
- ⑤ Click on the ☒ button.
- ⑥ Click on the **Write Value** button (Fig. 14/3).
- ⑦ Terminate the "RegistryEditor" by clicking on the ☒ button or on the ☒ button.

2.3.7 Checking the installation

- ① To start the program PrepressInterface: click on the buttons **Start>Programs>Prepress-Interface>Prepressinterface**.
- ② Process the **ppf** file.
- ③ Check the file:
Start Explorer, the appropriate **cdk** file must be filed in the directory **CDK_FILES**.

► **Information**
The file can be identified on the basis of the date and time.

2.3.8 Making a note of the path for CP2000

- ① Make a note of the path of the directory **CDK_FILES** for CP2000.

► **Information**
On the CP2000 Center the path in which the cdk files are filed must later be specified. The path consists of the PC name and the directory enable name:
\\PC_name\\enable_name

2.3.9 Checking the network connection to the CP 2000 Center

- ① Check the connection to the CP 2000 Centers on the PC PrepressInterface via the window "Network Neighborhood".

► **Information**
All CP2000 Centers must be displayed in the work group HDM.

2.3.10 Activating the DataControl-PresetImage/preview mask



Fig. 15 RegistryEditor

**Information**

The function preview mask is available on the CP 2000 Center from software version CPT 031.X onwards.

- ❶ Start the RegistryEditor.
- ❷ Click on the file **DataControl-PresetImage** (Fig. 15/1).
- ❸ Enter the value 1 (Fig. 15/2).
- ❹ Click on the Write Value button (Fig. 15/3).

Nothing has to be set up on the CP2000 Center for the function preview mask.

3 Setting up the CP2000 Center

3.1 Overview of possible configurations

UTKCP1860107001000000

Software version Prepress-Interface	Data format	Software version CPTronic
CPC32 V2.X	cdk	CPT 030.X CPT 031.X CPT 032.X
PPI V3.X	cdk	CPT 030.X CPT 031.X CPT 032.X
PPI V3.X	PPF	CPT V32.X

Tab. 2

A non-used interface (PrepressInterface, Prepress-Interface PPF and Plate Image Reader) must be deactivated (set to 0).

If several presses are to be connected to DataControl, bear in mind the following:

- if various software versions of the CPTronic or the software version CPC32 V2.1 of the PrepressInterface is present, only the data format cdk can be used.
- if the software version PPI V3 of the Prepress-Interface is present, the data format cdk must be set on presses with software versions CPT 030.X and CPT 031.X. On presses with software version CPT 032.X the data format PPF can be used, if the additional use of this data format is required.

Data formats on the CP2000 Center (data processing)

PresetLink	Software version CPTronic	Data format on the CP2000 Center
CPC32	CPT 030.X CPT 031.X	cdk
Prepress-Interface	CPT 032.X	cdk
Prepress-Interface PPF	CPT 032.X	PPF

Tab. 3

Data formats on the PrepressInterface (data generation)

Software version Prepress-Interface	Data format
CPC 32 V1.0	cdk
CPC 32 V2.1	cdk
PPI V3.0	PPF or cdk

Tab. 4

3.2 Installation sequence

- ① Perform the licensing.
 - **Information**
The PresetLink licensing is described in the operating instructions SM 102 / CD 102 and SM 74 with CP2000.
- ② Enter the appropriate paths, e.g. for PrepressInterface PPF:
\\PPFServer\PPFOUT\SM74
 - **Information**
Here the paths noted in the chapters "Setting up the Plate Image Reader on-line connection" and "Setting up the PC PrepressInterface" must be input and the value "Enabled" for the option used must be set to "1".
- ③ Restart the CP2000 press.
 - **Information**
The press must be restarted after any change.
- ④ Check whether switched clear.

3.3 Checking whether switched clear

- ① In the submenu **Data source** check:
Plate Image Reader or **PrepressInterface** must be entered.
- ② In the submenu **Memory management** check:
The files (jobs) filed during checking of the Installation Plate Image Reader/PrepressInterface must be displayed.

3.4 Setting up a "new data base in the network"

To link up with another press a "new data base in the network" can be set up in the PresetLink. To do so enter the following:

Designation	Input
Enabled	1
PlugIn	HDev_SheetPress.dll
DeviceName	e.g. CD 102-6+L
HostName	e.g. HDC0700003338

Tab. 5

3.5 Designation of the print jobs

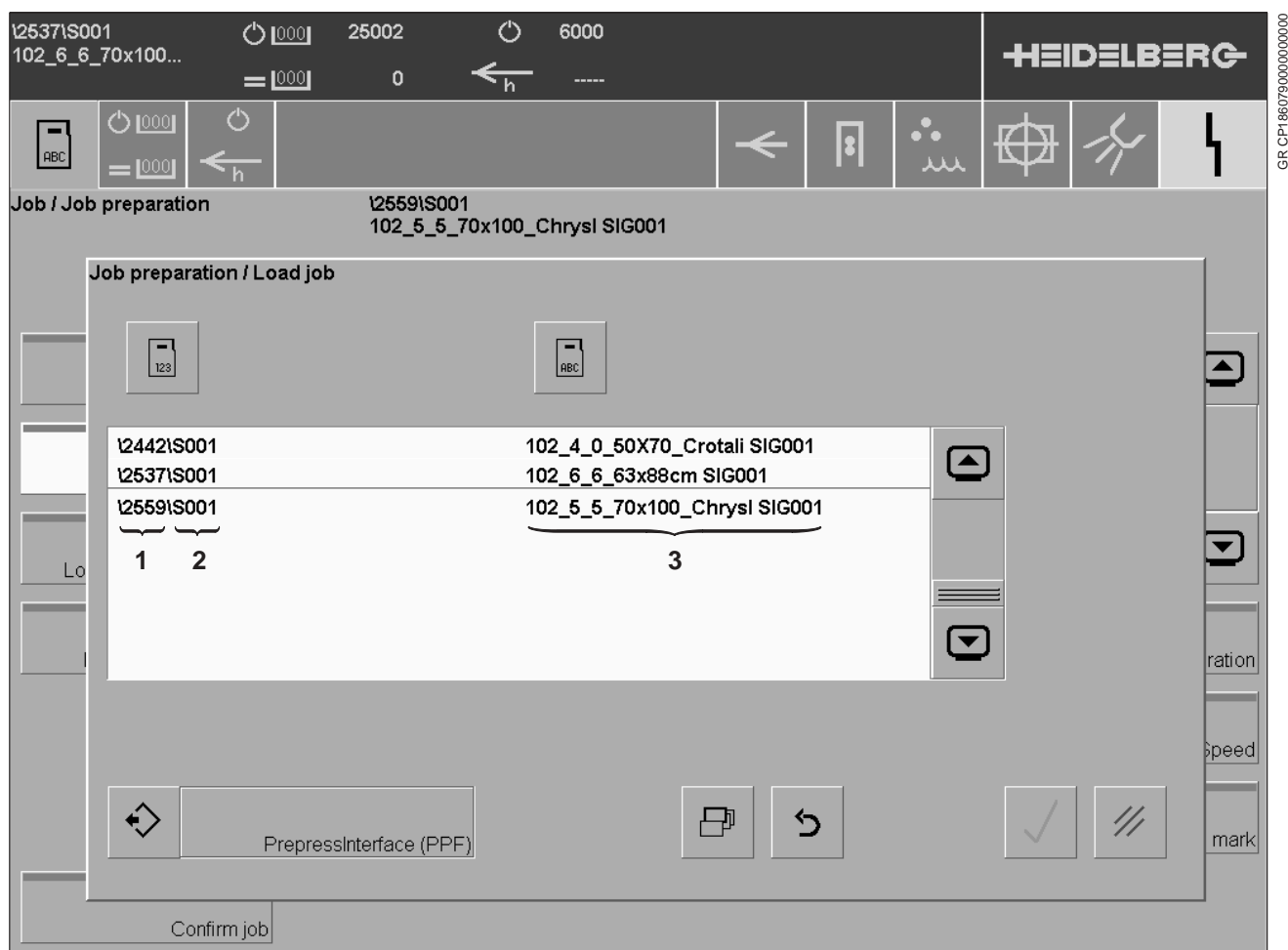


Fig. 16 Print jobs

- 1 Job number
- 2 Sheet number
- 3 Job name

Designation of the print job is defined at the prepress stage, but can be altered as required in the PrepressInterface Editor.

3.6 Troubleshooting

Error symptom	Possible cause	Error elimination
The Plate Image Reader or Plate Image Reader are not entered in the submenu Data source.	PresetLink (CP2000 Center) is not switched clear.	Switch the PresetLink clear.
	Enabled (CP2000 Center) is set wrongly or is not set.	Set enabled to "1".
In the submenu Memory management no files (jobs) are displayed.	The network connection does not function.	On the PC Plate Image Reader Online/PrepressInterface via "Network Neighborhood" check the connection to the CP2000 Center (CP2000 Center must be displayed) and check all network components (connection cable, router...). The network represents a further error source. If any problems occur, check whether the computers can "see" each other. Causes can be: Wrong data speed, wrong cable, distances too great. To ensure the basic functionality connect the PC PrepressInterface directly to the CP2000 Center (with cable reversed).
	Path wrongly entered in the PresetLink (CP2000 Center).	Correct the path input (\\PC_name\\enable_name).
	Directory not enabled or wrongly enabled on the PC Plate Image Reader Online/PrepressInterface.	Perform or correct the directory enable.
	User account "Guest" not set up or wrongly set up on the PC Plate Image Reader Online/PrepressInterface.	Activate or correct the user account "Guest".
Preview mask is not shown.	Parameter Datacontrol Preset Image not set in the Prepress-Interface.	Set the parameter to "1".

Tab. 6



Information

After any changes always switch the press off and back on.

3.7 Documentation for installation

This form has to be filed in the SSU after installation.

		Please fill out
Customer name		
Contact person at the customer's		
PC name	Plate Image Reader Online: PrepressInterface:	
User (with password) default: HD_Service (HDM)		
Protocols used in the network		
Network variant (as per specification)		
Path specifications \\PC name\clearance	Plate Image Reader Online: PrepressInterface:	
Equipment number	Plate Image Reader Online: PrepressInterface:	
Model designations and press serial numbers (CP2000)		
Option key / License key for Preset Link (CP2000)		
Service technicians		

Tab. 7

ManagementGate

1	Overview	A.3.3
1.1	General information	A.3.3
1.2	Linking CP2000 ManagementGate to the Management Information System MIS (trade-specific software system)	A.3.4
1.3	Linking CP2000 ManagementGate to DataControl	A.3.5
1.4	Configuring CP2000 ManagementGate	A.3.5
2	Connection of CP2000 Center to the trade-specific software	A.3.12
2.1	Overview	A.3.12
2.2	Transferring job data from MIS to CP2000 Center	A.3.13
2.3	Transferring CP2000 Center production data to the MIS	A.3.19
3	Connection of CP2000 Center to DataControl	A.3.22
3.1	Presetting Data from DataControl to CP2000 ManagementGate	A.3.22
3.2	Process Messages from CP2000 ManagementGate to DataControl	A.3.23

1 Overview

1.1 General information

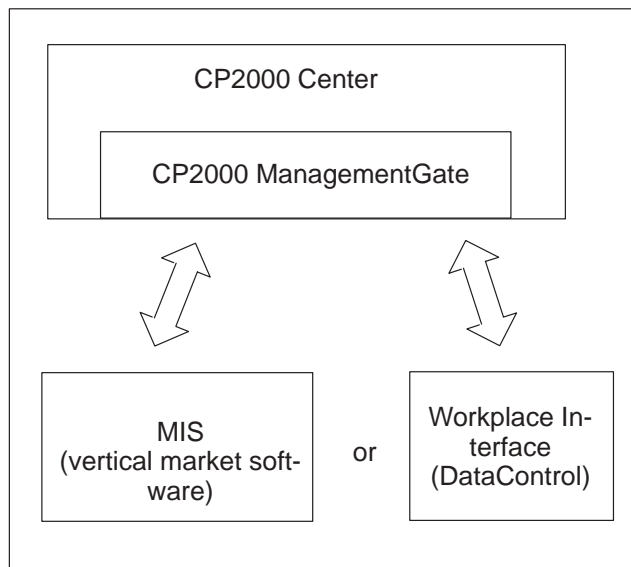


Fig. 1 Linking CP2000 ManagementGate with MIS or Workplace Interface

The "CP2000 ManagementGate" software module is integrated in printing presses with CP2000 Center from software version 32.5 onwards. After it has been enabled, it permits the EDP integration for a uniform job handling and production data acquisition (PDA).

The printing presses can be connected to a hierarchically higher Management Information System MIS (trade-specific software system) via an open interface.

CP2000 ManagementGate supports the connection:

- to the Management Information System MIS (trade-specific software system)
- to Workplace Interface (DataControl)

1.2 Linking CP2000 ManagementGate to the Management Information System MIS (trade-specific software system)

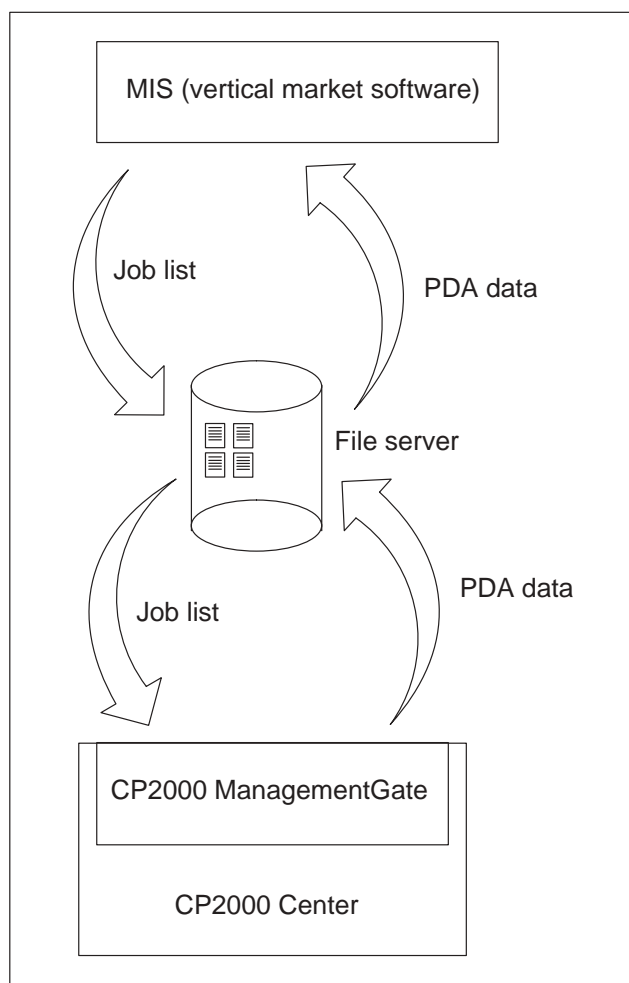


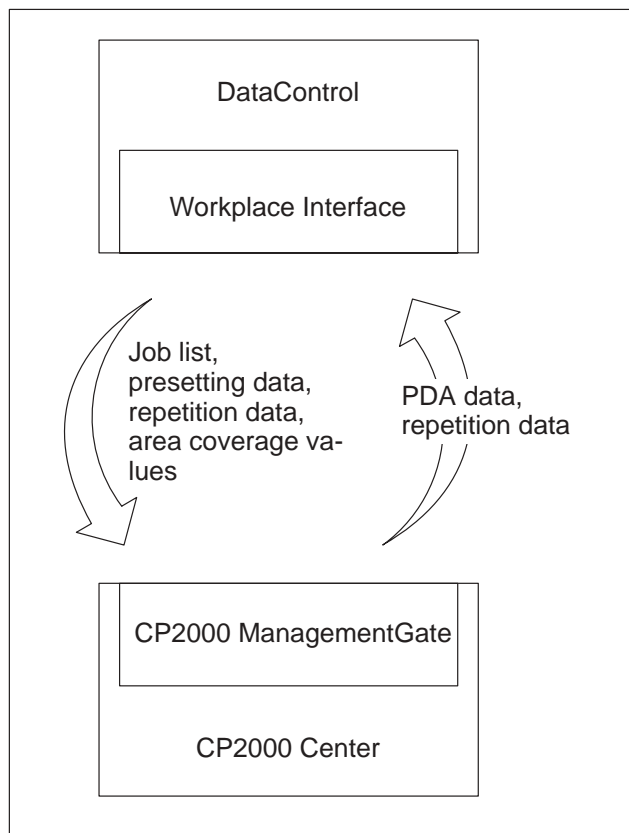
Fig. 2 Job data transfer between CP2000 ManagementGate and MIS

The interface between CP2000 ManagementGate and MIS obeys the same conventions as the interface between DataControl and MIS.

The interface is deliberately kept simple. It is based on a file transfer of ASCII files. MIS can transfer job data to presses with CP2000 control systems, and receive PDA data from such a press. This does not require a DataControl system to be installed at the customer's.

When the interface was designed care was taken to decouple the systems as well as possible. The data exchange files that can be read and written to with standard editors facilitate start-up and diagnosis of the interface. A file transfer mechanism permits different computer worlds to be linked with each other easily.

1.3 Linking CP2000 ManagementGate to DataControl

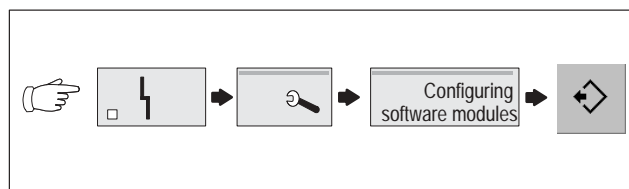


GR MG110004000001000

CP2000 ManagementGate is linked to DataControl via the DataControl Workplace Interface. Thus, the data from the DataControl database (presetting data, inking unit settings, and repetition data) is available at the CP2000 Center. The printing press delivers PDA data to DataControl.

Fig. 3 Data transfer between CP2000 ManagementGate and the DataControl Workplace Interface

1.4 Configuring CP2000 ManagementGate



GR 00110433500001000

The "CP2000 ManagementGate" software module is enabled at the CP2000 Center. It is described under "Basic adjustment", "Additional software modules" in the operating manual.

First invoke the "Configuring software modules / Data source" menu (see Figure) to select the link for the required application.

Fig. 4 Key sequence



Fig. 5 "Configuring software modules / Data source" service display

Display	Meaning
CPCDI	Configuration of the link to the printing press SM 74 DI.
DataControl	Configuration of the link to DataControl.
Setting up remote device	Configuration of the link to another printing press with CP2000 Center.
Management Information's System	Configuration of the link to a trade-specific software system.
Plate Image Reader	Configuration of the link to the printing plate reader.
PrepressInterface	Configuration of the link to PrepressInterface in a version smaller than 3.0.
PrepressInterface (PPF)	Configuration of the link to PrepressInterface from Version 3.0 onwards (enhanced scope of the presetting data).

Tab. 1

1.4.1 Link to DataControl



Fig. 6 "Configuring device" service display with connection to DataControl

Display	Default	Meaning
Enabled		1: Link to DataControl enabled. 0: Link to the outside disabled.
Plugin		Name of the device DLL, "HDev_WPI.DLL".
WP_OperatingTimeOut1	10000	Maximum waiting time (in ms) until an operation must be completed. Operation is enabled after this time.
WP_Id1		Name of the workplace ID under which DataControl manages the operator position. The name is "0" if the operator position has not yet been created. DataControl assigns the operator position an ID upon the first logon.
WP_Name1		Operator position under which CP2000 Center logs on with DataControl.
WPI_IP_Addr1		IP address of the PC with the Workplace Interface, either as a name or as a dot-separated numerical sequence.
WPI_Port_No1		TCP/IP port number of the PC that contains the Workplace Interface. Always "506" with DataControl.

Display	Default	Meaning
WP_CommunicationTimeOut1	60000	Time-out time in ms for the communication between ManagementGate and DataControl server.
WP_CodePage	1252	CodePage of the language selection of DataControl. The default value 1252 corresponds to Europe/America.
WP_ColorPreset		Preferred source for the loading process of repeat, color and presetting data. The default value is CPC1. This means that loading the area coverage values from the CPC1 is preferred. When "CPC3" is entered, loading the area coverage values from the pre-press stage is preferred. The other values are used if the preferred values can not be found.

Tab. 2

1.4.2 Link to the Management Information System MIS

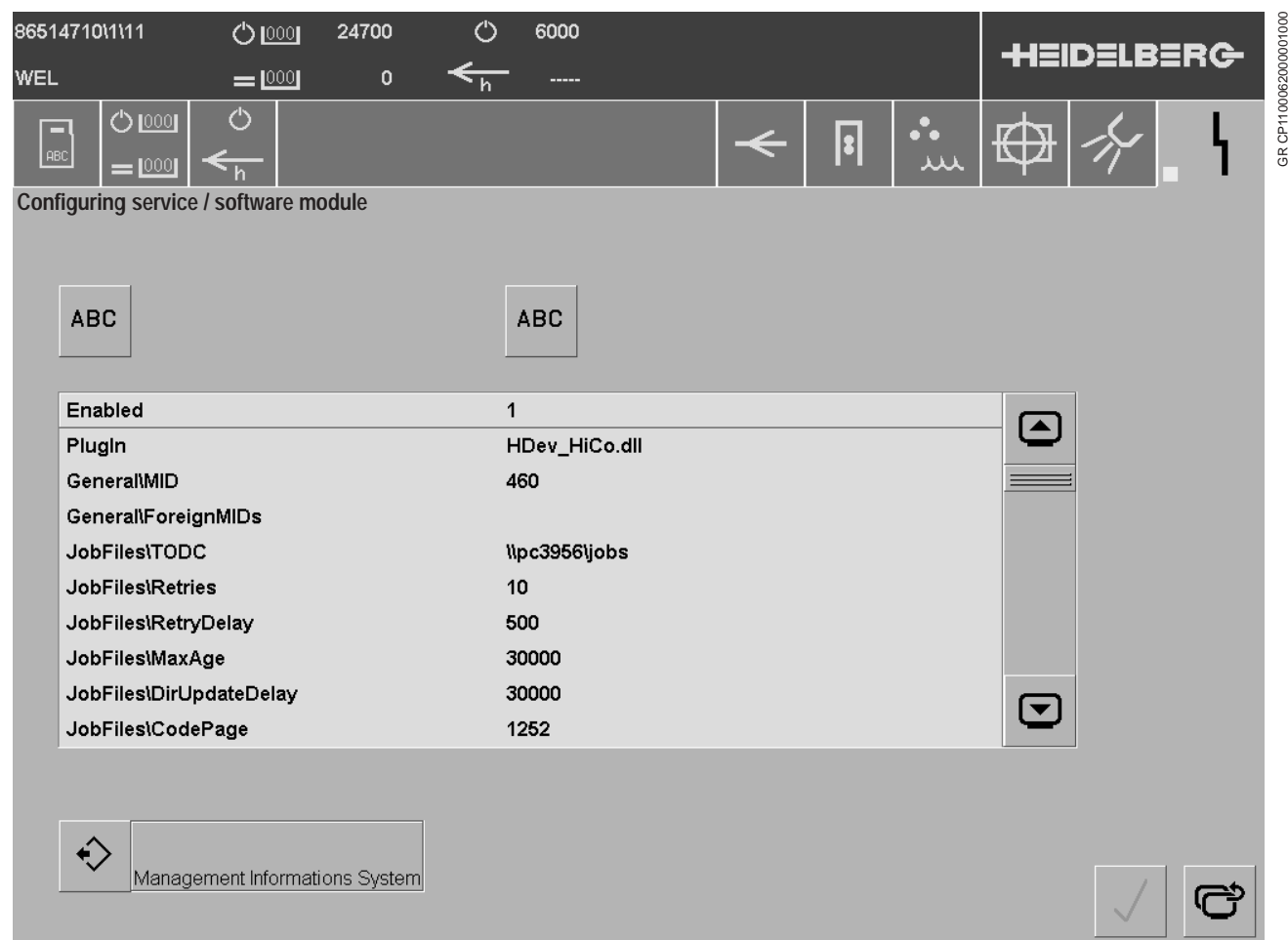


Fig. 7 "Configuring software modules" service display with connection to MIS, part 1



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Fig. 8 "Configuring software modules" service display with connection to MIS, part 2



Fig. 9 "Configuring software modules" service display with connection to MIS, part 3

Display	Default	Meaning
Enabled		1: Link to MIS enabled. 0: Link to the outside disabled.
PlugIn		Name of the device DLL, "HDEV_HICo.dll".
General\MID		Cost center number of the press used for allocating the operations from the job files and for identifying the press in the PDA file.
General\ForeignMIDs		A press can access operations from more than one cost center. Thus, additional cost center numbers can be entered here. The cost centers can be separated by blanks, commas, or semicolons.
JobFiles\TODC		Complete path of the TODC directory.
JobFiles\Retries	10	Number of attempts of opening or deleting a job file.
JobFiles\RetryDelay	500	Delay (in ms) between two attempts of opening a job file.
JobFiles\MaxAge		Number of days after which a job file is deleted automatically (even if it still contains operations).
JobFiles\DirUpdateDelay	30000	Delay (in ms) between the updating processes of the job list.
JobFiles\CodePage	2152	The code page the host system transfers to the documentation interface when the job is loaded.
BDEFile\FileName		Name of the PDA file with full path specification. A PDA file is not created if this parameter can not be found.

Display	Default	Meaning
BDEFile\TFIntervall	1000	Time interval (in ms) for partly-finished messages that are cyclically written to the PDA file.
BDEFile\BufferSize	200	Length of the cyclic buffer (in kbytes).
BDEFile\Retries	10	Number of attempts of opening a PDA file.
BDEFile\RetryDelay	500	Delay (in ms) between two attempts of opening a PDA file.
HierarchyMapping\ JobidElem1		First element in "job number" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNO" / "PRODNO" / "JOBNO"
HierarchyMapping\ JobidElem2		Second element in "job number" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNO" / "PRODNO" / "JOBNO"
HierarchyMapping\ JobidElem3		Third element in "job number" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNO" / "PRODNO" / "JOBNO"
HierarchyMapping\ JobidSeparator		Delimiter (one or more printable characters) that separate the elements in "job number" of CP2000 ManagementGate.
HierarchyMapping\ JobnameElem1		First element in "job name" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNAME" / "ORDERNO" / "PRODNAME" / "PRODNO" / "JOBNAME" / "JOBNO"
HierarchyMapping\ JobnameElem2		Second element in "job name" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNAME" / "ORDERNO" / "PRODNAME" / "PRODNO" / "JOBNAME" / "JOBNO"
HierarchyMapping\ JobnameElem3		Third element in "job name" of CP2000 ManagementGate. Input of one of the following key words: "ORDERNAME" / "ORDERNO" / "PRODNAME" / "PRODNO" / "JOBNAME" / "JOBNO"
HierarchyMapping\ JobnameSeparator		Delimiter (one or more printable characters) that separate the elements in "job name" of CP2000 ManagementGate.

Tab. 3

From software version 034 onwards, the individual elements of the job hierarchies can basically be allocated to the elements "job number" and "job name" of CP2000 ManagementGate as required. However, the connection of CP2000 ManagementGate to DataControl or to MIS requires that the production data supplied from CP2000 Center can unambiguously be allocated to a job. In CP2000 ManagementGate, the job number must therefore always be configured such that job number, sheet number and operation number of DataControl or MIS are contained. Merely the separators and the job name in CP2000 ManagementGate can be defined as required.

2 Connection of CP2000 Center to the trade-specific software

2.1 Overview

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Printing presses with CPTronic control system can be connected to MIS (trade-specific software) via DataControl. The definition of the interface between DataControl and MIS is already described in **"DataControl, interface descriptions, DataControl order interface / production data (PDA) from DataControl"**. The job data from the MIS can be transferred to the printing press, production data (PDA data) can be received.

An adaptation of the interface was performed in order to be able to connect printing presses with CP2000 control systems directly to the MIS. It is available with the "CP2000 ManagementGate" option package.

The following document describes the peculiarities of this interface and is based on the above-mentioned description.

2.2 Transferring job data from MIS to CP2000 Center

2.2.1 Job files

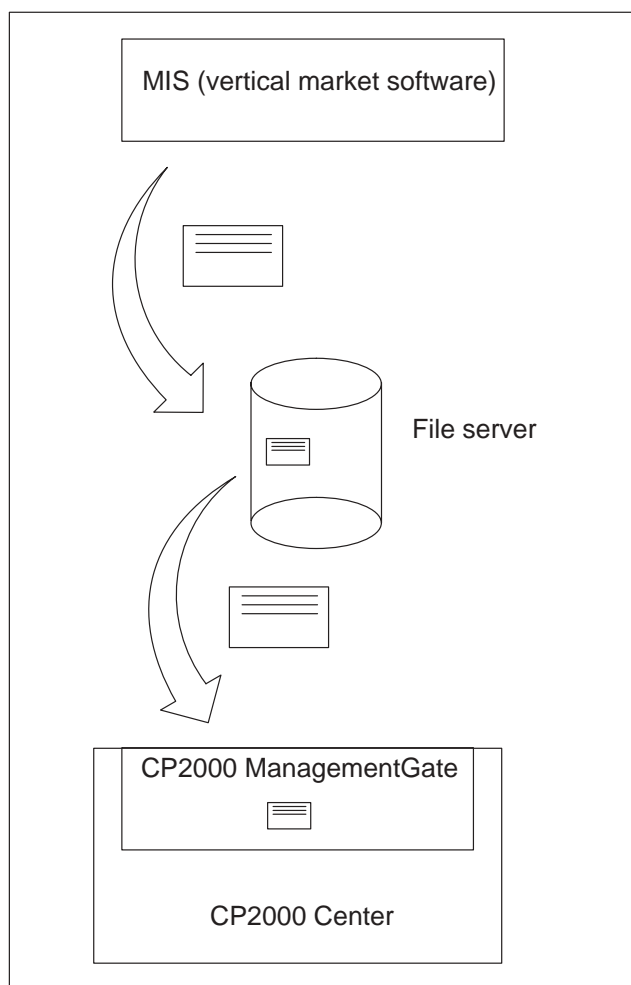


Fig. 10 Job file transfer from MIS to CP2000 Center (example)

Directory in the file server

The computer that contains the trade-specific software is called Management Information System (MIS). The MIS combines job data in files and stores these files in a directory in the file server. This directory, which can be chosen as required, must be entered in the CP2000 Center and in the MIS.

Loading a job

The files must be parsed when the press operator wants to load a job. CP2000 ManagementGate fetches a list of the jobs that are relevant to this cost center (operator position). The job list consists of the jobs where the cost center specified in the trade-specific software matches the cost center configured at CP2000 Center.

A job file created by the MIS may contain several jobs. After a job has been selected from the job list, the job data and the job docket are transferred. The job docket is a separate text file that contains additional information about the print job. Both files with the job-relevant contents are transferred to CP2000 Center.

In order to prevent a job from appearing again in the job list after it has been loaded, the currently loaded job is removed from the job file. The complete job file is deleted if it does not contain any other jobs. If the MIS transfers again a file with a job that has already been loaded to CP2000 Center, previously loaded jobs can again be displayed in the job list.

Modification of job data

When the MIS creates a new file upon a modification of the job data (the number of impressions, for example), there are two files for this job. The two files differ in the creation date (file date). In this case, CP2000 Center takes the file last changed that contains the modified data, and deletes the older files of the same job. Consequently, the job lists of CP 2000 Center and MIS are not synchronized automatically!

2.2.2 Data format

The data used by CP2000 ManagementGate must comply with the syntax specified in "**DataControl, interface descriptions, Orderinterface DataControl**". Only a part of the transferred data is processed in CP2000 Center. This data is described below.

Prerequisites

- **CodePage**
CodePage in MIS and CP2000 ManagementGate must be identical in order to obtain a faultless representation of the data in CP2000 ManagementGate! CodePage can be configured.
- **Cost center number**
A job can only be represented in CP2000 ManagementGate if the cost center for the printing press is known and has been transferred in the file. The cost center can be configured.
- **Delimiter**
The delimiter used for separating the job ID must have been configured.

Job hierarchy

An unequivocal allocation of the job-related data requires the identification of the job to be possible for MIS / Prepress Interface and for CP2000 ManagementGate. The different depths of the job hierarchies (MIS 3 levels, Prepress Interface 2 levels, CP2000 Center 1 level) represent a problem:

Software	Level 1	Level 2	Level 3
MIS (trade-specific software)	Job – Job number – Job name	Print sheet – Sheet number – Sheet name	Operation – Operation number – Operation name
Prepress Interface			–
CP2000 Center		–	–

Tab. 4 Depth of the job hierarchy

The following allocation is used to be able to represent the 3-level hierarchy of MIS in the CP2000 Center: Job number, sheet number and operation number of the MIS are jointly (with previously defined delimiters) represented in the job number in CP2000 Center.

Out of job name, sheet name and operation name in MIS, only the operation name is represented in CP2000 Center.

Example:

MIS:

- Job number: 1900195
- Job name: Alps
- Sheet number: 01
- Sheet name: MontBlanc
- Operation number: 40
- Operation name: Poster

Representation in CP2000 Center:

- Job number: 1900195/01/40 (with previously defined delimiter "/")
- Job name: Poster

The same goes for the 2-level hierarchy of Prepress Interface.

The individual elements of the job hierarchy are identified by key words:

Elements of the job hierarchy	Key word
Job number	ORDERNO
Job name	ORDERNAME
Sheet number / product number	SHEETNO / PRODNO
Sheet name / product name	SHEETNAME / PRODNAME
Operation number	JOBNO
Operation name	JOBNAME

Tab. 5

Which data is used by CP2000 Management-Gate?

Section (see interface description "Orderinterface DataControl")	Attribute	Meaning for CP2000 Management- Gate	Example
Order	OrderNo	Representation in the "job" menu is performed as job ID, separated by a defined delimiter (e.g. 1900195/01/40 with delimiter "/")	1900195
	ProdNo		01
	JobNo		40
	CustomerName	Customer	Jones
Prodxyz	Length	Print sheet length in mm (in sheet traveling direction)	700
	Width	Print sheet width in mm (at right angle to the sheet traveling direction)	1000
	PaperGrammage	Material thickness $\text{Thickness} = \text{PaperGrammage} * \text{PaperVolume} / 1000$	0,25
	PaperVolume		
Jobabcxyz	JobName	Job name	Poster
	Volume	Good sheets including plus sheets	8010
MLabcxyz	M00	Cost center	3100

Tab. 6

```

[Header]
SenderId=Heidelberg
Software=CP2000 ManagementGate
Version=01
Release=00

[Order]
OrderNo=1900195
CustomerName=Meier
DeliveryDate=20000331

[Prod000]
ProdNo=01
Width=1000
Length=700
PaperGrammage=135
PaperVolume=1

[Job000000]
JobNo=40
JobName=Poster
Volume=8010

[ML000000]
M00=3100

```

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Typical job file (*.job)

The typical file at the left-hand side shows how a file could look like that is transferred from the MIS to the file server. Since CP2000 ManagementGate only processes the data that is listed in the table above, the data listed under the [Header] section is not used.

To display the job in job preparation, the [ML000000] section (cost center) is absolutely necessary. The job will not be displayed if this section is missing or if the cost center does not agree with the cost center configured in the CP2000 Center!

Fig. 11 Typical file (*.job)

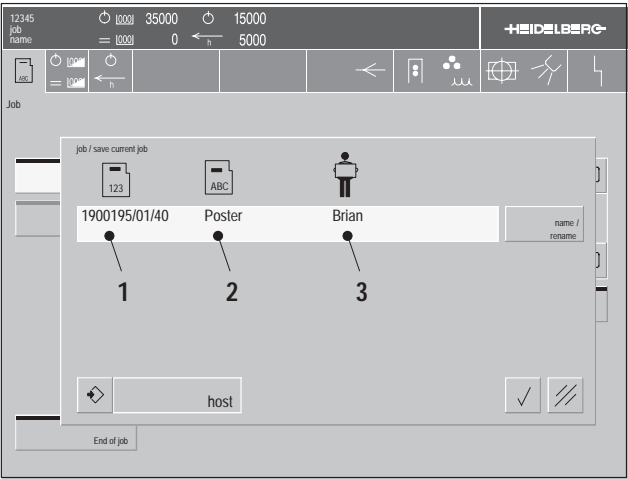


Fig. 12 "Save current job" menu

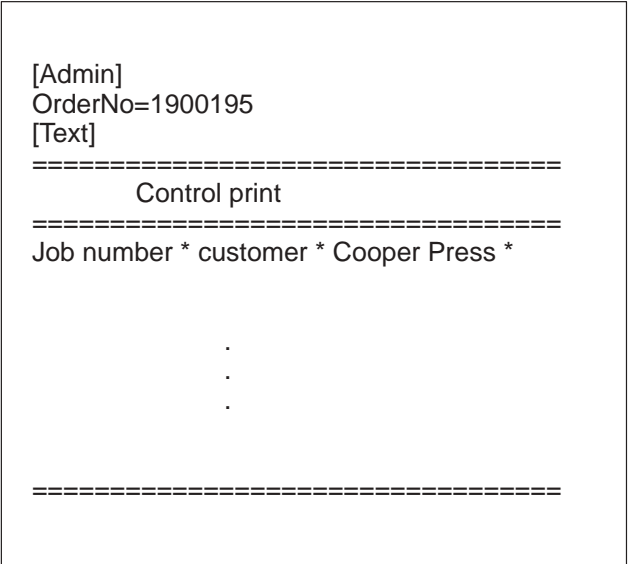


Fig. 13 Typical job docket file (*.obg)

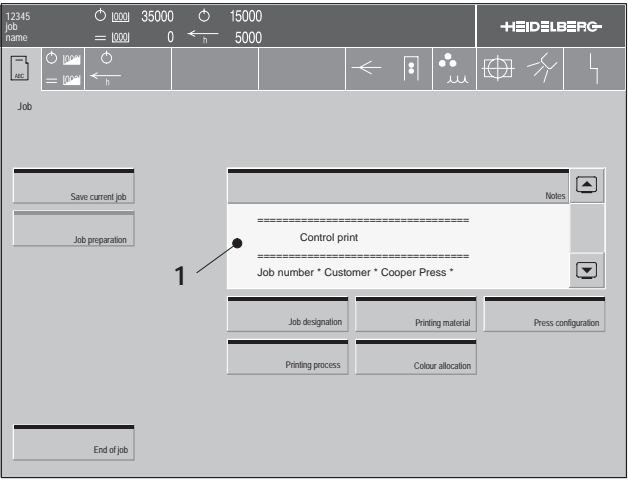


Fig. 14 "Job" menu

- 12/1 Job number
- 12/2 Job name (JobName)
- 12/3 Customer (CustomerName)

"OrderNo", "ProdNo" and "JobNo", separated by the defined delimiter ("/" in our example), are displayed as job number. Only "JobNo" is displayed of "OrderNo" and "ProdNo" are without contents or if a delimiter has not been defined.

Typical job docket file (*.obg)

The transmission of a job docket is an option. Any text can be transmitted. An allocation to the correct job is only possible if the [Admin] section with the "OrderNo" attribute exists. The file has the file name extension ".obg".

- 14/1 Note pad

The text of the job docket in the [Text] section is displayed without any changes in the note pad of the "Job" menu. Its maximum size is 32 kbytes.

2.2.3 System properties

Simultaneity

A common file server can be set up for the transfer of MIS to several CP2000 Centers. In order to avoid inconsistencies in the job files, only one CP2000 ManagementGate can access the job data at any one time. As long as a given file is read by a CP2000 ManagementGate, it can not be opened by another CP2000 ManagementGate. In this case, the process is interrupted and repeated after a short waiting time. An error message is output at the CP2000 Center after a configurable maximum waiting time or number of accesses.

Changing the number of available jobs

While CP2000 Center displays a list of the available jobs, the number of available jobs can change in the MIS. This can be caused by the MIS itself or by fetched jobs from other CP2000 ManagementGate systems. When the user at CP2000 Center chooses a job, there are two different cases:

- The selected job does not exist in the file server. In this case, an error message is output at the CP2000 Center.
- The selected job has changed. In this case, the current job is read, subsequently deleted from this job file, and written back to the file server.

2.3 Transferring CP2000 Center production data to the MIS

2.3.1 General information

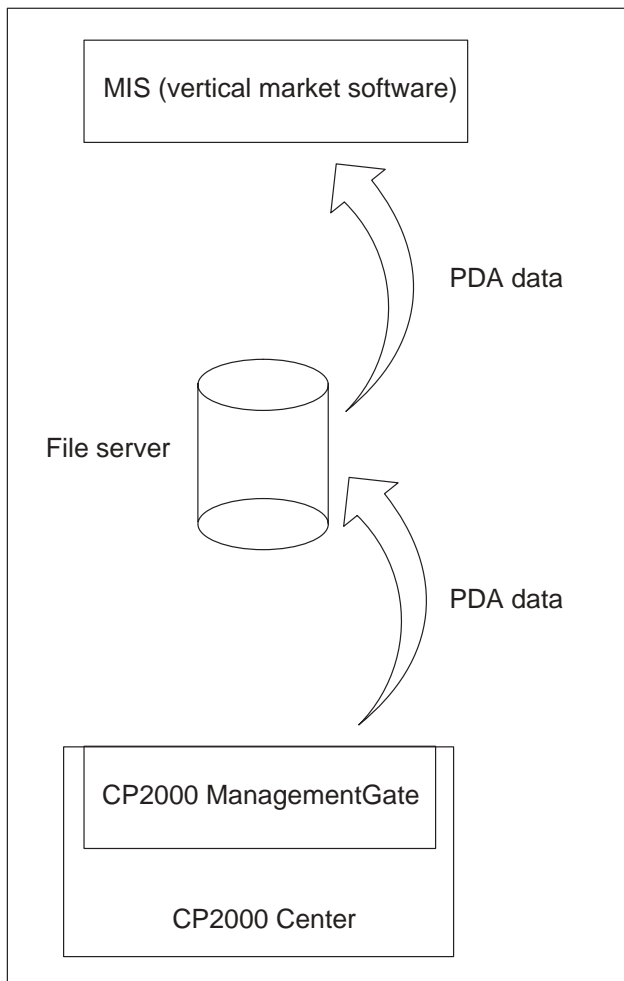


Fig. 15 Transferring PDA data to the MIS

2.3.2 Records

CP2000 ManagementGate can fetch job data from the MIS and transfer production data to the MIS. Evaluation and interpretation of the production data is within the receivers responsibility.

The signal data is converted into the PDA format of the host interface and continuously written to a file. Each press has its own unambiguous file name. The MIS employs this file name to allocate the production data to the press. MIS renames the PDA file before it reads it, and deletes it afterwards. Thus, CP2000 ManagementGate always creates the file again if it does not exist. Otherwise, new messages are appended at the end.

The number of data records (PDA messages) that is entered in the file can be configured at the CP2000 Center. The oldest PDA data is overwritten when this number is exceeded.

The syntax of the records that are sent from CP2000 ManagementGate to MIS corresponds to the syntax that is described in "DataControl, interface descriptions, DataControl production data (PDA)". There, the meaning of the individual record identifiers is explained in more details. Any CP2000 ManagementGate record identifiers without contents will not be managed by CP2000 Center. **Only Record 020 is transferred.**

2.3.3 Process messages in Record 020

Field no.	Data field	Length in char.	Meaning for CP2000 Management-Gate	Example
1	Record identifier	6	Number of the record	REC020
2	TimeStamp	16	YYYYMMDDHHMMSSHH	20000221123500
3	OrderNo	10	Job number (if the job ID is separated by a defined delimiter into OrderNo, ProdNo, and JobNo; <i>otherwise blank</i>)	1900195
4	ProdNo	10	Product number (if the job ID is separated by a defined delimiter into OrderNo, ProdNo, and JobNo; <i>otherwise blank</i>)	01
5	JobNo	10	Operation number (if the job ID is separated by a defined delimiter into OrderNo, ProdNo, and JobNo)	40
			Job ID (if the job ID is not separated by a defined delimiter into OrderNo, ProdNo, and JobNo)	1900195
6	WorkPlaceNo	10	Configured cost center number	0815/A
7	ActivityNo	20	See table below	@49
8	ActivityValue	10		4
9	ActivityName	20	Name of the event	Washing inking rollers
10	Amount	10	Quantity	25000
11	TotalCount	10	Totalizing counter	134527
12	Units	2	Is not transferred	
13	Note	80	Is only transferred with manually transmitted PDA messages	Note
14	PersNo	10		15065
15	ProductionTypeNo	10	Is not transferred	

Tab. 7

Predefined events with Record 020

Activity No.	Activity Value	Meaning	Comment
@17	–	Partial ready message.	This message is issued automatically by the machine. It is ensured that at least one partial ready message is issued inside a selectable interval. The shortest interval is one minute. New messages will not be issued when the machine is switched off.
@18	–	Production	A production interval characterizes a time interval during which sheets are produced. <ul style="list-style-type: none"> ●"Impression on" in at least one unit ●"Ductor on" in this unit ●"Sheet travel on"
@47	No. PU	Start blanket washup for printing unit no. xx.	Only machines with automatic washup device.
@48		End of blanket washup for printing unit no. xx.	
@49	No. PU	Start inking roller washup for printing unit no. xx.	
@50		End inking roller washup for printing unit no. xx.	
@51	No. PU	Start ink fountain roller washup for printing unit no. xx.	
@52		End ink fountain roller washup for printing unit no. xx.	
@53	No. PU	Start of impression cylinder washup for printing unit no. xx.	
@54		End of cleaning impression cylinder of printing unit no. xx.	
@95	–	Start of the job	
@96	–	Job interruption	
@97	–	End of the job	The print job is terminated.
@112	–	Beginning of the printer's working time	
@113	–	End of the working time	
@114	–	Beginning of the operator's working time	
@117	–	End of the printing interval	Printing interval with good sheets terminated.
@xx	–	User-defined message	

Tab. 8

3 Connection of CP2000 Center to DataControl

3.1 Presetting Data from DataControl to CP2000 ManagementGate

When a planning result is loaded, the system loads presetting, ink and repeat data. These data include:

- Order number (OrderNo, ProdNo, JobNo)
- Order name (JobName)
- Customer (CustomerName)
- Good sheets including allowances (Volume)
- Printed sheet length in mm in sheet travel direction (Length)
- Printed sheet width in mm at right angles to sheet travel direction (Width)
- Printing sheet thickness (Thickness)

Once the data from DataControl has been loaded, the jobs are shown in the data list. These are jobs that were scheduled for this work place on DataControl. All jobs scheduled for the workplace group can be displayed when the "Group" button is pressed. Currently, the list is limited to the 100 most recent jobs. Starting with the most recent job, the jobs are listed from top to bottom.

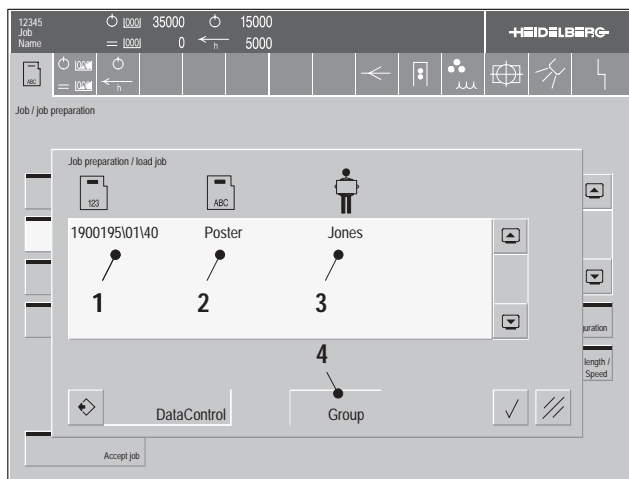


Fig. 16 Data list in the "Order preparation" menu

- | | |
|------|--|
| 16/1 | Order number (OrderNo, ProdNo, JobNo). |
| 16/2 | Order name (JobName) |
| 16/3 | Customer (CustomerName) |
| 16/4 | "Group" button |

3.2 Process Messages from CP2000 ManagementGate to DataControl

The following data items are transferred from CP2000 Center to DataControl:

- TimeStamp
Time base
- MachineState
State of the machine (ON, OFF, production fault, yellow fault, production)
- Amount
Good sheet counter
- TotalCount
Total sheet counter (totalizing counter)
- Speed
Current press speed
- Units
Printing units
- Events (activities)
see table below

3.2.1 Predefined Events (Activities)

Activity No.	Activity Value	Meaning	Comment
@17	—	Partial ready message.	This message is issued automatically by the machine.
@18	—	Start of print interval	
@47	No. PU	Start blanket washup for printing unit no. xx.	Only machines with automatic washup device.
@48		End of blanket washup for printing unit no. xx.	
@49	No. PU	Start inking roller washup for printing unit no. xx.	
@50		End inking roller washup for printing unit no. xx.	
@51	No. PU	Start ink fountain roller washup for printing unit no. xx.	
@52		End ink fountain roller washup for printing unit no. xx.	
@53	No. PU	Start of impression cylinder washup for printing unit no. xx.	
@54		End of cleaning impression cylinder of printing unit no. xx.	
@59	—	Start of early sheet	
@60	—	End of early sheet	
@61	—	Start of misaligned sheet	
@62	—	End of misaligned sheet	
@63	—	Start of double sheet	
@64	—	End of double sheet	
@67	—	Start of pull error	

Activity No.	Activity Value	Meaning	Comment
@68	—	End of pull error	
@69	—	Start of sheet infeed error	
@70	—	End of sheet infeed error	
@95	—	Start of the job	
@96	—	Job interruption	
@97	—	End of the job	The print job is terminated.
@112	—	Beginning of the printer's working time	Although this message is not transferred to DataControl, the related personal number is transmitted with each message.
@117	—	End of the printing interval	
@xx	—	User-defined message	

Tab. 9