DirectFax

The Fax Solution for the IBM iSeries

User Manual

iSeries & Toolmaker - Quality Combined

Screens

The illustrated iSeries screens in this manual may differ from the current layout.

Latest release

Changes since the last release are marked at the right margin.

Table of Contents

1.0 About this manual

Whether printed or stored on a disk, manuals can get outdated faster than you might think. We recommend that you take a look at the **Toolmaker website** from time to time. There you'll find information on new products and versions and the answers to frequently asked questions, or FAQs.

1.1 The Toolmaker website (www.toolmaker.de)

If you cannot find information on a topic in this manual, or if you're having problems with DirectFax hardware or software, why not visit the Toolmaker website, where you will find a description of improvements to DirectFax.

The Hotline provides tips and troubleshooting that will benefit any DirectFax user.

You can find it as follows:

Go to www.toolmaker.de.

Click *Software* to display a list of all our products. In the *DirectFax* section, click *Support*.

Search window
Enter a search term on the page displayed. Use the search term *Version* or the version number to display a list of questions on the topics *New version, Installation and Known problems*.

If the website displays a question on the topic *Known problems in version xxx* and this is the version of DirectFax you are using, read the topic carefully. You may find it useful to print it out.

If there is a known problem with a function you use, click the link and download the ZIP file to your PC, then follow the instructions on the website to install it.

Hotline
If you cannot find the answer to your question on the website, mail us at hotline@toolmaker.de. We can then look into your problem and respond to it promptly. Your e-mail will also help us to see which problems have not been addressed in the manual or on the website.

Note that if you use an address other than hotline@... for technical questions to Toolmaker (for example info@...), there may be a delay in dealing with your problem because we have to go through incoming mails to these addresses **manually**. E-mail to hotline@... is automatically forwarded to the Hotline consultant on duty.

In **urgent** cases, you can also **call** the Hotline at +49 (0) 405591962. If you call outside office hours, leave a message and we'll get back to you as soon as possible.

1.2 Where can I find which information ("Roadmap")?

This manual is intended for both DirectFax **users** and **administrators**. It includes all information available on the product. This section is designed to help you find the sections containing information relevant to your user profile.

1.2.1 Structure of the manual

The manual deals with the tasks relevant to users and administrators separately. For administrators, tasks are further subdivided into one-off tasks *(installation and configuration)* and tasks that are performed more frequently (*administration*).

Chapter 4 – User-controlled fax dispatch is intended for users who need to be able to fax. All available possibilities are presented. Fax dispatch from iSeries teminals with different editors and fax dispatch from a PC-application.

Chapter 5 - Automatic faxing from applications is intended more for programmers and administrators. It shows, how to interface the functions of DirectFax with an iSeries application.

Chapter 6 – Extended control functions for faxing discusses DirectFax form functions and the control codes that can be integrated into a fax to set options including "night fax", "layout", "fonts" etc.)

Chapter 7 – Incoming/outgoing fax management covers the options available to users to manage incoming and outgoing faxes.

Chapter 8 – Incoming fax covers the options available for working with an incoming fax.

Chapter 9 - Administration tasks describes the functions used to manage users, address books, forms, graphics (logos and signatures), and the automatic distribution of incoming faxes.

Chapter 10 - The DirectFax editors describes the use of the editors shipped with DirectFax.

Chapter 11 - Installation describes how to install a new version of DirectFax. First installation of DirectFax and the associated training are usually undertaken by a Toolmaker employee and are not covered in detail here.

Chapter 12 - DirectFax Lite describes the limitations of the competitively-priced DirectFax Lite version.

Chapter 13 - Configuration on the iSeries gives a detailed description of all settings used to control the software on an **iSeries**.

Chapter 20 – Upgrade from DCE fax box to modem. Many customers still use DCE fax boxes. This section shows you how to convert to a fax modem.

Chapter 21 – DirectFax/PC describes all options available for sending and receiving faxes in the PC component of the software.

Chapter 22 – Lotus Notes Connector for DirectFax describes the performance of the Notes Connector for DirectFax.

Chapter 23 - DirectFax PCL converter describes program configuration and fax operations when converting from spool files with *USERACII data stream in PCL format.

Chapter 24 – Fax hardware configuration contains instructions on configuring modems and routers and setting up fax cabling.

The other chapters are summaries, quick reference lists and non-essential topics.

1.2.2 Administrator: Quick start for first installation on the iSeries

For the first installation on the iSeries, please work through these chapters:

Chapter 2.2 Terms of use

Chapter 2.3 Technical requirements

See the document *DirectFax Installation Guide* on the CD.

Chapter 13.1 **Configure the DirectFax connection (CFGDIRFAX)**

Chapter 13.2 Work with fax lines (WRKFAXLIN)

Chapter 9.8.1 **Work with DirectFax user profiles and** groups (WRKFAXPRF)

Chapter 9.9 **Graphics, signatures and logos**

Chapter 9.7 **Maintain fax templates and source files** (only if users are sending with the DirectFax editor)

Chapter 9.1 **Daily tasks**

Having worked through these chapters, you will have defined the work environment for your iSeries terminal users. Further preparation is necessary: Shall PC users send faxes? Shall faxes be sent from applications?

1.2.3 Administrator: Quick start for installation on a PC

To install DirectFax/PC software on a personal computer, procede as follows:

Depending on the PC operating system, refer to the appropriate section in

Chapter 22 DirectFax/PC

1.2.4 Administrator: Quick start for faxing from applications

Please read **Chapter 5.0 Automatic faxing from applications** and decide which of the options you want to use:

- Print to the OUTQ DIRFAXPRT and use **AutoFax**
- Use control lines in spool entries
- Use CRTSPLFAX-API
- Use the command FAXSPLF
- Use the DirectFax DFI interface
- Send spool files with AFPDS data stream

- Send spool files with the Office ADVSCS data stream

If you have migrated form FAX400 to DirectFax, you may want to continue using your existing interfaces.

1.2.5   User: Quick start for sending faxes

You will find the relevant information in the following chapters:

Chapter 4.0 **User controlled fax dispatch**

(please choose the method appropriate to your needs)

Chapter 10.1 The DirectFax editor

(if you wish to create faxes using the DirectFax editor – command EDTSNDFAX)

Chapter 7.0 **User tasks for managing fax dispatch**

Chapter 6.1.16 **Reducing memory for PC serial faxes**

1.2.6   User: Quick start for incoming faxes

You will find the relevant information in the following chapters:

Chapter 8.0 Incoming fax

1.3   What other documentation is available?

IBM manuals on the topics:

- Operation of the iSeries
- OfficeVision/400
- ClientAccess/400
- TCP/IP on the iSeries
- SEU

Information on operating systems:

- Windows 98
- Windows 2000/XP

1.4   Remarks/Improvements to this manual

Mistakes are human, so if you notice **spelling or print errors**, or function descriptions that are not covered in sufficient depth, please feel free to contact us.

You may think that some sections require changes or additions. If so, feel free to make changes to the manual and then **send us a copy**. Thanks.

To make DirectFax and this manual easier to use, we have included an index and lists of all **commands** and **control codes** used in DirectFax.

Versions

We try to keep our manuals up to date. However, the manual may not correspond to the latest software version from time to time. Visit the Toolmaker website at www.toolmaker.de to find the latest information on the software.

Screens

The iSeries screenshots in this manual may differ slightly from your actual screens.

2.0 General Information

DirectFax for iSeries is a **complete solution** consisting of hardware and software.

2.1 Goals and benefits

It allows you to work with documents on any workstation and to send them immediately or after a defined period by fax to single or multiple recipients. Logos and standard text functions are supported, (bold, underline, italics etc).

Direct conversion of text to electronic data without the necessity of a scanner guarantees high quality reproduction on the receiver side. DirectFax saves you **time and money** by minimising the steps between data entry and transmission.

2.2 Terms of use

DirectFax software may be used only on the machine identified in the product order. Upgrading to a new model requires a new password and licence fees. Please ask for a written quote.

2.3 Technical requirements

With this version, you are no longer restricted to the V.24 interface and 8 fax lines. The new transmission program can now fax using TCP/IP. New hardware supported includes for example Bintec routers with fax modules and modems to a W&T ComServer. You can find important information on this topic in the chapter titled Configuration, section 13.2, command WRKFAXLIN and in chapter 24, Configuring the fax hardware.

If you want to use a modem with the V.24 interface, note the following.

Your iSeries must have a free **modem port** (V24-interface). All machines have a standard ECS interface on board. If all existing V.24 interfaces are in use, please contact you local IBM Business Partner for information on installing an additional interface. X.21-Interfaces are **not** suitable for this purpose.

The **connection cable** between the iSeries and the fax modem is **not** supplied by DirectFax. Normally this cable is delivered with the system.

If the wall socket is part of an internal exchange the dialled number must be prefixed with a digit (usually 0), with or without a delay. An internal exchange system with „earth key" is not suitable for getting an external line. If problems occur when faxing through an internal exchange, then a separate, standalone connection to your provider is required. It may also be possible to configure the system so that an open line is directly available.

The normal fax modem is designed for use with the analog phone system. If you are using ISDN, the exchange must be configured for analog devices.

If **Euro-ISDN** with an **S_0-Interface** is available, an ISDN fax modem can be used. The national ISDN protocol **1TR6** is not supported.

For technical details please contact our service desk at +49 (0) 40-5 59 19 62

You can find more information on the IBM release required in the installation guide.

2.4   Extending the test period

If you cannot fully test DirectFax within the agreed test period, please give us a call. We can arrange an extended test period by phone.

3.0 Overview

The world is full of fax devices sending and receiving documents. Because they are manually operated, faxes are costly in terms of people and time. In addition, non-standard document formats cannot be sent directly. Instead, they must be manually processed and reformatted to standard formats like A4.

DirectFax offers the ideal solution for fax-dispatch. The user simply enters the data and selects the recipient, and that's it. The fax is then automatically sent, either immediately or later to take advantage of cheaper rates. Users can optionally print copies of documents for their records.

Text can be edited with the integrated **fax editor** (DFE), with **OfficeVision** (OV/400, an IBM license program, up to OS/400 V4R5) or SEU/400 (Source Entry Utility). Existing **spool entries** (for example computer lists, automatically generated quotes) can be directly dispatched with an explanatory text attached to the fax.

Today, the greatest **potential for rationalisation** is in the field of automatic editing and forwarding of business process documents. Orders, confirmations, reminders and many other types of documents can be sent by fax to business partners. There are none of the costs associated with printing, sorting, enveloping and stamping. Also fax rates are normally lower than postal charges. Even high-end requirements on subjects like layout, signatures and security can be met.

AutoFax from DirectFax allows you to automatically fax spool entries (for example orders and reminders) from applications. No **programming** is required if the printout contains a fax number or data key that can be used to retrieve a fax number from a file on the system.

DirectFax control strings allow you to choose fonts, draw lines and boxes, add graphics and otherwise format documents. The **MIX** function executes on the iSeries.

Faxing of **AFP** and **PCL spool files** and OFC documents with the ADVSCS data stream is also possible. All font changes and added graphics are recognised and the DirectFax fonts and graphics are added. With the **Font generator** (optional), you can generate new DirectFax fonts from formatted documents on the PC.

You can also edit fax documents on a **PC** client using for example Word or Excel and then send the document to the iSeries with DirectFax. Because the fax is passed to the host as a graphic file, there are no restrictions on fonts and graphics. All Windows versions (95, 98, NT, 2000 and XP) are supported. Communication between PC and iSeries is with TCP/IP. A separate license is required.

It is possible to **receive a fax** with a modem. Received faxes are graphic files that cannot be displayed on a standard iSeries terminal. To display these files, you will need either an IBM 3489 screen or a PC with DirectFax/PC software. To print, you will need a **PCL5 printer** on the iSeries or a printer installed on the PC. Incoming faxes can be printed automatically or placed in an entry queue for specific employees.

With the **Charges option** (only with ISDN devices), phone costs can be registered and listed by cost centre. A separate license is required.

DirectFax allows you to integrate **forms**, **logos** and even **signatures**. Logos are saved as **graphic files** on the iSeries. Graphic files held on PC clients can be uploaded to the iSeries by file transfer. A logo can also be sent from a normal fax device to the fax modem and be integrated as a **graphic**.

Existing fax numbers and **address lists** in user files on the iSeries can be automatically imported to DirectFax. During the import, you can create a fax distributor list (or **call distributor group**). These groups can be used to send serial faxes to field offices, suppliers, prospects and so on. Using **control codes** for data fields, you can customise the content of the fax for each individual recipient.

From V3R7 onward, the iSeries can be used as an SMTP and POP3 **e-mail-server**. DirectFax now has an interface designed to utilize these functions. You can now send incoming faxes either manually or automatically as e-mail. Text, TIF and PDF formats are supported. A separate license is required.

An optional **archive interface** allows you to pass both incoming and outgoing faxes to third-party archiving tools. Graphic fax content (MIX fax) can be converted to TIF or PDF format. The interface also allows you to pass parameters. A separate license is required.

In terms of hardware, DirectFax now supports Ethernet devices as well as V.24 interface devices. These include the **Bintec router** with fax module and modems, connected to a **W&T ComServer** and the **TCU** (Toolmaker Communication Unit). With a **TCP/IP address** and a **port**, these devices are also accessible over the internet. This allows you for example to control the Bintec router in a distant branch from headquarters, thereby reducing the cost of faxing.

4.0 User controlled fax dispatch

For PC users, DirectFax can be used to send just about any file. Any application that uses the Windows 95/98/NT/2000/XP print manager can be used for data entry.

4.1 Overview: Fax dispatch options

iSeries terminal users can enter data in a number of ways. The easiest way is to use the DirectFax editor. It provides simple word processing functions such as text highlighting and is easy to learn.

For more complex word processing, the editor shipped with IBM's OfficeVision license program can be used.

For programmers and other users familiar with it, SEU or Source Entry Utility can also be used for fax data entry.

Control codes in faxes

Whichever editor is used for data entry, a wide range of control codes defining the layout and security of the fax can be included in the text.

Forms

The most important codes are the **mix fax control codes**. They allow you to superimpose graphics and logos onto the text and to add graphical elements such as lines, boxes and fonts. Mix fax control codes therefore allow you to incorporate forms into your faxes. For more information, please refer to the section , PAGE 91, AND **MAINTAIN FORMS (WRKFAXFRM)**, PAGE 178.

4.2 With the DirectFax editor (EDTSNDFAX)

Start the editor with the command EDTSNDFAX (Edit and send fax) or option 1 from the DirectFax user menu (GO FAX).

Note 1:

The DirectFax editor saves your data in source files. For more information on source files, see option 10 in the Configuration 2 menu (GO FAXCNFG2).

Note 2:

There are 2 editor versions, one old and one new. Only the newer version is dealt with here. The version used is determined by a DTAARA flag or a code in the fax USRPRF (*E1).

If the error message "**Not authorised for editing**" is displayed, the function has been disallowed for the user or users. For more information, look up the value "*NONE" (see CHGFAXDFT) in the sections on "Default values...".

Begin by entering the text name, file and library in the following screen:

```
FA ...........................................................................
 :                      Open source file                    RENGEL    : 4
Se :                                                                    :
   : Enter selection and confirm                                        :
   :                                                                    :
   :                       Name          File         Library          :
   :   DirectFax text . . TEST_____     FAXMASKE__    DIRECTFAXF        :
   :                                                                    :
   :   DirectFax mask . . _____      FAXMASKE__    DIRECTFAXF        :
   :                                                                    :
   : F3=Exit   F4=Prompt   F10=Recipient   F12=Cancel                   :
   :                                                                    :
   :                                                                    :
   :...................................................................:
      10. Work with Addressgroups
      11. Work with Country Codes
      90. Sign off                                  99. Display Version

 Selection or command
 ===> 1_____

 F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
 F13=Information Assistant   F16=AS/400 main menu
```

0219 - Edit and dispatch faxes – open source file

The values displayed initially depend on the default values in the DirectFax user profile and other general defaults. They may be pre-defined values or the parameter values previously used.

Parameters

DirectFax text
Name
Enter the name of the text you want to edit. This can be the name of an existing text or a new name. The name must begin with an alphabetic character. The maximum length is 10 characters. Spaces and special characters are not allowed. You can use F4 to display a list of existing names. In the list, you can scroll, select, copy, delete and rename.

File
The name of the source file containing the text you want to open or save. This file is **protected** against modification if so defined in your profile.

Library
The name of the library in which the file is stored (usually DIRECTFAXF).

DirectFax mask
Name
If you have defined templates used to create new texts (masks) in the file FAXMASKE, you can enter a template name here or default the field from the user profile. This field is used only if you are creating a new text. If you are editing an existing document, it is ignored.

File
Name of an existing source file where the templates are stored (usually FAXMASKE). This file is **protected** against modification if so defined in your profile.

Library

The name of the library in which the DirectFax mask file is stored (usually DIRECTFAXF).

You can define the **fax recipient** from this screen if you wish. The recipient and a number of other parameters are displayed for data entry if the relevant parameter in the user profile is set to ***YES** or if you press **F10** in this screen. To hide these fields, press **F10** again.

If you enter or select (F4) an address, the ^&KA data parameters are automatically replaced with the master file record content.

After entering all the required parameters, press Enter to start the DirectFax editor. The following screen is displayed:

```
10.04.05 20:45:44          DirectFax Editor              DIRECTFAXF/FAXMASKE
 RENGEL                                                                  TEST
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....
****************** Data begin ***********************************************
fax no. ¢UN   date: ¢UD   time: ¢UT   from ...

                                              phone: 0213/43432-

subject:


Dear ¢UA

thank you for your letter from yesterday. We would like to offer the
requested goods. Please send us your vat number.
                                  ▌
*****************Data end  ************************************************



_____
F1=Select      F2=Copy        F3=Exit        F4=Delete      F5=Insert
F6=Functions   F8=Highlight   F9=Underline   F10=Reverse    F24=More keys
```

0001 - The DirectFax Editor

You can now enter the text for your fax. See chapter 10 for more information on the DirectFax editor.

After entering your fax text, press **F3-Exit.** Enter in the following screen a description of the text file you have just created. Press Enter to save to the source file. If you press **F3 again**, your data will **not be saved**. Use F12 to return to the editor.

```
10.04.05 20:45:44          DirectFax Editor          DIRECTFAXF/FAXMASKE
 RENGEL                                                             TEST
<...+.. .......................................................... ...+....
******* :        Exit member                        RENGEL    : ********
fax no. :
        :     Enter selection and confirm                      :
        :                                                       :
        :        Save changes          █         Y=Yes N=No    :
subject :        Send fax . . . . .     Y         Y=Yes N=No    :
        :                                                       :
        :        File  . . . . . . .   FAXMASKE___              :
Dear ¢U :          Library . . . . .    DIRECTFAXF             :
        :        Member  . . . . . .   TEST_____              :
thank y :                                                       :
request :        Description                                    :
        :        _____          :
******* :                                              : ********
        : F3=Exit   F4=Prompt   F12=Cancel             :
        :                                               :
        :...............................................:

F1=Select      F2=Copy        F3=Exit       F4=Delete      F5=Insert
F6=Functions   F8=Highlight   F9=Underline  F10=Reverse    F24=More keys
```

0002 - DirectFax Editor - Final screen to save data (after F3)

The *Specify recipient* screen is now displayed. This screen is described in its own section below. (CHAPTER **ENTER FAX RECIPIENT**, PAGE 33)

```
10.04.05  20:49:27              Enter recipient               RENGEL

Enter to continue .....:              Password for quick fax . . .

CPI. . . . . . (10,12,17,20)  __      LPI . . . . . . . . . (6,8)  _
Log printer  . . . . _____          Print  : No, Pre., Hold.    _
                                       Resolution . . . . . (F,G)  _
        B/N
        1-5 Recipient          Personal addressing
0001 █     _____       _____
0002 _     _____       _____
0003 _     _____       _____
0004 _     _____       _____
0005 _     _____       _____
0006 _     _____       _____
0007 _     _____       _____
0008 _     _____       _____
0009 _     _____       _____
0010 _     _____       _____
0011 _     _____       _____
0012 _     _____       _____

F3=Exit   F4=Address   F8=Groups   F10=Email/Time   F12=Cancel
```

0003 - Specify recipient after editing

4.3 With the OfficeVision/400® text editor

If the IBM license program OfficeVision (OV/400) is available, you can use it to create and send fax documents. This chapter assumes that the IBM license program OV/400 is installed on the system and that the user is familiar with it.

Please note section 5.11 on faxing OfficeVision documents with *ADVSCS data stream.

4.3.1 Notes on the fax document format

The **page length** (last line and/or footer) must **not exceed 66** in OV/400 or in spool files. This is because the fax software inserts a page break automatically after 66 lines. Longer pages (for example through footers) lead to unnecessary page feeds at the recipient and produce almost empty pages.

If you want to use a default **header logo** on the fax, you will need to make allowance for it in the OV document page format. Set the first written line on the first page to 13 or thereabouts so that OV/400 allows for the logo at the page break. In the fax program, the first **line feed** to a specific line after a logo is ignored. This ensures that the first written line appears directly after the logo, maintaining the overall layout.

Font changes in the OV document are <u>not</u> recognised by DirectFax. For example, footers in CPI 20 cause a break and lead to longer fax text. However, you can use specific attribute codes in the text to change the character density. See below for more information. Note that these tricks are ignored in the fax log and the line is cut off.

4.3.2   With the command EDTSNDOFC

Use the command **EDTSNDOFC** or option 3 from the DirectFax user menu to access OfficeVision.

If the error message "**Not authorised for editing**" is displayed, the function has been disallowed for the user or users. References see at special value "*NONE" at **Work with DirectFax user profiles and** groups (WRKFAXPRF), Parameter OFCDOC, page 160 or **Default values for OfficeVision/400 (CHGOFCDFT)** page 240).

Depending on the entry for Document name in the **fax user profile**, either the command **EDTSNDOFC** or the command entered for **Folder name** is executed.

The command EDTSNDOFC is an easy way to use the OV/400 editor for inputting text, but does not provide access to other OV functions such as searching documents in directories.

To utilise the whole OfficeVision functionality while retaining the ability to fax, you may want to ask users to go directly into OV/400. You could also specify a command other than EDTSNDOFC in the fax user profile**.** Such commands include **WRKDOC** or **STROFC** with or without selection indicators. For more information, refer to the section on WRKFAXPRF, Work with DirectFax user profiles. See below for information on faxing directly from OV/400 (look up the *Run instruction).

In its default form, the command EDTSNDOFC runs as follows. The following screen is shown, where you can enter the document and folder names.

```
18.04.05  19:15:33          Select document or folder            RENGEL

Enter selection and confirm

Document . . . . . . . . . . . . ▮_____

Folder . . . . . . . . . . . . _____


_____




F3=Exit   F6=New document   F18=New folder   F12=Cancel
```

0268 - Editing and sending a fax with OFFICE/400

The values displayed initially depend on the default values in the DirectFax user profile and other general defaults. They may be pre-defined values or the parameter values previously used.

Parameters

Document name

The name of the fax text. This can be the name of an existing text or a new name. The name can consist of any combination of alphabetic characters and digits. Dots are allowed as delimiters. The rules of the IBM license program apply. To create a new document, first enter the document and folder names here. Then use F6 to run the OFC function Create for the new document.

Folder

The name of the folder. This is where existing documents are stored and new documents are saved. If you are creating a new folder, press F18 after entering the complete folder name to execute CRTFLR (Create folder).

You can block F18 for all users by entering "**N**" at character 42 of the data area **FAXDTAARA** or with *YES in the command CHGFAXVAL.

Press Enter to run the **OV/400 editor**. For more information on this IBM license program, please refer to the IBM manuals. You can highlight words and phrase in the editor by assigning attributes with function keys.

The DirectFax transmission program supports the following features: **Bold, underline** and **reverse** (latter only with the attribute codes ^R1/^R0). You can use control codes to place variables (date, time, salutation, incremental fax number, CSI, **graphic**s and logos, and data fields from the address master file) into the text.

After you have entered the fax text and saved it to a folder, the **Specify recipient** screen is displayed. This screen is described below. (CHAPTER **ENTER FAX RECIPIENT**, PAGE 33).

4.3.3   With the *Run instruction

Fax users can use either **option 3** in the fax menu or send directly **from OfficeVision**. The fax USRPRF can either refer to a directory or embedded calls for commands such as: WRKDOC or STROFC 6.

Do the following to use the **fax interface from an office document**:

1. Insert the **instruction 26**=Execute/*RUN at the end of the document using **F9**. Change only the **FAX** command. All other parameters remain unchanged.

2. Before saving the completed document, press **F3**. In the "Exit document" screen, enter **Y=Yes** in **Print document** and **Y=Yes** in **Display print definitions**.

3. Specify the printer name **DIRFAXPRT**. The OUTQ must be either ***DEV** or DIRFAXPRT. Ensure that the option "**Place in JOBQ**" on page 3 is set to "**N=No**", otherwise the recipient dialog will not be displayed.

After print processing, the entry screen for **recipient data** is opened (description below). Enter the fields and confirm with Enter. The program acknowledges the number of faxes and places the printout in the outqueue DIRFAXPRT. The **fax transmission program** then transfers it to the fax outqueue. The fax can now be displayed in the fax queue with option 7.

Prerequisites

Rights
Note that **instruction 26** can only be run by users authorised to run it. Authorise users by setting the parameter "**Allow commands in documents**" to "**Y**". See "**Registration options**" in the OfficeVision menu "Working with Office users". How to get there: **STROFC** option **9**, option **1**, option **2**=change, or with the command:

```
CHGOFCENR USRPRF(Name) ALWDOCCMD(*YES)
```

Default values
To avoid making these settings separately each time, you can enter the **RUN instruction**, the OUTQ **DIRFAXPRT** and the "**N**" parameter in the document format as the default settings on which new documents are based.

Print only (do not fax)
To print a document without faxing, change the printer and set the parameter "**Place in JOBQ**" to **Y=Yes**. The ***RUN instruction** can remain in the document as it is ignored by DirectFax.

Additional options

Fax command parameter in the RUN instruction:
The parameter CODES() allows you to enter additional control codes (for example ^NODFT). These appear after the control line (^FAX0123..) in the spool entry. This has the advantage that certain parameters are fixed and cannot be forgotten by OV users. Example for a *RUN instruction:

```
FAX CODES(' ^NODFT ^PRT(PRTO4) ^NIGHT')
```

4.3.4   With the control code ^FAX

If the control code **^FAXnnnnnn** (nnnn is the fax number) appears on the first line of an OV/400 document in the OUTQ **DIRFAXPRT**, it is automatically processed by DirectFax. You can use this function to force applications to automatically merge fax numbers into the text documents being processed (with MRGDOC or ITP/CS).

Multiple ^FAXnnn instructions on separate lines are allowed. DirectFax then sends the document to each number.

Other fax codes, including for example ^Cx for fonts or ^SIGN for signatures, are also available in OV/400. For more information on control codes, please refer to the section titled "Reducing memory for PC serial faxes".

4.3.5   Work with fax numbers in the document description

OV/400-documents that are generated from an application with MRGDOC can contain the fax numbers in the **keyword parameter** of the document description. That means that applications can automatically control the entire document creation process, addressing, printing and faxing. In DirectFax, this function is called RTVDOC.

Multiple fax numbers and control codes can be entered with semicolon delimiters in the document description. You can use the OS/400 command CHGDOCD to change the document description. As described in the previous section, OFC documents must be printed by the application to the DIRFAXPRT OUTQ.

Note:
DirectFax uses the command RTVDOC to retrieve the document information. The document may not be manipulated or opened by an application or user during this process. This function usually takes 1 – 2 minutes to complete. Very large spool files may take somewhat longer.

Additional control codes
In addition to the multiple fax number option, DirectFax offers a range of other control codes. Examples include ^FAX line and ^NIGHT for faxing at night rates.

Requirements
The function RTVDOC must be activated in DirectFax. With the command CHGFAXVAL, you can then choose one of two variants. *NONE disables the function. The fax number can contain a maximum of 20 characters.

Parameter values for RTVDOC in the CHGFAXVAL command

*KEYTEXT
Checks all keywords for fax numbers. Alphabetic characters, spaces and special characters are ignored and present no problems. This variant is recommended if the key fields contain only fax numbers and control codes. Example: 040/5591908 **;** ^NIGHT

*FAXCODE
This parameter only retrieves values prefixed ^FAX. This allows you to continue to use keywords as normal in OfficeVision. All values not prefixed with the "^" character are ignored by DirectFax. Example: ^FAX040/5591908; ^NACHT

4.4   Enter/send text with SEU/400 (EDTSNDSEU)

The command EDTSNDSEU or option 4 in the DirectFax User menu starts the OS/400 Source Entry Utility.

If the error message "**Not authorised for editing**" is displayed, the function has been disallowed for the user or users. For more information, look up the value "*NONE" (see CHGSEUDFT) in the sections on "Default values...".

You are first prompted for the file and text name in the following screen:

```
                    Specify Members to Work With

Type choices, press Enter.

    File  . . . . . . . . . .    ▨▨▨▨▨▨▨▨    Name, F4 for list

      Library . . . . . . . .    _____  *LIBL, *CURLIB, name

    Member:
      Name  . . . . . . . . .    _____  *ALL, name, *generic*
      Type  . . . . . . . . .    _____  *ALL, type, *generic*, *BLANK




F3=Exit     F4=Prompt     F5=Refresh     F12=Cancel
```

0004 - Edit and send faxes with SEU/400

The values displayed initially depend on the default values in the DirectFax user profile and other general defaults. They may be pre-defined values or the parameter values previously used.

Parameters

Source file
The name of an existing source file in which fax texts are stored as members.

Library
The name of the library that contains the source file.

Source member
Enter the name of the text you want to edit. This can be the name of an existing text or a new name. **Names are alphanumeric but must begin with a letter**. The **maximum length** is **10** characters. Spaces and special characters are not allowed.

Now press Enter to call the SEU. For more information on this IBM license program, please refer to the IBM manuals.

After you enter and save the fax text, DirectFax displays the "Enter fax recipient" screen. This screen is described elewhere in this document.

4.5   Send spool files as fax (WRKSPLFAX)

DirectFax is capable of sending spool file entries in letter format as fax including comment text as well as lists and reports. The spool entries can be created by any application and **must not be specially edited for fax dispatch.** For practical considerations, the entry should be held in „HLD" status or in an inactive OUTQ.

Special note:
If you want to support the **^FORM** function and retrieve **form settings** from the fax user profile, you must set a switch. To do this, enter "F" at position 148 in FAXDTAARA as follows:

`CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA (148 1)) VALUE(F).`

The command **WRKSPLFAX** (Work with spool and fax) or the corresponding option in the DirectFax User menu displays the screen shown below. To work with spool queues other than the current user's (USER *CURRENT), use WRKSPLFAX and F4 to change the parameters.

```
 4.03.05  10:14:03      Work with all spooled files              SES

Enter selection and confirm
    1=Fax        2=Change     3=Hold         4=Delete        5=Display
    6=Release    7=Messages   8=Attributes   9=Print status  S=Source ...

                             Device/                     Pages  Act.
Opt  File        User        Queue        User data  Sts.  all   Page  Copy
 _   QSYSPRT     SES         PRT01                    RDY    1          1
 _   QSYSPRT     SES         PRT01                    RDY    1          1
 _   QPJOBLOG    SES         PRT01        TESTSES2    RDY   13          1




                                                                   End
F3=Exit    F4=Help    F5=Refresh   F10=View 3        F11=View 2  F12=Cancel
F17=Begin  F18=End    F22=Printer  F23=More options
                               (c) Toolmaker Software GmbH 2005, Version 5.40b
```

0005 - Work with spool files

The screen shows a list of available spool entries. The display is similar to the OS/400 **WRKSPLF** command. Most options and function keys are identical. The following description concentrates on the specific DirectFax functions.

You can scroll through the spool entries listed, toggle views and validate the spool files for data errors.

Copy spool entry to source file (CPYSPLFSRC)

The option "S=SRC" calls the CPYSPLFSRC command which allows you to copy the spool entry to any source file. This speeds the creation of serial faxes because it allows you to change existing spool entries and send them as standard text faxes from the DirectFax editor without making changes to application programs.

```
                  Copy Spooled file to SRC-membe (CPYSPLFSRC)

Type choices, press Enter.

Spooled file . . . . . . . . . . >  QPJOBLOG    Name
Job name . . . . . . . . . . . . >  TESTSES2    Name, *
  User . . . . . . . . . . . . . >    SES       Name
  Number . . . . . . . . . . . . >   161611     000000-999999
Spooled file number  . . . . . . >  0002        1-9999, *ONLY, *LAST
To source file . . . . . . . . .    SPLFSRC     Name
  Library  . . . . . . . . . . .     QTEMP       Name
member . . . . . . . . . . . . .    *SPLF       Name, *SPLF
Add or replace records . . . . .    *ADD        *ADD, *REPLACE
Folder for PC text file  . . . .    _____

Name of PC text file (.TXT)  . .    *SRCMBR     Name, *SRCMBR
Replace PC text file . . . . . .    *NO         *YES, *NO


                                                            Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0006 - The command CPYSPLFSRC Copy spool file to source member

Send spool entry

Select an entry for further processing with option **1=Fax**. The following screen is displayed:

It contains the parameters and settings required to fax spool entries. Use F5 to display the spool data.

```
                      Work with Spooled File Attributes

Job  . . . . . . . . . :    CITRIXPMD1      File . . . . . . . . . :   MAKECMD
  User . . . . . . . . :    RENGEL            Number . . . . . . . :     1
  Number . . . . . . . :    160485

Status . . . . . . . . . . . . . . . . . :    READY
Output queue . . . . . . . . . . . . . . :    PRT01
  Library  . . . . . . . . . . . . . . . :      QUSRSYS
ASP file resides on  . . . . . . . . . . :    1
Form type  . . . . . . . . . . . . . . . :    *STD
Output priority  . . . . . . . . . . . . :    5
Copies left to produce . . . . . . . . . :    1
Total copies . . . . . . . . . . . . . . :    1
Maximum records  . . . . . . . . . . . . :    100000
Number of separators . . . . . . . . . . :    0
File becomes available . . . . . . . . . :    *FILEEND
Hold file before written . . . . . . . . :    *NO
Save file after written  . . . . . . . . :    *NO
                                                              More...
Press Enter to continue.

F3=Exit   F5=Refresh   F12=Cancel   F13=Change
```

0007 - Spool file attributes and fax parameter options

Input fields

Rotate page 90°/landscape
Lists with **more than 160 characters** (max: 200) can only be faxed in landscape format. To set this, enter ***YES** for **CPI 20** and **LPI 9**. The list is processed as a mix fax, which is performance-intensive on the iSeries. LPI=9 allows up to 72 lines in landscape format.

Send with LPI/CPI

The parameters LPI (Lines per inch) and CPI (Characters per inch) are calculated by the program from the spool file attributes. They can be changed for faxing. The program checks the total length of the spool line, not the last character in the line. With a line length of 132, CPI 17 is recommended.

A warning is displayed if the selected value is too small. If the warning is ignored, automatic line feeds are added where longer lines are found.

Note:
The command WRKSPLFAX defaults the value *CALC (Calculate) to the CPI and LPI parameters. If you find you need to change these values regularly, use the command CHGCMDDFT to change them. You can also use *SPLF, which inherits the values from the spool file attributes.

Send from/to page
If you do not want to fax the entire list, use this value (**1-9999**) to fax selected pages. The total number of pages is indicated in the "**Number of pages**" field in the middle of the screen. An error message indicates invalid or inconsistent pages numbers.

Page feed after cover letter
*NO suppresses the page feed after the cover letter. Single page documents default automatically to ***NO**, multiple page documents to ***YES.**

Ignore control codes in text
Control codes (for example ^F2103) are usually ignored in manual spool faxes. The default value is ***YES** (Yes, ignore control codes). However, in some cases it may be useful to set this value to *NO. Example: You want to send a single page document with mix attributes (^MIX) and font attributes (^Fxxxx) to an address group as a serial fax. To do this, the parameter must be set to *NO (No, do not ignore control codes).

Send AFP data stream
This parameter is only displayed if the spool files has AFP or PCL attributes (*AFPDS or *USERASCII/PCL data stream). It defaults to *YES. With *YES, all font and graphic attributes remain intact. If you set *No, DirectFax uses only the text.

Function keys

F3=Exit
Exits the program.

F5=Display spool file
Displays the content of the spool file.

F6=Header text
Opens the DirectFax editor for text entry.

The special value NOSKIP (no form feed) compresses the content of long lists that would otherrwise produce empty pages and white space on the fax. This reduces transmission time is paper use. This code must appear in the cover letter. (SEE CHAPTER CONTROL CODE/^S0 OR ^NOSKIP, PAGE).

F12=Cancel
Cancels and returns to the previous display.

After setting the parameters and entering the fax text, press Enter to display the **Enter fax recipient** screen. You can find information on the topic *Enter fax recipient* page 33)

4.5.1 Fax cover sheet in portrait and document in landscape

WRKSPLFAX recognises the codes ^MIX and/or ^MIXALL, enabling mix fax techniques in the cover letter. In earlier versions, this was allowed for landscape faxes only. To fax the cover letter in portrait format and the rest of the fax in landscape, do the following:

Create a standard cover letter called PRELANDSC.
1. line: ^MIXALL

Text   for   the   recipient

Last line: ^Q^LM5^L8^C2

The last line switches to landscape and sets the left border to 5 mm, LPI to 8 and CPI to 12. Note that using ROTATE (90°) here would defeat the purpose of the function because the actual rotation would be doubled to 180°. The above is an example. Your applications may require other values.

Note:
We recommend the use of **AutoFax** when WRKSPLFAX is frequenty used to enter recipient and other values to the actual spool data. A lot of valuable time can be saved if the fax is automatically routed to DIRFAXPRT.

4.6   Enter fax recipient

The last screen in the series, used to select recipients for the fax. In tis screen, you can select one or multiple recipients and change send and log parameters.

After text editing, the following screen is displayed:


```
10.04.05  20:49:27              Enter recipient                    RENGEL

Enter to continue ......              Password for quick fax . . .

CPI. . . . . . (10,12,17,20)  __      LPI  . . . . . . . . . (6,8)  _
Log printer  . . . . -  _____    Print : No, Pre., Hold.       _
                                      Resolution . . . . . . (F,G)  _
        B/N
        1-5 Recipient                 Personal addressing
0001  ▌ _____          _____
0002  _ _____          _____
0003  _ _____          _____
0004  _ _____          _____
0005  _ _____          _____
0006  _ _____          _____
0007  _ _____          _____
0008  _ _____          _____
0009  _ _____          _____
0010  _ _____          _____
0011  _ _____          _____
0012  _ _____          _____

F3=Exit   F4=Address   F8=Groups   F10=Email/Time   F12=Cancel
```

0008 - Specifying a recipient after editing

Input fields

Header/footer logo

These parameters are only displayed with **WRKSPLFAX**. They allow you to create space for a header logo, and to change or delete graphic names.

Digital signature

A digital signature is added to the fax only if a signature entry configured with the command WRKSGNCFG is specified here. This also applies to the default entry *DEFAULT. A separate signature license is required.

CPI (characters per inch, or pitch)

Specifies the CPI for the fax. The following values are allowed:

- **10** CPI, 80 characters per line (default value)

- **12** CPI, 96 characters per line (OFC documents)

- **17** CPI, 132 characters per line (suitable for computer lists)

- **20** CPI, 160 characters per line, high compression (suitable for very wide computer lists)

The higher the CPI, the smaller the printout, which may lead to illegible faxes. 10 or 12 CPI is the most commonly used value. Automatic line feeds are inserted if CPI and line length do not match, so no data is lost. However, this will make the fax longer.

Note:

When using CPI 17 or 20, set the resolution to FINE to increase legibility.

If you do not enter this parameter, DirectFax uses the **default value of 10 CPI**. The CPI value can be automatically suggested when faxing documents from OV/400. Use the command **CHGOFCDFT** to edit this value. This value can be automatically adjusted if so defined in the document font ID.

LPI (lines per inch)

Specifies the number of lines per inch. 6 lines per inch is a commonly used value. This value can be set to 8 when using CPI 17 or 20.

If you do not enter this parameter, DirectFax uses the **default value of 6 LPI**. This value can be automatically suggested when faxing documents from OV/400. Use the command CHGOFCDFT to set the suggested value.

Log printer

Allows you to specify a printer ID if you want to print out the fax.

Print: No, Pre, Hold

"**N**", ignores fax USRPRF defaults and the log is not printed. With '**V**', the fax is printed but not sent. The fax remains in the fax queue with the status "***HLD verify**" until the user has checked and released it. "**H**" is similar, except that nothing is printed. Instead, the user can use option 5=Display to review the fax data on screen.

Resolution

This parameter determines the dot matrix grid for graphic resolution. High resolution (**FINE**) requires the transfer of more information and takes longer. This increases both quality and cost.

This value defaults to **Coarse** if not entered. The following values are allowed:

- **F** Fine. Improves graphic quality and legibility with small fonts.

- **G** Coarse. Default resolution, suitable for 10 and 12 CPI.

Notes:
Low resolution is normally sufficient as DirectFax documents are not scanned and contain no distorted data. High resolution is strongly recommended for landscape faxes. High resolution is also usually recommende for graphics. You can set the default resolution in the fax user profile.

Subfile for recipient data entry
There follows a description of the subfile, or lower half of the screen. Allows you to select one or multiple recipients for the fax. The left column (0001 ...) numbers the input lines. The other columns are as follows:

N/B (Priority night/fast or rate information)
If you do not enter this field, the fax is sent normally.

If the iSeries and fax program are left on, you can also fax at cheaper night rates. "**N**" or "**1**" is the first night rate (night) . "**2**" sends at night rate 2, and so on. A total of 5 different rates for each day of the week can be defined with the command EDTTIMTBL.

Use "**B**" and the fast fax password to send particularly urgent faxes. Fast faxes take priority over all other faxes in the queue. They should remain an exception.

Password for fast fax
You must enter a password if you select "**B**" for fast fax. The password has a maximum of 5 characters and is not displayed. The password should remain secret. It can be changed by the system administrator with the command CHGPRIKEN.

Recipient
In the recipient field, you can enter the **fax number**, a **short name** or a **call group** (prefixed with #). The fax number can be used for one-off faxes.

To use short names, the name must be stored with an address and a fax number. You can display existing short names with **F4** (F7 in older versions).

Names are **case-sensitive**. If you type a name directly into the field (without using F4) and it matches multiple entries, all matching entries are displayed. You can then select a recipient with **1**.

To send to multiple recipients, enter a call group (prefixed with '**#**') or select from the list of existing groups with **F8**.

Personal addressing
This field is normally left empty for one-off faxes.

Allows you to enter a separate salutation for each fax number for **serial faxes** to multiple recipients containing the code **^UA** in the fax text.

If a short name is specified instead of a fax number and the name is followed by an address code with personal addressing, the latter is used only if nothing is specified in this screen.

More input fields with F10

Use **F10=Time** to display more input fields in a double-line display. The following fields are displayed.

E-mail address
Sends a document by e-mail. Only available if the DirectFax e-mail function has been configured and tested.

CSI (verification code)
This field is normally left empty. It was designed for use with DCE fax boxes and is no longer supported.

Date/time for transmission
Allows you to specify the earliest time at which a fax should be sent. The time the fax is actually sent depends on a number of factors, including whether DirectFax is active, priority settings, busy signals etc.

Note:
We recommend using time settings only when necessary. Mass faxes with time settings make heavy demands on iSeries resources. Use night rate transmissions instead.

Date and time must be entered as **4 and 6 digit** numbers respectively:

    010198 1830   specifies 01.01.98 at 18:30.

Function keys

F3=Exit
Exits the program.

F4=Address codes
Allows you to select address codes.

F8=Groups
Allows you to select call distributor groups.

F10=E-mail/time
Switches to a double-line display showing additional input fields including e-mail and send time.

F12=Cancel
Returns to the previous screen.

Press Enter after data entry to start processing. A fax is sent to the queue for each fax number or address code. The total number of faxes submitted is displayed. You will be notified that no faxes have been created if you exit with F3.

5.0 Automatic faxing from an application

DirectFax provides a range of **interfaces** that allow you to automatically send text and spool files by fax or e-mail from other applications.

5.1   Interfaces

The following is an overview of the interfaces provided by DirectFax.

Most third-party applications create print data in the form of **spool files** (SPLF).

Some software also passes print data through intermediate files (databases and source files) or with a CALL instruction to other programs responsible for sending faxes and e-mail.

5.1.1   Fax spool files with OUTQ

Spool files can be passed to DirectFax through the **OUTQ DIRFAXPRT**. They are processed as follows:

Using **AutoFax**. This method requires that the documents and pages in the spool file contain the recipient. Exception: if the entire spool file is always sent to the same recipient. There is no programming involved. You define how the spool file is processed. This is described in detail later in this chapter.

Using the DirectFax **control line**. The **^FAX** control line, usually the first line in the document, defines where the document is sent. It can receive values from external parameters. All control codes are described in detail later in this chapter.

Using **OVRPRTF** and transmission of a **^FAX** command line as parameter. From a certain OS/400 release on IBM introduced the USRDFNDTA parameter in the spool file properties. With this parameter a command line up to 200 characters containing all necessary code can be transmitted to DirectFax.

GFC (*XE and *.) and **FAX400** (#*) control codes are also allowed. You will find detailed information on FAX400 elsewhere in this document.

OfficeVision documents can use the ***RUN iInstruction** in a **dialog** to pass the recipient as a control line. This is described elsewhere.

With **OfficeVision**, the fax number can be included in the **document attributes**, making it possible to fax automatically from applications that mix OV documents and data.

Monitor alternative OUTQs

Previous versions of DirectFax could monitor only the **OUTQ DIRFAXPRT**. A new function has now been added that allows you to monitor all other OUTQs and send the spool files with DirectFax.

5.1.2   Requirements for *SCS spool files

The *SCS spool entry must be created with **10** or **12 CPI**. Due to limitations in OS/400, spool files with 15 CPI or a mixture of 10 + 15 CPI may not be passed correctly to DirectFax. AFP or PCL spool files are an exception to this rule. They are described separately.

AutoFax

The spool must contain some **destination information**. This may be a printed fax number, key fields or a control line.

Single spools with **multiple documents** for different recipients must have a **delimiter** marking each recipient. The common delimiter must be defined (for example a customer number) and always be found at a **predefined position** in the spool. This information must not appear on every page, but it must be on the first page of a new document.

5.1.3 Fax spool files with a command call (FAXSPLF/SBMFAX)

The send process can be started with a **fax command** after a **spool file** has been created by a third-party application.

About the command **FAXSPLF**. You can pass more than 40 values to control the send process with the parameter. The command is described in detail later in this chapter.

About the command **SBMFAX**. This command derives originally from IBM Facsimile Support and has been reproduced in DirectFax. It is described in detail later in this chapter.

5.1.4 Fax spool files with API (CRTSPLFAX)

Instead of a fax command, you can use a program call API.

About the **CRTSPLFAX API**. The control parameters are passed as single values and data areas.

About the **IBM R/DARS API** using the program QRLRSFAX. We have customised the IBM program for DirectFax.

About the DirectFax **InfoStore API (Solitas)** using the program FAXEFSARC. You can select a spool file for faxing with option **7=Fax** from the InfoStore archive query.

5.1.5 Fax with file transfer (DirectFax interface/CALL PGM)

It was common in older iSeries fax applications to read documents from an **intermediate file**. DirectFax provides a range of interfaces designed to support such applications. This makes it easy for customers to migrate to DirectFax when their current software becomes obsolete or is no longer supported by the manufacturer. DirectFax integrates the following variants.

The **DirectFax interface DFI**. A configuration command calls a program at regular intervals to retrieve data from the intermediate files and generate the fax. Programs are available for the following applications.

DAVIS (file TELEFAX)

RATIOPLAN (file TELEFAX)

FAX400 (file TTXSENDE)

Program calls from other fax applications have been reproduced. Works with intermediate files, or the text lines and fax data are passed as parameters. The following programs are available:

TOPCALL CALL TL120R with source file

TTX CALL TRxxxTTX

GFC CALL PGTELEX06

GFC CALL PGTELEXD10

FAX400 CALL TTX005B

The **FAXMBR API**, which replaces the IBM fax service with **SNDDST**.

Notes:

Please call the **Hotline** to discuss details if you intend to use any of the interfaces to older applications. We will need to check your intermediate files and parameters. Some changes to programs may be made by the Hotline. You can find the source programs for these interfaces in the files QCLPSRC and QRPGSRC in the DIRECTFAX library. INFO entries on the programs have been provided.

5.2   The AutoFax function

Warning:

The **AutoFax** function is <u>not</u> available to DirectFax **Lite** customers.

Note:

Please read the section titled **First steps with AutoFax** on page 55.

When an application sends a spool files to the **DIRFAXPRT OUTQ**, DirectFax first checks for AutoFax definitions. If none are found, DirectFax checks for a control line in the spool. This is described in the next section.

No extra programming is required when the target information (fax number, key fields etc.) is embedded in the spool text. Remember to ensure that CPI 10 or 12 is used.

Processing is also possible for spool files without target information as the spool is then rerouted to a printer or a default fax number.

AutoFax can **reprocess spool files**, for example to mail a copy to customer representatives. For this to happen, the form number must be included in the AutoFax filter and the spool file must contain the second recipient. You can find more details below under *The File menu, 4. Spool actions*.

If AutoFax does not have enough information to send the fax, the relevant control codes can be placed in the spool by the application. This is dealt with in more detail in the section titled *Programming*.

Before running AutoFax, ensure that the following requirements are met:

Ensure that **the AUTOFAX** parameter is set to ***YES** in the command **CFGDIRFAX** (Configure DirectFax, menu FAXCNFG) or with **CHGFAXVAL F4 F10**.

Ensure that the **FACTOR** parameter in **STRDIRFAX** is set to a value greater than zero. We recommend a value of 10.

Ensure that the faxing application prints to the **DIRFAXPRT OUTQ** and not to the default print queue. The best way to do this is to specify "DEV(DIRFAXPRT)" and "OUTQ(*DEV)" in the **OVRPRTF** command.

For each application's spool file, use the command **WRKATFDEF** (Work with AutoFax definitions) to create an AutoFax definition that describes where in the spool the fax number or other target information can be found. This is described in more detail below.

5.2.1   Notes on workflow

AutoFax analyses the spool files in order to locate the **recipient fax number**. The source of this information can be a DirectFax address code, a call group, the text in the spool or a database on the system. For database access, keys fields (customer number etc.) are retrieved from the spool file.

As an example, this allows you to create an AutoFax definition that automatically sends reminders from the Accounting department. The information source for the recipient would be the Accounting program's customer master file. Key fields from the customer master, such as customer number, are usually included in the spool file. AutoFax can then use the customer number to access the customer master file and retrieve the fax number. Reminders for which no fax number is stored could be sent to another printer. In most cases, this will allow you to send the majority of reminders by fax.

AutoFax uses key definitions to detect page breaks and new faxes within a spool file, allowing it to identify and send faxes correctly. You might also use AutoFax to fax an entire list to a recipient or call distributor group. Also such cases can be solved with AutoFax.

You can include all fax commands (^B1=Bold, ^U1=Underline, ^R1=Reverse etc.) in the AutoFax definition. This allows you to easily incorporate graphics, fonts and other DirectFax elements.

Conditional spool selection (inclusion/exclusion) also allows you to blank out, delete or insert database columns and lines to fit to a form graphic.

Without making changes to applications, spool files can be altered before they are passed to DirectFax for use with **AutoFax** and other functions. The **Exit program DIREXIT001** is shipped as an RPG source for this purpose. For example, you might use it to convert print control sequences in the spool file into DirectFax graphic commands.

5.2.2   Work with AutoFax definitions (WRKATFDEF)

Note: This program requires a terminal or 5250 session with a **132**-character display.

The command **WRKATFDEF** (Work with AutoFax definitions) or option 2 the DirectFax in the Configuration menu displays the following screen:

```
20:57:34  10.04.05      Work with AutoFax def.                    RENGEL

 Begin list with:  _____

 Enter selection and confirm
   2=Change   3=Copy   4=Delete   5=Display filter   7=Rename   8=Header

Op  Definition Description                                       Active
 █  INVOICE    Invoice                                             N
 _  TEST       Demonstration                                       Y






                                                                Bottom
F3=Exit   F5=Refresh   F6=Create   F10=Config.   F12=Cancel
```

0009 - Work with AutoFax definitions (WRKATFDEF)

A list of existing definitions is displayed. Each definition has a unique name and spool file filter. Use page up/down to scroll through the list. You can enter a name in the "Position to" field to reposition the display.

Note:
This command is only available if the AUTOFAX parameter has been set to *YES when configuring DirectFax.

You can select a definition in the left column with the following options.

Options

2=Change
Allows you to change an existing definition. This option is described in detail below in the section titled "AutoFax definition". This function requires a 132 x 27 display.

3=Copy
Copies an existing definition. Enter a name for the new definition in the window displayed.

4=Delete
Deletes an existing AutoFax definition. You will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Display filter
Displays the current spool file filter for definition. The filter is described in more detail below in the section titled "Configure AutoFax".

7=Rename
Renames an existing definition.

8=Header

Allows you to change the definition description or deactivate the definition.

Function keys

F3=Exit

Exits the program.

F5=Refresh

Refreshes the display.

F6=Create

Creates a new definition. For details, refer to the section titled "Enter an AutoFax definition".

F10=Configure AutoFax

Allows you to define AutoFax selection criteria. For more information, see "Configure AutoFax"

F12=Cancel

Returns to the previous screen

5.2.3 Configure AutoFax (F10)

Used to set unique **spool identification criteria** for AutoFax spool analysis. This definition is valid for all AutoFax definitions.

Most systems use unique names to identify spool files. If this is the case, select the file name with ' / '. If this is not the case on your system, then selected attributes like program, user, job name and form type can be used instead.

In most cases, **file name, program name** and **form type** are sufficient.

5.2.4 Enter an AutoFax definition

Use F6 to create a new definition or option 2 to change an existing definition.

Requirements

Before you enter a new definition, create a **sample spool file** in an OUTQ on you system. A **132** digits display is also required.

The definition program

During processing, the definition is copied to a temporary workspace which is internally encrypted with "##123456" (123456=job no.). Other programmers attempting to access the definition receive an error message. You will be prompted to save the definition. If you save, it is copied from the workspace back to the original definition name. If you do not save, the workspace is deleted and the original definition retained.

Definition entry is supported with **pull-down menus** similar to PC menus. The menu names are displayed at the top left of the screen. You can use the **mouse** with these menus.

If you do **not** have **a mouse**, use the **Tab key** (-->|) to scroll through the menus. You can then use Enter to open a menu. Select menu options with the option number, or by positioning with the cursor keys and selecting with the spacebar. Your terminal or emulation may use different keys. Blue menu options are inactive and cannot be selected.

There follows a detailed description of all AutoFax menus and options.

5.2.4.1   The File menu

1. Open spool (SO)
Select this option to start a new definition. After selecting user, OUTQ and so on, the "Work with spool files" dialog is displayed. With option 1, open the sample file created earlier.

The contents of the spool file are stored in the definition file as long as the spool file is open. The spool file (when open) is automatically displayed when the definition requires changes.

After selecting a spool file, enter the number of pages to be processed. The system default value is normally sufficient. The spool file is now copied to the AutoFax workspace.

If the selected **spool file attributes** match an existing definition, an error message is displayed and the spool file is not copied. This ensures that all definitions are unique. The **filter parameter** configuration is essential to this process.

It allows the program to detect changes to attributes such as file name, user etc. You will be prompted to confirm the delete for the existing definition.

After successful opening the file, the following display appears.

2. Close spool (SC)
Closes the current spool file and refreshes the display. The content of the spool file is removed from the workspace. To continue working on the definition, open the spool file again. Closing and reopening is required when the filter attributes or the spool content has been changed.

3. Change header (HD)
Allows you to change the AutoFax header definition. This function is only available if the Active parameter is set to Y =Yes.

4. Spool actions (SA)
After selecting option 4, the window for spool actions appears. This menu option is important for the correct processing of spool entries without fax number or email address. Also used to set the location of the original spool file.

Second run
AutoFax can **reprocess spool files**, for example to mail a copy to customer representatives. For this to happen, the **form number** must be included in the AutoFax filter and the spool file must contain the second recipient. This function is available here as F=FormsChange.

If you change the FORMTYPE parameter in the spool file after the first run and release the file in the DIRFAXPRT OUTQ, AutoFax reopens the spool file to process it with another definition. The second definition is based on the changed form name. It retrieves a different recipient. Set the function

---

with F=FormsChange in *Source spool file* in the *Hold* parameter. You must also enter the form name in *Place in OUTQ*.

If this function does not cover your requirements, use the EXIT-program ATFEXIT01 (source in QCLPSRC in DIRECTFAX) instead. The EXIT program allows you to make other changes to spool file attributes such as USRDTA. You can find more information in the source program.

Spool source file
Place in OUTQ, Hold Y=Yes, N=No, F=FormsChange (second run)

Specifies what happens to the spool file in the **DIRFAXPRT OUTQ** after AutoFax processing is completed. The default is ***DELET** and Hold=N. To back up the spool file, enter the name of another OUTQ.

To send the spool file to another recipient in a **second run**, enter the form name in "Place in OUTQ". Set "Hold" to **F**=FormsChange.

Printing pages without a fax number
Hold in OUTQ library Y=Yes, N=No

Allows you to specify a printer for spool files that do not contain a fax number or e-mail address. The values allowed are:

*NONE   Pages without a fax number are deleted.

*FAXQ   Pages without a fax number are placed in the FAXQ and an error message is sent to the user. There they identified with ????????.

NameThe OUTQ in which such spool files are placed for later printing. The spool status is set to *HLD if the hold parameter is set to Y=YES.

Note: For technical reasons, spool files created by Autofax containing pages with no fax number have the **name** DIRECTFAX as **owner**. When printing pages without a fax number, the value "U" at position 145 in FAXDTAARA in DIRECTFAXF outputs the owner name of the original spool file as a parameter in the field **USRDTA**.

5. Fax parameters (FP)
The parameters in this important function should always be reviewed. It allows you to set internal control parameters like protocol printer and resolution. The parameters are described later in this document in the section titled "Internal control line parameters". The following are some of the input options.

Mix fax
A   If you fax by modem (or a router or TCU), set all faxes as mix faxes with A=Mixall.

N or M   Required only if you use a DCE fax box. If you set M and fax by modem, logo and spool text will be sent as separate pages.

Copy fax
N   Use the value N. Y should not be used.

Ignore profile entries
N   Uses the header logo from the fax user profile. N must be set if a header logo is specified on page 2 of the fax parameters.

Y Ignores the header logo entries in the profile and fax parameters. You can then insert graphics with F8 *Insert command* and the control code ^gLOGONAME.

Log printer
*NONE The log is not printed.

*DFT Uses the log printer from the fax user profile.

*WRKSTN Useful in environments where the user's default printer is retrieved from the device description using *WRKSTN in the iSeries user profile. DirectFax attempts to detect the printer from the spool file job name. If the printer entry is set to *SYSVAL in the device description, the system printer QPRTDEV is used. If the job name is not a terminal, the log printer is not used.

Name Name of the central log printer.

2[#]. page of the fax parameters

D[#]ifferent user name
*OWNER The default value. The owner of the spool file should also be the fax owner.

*USRDTA The "User data" parameter in the spool file attributes sets the user name for the fax. Use this parameter to control user names for batch spool files created for different users.

Name A fixed user name for all faxes created by the AutoFax definition.

C[#]ost centre

S[#]ender

G[#]roup send

W[#]aiting time

O[#]ptimize

H[#]eader logo, F[#]ooter logo
Name Uses the graphic entered instead of the logo specified in the fax user profile. The "Ignore profile entries" parameter on page 1 must be set to N.

H[#]eader text, F[#]ooter text

[#] CHGDEFB_BF062
[#] CHGDEFB_BF062_AAUSER
[#] CHGDEFB_BF062_AACST
[#] CHGDEFB_BF062_AACSI
[#] CHGDEFB_BF062_AAGRP
[#] CHGDEFB_BF062_AAGWT
[#] CHGDEFB_BF062_AAOPT
[#] CHGDEFB_BF062_AAHLG
[#] CHGDEFB_BF062_AABLG
[#] CHGDEFB_BF062_AAHTX
[#] CHGDEFB_BF062_AABTX

Name Not supported if you fax by modem. Used with a DCE fax box for non-mix faxes.

E[#]xclude fax

U[#]se APF function

E[#]mail priority

S[#]pecial ^CODES
Used to enter a ^CODE in the ^FAX control line. For example, ^ARCNAM(REM) assigns the archive name REM to a fax, allowing you to control archiving for outgoing faxes. For details refer to *Archive interface for outgoing faxes*. ^REF() for the e-mail subject line are specified here if required.

6. Send test (ST)
This option provides a convenient way to test fax definitions or definition changes. The send test prints a number of pages from the open spool file to the DIRFAXPRT OUTQ for processing by AutoFax in the working environment. You will be prompted for the range of pages to be printed. You can also set the test fax to *HLD. **Use this function to test the fax number in AutoFax definitions.**

Warning:
Do not close the current definition while the test is running.

Note:
For faster execution, this job is submitted to QINTER. If QINTER does not exist or cannot be used, change the function defaults using the command CHGFAXVAL. The new JOBQ is placed in the DTAARA DIRECTFAXF/FAXDTAARA in position 66 (length 10).

7. Layout test (LT)
This option provides a convenient way to test fax definitions or definition changes. The layout test prints a number of pages from the open spool file to the DIRFAXPRT OUTQ for processing by AutoFax in the working environment. You will be prompted for the fax number and the range of pages to be printed. You can also set the test fax to *HLD. **Use this function to test the fax commands and conditions in the AutoFax definition.**

Warning:
Do not close the current definition while the test is running.

Note:
See the *Note* for option 6 Send test.

8. Exit (E)
Exits the program and returns to the WRKATFDEF display. F3 offers more options.

5.2.4.2   The Fax number menu

[#] CHGDEFB_BF062_AAEXC
[#] CHGDEFB_BF062_AAAPF
[#] CHGDEFB_BF062_AAEMPR
[#] CHGDEFB_BF062_AACOD1

This is the most important menu in AutoFax definition. It should always be selected first. Omitted or incorrect entries will produce errors in AutoFax.

1. Source fax number (SF)
Displays the **Source for fax number** window, allowing you to select the source fax number from a menu. 6 options are available. The first 4 options treat the entire spool entry as a single fax. Options 5 and 6 allow more flexibility in sending separate documents within a spool entry.

1. Fixed fax number
Allows you to enter a fixed fax number. The **entire** spool file is sent to the recipient.

2. From spool (^h)
The fax number is contained in the spool in the ^h or ^FAX statements. This may be helpful in situations where changes cannot be made to an existing application.

3. From address code
This function allows you to send the **entire** spool file to a single recipient identified with an address code.

4. From call distributor group
Retrieves the recipient from a call distributor group. Use this function for serial faxes. The **entire** spool file is sent to each recipient in the group.

5. From database
The fax number or e-mail address is retrieved from a database, for example the customer master file. You might use this function in conjunction with your Accounting or Purchasing systems to automatically send reminders or purchase orders. The window displayed prompts you for file name, library and member. Please refer to the *Notes* at the start of this section.

Note:
To use this function, you must define the key fields and the field containing the fax number or e-mail address in **options 2 and 3**.

6. From spool
The **fax number** information source is embedded in the spool data. AutoFax can use a fax number or e-mail address included in the spool text. AutoFax separates the print output according to changes of the fax number into single fax outputs (documents). The position of the fax number is determined subsequently.

You can define a **condition**, or text constant. This is used to locate the fax number in the spool. AutoFax checks for occurrences of the condition in the spool file. If no occurrence is found on a page, the page is assumed to be a continuation of the fax.

Note:
To use this function, you must specify the location of the fax number or e-mail address in the spool file with **option 3** *Data fields.*

2. Key fields (KF)
Used to define key field positions and lengths (for Fax source = 5). Keys not included in the spool (company number etc.) can be inserted using a constant. With values such as *USRDTA, you can use the spool file

attributes to retrieve information from a database. Other values allowed are: *FILNAM, *PGMNAM, *JOBNAM, *USRNAM. You can also use text constants. For example you could use a constant to retrieve only customer numbers with the heading "Customer number". Previously defined key fields are displayed blue.

Note: This option is only available if the fax number source is *From database*.

3. Data fields (DF)
Used to define data fields. If you have selected *From spool* as the source, displays a dialog that allows you to set fax number, e-mail and position in the spool file.

Note: Fax numbers and mail addresses at the **same position** in the spool file are distinguished automatically. The file is then faxed or mailed as appropriate. A requirement for this is that only the mail address is marked for extraction in the AutoFax definition.

If you have selected *From database* as the source, a list of database fields is displayed.

Use the digits 1-5 to set the fields required. The fax number can be a combination of 1=Country code, 2=Area code and 3=Fax number. Most databases hold the fax number in a single field, so it is usually sufficient to select option 3. Alternatively, you can use 5 to select an e-mail address. You can also use 4 to specify a database field for personal addressing (^PA). For example, this could be the customer name. This information is included in the send log.

You can display other information in the status line and send log with option 4 *Fax ID* in the "Fax number" menu.

Note: This option is only available if the fax number source is *From database* or *From spool*.

4. Fax CSI (FK)
Allows you to select up to 3 entries separated with '/' from the spool file for display in the fax queue. For example, customer no./Order no./Date.

When you select this option, first enter an ID sequence number. You will then be prompted to select the beginning and end of the text to be extracted. Note that the status display is restricted to 19 characters.

5. Appl. Keys(AK)
You can pass 2 application keys from the spool file to DirectFax. These might be for example the customer and order numbers. Application keys are saved as data fields in the file FAXSTAT. These fields are associated with the logical file FAXSTA14. You could use this to program applications to display header records for all outgoing faxes. See also the USER parameter in WRKFAXSTS (API/Display fax status special function).

When you select this option, first enter a key sequence number. You will then be prompted to select the beginning and end of the text to be extracted. Note that key values have a maximum length of 10 characters.

5.2.4.3   The Display menu

1. Display Spool Filter (FI)

This menu option displays the current spool file filter. For AutoFax to recognise the spool file, all spool attributes must match the filter. You can configure the attributes you want to use with F10 in WRKATFDEF (Work with AutoFax definitions).

2. Display Attributes (DA)

Use '/' to specify the colour used to display fax attributes. The following options are available:

/ CMD insert	Inserted fax commands in yellow reverse.
/ CMD overwrite	Overwrite commands in yellow reverse
/ Text CMD overwrite	Display command text in yellow reverse for overwrite commands
/ CMD condition	Yellow underline for condition constants in fax commands
/ Fax no. key	Blue reverse for fax number source
/ Fax no. condition	Blue underline for condition constant for fax number source
/ *ROW/COL commands	Pink reverse for line and column commands
/ *ROW/COL condition	Pink underline conditions in line and column commands

">" indicates the current selection with the mouse. If you do not have a mouse, select using the spacebar or the slash '/'. The spool file display is refreshed when you close the window with Enter. Colour highlighting for options without '/' is removed.

3. Command overview (DC)

This command shows a list of the fax commands contained in the current definition sorted by page, line and column. The display is designed to provide a convenient overview of the defined options. You cannot select. You can scroll through the display. Close it with Enter.

The columns are as follows:

Pag	Page
Row	Line
Col	Column
Command	Fax command (example B1=Bold on)
Ins	Insert Y/N (Insert)
Condition	Constant for condition validation
Condition/	
Row	Begin line for condition validation
Col	Begin column for condition validation
Rel	Relative condition (J)
To line	End line for condition validation
To page	End page for condition validation
No.	Number of lines for *ROW/COL commands

4. Display fax key (DK)

Displays a list of defined key fields if the fax number source is *Database*. The list is for information purposes only. You cannot select. Close it with Enter.

The columns are as follows:

Key	Name of the key field in the database file
Constant	Value of the constant (if specified)
Row	Begin line for key data in spool entry
Col	Begin column for key data in spool entry
Condition	Constant for condition validation
Row	Begin line for condition validation
Col	Begin column for condition validation

5. Display fax status (FS)

Runs the command WRKFAXSTS and displays the list of unsent faxes. Use this function after a send or layout test.

5.2.4.4   Email subject line

Autofax now provides an option to add a subject line with data from the spool file. Example:

Definition: ^REF(Invoice &A2 of &D4 Cust.no. &A1)
Subject: ^REF(Invoice 78343 of 11.03.05 Cust. no. 008001)

&A1+2 are application keys (e. g. customer and invoice no.)
&D1-9 are CSIs (any spool information)

IDs were previously limited to 1-3. There are now 9. However, only IDs 1-3 are output as additional information to the Personal addressing field, WRKFAXSTS and the send log.

The finished subject line can hold a maximum of 50 characters. Longer strings are truncated without warning. If no subject line is specified in Autofax, the mail program uses the constant REF line from the default mail text (file ##COVER).

To add a subject line, specify **^REF(...)** in the Autofax definition in ^*Codes* at the bottom of page 2 of the fax parameters.

The subject line can also be generated by an EXIT program. This is required for example if the subject text is variable and cannot be taken from the spool text. Example:

Definition: ^REF(*PGM*BIBLA/PGM1)
Subject: ^REF(Invoice 78343 of 11.03.05 – Ms Arp)

Explanations:
PGM   Code for EXIT program
BIBLA/PGM1   Qualified program name (lib/program)

The following 3 parameters are passed to the EXIT program
```
P1=Name of the Autofax definition (10A)
P2=Subject line empty (50A)
P3=Data structure (2000A)
   001-0550 = 11 x 50 digits (field group)
            Elements 1-9 = CSIs 1-9
            Elements 10-11= Application Key 1+2
   551-2000 = reserved/not used
```

Using the Autofax definition name, the spool data in the array and in some cases by accessing a database file, the program can then concatenate the subject text with the variables and pass it to the subject line parameter. Autofax then passes the subject as a ^REF(Text) instruction for downstream processing.

5.2.4.5 Sender's email address

The e-mail sender's address can be defined for all users in the configuration program CFGFAXMAIL, or at user level in the fax profile program WRKFAXPRF. Autofax has now been enhanced to allow retrieval of the sender's address from the spool file.

Warning: The e-mail sender's address can only be retrieved from the spool if the destination address is also taken from the spool file.

After defining the source of the e-mail address by positioning the cursor in **Autofax**, the new menu option *E-mail sender* is available in the *Fax number* and *Data fields* menu. The sender's address is also defined by positioning the cursor at the beginning and end. You can also define a condition.

In the Display menu, you can select *Display FAX key* to check the definition ***EMSND***. It can be deleted with option 4.

If the spool file does not contain a sender's address at the position specified, the default sender's address from the fax profile or configuration program is used. The same applies if the condition for retrieval of the sender set in Autofax is not met. No message is displayed.

5.2.4.6 Function keys

F3=Exit
Exits the program. You will be prompted to confirm.

F4=Prompt

F6=Create

F8=Fax command
This important function allows you to enter fax commands (^gGRAFIK, ^F0011 etc.) in the open spool file.

Before F8, position the cursor where you want the entry in the spool file.

You can find more information on this topic in the section titled "Insert fax commands with F8".

F9=Direct call
Opens a window for entering direct calls. Use direct call as an alternative to the pull-down menus. The commands are displayed in brackets in the menus. For example, Fax parameters (**FP**) or Exit **(E)**.

F10=Actions
F10 positions the cursor in the menu bar. You can also use **Tab** for this purpose.

F12=Cancel
Cancels the current option.

F19=Right

Shifts the display approx. 100 characters to the right

F20=Left
Shifts the display approx. 100 characters to the left

F21=Command line
Opens a window for entering system commands.

5.2.4.7   Insert fax commands with F8

Allows you to enter fax commands. Fax commands are prefixed with "^".
They can be used to format the spool file with bold, underline etc.

You can also insert text (for example **F A X**) instead of fax commands.
Commands entered are displayed in yellow reverse.

Example
To underline a word:

1. Position the cursor on the first character and press F8.
2. Enter the command ^U1 (Underline on) and press ENTER. The cursor
   position is highlighted in yellow.
3. Position the cursor on the last character and press F8.
4. Enter the command ^U0 (Underline off) and press ENTER. The
   position is again highlighted.

Change/delete existing command
Position the cursor on a yellow reverse block and press Enter to **change** or
delete a command.

F8 displays the following window:

```
:.....................................................................................:
:   Process command                                                                   :
:                                                                                      :
: Definition : TEST          Page :   1  Line :   4  Column:   070                     :
:                                                                                      :
: Command. . .:  ^SIGN(WIDTH)_____    *DLTCOL, *DLTROW, *INSCOL, *INSROW :
: Number of. . . . . :  ___      by  *ROW, *COL     *CLRCOL, *CLRROW, *HOTFAX, *REL    :
:                                                                                      :
: Insert . . . . . . : Y        Y=Yes N=No                                             :
: Condition  . . . . : Y        Y=Yes N=No                                             :
:                                                                                      :
: To line  . . . . . :   4      Line                                                   :
:   Condition rel. : Y          Y=Yes N=No                                             :
: To page  . . . . :   1        Page                                                   :
:                                                                                      :
:    F3=Exit   F12=Cancel                                                              :
:                                                                                      :
:.....................................................................................:
```

0010 - The F8 Edit command window

Page
Specifies the start page for the command. The default is the page containing
the cursor when you press F8.

Line

Specifies the start line for the command. The default is the line containing the cursor when you press F8.

Command

An 30-character input field for fax codes, commands and additional text. The following is a partial list of fax codes and line/column commands.

Explanation: CPI Characters per inch

LPI Lines per inch.

General fax codes

The following codes can be used anywhere in the fax text:

- Insert graphic ^gNAME
- Insert date (dispatch date)^UD
- Insert time (dispatch time)^UT
- Insert fax sequence number ^UN
- Bold on / off ^B1 / ^B0
- Underline on / off ^U1 / ^U0
- Reverse on / off ^R1 / ^R0
- CPI 10 on ^C0 (default)
- CPI 12 on ^C2
- CPI 17/20 on ^C7
- CPI default back ^CN
- LPI 6 on ^L6 (default)
- LPI 8 on ^L8

LPI default back ^LN

Codes in mix faxes

The **Euro-symbol** was added to the **MIX fonts** in DirectFax. To use this function, add the substitute character to position 86 of the data area FAXDTAARA. This might be for example hex code x'9F' (Euro character from V4R4).

The following codes are only allowed or only allowed with the syntax shown in mix faxes:

Change font to: ^Fxxxx (xxxx=number - see list below)

- Courier 10 CPI 0011 (default)
- Courier 12 CPI 0085
- Courier 15 CPI 0223
- Courier 17 CPI 0256
- Courier 20 CPI 0280
- Helvetica 6 points 2115
- Helvetica 6 points bold 2112
- Helvetica 10 points 2105
- Helvetica 10 points bold 2110
- Helvetica 12 points 2114
- Helvetica 12 points bold 2113
- Helvetica 16 points 2106
- Helvetica 16 points bold 2111
- Helvetica 24 points 2104
- Helvetica 24 points bold 2109
- Bookman 10 points bold 2107
- Bookman 16 points bold 2108
- Bookman 24 points bold 2103

- Symbol 10 points   2200
- Symbol 16 points   2201

Insert a **graphic** at: ^gNAME(x,y) x and y in mm

- CPI fixing at 01-99 pixels ^Cfxx
- CPI fixing automatic   ^CFA
- CPI fixing default back   ^CFN
- LPI 1-9 on   ^Lx (LPI6 is default)
- LPI automatic   ^LA
- Line and box command (mm)   ^B(x1,y1,x2,y2,LT,LD)
- Left margin at mm   ^Lmxx
- Text positioning at mm   ^P(x,y)
- Landscape commands x,y=mm   ^Q ^Q(x,y) ^Q*   ^QN
- Set TAB (mm)   ^t(a,b,c,d,e,f,g,h,i)
- Tab jump to   ^t ^ttt ^t5

Line and column commands (Delete, Insert)

These commands allow you to delete, insert and blank out lines and columns in the spool file. You can also specify conditions for pages not faxed.

- Delete line   *DLTROW
- Insert line   *INSROW
- Clear line   *CLRROW
- Delete column   *DLTCOL
- Insert column   *INSCOL
- Clear column   *CLRCOL
- Do not fax page   *NOTFAX

Number

The number of columns/rows that are affected by *ROW/COL-commands. Do not enter these fields for other commands. For *DLTCOL, enter the maximum 72 lines per page to ensure that "Delete columns" deletes all lines.

Insert

Use Y=Yes (default) to insert a fax command. If you insert text, the rest of the line is displaced to the right. ^commands do not displace the line text. Use **N=No** to overwrite the text where the command is inserted. You can use this function to replace text in the spool file.

Condition

Y=Yes specifies that the command is only executed if a condition is fulfilled. A condition is normally a text **constant** that the program validates prior to executing the command. The editor prompts for start and end positions for the condition. Position the cursor and use Enter to indicate these positions. **N=No** specifies that the command is **always** executed.

To line

Specifies the spool line number to which AutoFax should verify a condition. The default value is 1 so that only the first line is verified. If start line 5 and end line 10 are entered, AutoFax checks that range.

Relative condition

If **Y=Yes**, the command is inserted relative to the condition line found. For example, if the condition is found in line 10 in the previous example, the

command is also inserted in line 10. **N=No** (default) specifies that the command is inserted at the line defined regardless of where the condition is found. If the condition is not fulfilled, the command is not inserted.

To page

If an application produces multiple pages for document, use this option to set the maximum number of pages on which commands can be repeated. This reduces the effort involved in repeating definitions on multiple pages. To Page defaults to Start page.

5.3　First steps with AutoFax

Note:

You cannot execute this function with standard DirectFax user **rights**. You must have DirectFax ***SECOFR** rights or log on as **QSECOFR**.

Task

You want to send a spool file automatically with DirectFax. Because the document contains the fax number and you want to avoid programming, you want to do this with AutoFax.

5.3.1　Requirements

Before you can use AutoFax, the following requirements must be fulfilled:

- You are using the full version of DirectFax (not the Lite version).

- The AutoFax function must be **activated**.

- You are using a **terminal** or emulation with a **27 x 132** display.

- You have a **sample spool entry** in an OUTQ for the AutoFax definitions. The spool is saved together with the AutoFax definition so that it can be automatically opened if changes are required later.

- The spool entry is a standard ***SCS data stream**.

- The document in the spool file contains either the **fax number** or **key information** at a fixed position to enable AutoFax to retrieve the fax number from a database file.

- The spool entry has an **attribute** or a **combination** of attributes (spool file name, program name, form type, user data) to distinguish it from other spool files. Different spool files with the same attributes but different content do not exist.

- The application producing the spool file sets the **DEV** and **OUTQ** parameters in the **OVRPRTF** command to the DirectFax interface. The printer and OUTQ name is **DIRFAXPRT**. The spool has the status **RDY**. The OUTQ has the status **RLS**.

Activate AutoFax

If you have not used AutoFax before, check that it has been activated. To do this, enter the following command:

CHGFAXVAL followed by F4 and F10

The parameter *Activate AutoFax* on page 3 must be set to ***YES.**

ENDDIRFAX

Wait until the DirectFax subsystem has been terminated.

STRDIRFAX and F4

The parameter *Factor for spool file test* should be set to **10**. If it is set to 0 (zero), change it to 10. This activates the DirectFax spool file interface (the DIRFAXPRT OUTQ). Now press Enter to restart DirectFax.

Configure AutoFax

AutoFax must first be configured correctly. For this, unique spool attributes are required.

Enter the following command on your 27 x 132 PC or Terminal, then press Enter:

WRKATFDEF

The program *Work with AutoFax definitions* is displayed. Press F10=Configuration. A window with the headings *F10=Configure AutoFax* and *Select spool file* is displayed.

The buttons displayed may differ from machine to machine, depending on the age and graphical capabilities of your PC or terminal. Buttons sometimes appear as slashes. Highlighted lines are selected. You can select with the mouse, the spacebar or by entering a slash.

Decide which of the attributes *File name, User, User data, Job name, Program name* and *Form type* you want to use to identify spool files. *File name*, *program name* and *form type* are usually sufficient.

The attribute *User data* may also be required in some environments. In other environments, *File name* and *Form type* are sufficient. Select the attributes that can best be used to distinguish your files.

When you have made your selections, confirm them with Enter. Configuration has now been completed.

5.3.2 Example 1 - Create a simple AutoFax definition

The following walks you through the creation of a simple definition designed to familiarise you with AutoFax functions. It concludes by describing how use a key field to retrieve the fax number from a database file.

Sample spool file
You have a sample spool file available? So let's start. For this example, we'll assume the fax number is contained in the text.

Start the definition program

Start the AutoFax definition program with:

`WRKATFDEF`

F6=Create an AutoFax definition
Press *F6=Create*. A window with 3 input fields appears. Enter a name and a short description for the definition. *The Active* field must be set to **Y=YES.**

Pull-down menus and menu options
The screen displayed when you press Enter is mostly empty. There are 3 pull-down menus at the top left. You can select them with the mouse or the Enter and Tab keys.

Depending on your terminal or 5250 emulation, **menu options** can be selected with the mouse or the spacebar. Some options are selected with the option number.

Open spool file
Select *Open spool file* from the *File* menu.

The next screen is similar to the IBM WKRSPLF display. Select your spool file with **1**.

The next screen suggests a number of pages. A value of 1 is sufficient if every page in the spool has the same structure. If not, select 3 for this example. Enter returns you to the AutoFax definition program and displays the first page of the sample file.

Select fax number source
Open the second menu and select **1** *Source fax no.* In the following window, select option **6** *From spool*.

Set the fax number position
The *Data fields* option in the second menu is now available. Select it. The next screen allows you to choose between fax number and e-mail address. Select fax number. The status line now displays *Set start position for fax number with cursor*. Position the cursor where you want the fax number to start in the spool file and press Enter. The status line now displays *Set end position for fax number with cursor*. Position the cursor where you want the fax number in the spool file to end. Up to 20 characters are allowed.

Condition verification
Now decide if you want to include a condition for extracting the fax number. Conditions are required if **continuation pages** have a different structure or if the fax number is only printed on the first page.

Set the position of the condition
Enter **Y=Yes**. You will be prompted to set the start position for the condition with the cursor. A **condition** is a constant (word or number) in the spool file that determines the first page of the spool document. This could be for example the text "Fax number" or a page number ("Page 1").

Now set the end position for the condition. The fax number and condition are now highlighted blue on colour screens, otherwise reverse or underlined.

You have completed the most important step in the definition.

Verify fax parameters
From the *File* menu, use option 5 *Fax parameters* to check or change the default settings for the send parameters. *Mix fax* should be set to A=Mixall. This display has 2 pages. Scroll to view the second page.

You can now perform a test.

Do a test transmission
From the *File* menu, select option 6 *Send test.* Decide if the spool status should be set to HLD (recommended) and the number of pages to transmit in this test.

The process
AutoFax prints the specified number of pages from your sample spool file and places the spool entry in the OUTQ DIRFAXPRT. DirectFax finds the spool file and checks for an AutoFax definition. Although it is still in the AutoFax workspace, the definition can be used to process the spool file. The AutoFax definition entries are now applied.

The results
Stay in the AutoFax definition program in the current entry. You can now check the results of the test from the *Display* menu with option 5 *Display fax status*.

The text fax will appear in the display after a couple of minutes. The fax number appears in the right column. You can display the fax with option 5 *Display*.

Use option 8 *Send details* to change the number to an internal fax. A short while later you will have the physical evidence in your hands.

Return to AutoFax
Use F3 to return to the AutoFax definitions.

Save the definition
Use F3=Exit to exit AutoFax definitions. Confirm the prompt with Enter to save the changes. AutoFax now saves all data (including the first pages of the sample file) from the workspace to a file. The new definition is now ready for use.

5.3.3   Example 2 – An AutoFax definition with database access and fax ID

This example shows you how to use the **customer number** in the spool text to retrieve the fax number from an indexed database. It builds on the first example above. You could also use a supplier number or any other variable key value.

Select fax number source
Open the second menu and select **1** *Source fax no.* In the following window, select option **5** *From database.* You will be prompted for **file name**, library and member. Enter the **library**, place the cursor at *File name* and press **F4**. It is important to now select an indexed physical or logical file in which customer number is the key. 99% of the time, the member name is *FIRST. Do not enter *LIBL. Always specify the library.

Key fields

Open the second menu again and select option **2** *Key fields*, which is now enabled. The window that appears displays a list of all key fields in the database file. In the next few steps, ensure that entries are made for **all** key fields. Database access will fail at run time if any keys are omitted.

We'll assume for this example that there are 2 key fields. The first is a company number that always contains the value "01". The second is the customer number.

Select the first key field (company number)
Click the first key field. AutoFax prompts you to decide if you want to use a **constant value**. Because the company number in our example is fixed, select **Y**=Yes. In the next window enter the value 01 without quotes. Values such as *BLANK or *USRDTA are allowed but not required here for our example. Press Enter and the first key is done.

Select the second key field (customer number)
Open the second menu and again select option **2** *Key fields*. Click the second key field. AutoFax again prompts for a constant. Because the customer number is a **variable**, select **N**=No.

The status line displays *Set start position for key field with the cursor*. Position the cursor where you want the number to begin in the spool file. If the customer number in the file is numeric and leading zeros are suppressed in the spool file, calculate the left position from the end position.

Press Enter. The status line displays *Set end position for key field with the cursor*. Position the cursor at the last position and press Enter.

Condition verification
Now decide if you want to include a **condition** for extracting the customer number. Conditions are required if **continuation pages** have a different structure or if the customer number is only printed on the first page.

Set the position of the condition
Enter **Y**=Yes. You will be prompted to set the start position for the condition with the cursor. A **condition** is a constant (word or number) in the spool file that determines the first page of the spool document. This could be for example the text "Cust number" or a page number ("Page 1"). Because it is a variable, never use the customer number itself.

Now set the end position for the condition. The customer number and condition are now highlighted blue on colour screens, otherwise reverse or underlined.

Data fields
We have now defined the key fields, but we haven't yet specified the data field from which the fax number will be taken.

Open the second menu again and select option **3** *Data fields*. The window that appears displays a list of all fields in your database file. You can now set up to 5 fields with options 1-5. The minimum requirement is **option 3** for the field with the **fax number**.

If your database stores country code, area code and fax number separately, you must also select options 1 and 2. 4=Name is optional. If selected, the field content is displayed in the right column in the fax queue. See also *Fax ID*. 5=E-mail selects the field with the e-mail address, if available.

You have now defined the key fields.

Fax ID

You may want to display information from the fax, such as the recipient or the order number, in the right column of the fax queue so that users don't have to display the fax contents with option 5.

You can select 3 elements (words or numbers) for display. Selection is with the cursor as when setting conditions. At run time, the elements are retrieved from the spool file to a string separated by slashes. The string can contain up to 30 characters. 19 characters are displayed in WRKFAXSTS.

To set an ID, select *Fax ID* from the second menu and enter 1-3 for the elements. The status line will prompt you to select the start and end positions for each element.

Application keys

You may want to define 1 or 2 internal key fields that your applications can use to access the DirectFax logical file FAXSTA14 to retrieve the fax status. These could be customer and order number or supplier and purchase order number. Each key contains 10 characters. FAXSTA14 key fields can be displayed with DSPFD. Set the keys in the same way as you set the fax ID. Application keys can also be displayed in WRKFAXSTS by pressing F11 twice.

5.4   Program automatic fax dispatch

In situations where automatic dispatch is not possible with AutoFax, or if you have particular security needs, you may want to consider making changes to the application program. Spool file text, as already noted, must be 10 or 12 CPI.

On certain conditions a **^FAX command line** in parameter **USRDFNDTA** can be transmitted using **OVRPRTF**. In this case it is not necessary to change the print output itself. The spool file may consist of a single document only, because segmentation is not possible. Before using this method, please check with OVRPRTF F4 F10 F11, whether the parameter user defined data USRDFNDTA exists (depends from the OS/400 version). In this case, codes in the ^FAX command line can be easily transmitted using OVRPRTF.

5.4.1   The ^FAX control line in a spool entry

Program enhancements

There are two initial requirements: the first spool line must indicate where the fax is to be sent, and multiple faxes within a single spool must be delimited. The application must also reroute the spool to the **DIRFAXPRT** OUTQ. A range of control codes can be entered in the spool file for formatting purposes.

Specifying

^FAX(MAHN100) ^DIAL(346358)

in the first line of the first page is sufficient because the other parameters are retrieved from an external file by the MAHN100 definition.

Notes on using external parameters

The command **WRKFAXPAR** "Work with DirectFax SPL parameters" (option 4) in the Configuration 2 menu can be used to edit external control parameters for the DirectFax interface DIRFAXPRT. This can save a lot of work with mix faxes, because the fine-tuning for graphic and text positioning come from an external source.

Example of a simple control line:

The **simplest form** of recipient information in line 1 of an automatic fax looks like this:

^FAX01234/56 78-11

^   indicates the beginning of a control code

FAX   indicates that a fax number follows

01234/56 78-11   is the full recipient fax number

Blanks between the digits are allowed. The number may be up to 20 digits long and contain separators. It ends at the beginning of the next parameter.

Warning: Any line beginning with ^FAX is a **control line**. It is <u>not</u> faxed with the rest of the document. The line can only contain the control codes described in this section. After parameter analysis, the line is removed from the document.

Example of a control line for external parameters

The **external form** of a control line looks like this:

^FAX(LIEF100) ^DIAL(03456/346 358)

LIEF100 in brackets is the <u>external name</u> of a parameter definition. The fax number is appended to the **^DIAL** instruction. Other parameters can follow. They are described below. As a rule, default values are set in the definition. You can use WRKFAXPAR (menu FAXCNFG2) to edit definitions. Names must conform to iSeries object naming conventions. Entries in the control line override external parameters.

5.4.1.1   Control line parameters

The ^FAX control line may contain the following additional values if you can't or don't want to include them in the external definition:

Warning: Codes shown in bold can also be used on the PC.

^DIAL()	Fax number or call group (#Name)
^MAIL()	E-mail address
^MAILPTY()	Priority fax/e-mail if both specified
^NODFT	Do not use default logo from the fax user profile
^PRT()	Log printer (e.g. PRT04 or ***DFT** fax profile printer)
^CPIxx	Characters per inch: xx=10, 12, 17 or 20
^LPIx	Lines per inch: x = 6 or 8
^GROB	Coarse resolution
^FEIN	Fine resolution
^NACHT	**Night job, ^NACHT(3) for rate 3**
^HALT	**Fax remains on hold until released manually**
^VORAB	Preprint on named printer, otherwise see ^HALT
^BLITZ	**Flash fax**

^KST( )	Cost centre (5-character, alphanumeric)
^SDATE( )	**Date/time or date only (e.g. 1610021630/Format DMY HM)**
^STIME( )	**Dispatch time (e.g. 1630)**
^USER( )	**Different owner (USRPRF must exist)**
^PA( )	**Personal addressing or information for send log**
^KEY()	Key data (name or number)
^KEYINT()	Associated internal address code
^KEYPGM()	CALL program for key field processing (LIB/PGM)
+	Continuation line (see example below)

Additional parameters

Warning: Only allowed on PC if indicated.

^AKEYA() and ^AKEYB() **Application keys** A and B (max length 10). These fields are used to pass application data (customer/supplier/sequence numbers etc.) The logical file **FAXSTA14** can be accessed directly from the application to keep track of the document status. See also the USER parameter in WRKFAXSTS (API/Display fax status special function).

^FLINE Used to default a specific line (for example ^FLINE2) so that the application can determine which line should be used. If the line specified does not exist or is not active, the fax is not sent. This parameter is not usually required.

^MTQ() Use the "**M**OVE **T**O OUT**Q**" parameter to move successfully processed spool files to an OUTQ instead of deleting. For example, For example, ^MTQ(Library/OUTQ name). It remains there with the status *FAXSAV* until printed or manually deleted. See also ^SPLF(H). The ^FAX control is retained in the spool file.

- In the control code **^NIGHT(S)**, the (S) indicates immediate transmission at normal priority.

^RNAME( ) Passes a maximum 30-character **recipient name** to DirectFax. Allows you to search by recipient in the Status and History views. Also allowed on the PC.

^SPLF(H) If set to **H**=Hold, keeps the spool file in the DIRFAXPRT OUTQ instead of deleting it. It remains there with the status *FAXSAV* until printed or manually moved to another queue. See also ^MTQ().

^SHIFT Can be used to **decrease** the document margin. Example: ^SHIFT5 shifts the text in each line 5 characters left. Characters are lost if the margin is less than 5 characters. You can set a default value for margin decrease (with all attendant risks) in the data area FAXDTAARA at position 146. The values allowed are 1 to 9. Position 146 is not usually entered. Text from the DirectFax editor is not shifted.

^HLGO( ), ^BLGO( ), ^HLGOF( ) and **^BLGOF( )** are control parameters for the default header and footer logo. They temporarily override the values in the fax user profile. Specify the name of the graphic between the brackets.

^HLGO Header logo (also allowed on the PC)

^BLGO Footer logo

^HLGOF Header logo next page (from page 2)

^BLGOF Footer logo next page (from page 2)

On the **PC**, **^HLGO()** can also include the header logo for the next page. Examples: ^HLGO(LGO1:LGO2) ^HLGO(LGO1:*NONE)

Restriction: The number of characters between the brackets may be a maximum of 10 incl. the colon.

^REF()   Passes max 50 characters of text for the **e-mail subject line**. The **^UN** code for the fax sequence number is supported in subject line text. If no ^REF() text is specified, the subject line is generated automatically. ^REF() is not supported on the PC, but you can enter a 48-character subject text in the "Personal addressing" field.

^ATTACH(), used to **attach TIF images** to a fax (e.g. business terms and conditions), is supported in the ^FAX control line from Version 5. The syntax is slightly different.

Example: ^FAX012345678 ^ATTACH(PFAD/DATEI.TIF)

48 characters are available for path and file name. This function adds a new file, FAXST01, to DIRECTFAXF. It is maintained automatically.

^ARCNAM() has been added to control the archive interface for outgoing faxes. For example, if you want to archive only reminders, you could add ^ARCNAM(REM) to the ^FAX control line. If you have selected M=Manual in CFGFAXARC *Configure archive interface* and F10 "Outgoing faxes in archive mode", only faxes which have received a name from ^ARCNAM() are archived. You can use &ARCNAM to pass the archive name in the archiving command. An 80-character input field for special ^CODES has been added to parameter page 2 in AutoFax. You could enter ^ARCNAM(REM) there.

^MAILSND() Sender's address for email. The EXIT program DIREXIT002 is called if the e-mail sender's address is invalid.

^MAILCVR() The default source file for the mail body text, for example for other languages. The file must be in DIRECTFAXF.

^MAILATT() The mail attachment file type (T=TIF, P=PDF, X=Text).
Examples for mail parameters:
^FAX ^MAIL(woi@toolmaker.de) ^MAILSND(info@meier.at)
  ^MAILCVR(#GERMAN) ^MAILATT(T)

The DirectFax **PC client** now includes a function that allows you to use a ^FAX control line to specify an additional mail address to which a copy of the fax is sent. You might use this for example for sales reps or other branches. Example:
`^FAX0405591908 ^MAIL(info@customer.de) ^PA(vtrma@tms.de)`
The ^PA() code is normally used for additional fax information, but is used here for the second mail address.

^FAX example
^FAX040/55919-08 ^PA(Order 128759)^PRT(*DFT) ^CPI17 ^FEIN +
^STIME(2200)^RNAME(Hoffmann) ^HLGO(LOGOAB)

In this example, the document would be transmitted with **17CPI,** and in **FINE resolution** at **22:00** to the number **0405591908**. A protocol would then be printed on the user printer. The protocol would contain the additional information "Order 128759". The fax status would display the recipient's name "Hoffmann" The default logo from the profile would be replaced by the graphic LOGOAB.

The parameters following ^FAX can be in any order, but the ^FAX control **must be at the beginning**. Spaces between the parameter, for example ^PRT, and the value, for example (DFT), are not allowed. Spaces are allowed between the codes and the brackets. Lower case is converted to upper case automatically.

5.4.1.2   Page delimiters (^T)

Use **^T** to delimit separate faxes within a spool file. It must be in the last line of the last page of the fax. It is not required at the end of the spool file. Multiple faxes within a spool file are supported. Use the ^FAX01234 code at the start and the ^T code at the end of pages or groups of pages to subdivide the spool file into multiple faxes that can be sent to different recipients. This code is not supported on the PC.

5.4.1.3   Send a fax to multiple recipients (Copy)

If multiple ^FAX01234 codes are added to a single document before the final ^T page delimiter, the document is faxed to each number.

Example:
^FAX012346436

^FAX0511678

^FAX739747664

Document text...

^T

In this example, 3 identical faxes are generated and sent to the 3 numbers.

The code ^T must not be forgotten as 10 faxes of each 1 page could become 10 fax with 10 pages !

OVRPRTF OUTQ(DIRFAXPRT)

To ensure that the spool is rerouted to the DIRFAXPRT OUTQ, run OVRPRTF with the parameters DEV(DIRFAXPRT) and OUTQ(*DEV) <u>before</u> the printer file is opened.

Note
A range of other control codes for graphics and formatting are also available. They are not included in the ^FAX control line. You will find a detailed description elsewhere in this document.

5.4.1.4   Activate the interface

In addition to monitoring faxes for dispatch, the fax transmission program can also monitor the DIRFAXPRT OUTQ. With the command **STRDIRFAX** and F4, or option 1 in the FAXOPR menu, enter the "Factor for spool file test" parameter. The factor must be greater than zero.

5.4.2   Work with external SPL parameters

You can find the command WRKFAXPAR in the Configuration 2 menu (GO FAXCNFG2) under option 4. The following screen is displayed:

```
8.04.05  18:12:24       Work with DirectFax SPL parameters        RENGEL

Position to definition    _____


Enter selection and confirm
   2=Change   3=Copy   4=Delete   7=Rename


   Definition  Description
▌  DEMO        Example MIX QUER with Graphic
_  TEST        test










F3=Exit   F5=Refresh   F6=Create   F12=Cancel
```

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A list of existing definitions is displayed. Each definition has a unique name. Use page up/down to scroll through the list. You can enter a name in the "Position to" field to reposition the display.

You can select a definition in the left column with the following options.

Options

2=Change
Allows you to change an existing definition.

3=Copy
Copies an existing definition. Enter a name for the new definition in the window displayed.

4=Delete
Deletes the definition. You will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

7=Rename
Renames an existing definition.

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display.

F6=Create

Creates a new definition.

F12=Cancel
Returns to the previous screen

```
 4.03.05  10:40:22        Work with DirectFax fax parameters        SES
                                                                   Page  1
Enter data and confirm or scroll forward

Name or parameter definition . . . . . . FPNAME  DEMO          Name
Definition description . . . . . . . . . FPDESC  Example MIX QUER with Graphic
egung FEIN NACHT
Use definition YES, NO, TEST . . . . . . FPACT   J             J, N, T
Lock override for application. . . . . . FPOVRP  _             J
Send user message YES, NO  . . . . . . . FPMSG   _             J, N
Identical copy of serial fax . . . . . . FPCPYX  _             J
Fax dial up Nbr  . . . . . . . . . . . . FPDIAL  _____
Key (KA-, KD-, Supp.-number) . . . . . . FPKEY   _____
Internal key number  . . . . . . . . . . FPINTN  _____
Use Standard graphic from profile  . . . FPDFT   N             J, N
Mixfax : BLANK=No,M=MIX,A=MIXALL  . . . . FPMIX   A             M, A
Landscape (90°rotation)  . . . . . . . . FPROTA  _             J
CPI/Char. per inch . . . . . . . . . . . FPCPI   _             10, 12, 17, 20
LPI/Lines per inch . . . . . . . . . . . FPLPI   _             6, 8
Resolution FINE  . . . . . . . . . . . . FPFINE  J             J
Log pringer/QOUTQ  . . . . . . . . . . . FPOUTQ  _____     Name
                                                                       +
F3=Exit    F5=Refresh   F12=Cancel
```

0012 - Page 1 of an external parameter definition

Parameter   description

Name of parameter definition (FPNAME)
A unique name for the definition. Names can contain letters and numbers
cannot contain special characters. This is the same name as specified in the
^FAX control line. **Example**:

Name of definition: **DEMOQUER**

Control line: ^FAX(**DEMOQUER**) ^DIAL(...) ...

Description of definition:
A description of the parameter definition.

Use definition (FPACT)
Y=Yes, N=No, T=Test.

T=Test prints a log.

Overwrite protection for application (FPOVRP)
Y=Yes ignores the additional parameters in the spool file control line. This
parameter is not usually entered. In most cases, you will want to allow the
application to write additional parameters to the control line.

Send user message (FPMSG)
Y=Yes sends messages on the send status to the user. N=No suppresses
user messages.

Serial faxes with identical copies (FPCPYX)
This parameter should only be used in exceptional circumstances. Y=Yes
saves the text content of the first fax only if all other faxes in the series are
identical.

Fax number (FPDIAL)

In exceptional circumstances (for example if the entire spool file is always sent to the same recipient), allows you to enter a fixed fax number. The number is normally passed to DirectFax by the ^DIAL() parameter in the control line.

Key (KA, KD, Supplier number) (FPKEY)

In exceptional circumstances (for example if the entire spool file is always sent to the same recipient), allows you to enter a fixed key value from the address code file. The number is then passed to DirectFax by the ^KEY() parameter in the control line.

Internal key number (FPINTN)

In exceptional circumstances (for example if the entire spool file is always sent to the same recipient), allows you to enter a fixed address number for a key from the address code file. The number is then passed to DirectFax by the ^KEYINT() parameter in the control line.

Use default graphic from profile (FPDFT)

N=No suppresses the header logo from the fax user profile.

Mix fax (FPMIX)

Because all faxes are sent by modem, this parameter can be set to A=MIXALL or not entered. It is required if you still use a DCE fax box.

Rotate 90° (FPROTA)

Y=Yes rotates the fax.

CPI (FPCPI)

Specifies the characters per inch. The values 10, 12, 17 and 20 are allowed. 10 is assumed if the parameter is not entered.

LPI (FPLPI)

Specifies the lines per inch. The values 6 and 8 are allowed. 6 is assumed if the parameter is not entered.

Resolution FINE (FPFINE)

Y=Yes sets the resolution to fine (better quality, longer transmission time). Otherwise the resolution is set to coarse.

Log printer/OUTQ

Specify a printer or an OUTQ if you want to print a log when a fax is successfully sent. Otherwise no log is printed.

```
 7.03.05  10:01:45        Work with DirectFax fax parameters          SES
                                                                      Page  2
 Enter data and confirm or scroll forward

 Name or parameter definition . . . . . . . FPNAME  DEMO


 Fax in Hold/Preprint . . . . . . . . . . . FPHOLD  ▮            J, V
 Send prior.  N(ight), B(Quick), 1-5 Rate FPNIGH  N            N,B,1,2,3,4,5
 Send date . . . . . . . . . . . . . . . . . FPSDAT  _____
 Send time . . . . . . . . . . . . . . . . . FPSTIM  ____
 Differ. user name  . . . . . . . . . . . . FPUSER  _____
 Cost center  . . . . . . . . . . . . . . . FPCST   DEMO2
 Infotext . . . . . . . . . . . . . . . . . FPINFO  _____
 Addressing . . . . . . . . . . . . . . . . FPPA    _____
 _____
 Key field programm (LIB/PGM) . . . . . . FPKEYP  _____
 Control parm.   page 1, line 1 . . . . . FPCOD1  ¬gBESTELL(1,1)¬Q(1,1)¬LM3¬FOO1
 1
 Control parm. from page 2, Line 1  . . . FPCOD2  ¬Q(1,1)¬LMN¬gBESTELL(1,1)¬Q(1,
 1)¬LM3¬FOO11
                                                                          ·

 F3=Exit    F5=Refresh    F12=Cancel
```

0013 - Page 2 of an external parameter definition

Parameter description

Fax on hold/preprint (FPHOLD)
Y=Yes places the fax in the fax queue with the status *HLD. The user must then manually release it with WRKFAXSTS and option 6.

V=Preprint also creates a preprint.

Send priority (FPNIGH)
Allows you to set the send priority. The following values are allowed:

B=Fast fax (not recommended in this parameter).

N=Night job (equivalent to rate 1).

Rates 1-5 (see section on editing rates with the command EDTTIMTBL)

Send date (FPSDAT)
Allows you to specify a fixed send date (not recommended, use night rates instead).

Send time (FPSTIM)
Allows you to specify a send time. We recommend that you use night rates instead.

Different user name (FPUSER)
Allows you to specify the user name under which the fax appears in the queue. Usually set to the spool file owner.

Cost centre (FPCST)
Allows you to enter a 5-digit cost centre number. The number is included in the send log (DSPSNDSTS).

Infotext (FPINFO)
Not used.

Personal addressing (FPPA)

You can use this parameter to add additional information to the fax and the send log (DSPSNDSTS). However, it is better to pass document information to DirectFax with the ^PA() parameter in the control line.

Key field program (FPKEYP)

Not used.

Control parameter page 1, line 1 (FPCOD1)

This and the next parameter FPCOD2 can be very useful for inserting graphic and font parameters. Allows you to enter 80 characters to add control parameters not allowed in the ^FAX control line to the spool file. The screenshot above shows an example from a live environment:

^gBESTELL(1,1)^Q(1,1)^LM1^F0011^CF19^P(1,20)
Description page 1: Insert graphic BESTELL at position 1,1, rotate fax, set left margin to 1, change to font 11, change CPI fixing to 19 pixels per character, set cursor to position 1,20.

^Q(1,1)^LMN^gBESTELL(1,1)^Q(1,1)^LM1^F0011^CF19^P(1,40)
Description page 2: Remove rotation, set left margin to default, insert graphic BESTELL at position 1,1, rotate fax, set left margin to 1, change to font 11, change CPI fixing to pixels per character, set cursor to position 1,40.

Control parameter page 2, line 1 (FPCOD2)

As above, but applied from page 2 of the spool file.

5.5   Using the DirectFax interface (DFI)

Fax and text data from other applications can be integrated into your automatic faxing system through the DirectFax interface (DFI) with little or no programming effort.

All that is required is a **simple print program** that retrieves the data from an existing file and spools it to the DIRFAXPRT OUTQ.

You will find sample CL/RPG programs in the QxxxSRC source files in the library DIRECTFAXF. The file QCLPSRC includes a member **#INFO#** containing information on the programs. The other source files contain additional #INFO# members.

Note:

You will need to make a copy of all QxxxSRC source files in DIRECTFAXF if you intend to use DFI. Otherwise they will be lost the next time you upgrade DirectFax.

DFI operates on the same principal as described in the section "Fax spool files automatically", by "printing" the fax text as a spool entry to the **DIRFAXPRT** OUTQ, from where it is sent by the fax program to the send queue.

Procedure

1.   **File organisation** and **record format descriptions** must be available for the fax and text files. You must define how text is written to the files, how it is identified and how it is marked as complete after it is extracted. You may want to discuss these topics with the Hotline.

---

2. Use the sample program to create a routine that reads the data and inserts the **^FAX control line** before printing the list.

3. Prepare a test file with demonstration data.

4. Use **CHGDFIPAR** to adjust the DirectFax interface parameters. However, do not activate the interface yet (**ACTIVE *NO)**. In the F10 additional parameters, set **^HOLD** so that the test faxes are not sent immediately.

5. Use the command **CALL DIRECTFAX/DFIREAD** to read and print the test file data. The spool entries created land in the DIRFAXPRT OUTQ. If the fax program is active, they are then moved to the fax queue.

6. Check for errors and repeat the test if necessary.

7. When everything is running smoothly, use **CHGDFIPAR** to set the "live" file, activate the interface and set the **F10** parameters.

8. From this point on, the background fax program **monitors** the **DFI** for new faxes.

5.6 Fax spool file without dialog (CRTSPLFAX-API)

This feature allows you to create and send a fax by passing parameters from an application with a call. No other user intervention is required. The API was created for use with the **R/DARS** archiving system, but it can be used from any other application.

Sample programs for CL and RPG can be found in the file **QAPISRC** in the library DIRECTFAXF.

CRTSPLAX has been enhanced to allow processing of spool files from the **QPRTJOB** environment. In most cases with these SPLFs, only the name, user and file number are known. The job number is usually unknown. If the job number parameter is left empty and the job name is QPRTJOB, DirectFax automatically determines the right job number. Number and *LAST are the values allowed for the spool file number parameter.

Warning: If the spool file number parameter is specified, the file with that number is processed even if the file name does not match. The job log records the SPL parameters passed and used.

A function "Cover sheet" allows the automatic insertion of a cover sheet with predefined substitution information like : ^&FAXNAM, ^&FAXSND etc.). Use STRSEU to create a member called ##COVER in a source file with the name of the user in DIRECTFAXF. You can define the member DIRECTFAXF/##COVER (##COVER) to be used as the default cover sheet if no user member is found.

Return values are used either to indicate an error or to return the sequence number of the fax being processed. This is illustrated in the QAPISRC samples.

From Version 5.15, CRTSPLFAX also supports PCL spool files. A license for the **PCL** converter is required.

If you have any questions, please call the Toolmaker Hotline.

5.7　Send a spool file with FAXSPLF

The command **FAXSPLF** allows you to send a complete spool file, including the cover sheet, without displaying a dialog. This function uses the same API calls as previously described for R/DARS.

You can use FAXSPLF and F4 or a **CL program in an application** to enter the parameters.

F4 displays the parameters allowed for the command. The next section contains screenshots and comments for all parameters.

From Version 5.15, FAXSPLF also supports PCL spool files. A license for the **PCL** converter is required.

```
                         Fax spooled file (FAXSPLF)

 Type choices, press Enter.


 Fax number . . . . . . . . . . . .    _____
 EMail address  . . . . . . . . .      *NONE_____
 _____
 Spooled file . . . . . . . . . .      _____    Name
 Job name . . . . . . . . . . . .      *_____    Name, *
   User . . . . . . . . . . . . .      _____    Name
   Number . . . . . . . . . . . .      _____    000001-999999
 Spooled file number  . . . . . .      *ONLY____     1-9999, *ONLY, *LAST
 Page range:
   From page  . . . . . . . . . .      1_____      1-9999
   To page  . . . . . . . . . . .      9999____      1-9999
 Delete spooled file  . . . . . .      *NO__         *YES, *NO
 Hold fax . . . . . . . . . . . .      *NO__         *YES, *NO
 Mix Fax  . . . . . . . . . . . .      *NO__         *YES, *NO, *ALL
 Send message . . . . . . . . . .      *YES_         *YES, *NO
 90° rotation . . . . . . . . . .      *NO__         *YES, *NO
                                                                  More...
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

0014 - The command FAXSPLF, page 1

For AFPDS spool files, the From/To page parameters must contain the default values 1-9999.

FAXSPLF has been enhanced to allow processing of spool files from the **QPRTJOB** environment. In most cases with these SPLFs, only the name, user and file number are known. The job number is usually unknown. If the job number parameter is left empty and the job name is QPRTJOB, DirectFax automatically determines the right job number. Number and *LAST are the values allowed for the spool file number parameter.

Warning: If the spool file number parameter is specified, the file with that number is processed even if the file name does not match. The job log records the SPL parameters passed and used.

```
                          Fax spooled file (FAXSPLF)

Type choices, press Enter.

LPI  . . . . . . . . . . . . . .      █              6, 7, 8, 9
CPI  . . . . . . . . . . . . . .      10             10, 12, 15, 17, 20
Left margin (mm) . . . . . . . .      _____          Zahl
Upper edge mm  . . . . . . . . .      _____          Zahl
Resolution . . . . . . . . . . .      *COARSE        *FINE, *COARSE, *FAXPRF
Log printer  . . . . . . . . . .      *NONE          Name, *NONE, *FAXPRF
Form . . . . . . . . . . . . . .      *NONE          Name, *NONE, *FAXPRF
Send cover page  . . . . . . . .      *AFP           *YES, *NO, *AFP
Recipient name 1 . . . . . . . .      _____
_____
          name 2 . . . . . . . .      _____
_____
          name 3 . . . . . . . .      _____
_____
Sender name 1  . . . . . . . . .      _____
_____
                                                                     More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0015 - The command FAXSPLF, page 2

The **Left margin** (MARGIN) parameter behaves as follows:

A positive number 1..99 sets the default margin in a mix fax from 15 mm to the value indicated in mm.

A negative number -1..-9 displaces the text the specified number of characters to the left. Character overflow is ignored.

In Version 5, the parameter **Top margin** (MARGINTOP) has been added. This allows you to increase the top margin to create space for graphics. To avoid unwanted page breaks, you may need to increase the LPI (lines per inch) if you do this. Automatic scaling is not supported.

In addition to 10, 12, 17 and 20 CPI, **15 CPI** and **7 LPI** (font 0223) now allow you to improve the appearance of the fax. These changes apply to mix faxes in the full version of DirectFax. There are restrictions in the light version.

To insert a cover sheet, set the **COVER** parameter to ***YES**. If left at ***NO**, the spool is processed as a normal *SCS file. AFP font changes and overlays are ignored. From version 5.51, the cover sheet function is also supported for AFP spool files (specify *YES). To send an AFP spool file without a cover sheet, specify *AFP.

```
                    Fax spooled file (FAXSPLF)

Type choices, press Enter.

       name 2  . . . . . . . . .  █_____
_____
       name 3  . . . . . . . . .  _____

Fax title . . . . . . . . . . .  _____
_____
Annotation . . . . . . . . . .   _____
_____
Extented comment . . . . . . .   _____
                                 _____
                                 _____

Night transmission . . . . . . .  *NO       *YES, *NO, *SCD, 1, 2, 3...
Send time  . . . . . . . . . . .  *IMMED    Zeit, *IMMED
Send date  . . . . . . . . . . .  *IMMED    Datum, *IMMED

                                                        More...

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0016 - The command FAXSPLF, page 3

The parameter **CMX** *Extended comment* can hold up to 256 characters.
Line breaks are added automatically in the cover sheet. **^&CMX060** in the
cover text sets the start position and width of the text, 60 characters in this
example. The width value must be between 40 and 80. The default is 60
characters.

The **HEADER** parameter works as follows:

The values ***NONE** and ***FAXPRF** insert the logo specified in the **profile**, if
entered. With ***NODFT**, the default logo from the profile is **not** inserted. Enter
a logo name to replace the default profile logo with the logo specified here.
The Header / Text parameter should always be set to *NONE. **Header text**
is **not** supported in mix faxes.

```
                    Fax spooled file (FAXSPLF)

Type choices, press Enter.

Header:
  Logo . . . . . . . . . . . . .  *NONE      Zeichenwert, *NONE...
  Text . . . . . . . . . . . . .  *NONE      Zeichenwert, *NONE...
Footer:
  Logo . . . . . . . . . . . . .  *NONE      Zeichenwert, *NONE...
  Text . . . . . . . . . . . . .  *NONE      Zeichenwert, *NONE...
Cost center  . . . . . . . . . .  *FAXPRF    Zeichenwert, *FAXPRF, *NONE
User . . . . . . . . . . . . . .  *CURRENT   Zeichenwert, *CURRENT
Sender CSI . . . . . . . . . . .  *FAXPRF_____
Optimise Mix . . . . . . . . . .  *NO        Name, *NO
Group dispatch . . . . . . . . .  *NO        Wait time (sec), *NO

                                                        Bottom

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0017 - The command FAXSPLF, page 4

Values for the **BOTTOM** parameter for the footer logo are the same as
described for the header above.

Values returned to the CL program

The command **FAXSPLF** returns the 7-character **fax sequence number** in the confirmation message to the user. The following line in a CL program returns the message FAX1146 after the command FAXSPLF:

```
RCVMSG      MSGTYPE(*LAST)  RMV(*NO)  MSGDTA(&MSGDTA)  +
        MSGID(&MSGID)
```

The &MSGDTA holds the **7**-character **sequence number** beginning at position **31**. With this number, an application can determine the send status from the file FAXSTAT in DIRECTFAXF. It is a good idea to do the same for MSGID FAX1146 to check for errors.

A **digital signature** is added to the fax only if a signature entry configured with the command WRKSGNCFG is specified in the parameter DSNAME. This also applies to the default entry *DEFAULT. A separate signature license is required.

5.8   FAX400 interfaces

The most important interfaces are available for a transition from the Ehrhardt & Partner fax solution to DirectFax

File TEXTEIN (Program TTX005B)

The application continues to deliver the text to the file TEXTEIN and call the program TTX005B. The difference is that the TTX005B shipped by DirectFax executes and passes the fax to DirectFax. You will find more details in DIRECTFAX/QRPGSRC in the info entry for TTX005B.

File TTXSENDE (DFIFAX400)

The application continues to deliver the text to the file FAXSENDE. From there, it is processed by the DirectFax interface DFI. You will find more details in DIRECTFAX/QCLPSRC in the info entry for DFIFAX400.

Spool file import from OUTQ FAXSST

Import of spool files from existing applications with a # * **header** from the OUTQ FAXSST is supported. The value **#** in FAXDTAARA in the library DIRECTFAXF at position 156 activates this function. In the DirectFax configuration parameters, enter FAXSST instead of DIRFAXPRT. The data area FAX400TM in DIRECTFAXF can automatically convert times to night rates. For example, the default send time 02:00 from the FAX400 header can be converted to night rate 1 (02:00-05:00). For 21:00, night rate 2 is used. For more information, contact the Hotline.

Address import

The transition from **FAX400** to DirectFax requires the **address file** be imported from TTXADR to FAXTRF. This operation is normally executed as part of a new installation process.

Load serial lists to call groups

DirectFax provides the **TRFTTXRSL** command to load serial lists from **FAX400**. The address import must be complete before running it. The command can load

---

- All files

- Files for a user

- A single serial list

DirectFax does not support user call distributor groups. In this is a problem, contact the Hotline for support.

5.9   Fax AFP and PCL spool files

Warning:
This function is not available to DirectFax **Lite** customers.

5.9.1   Fax AFP Spool files with Host Print Transform (HPT)

A new interface for faxing **AFP Spool files** using Host Print Transform has been integrated. This is done by automatically converting the AFP SPLF to a TIF file and then to a mail or fax. The fonts and graphics used are from the iSeries and not the DirectFax environment. This considerably reduces the preparation time previously required for faxing AFP documents. The interface is limited to the operating system options provided by IBM for **AFP Host Print Transform**.

Option 8 "AFP SSP compatibility fonts" must be installed.

In the command CHGFAXVAL, the parameter **AFPCVT** *AFP Converter Version* has been added, where you can use activate this interface with the value ***HPT**. The parameter *Activate AFP/PCL interface* (**AFPPCL**) must be set to ***YES**. To ensure that all fonts available on the local system are found, all QFNTxxxx libraries are added automatically to the current library list for the job FAXMIX.

From 5.51, **automatic rotation and scaling** for all faxes can be specified if automatic mode produces results of insufficient quality. The flags in positions **493** and **494** in data area **FAXDTAARA2** control conversion as follows:

Warning: these flags are changed in version 5.52!

```
Position 493 (Scaling)
' ' = Automatic (scale as required)
'N' = No scaling (reduction)
'L' = Scale to length (height)
'W' = Scale to width
'P' = Scale to page
'R' = Scale to resolution)

Position 494 (Rotation)
' ' and '1' = Automatic (rotate as required)
'0' = No rotation
'2' = Rotate 90°

Example:
CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA2 (493 2)) VALUE('L0')
```

5.9.2 The old method of faxing AFP spool files

Note: If you cannot use the Host Print Transform method described above, please read the following on faxing with the old method.

AFP spool files have a complex structure. They contain overlaid graphics and different fonts. DirectFax analyses the text, font and graphic components of the spool files separately.

The AFP document text is displayed and used by AutoFax to determine the recipient fax number. The structure of the graphics is used as a template for inserting DirectFax graphic and font commands.

Important:
DirectFax detects the names and numbers of AFP graphics and fonts and matches them to the corresponding DirectFax graphics and fonts. DirectFax cannot process IBM font and graphic objects.

Enable AFP

Enter **A** at position **153** in the data area **FAXDTAARA** in **DIRECTFAXF** to enable the function.

Convert data stream to *SCS data

When converting AFP to *SCS, only the text section of the AFP data stream is read and faxed. As a result, font, graphics and forms are lost. With different font pitches, data may also be overlaid.

Converted *SCS data looks something like an AFP file displayed with DSPSPLF.

Fonts, graphics and forms can be inserted using AutoFax definitions.

Use original AFP data stream

When using AFP, the command sequences in the spool file are read and converted to the DirectFax graphic format during the Mix process. All faxes are mix faxes.

Printer resolution, graphics, forms and fonts in the AFP data stream may not always correspond to those in DirectFax. Slight image distortion may result.

DirectFax requires that fonts and graphics be available as graphic files. These are created by scanning or by loading BMP files.

If the fonts, graphics and forms used do not match those in DirectFax, AFP objects names (Font, PAGSEG, OVL) can be assigned an alias with the command WRKFAXALI.

If the fonts you use are not included in DirectFax, please contact us for support.

The following AFP functions are supported:

- A range of fonts

- Form overlays (*OVL)

- Graphics (*PAGSEG)

- Lines (DDS keyword LINE)

- Boxes (DDS keyword BOX)

- Rotation (0°,90°,180°,270°)

Transmission with AutoFax

AutoFax uses the definition program WRKATFDEF to transmit AFP data. In the AutoFax definition, set the "Use AFP functions" parameter to "Y" on the second "Fax parameters" page in the "File" menu.

If this parameter is set to "N", the AFP data is converted to *SCS.

When using the APF (Advance Printer Function) functions, all DirectFax commands are ignored.

If a printer is specified in "Spool actions" for documents with no fax number, an AFP file is printed. Forms and other graphics are printed.

Manual dispatch with WRKSPLFAX

AFP files can also be sent with WRKSPLFAX. Use option 1=Fax as with other spool files.

0018 – Display spoolfile attributes

If the selected file is an AFP file, the "Send APF data stream" parameter is displayed. If you set this parameter to *YES, DirectFax sends the AFP data. If not, the AFP data stream is converted to *SCS. Graphic functions are lost.

With APF data streams, the values for LPI, CPI, control codes etc. are ignored.

Using AFP object aliases

DirectFax distinguishes three types of AFP object:

- Fonts *FONT

- Graphic segments *PAGSEG

- Forms *OVL

If an object in an AFP data stream is already in use or does not exist, it can be assigned an alias name associated with an object DirectFax can use. This is done with the command WRKFAXALI.

```
 09:56:58   7.03.05     Work with DirectFax alias names          SBS

    Begin list with:   _____

    Enter selection and confirm
       2=Change    4=Delete

 Op  Object     Type      Data strea Alias name Description
 _   04711      *FONT     *AFPDS     0085       AFP Font 4711 -> FaxFont85




                                                                 Bottom

 F3=Exit    F5=Refresh   F6=Create    F12=Cancel
```

0019 – Alias names

Use "F6=Create" to create a new alias. The name is a system name, not a document type name.

*AFPDS must be entered as the data stream.

Valid object types are *FONT, *OVL and *PAGSEG.

The object names correspond to the original AFP object names or fonts. With *OVL or *FONT , a DirectFax graphic must exist with the alias name (see WRKFAXGRF). The alias name specified for *FONT objects must exist as a DirectFax font.

5.9.3   Fax PCL Spool files

Spool files in the format *USERASCII containing the PCL data stream can be faxed using the native DirectFax PCL converter. For more information, please refer to section 23 in the manual.

5.10 Fax Office documents (*ADVSCS data stream)

Warning:
This function is <u>not</u> available to DirectFax **Lite** customers.

With this function, Office Vision documents can be faxed "as is". There are no restrictions on fonts and graphics. As with the AFP data stream, the spool file is read and interpreted directly.

Enable OFC/*ADVSCS

Enter **O** (O, not zero) at position **147** in the data area **FAXDTAARA** in **DIRECTFAXF** to enable the function.

Convert to *SCS data stream

The EDTSNDOFC and WRKSPLFAX dialogs contain the parameter "Use APF" which is defaulted to *YES/Y. With *NO/N the user can disable the function. If the function is enabled, DirectFax tries to process the *ADVSCS data stream when spool files are taken from the DIRFAXPRT OUTQ.

Use original *ADVSCS data stream

The functionality is similar to AFP. Fonts and graphics must be available or have an alias entry.

5.11 Send batch faxes with SBMFAX

DirectFax supports the command **SBMFAX** for batch faxing documents from an application. The command is a reproduction of the IBM command. It supports the *SPLEXIST, *GENFAXSPL and *FAXOFCDOC functions.

Spool files with SCS data stream (*SCS) and enhanced SCS data stream (OfficeVision/OV) are supported. Fonts in OV documents are recognised, but an equivalent DirectFax font must exist. Aliases can be used to select similar fonts.

Applications using the IBM SBMFAX command can fax from DirectFax without any additional programming.

The following section describes SBMFAX functions and parameters. IBM SBMFAX users can use this description to decide whether the DirectFax SBMFAX command can be implemented as shipped or with minimal changes, or if another DirectFax function is preferable.

5.11.1 Functions supported

The DirectFax SBMFAX command was created in the context of a customer project. Only the fax functions required by the project applications have been reproduced.

If you require functions or parameters that are not supported or not covered in this description, please contact the Hotline. We may be able to suggest alternative functions or add the parameters you require.

Request type (TYPE)

Only ***BCH** (batch processing) is supported. *INT (interactive) is not supported. DirectFax offers a wide range of options for sending text and spool files interactively, including EDTSNDFAX, EDTSNDOFC and WRKSPLFAX.

Request option (OPTION)

This parameter specifies the function executed by SBMFAX.

*SPLEXIST (Send existing spool file) is supported and the default option.

*GENFAXSPLF (Generate and send spool file) is supported.

*FAXOFCDOC (Fax OfficeVision document) is supported.

*PRTSCNFAX (Fax screenshot) is an interactive function and not supported. DirectFax offers a convenient way to send screenshots with the command FAXSPLF.

*FAXRCVFAX (Fax received fax) is not supported. DirectFax includes a dialog in which received faxes can be sent (WRKINCFAX).

5.11.2 Parameters

The following is a description of all parameters for the DirectFax SBMFAX command and the values they do and do not support.

Destination selection method (DSTSELMTH)

*EXT and ***NONE** are supported. The destination fax number is always expected in the **TO** parameter (described below).

*DEST, *IDEN, *BOTH and *DIST are not supported.

Destination (DEST), ID (ID) and distributor list (DST), entry selection method (ENTSELMTH) and entry (ENTRY)

These parameters are not supported. If entered, the values *NONE or *DEFAULT (for ENTSELMTH) are assumed.

Description (TEXT)

This parameter can be entered but is ignored by DirectFax.

Note: The ID, DST and ENTRY parameters have been extended from 10 to 32 characters in version 5.51. The contents of the **DEST**, **ID** and **TEXT** (description) parameters are now included in the fax unless DEST and ID are set to *NONE. The information is passed to the *Personal addressing* field XCHPA in the file FAXSTAT with the format DEST:ID:TEXT. If no e-mail address is found, the first 19 characters of this text field is displayed in WRKFAXSTS in the right column. You can enter characters in the *Recipient: ___ (Name)* field to search and filter the fax list.

Send to (TO)

This parameter holds the **fax number**. You can also enter 1-3 text lines of 40 characters each, in quotes. The lines are included as address lines (TO) in the cover sheet if a cover sheet has been selected (see CRTCVRP).

From (FROM)

Allows you to enter 1-3 text lines of 40 characters each, in quotes. The lines are included as sender lines in the cover sheet if a cover sheet has been selected (see CRTCVRP).

The value *PROFILE is ignored.

Title (TITLE)

Allows you to enter 1 text line of 40 characters, in quotes. The line is included as the title line in the cover sheet if a cover sheet has been selected (see CRTCVRP).

The value *PROFILE is ignored.

Comment (COMMENT)

Allows you to enter 1 text line of 40 characters, in quotes. The line is included as a comment line in the cover sheet if a cover sheet has been selected (see CRTCVRP).

The value *PROFILE is ignored.

Spool file (FILE)

The name of the spool file to be faxed.

Job name, User, Number

This parameter indicates the job that created the spool file. The value ***** indicates that the file was created by the current job (default).

Spool file number (SPLNBR)

Indicates the spool file number. *ONLY (default) indicates that only one spool file exists and the number is not required. *LAST indicates that the spool file with the highest number will be faxed.

Fax description (FAXD)

This parameter is not supported. If entered, only the value *ANY or a name are allowed. *PROFILE is not allowed.

Transmission mode (MODE)

Sets the **quality** (resolution) of the fax.

*PROFILE (default) indicates that the resolution specified in the DirectFax user profile will be used.

*FILE indicates fine resolution (200 x 200 dpi).

*NORMAL indicates normal resolution (coarse, 200 x 100 dpi).

Create cover sheet (CRTCVRP)

Specifies whether a cover sheet is faxed.

*PROFILE (default) is ignored and the cover sheet is not faxed.

---

*YES specifies that a cover sheet is faxed.

*NO specifies that a cover sheet is not faxed.

Printer file for cover sheet (CVRPRTF)
This parameter is ignored. DirectFax supports cover sheets, maintained at general and user level in a member in the file ##COVER in the library DIRECTFAXF.

Send acknowledgement (SNDACK)
Specifies whether transmission and error message are sent to the user. *PROFILE applies the DirectFax system settings.

Acknowledgement type (ACKTYP)
This parameter is ignored. DirectFax sends only SNDMSG messages.

User ID (MALUSR)
This parameter is ignored. DirectFax sends messages only to the fax owner.

Addresse (MALADR)
This parameter is ignored.

Send time (SNDTIME)
The default value *CURRENT specifies that the fax has no time settings and is sent as normal. You can specify the earliest time at which the fax can be sent. If this is less than the current time, the fax is sent the next day unless a date has been specified.

Notes:
We recommend that you use this parameter only for exceptions. Use the SCHEDULE parameter to send at night instead. Night rates are a more flexible way to organise fax transmission and benefit from free system resources.

Send date (SNDDATE)
The default value *CURRENT specifies that the fax has no date settings and is sent as normal. You can specify the earliest date on which the fax can be sent. See also SNDTIME.

Document (DOC)
The name of the OfficeVision document to be faxed. Name are DOS format 8+3 characters (for example DOCUMENT.DOC).

Folder (FLR)
Specifies the folder containing the document to be faxed. A maximum of 80 characters is allowed.

Fax file and library (FAXFILE)
Not supported.

Fax member (FAXMBR)
Not supported.

Command to create fax (COMMAND)
Used in conjunction with the function *GENFAXSPL in the OPTION parameter to specify the command used to create the spool file to be faxed. A maximum of 500 characters is allowed.

Spool file to fax (SPLNBR)
The name of the spool file created by the command above.

Transform printer data stream (TRANSFORM)
Accepts only the value *NO. Directfax does not support Host Print Transform.

User-defined field 1 (USRDFNFLD1)
User-defined field 2 (USRDFNFLD2)
Enter information such as customer or order number. This information can be used to identify faxes in the Send status and History dialogs. A maximum of 20 characters per parameter is allowed. The fields are concatenated and saved in the field XCHPA in the file FAXSTAT. The first 30 characters are also printed in the DirectFax send log (DSPSNDSTS). 19 characters are displayed in the Send status and History dialogs.

*BLANK (default) passes an empty field.

5.11.3 Additional DirectFax parameters

You can execute the DirectFax SBMFAX and use F4 and F10 to display more than 20 additional DirectFax parameters.

These can be used to create landscape format faxes, overlay graphics and send faxes by e-mail.

E-mail address (EMAIL)
If DirectFax e-mail has been enabled and tested, allows you e-mail documents by omitting the fax number and entering a mail address instead. If both fax number and e-mail address have been specified, the priority setting in the mail configuration determines how the document is sent.

Page range: From page, To page (PAGERANGE)
Allows you to fax a page range from the spool file.

Delete spool file (DLTSPLF)
*YES specifies that the spool file is deleted after it is loaded to DirectFax. *NO leaves the spool file in the OUTQ.

Hold fax (HLDFAX)
*YES places the fax in the queue and sets it to *HLD. The fax remains in the queue until it has been reviewed and released by a user. *NO sets the fax to *Ready*.

Mix fax (MIX)
*NO (default) indicates that the DirectFax system value *Fax modem support* (*MIXALL)* determines how the fax is generated. *YES and *ALL apply only if a DCE fax box is in use.

Rotate fax 90° (ROTATE)
*NO faxes the document in portrait format. *YES rotates 90° and faxes in landscape format. Note that landscape documents have a limited number of lines. For a landscape page with 66 lines, set the LPI parameter to 9 and the CPI parameter to at least 17. Otherwise the lines do not fit with the page or characters overlap.

LPI (LPI)
Specifies the lines per inch. The default value is 6. The values 8 and 9 are also allowed. At 9 LPI and 17 CPI, a page can hold 72 lines.

CPI (CPI)
Specifies the characters per inch. The default value is 10. The values 12, 17 and 20 are also allowed.

Left margin mm (MARGIN)
This parameter is not usually entered. The default left margin is 15 mm. Enter a value to specify the margin in millimetres.

Log printer (OUTQ)
Specify a printer or an OUTQ if you want to print a log when a fax is successfully sent. *FAXPRF prints the log to the printer specified in the fax user profile. *NONE suppresses the print.

Form (FORM)
Allows you to specify a fax form. The DirectFax Form function mixes overlays with the spool text. It has separate controls for the first and following pages. Not to be confused with header and footer graphics. *FAXPRF specifies that the form in the fax user profile is used. *NONE specifies that no form is inserted.

Night job (SCHEDULE)
Allows to schedule night jobs conveniently. A maximum of 5 rate groups can be specified.

*YES Night rate 1

*NO   Normal, night rate not used

*SCD Scheduled (see SNDTIME, SNDDATE)

1   Night rates 1..5

*FAXPRF   Night rate as specified in fax user profile

Days and times (the periods in which the rates apply) can be defined with the command EDTTIMTBL.

Header: Logo, Text (HEADER)
Specifies a header logo other than the logo in the user profile or a whole-page overlay graphic. Header text is only supported with the DCE fax box.

Footer: Logo, Text (BOTTOM)
Specifies a footer logo other than the logo in the user profile. Footer text is only supported with the DCE fax box.

Cost centre (CST)
Allows you to specify a cost centre other than the cost centre in the user profile (5 characters).

User (USER)
Allows you to set a user other than the spool file owner. This user is the fax owner.

Sender CSI (CSI)
Specifies a sender CSI other than the one in the user profile.

Mix optimisation (OPTIMIZE)
This parameter is not currently supported.

Group send (GRPWAIT)
Allows you to specify a number of seconds. If group send (multiple faxes to the same recipient) is set to *ALL or *REQ in the DirectFax system values, this parameter defines the wait period for other faxes to the same destination.

5.12 Fax from InfoStore archive (Solitas)

You can select a spool file (SCS data stream) for faxing with option **7=Fax** from the InfoStore archive query. You are prompted to enter the fax number or e-mail address and for cover sheet information.

There now follows a description of the DirectFax interface for faxing from the InfoStore archive on the AS/400 or iSeries.

The current version can fax normal SCS spool files from the archive. TIF files are not yet supported.

5.12.1 InfoStore configuration

Use the InfoStore command **EDTEFSDFT** to set the parameter *User exit for option 7=Fax* on page 3 to the program name **FAXEFSARC**.

If you have defined the index field **FIRMA** in the InfoStore archive and want to use it to control the fax parameters, you can find the **internal field number** as follows (you will need this number in the next section):

ADDLIBLE EFS

WRKARCD

Option 8=Enter index fields before archive.

Option 5=Enter displays before FIRMA field.

Note the "Internal field number" values.

5.12.2 DirectFax configuration

There are two ways to control the faxing process.

1. Using the **archive ID**

2. Using the **company number** or **company name**

The Hotline can help you set some of the parameters at the beginning of the program **FAXEFSARC** in the file **QCLPSRC** in the library **DIRECTFAX**.

If you want to work with the archive ID, set the parameter **&NRFIRMA** in the source file to **0** (zero).

If you want to use the second control option, set the __internal number__ for the index field FIRMA, noted earlier, in the **&NRFIRMA** parameter.

Then compile the source file with option 14 or CRTCLPGM. The **destination library** is **EFS**. Note that the library **EFS** must contain the latest version of FAXEFSARC/*PGM. You should also back up the **FAXESARC source** to one of your libraries so that the changes are not lost during the next DirectFax update. The object **FAXEFSARC** in EFS may be removed if you install a new version of **InfoStore**. If this happens, use CRTCLPGM to create it.

The **company logo** specified by the archive ID or the company number/name must be included in the **WRKFAXGRF** command. The graphic name begins with #. Then enter the archive name (e.g. #ARCHIV1) or the company number/name (e.g. #1 or #TMS).

The **fax parameters** are created with the command **WRKFAXPAR**. The entry name begins with #. Then enter the archive name (e.g. #ARCHIV1) or the company number/name (e.g. #1 or #TMS).

A parameter definition in **WRKFAXPAR** might look like this:

```
 4.03.05  10:40:22       Work with DirectFax fax parameters        SES
                                                                   Page  1
 Enter data and confirm or scroll forward

 Name or parameter definition . . . . . .  FPNAME  DEMO         Name
 Definition description . . . . . . . . .  FPDESC  Example MIX QUER with Graphic
egung FEIN NACHT
 Use definition YES, NO, TEST . . . . . .  FPACT   J            J, N, T
 Lock override for application. . . . . .  FPOVRP  _            J
 Send user message YES, NO . . . . . . .   FPMSG   _            J, N
 Identical copy of serial fax . . . . . .  FPCPYX  _            J
 Fax dial up Nbr . . . . . . . . . . . .   FPDIAL  _____
 Key (KA-, KD-, Supp.-number) . . . . . .  FPKEY   _____
 Internal key number . . . . . . . . . .   FPINTN  _____
 Use Standard graphic from profile  . . .  FPDFT   N            J, N
 Mixfax  : BLANK=No,M=MIX,A=MIXALL  . . .  FPMIX   A            M, A
 Landscape (90°rotation)  . . . . . . . .  FPROTA  _            J
 CPI/Char. per inch . . . . . . . . . . .  FPCPI   __           10, 12, 17, 20
 LPI/Lines per inch . . . . . . . . . . .  FPLPI   _            6, 8
 Resolution FINE  . . . . . . . . . . . .  FPFINE  J            J
 Log printer/OUTQ  . . . . . . . . . . .   FPOUTQ  _____   Name
                                                                   +
 F3=Exit    F5=Refresh   F12=Cancel
```

0020 - Fax parameters page 1

Use *Page up* to open page 2:

```
 7.03.05  10:01:45       Work with DirectFax fax parameters        SES
                                                                   Page  2
 Enter data and confirm or scroll forward

 Name or parameter definition . . . . . .  FPNAME  DEMO


 Fax in Hold/Preprint . . . . . . . . . .  FPHOLD  █            J, V
 Send prior.  N(ight), B(Quick), 1-5 Rate FPNIGH  N            N,B,1,2,3,4,5
 Send date . . . . . . . . . . . . . . .   FPSDAT  _____
 Send time . . . . . . . . . . . . . . .   FPSTIM  ____
 Differ. user name . . . . . . . . . . .   FPUSER  _____
 Cost center . . . . . . . . . . . . . .   FPCST   DEMO2
 Infotext . . . . . . . . . . . . . . . .  FPINFO  _____
 Addressing . . . . . . . . . . . . . . .  FPPA    _____


 Key field programm (LIB/PGM) . . . . . .  FPKEYP  _____
 Control parm.    page 1, line 1 . . . . . FPCOD1  ¬gBESTELL(1,1)¬Q(1,1)¬LM3¬F001
1
 Control parm. from page 2, Line 1  . . .  FPCOD2  ¬Q(1,1)¬LMN¬gBESTELL(1,1)¬Q(1,
1)¬LM3¬F0011
                                                                   +
 F3=Exit    F5=Refresh   F12=Cancel
```

You can use F6 to create a new parameter definition. The parameter FPACT should always be set to Y=Yes (active).

Most of the parameters are self-explanatory. However, the following require some explanation:

Infotext (FPINFO) for CSI
Allows you to set a different CSI for the company. This is a 20-character text string. It appears in the Sender field at the top left of the fax banner. If nothing is entered, the default CSI is used.

Personal addressing (FPPA) for margin settings
This field can be used to set the left margin. If nothing is entered, the default value 15 mm is used Enter a 2-digit, left-justified value (e.g. 05 or 20) to change the margin. Negative values truncate the print file even if the range contains characters. Avoid using negative values.

These parameters are not supported
FPOVRP, FPCPYX, FPDIAL, FPKEY, FPINTN, FPDFT, FPMIX FPKEYP, FPCOD1, FPCOD2

5.12.3 Prepare cover sheet

You can add a cover sheet to faxed documents.

Use the command EDTFAX edit the cover sheet ##COVER in the file ##COVER in the DIRECTFAXF library.

5.12.4 Fax from archive

You can select a spool file for faxing with option **7=Fax** from the InfoStore archive query. You are prompted to enter the **fax number** and for cover sheet information. You can use F9 to display additional parameters.

You can specify an **e-mail address** instead of the fax number. For information on configuring and testing the DirectFax e-mail function, please refer to chapter 17 in this document.

5.13   API FAXMBR as replacement for the IBM fax service with SNDDST

While OfficeVision/400 was still running under OS/400, the IBM fax service remained usable. OV/400 documents were sent by SNDDST to a server which faxed them to the recipient specified in the document.

DirectFax now provides an API that replaces this service. This works by passing a member generated from the OV/400 document to the DirectFax program FAXMBR1.

To enable it, simply replace this command:

```
SNDDST TYPE(*DOC) TOUSRID((FAX IBMMAIL)) +
    DSTD(&MEMBER) CFMDEL(*YES) USRID(FAXUSER +
    DERKASF3) DOC(&MEMBER) FLR(SNDFAX)
```

with this one:

```
ADDLIBLE DIRECTFAX POSITION(*LAST)
MONMSG CPF2103
CALL PGM(FAXMBR1) PARM(' *LIBL' FAXELOG +
    &MEMBER '010')
```

The parameters in CALL FAXMBR1:

1. Source file library

2. Source file name

3. Member name

4. Feed to first line after header logo (3-character)

Member header

```
/BA

/FROM      Sender name

/FAX       345405591908        C=31

/MAIL      hotline@toolmaker.de

/TO        Recipient name

/REF       FX123456

/SUBJECT P U R C H A S E   O R D E R

/EA
```

Process:

FAXMBR1 analyses the address data in the member header (/BA.../EA) and prints a list to the OUTQ DIRFAXPRT. The /MAIL parameter is optional. It can be entered in addition to or instead of /FAX.

Line 1 of the spool file contains the ^FAX control line, including fax number, recipient etc. DirectFax monitors the OUTQ and sends the spool file as a fax to the outgoing fax queue (display with WRKFAXSTS).

Additional control line parameters can be added from the parameters in the command CHGDFIPAR F4 F10, for example ^NACHT1 ^CPI12 ^HLGO(LOGO1).

The program FAXMBR1 and the print file DIRECTFAX should be in the library DIRECTFAX. The fax overflow line can be changed with CHGPRTF DIRECTFAX/DIRECTFAX F4.

Source program FAXMBR1

If changes have been made to FAXMBR1 in DIRECTFAX/QRPGSRC, please send the source to the Hotline. Ensure that you back up the changed source file to another library. The changes will otherwise be lost the next time DirectFax is upgraded.

5.14 Monitor alternative OUTQs

Previous versions of DirectFax could monitor only the **OUTQ DIRFAXPRT**. A new function has now been added that allows you to monitor all other OUTQs and send the spool files with DirectFax.

This was provided in response to an application that produced multiple spool files with the same name and attributes. Only printer or OUTQ could be varied. Because all SPLFs had the same attributes, Autofax could not have been used without the new function.

Sequence
The table of contents for the monitored OUTQ is checked once per minute. When the OUTQ status is RLS, the **form type** or user data parameters are **changed** for **all** spool files found and the spool files are **transferred to** the **OUTQ DIRFAXPRT**. The changed form type allows Autofax to distinguish between otherwise identical SPLFs.

Requirements
The alternative OUTQs must be created with **CRTDEVPRT** in the library **QUSRSYS** and cannot be associated with an active print program. **All** spool files are processed, including those on hold. There is no selection. The OUTQ must have the status **RLS**.

Setup
An OUTQ to be monitored by DirectFax can be created as follows:

```
CRTDEVPRT DEVD(Name) DEVCLS(*VRT) TYPE(3812)
          MODEL(1) ONLINE(*NO) FONT(11)
```

For *Name*, specify a unique **unit name**. This name is also used as the name of the OUTQ.

Warning: The monitoring function does not work with OUTQs created with the command CRTOUTQ.

The names of the OUTQs and the **form type** and **user data** parameters are specified in the new **file FAXOUTQ** in DIRECTFAXF. The command for maintaining this file is **WRKFAXOUTQ**. Example of an entry in the file FAXOUTQ:

```
OUTQ Name  . . . . .    DIRFAXPRT2

To Formtype  . . . .    DFP2_____
To USRDTA  . . . . .    _____
```

This example monitors the OUTQ DIRFAXPRT2. All SPLFs are changed to DFP2 with the parameter FORMTYPE and moved to the OUTQ DIRFAXPRT. There they are processed by Autofax.

Before you can process a spool file from this type of OUTQ, you must first manually change the form type for a **template spool file** to the new type. This is a one-off job. Then create the **Autofax definition** and import the template file. After doing this, the form type is then automatically changed in a live environment.

DirectFax must be restarted with **ENDDIRFAX RESTART(*YES)** after setting up this function.

6.0 Extended functions for fax dispatch

Warning:
These **mix functions** described in this section are not available to DirectFax Lite customers. However, some mix techniques are used internally to fax via modem.

6.1 Mix faxes and forms

DirectFax's "MIX FAX" function allows you to combine graphic elements and a large range fonts in text documents. You can print predefined forms (scanned letter heads) together with text:

- You can print predefined forms (for example scanned letterheads) together with the fax text
- You can change fonts with the ^F control codes
- You can use special characters
- You can create tables using tabs (^t instruction)
- You can draw lines and boxes (^B instruction)
- You can switch between portrait and landscape formats (^Q instruction)
- You can print diagonally with the ^Q() instruction
- You can insert logos. Unlike "normal" faxes, logos can overlay lines of text in mix faxes
- There are a range of instructions for optimising the mix process for serial faxes
- You can insert TIF files

6.1.1 Set as mix fax

This option is required only if you are using the old DCE fax box. Otherwise all faxes are treated as mix faxes (MIXALL).

The function is activated by **^MIX** or **^MIXALL** in the first document line**.** Unlike ^MIX, **^MIXALL** formats the fax so that the header and footer logos specified in the fax user profile are included on each page of the fax.

The following options are available for mix faxes:

6.1.2 Insert form (^FORM)

With the **^FORM(xxx)** instruction, you can overlay the fax text with a predefined form, where xxx is a maximum 8-character form name. Forms are created with with the command **WRKFAXFRM**. Forms can contain graphics, lines, boxes or text constants. For more information on maintaining forms see chapter **MAINTAIN FORMS (WRKFAXFRM)**, PAGE 178.

6.1.3 Select font (^Fxxxx)

DirectFax supports over 20 fonts. Fonts supported include **Courier** at 10, 12, 15, 17 and 20 CPI (fonts 0011, 0085, 0223, 0256 and 0280), and **proportional fonts** with point sizes ranging from 2103 to 2115. Two symbol character sets are also supported.

You ca use **^CN** to restore the default font for a fax at any time.(^CN stands for **CPI normal**).

The following are some of the **fonts** available for mix faxes.

You can display a list of all fonts available in DirectFax with the command WRKFAXFNT.

`Courier 10 CPI (^F0011)`

`Courier 12 CPI (^F0085)`

Courier 15 CPI (^F0223)

Courier 17 CPI (^F0256)

`Courier 20 CPI (^F0280)`

Helvetica 6 Points (^F2115)

Helvetica 6 Points Bold (^F2112)

Helvetica 10 Points (^F2105)

Helvetica 10 Points Bold (^F2110)

Helvetica 12 Points (^F2114)

Helvetica 12 Points Bold (^F2113)

Helvetica 16 Points (^F2106)

Helvetica 16 Points Bold (^F2111)

Helvetica 24 Points (^F2104)

Helvetica 24 Points Bold (^F2109)

Bookman 10 Points Bold (^F2107)

Bookman 16 Points Bold (^F2108)

Bookman 24 Points Bold (^F2103)

Symbols (♑☌♑♒♒♋♌☿♓□◻) 10 Points (^F2200)

Symbols (♎⚔♑♒℮♄&⚱⚸□■) 16 Points (^F2201)

Making text larger or smaller is no problem

no problem either

Overview:

Command (^Fxxxx)	Font
^F0011	Courier 10 CPI
^F0085	Courier 12 CPI
^F0223	Courier 15 CPI
^F0256	Courier 17 CPI
^F0280	Courier 20 CPI
^F2103	Bookman 24 points bold
^F2104	Helvetica 24 points
^F2105	Helvetica 10 points
^F2106	Helvetica 16 points
^F2107	Bookman 10 points bold
^F2108	Bookman 16 points bold
^F2109	Helvetica 24 points bold
^F2110	Helvetica 10 points bold
^F2111	Helvetica 16 points bold
^F2112	Helvetica 6 points bold
^F2113	Helvetica 12 points bold
^F2114	Helvetica 12 points
^F2115	Helvetica 6 points
^F2200	Symbol 10 Points
^F2201	Symbol 16 Points

Note
If there is an error in the font code or a selected font is not available, DirectFax issues a warning and continues using the current font.

Translation tables

The following are tables for standard fonts and symbols showing hexadecimal values.

Table	4	5	6	7	8	9	A	B	C	D	E	F
0		&	-	ø	Ø	°	µ	¢	ä	ü	Ö	0
1		é	/	É	a	j	ß	£	A	J	÷	1
2	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	{	ë	[	Ë	c	l	t	.	C	L	T	3
4	à	è	À	È	d	m	u	ƒ	D	M	U	4
5	á	í	Á	Í	e	n	v	@	E	N	V	5
6	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	ñ	~	Ñ	`	i	r	z	¾	I	R	Z	9
A	Ä	Ü	ö	:	«	a	¡	¬	-	1	2	3
B	.	$	,	#	»	°	¿	|	ô	û	Ô	Û
C	<	*	%	§	ð	æ	Ð	‾	\	}	\	]
D	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	+	;	>	=	f	Æ	þ	´	ó	ú	Ó	Ú
F	!	^	?	"	±	¤	®	_	õ	ÿ	Õ	

	4	5	6	7	8	9	A	B	C	D	E	F
0		📖	⬀	⬂	➢	⊞	✇	●	➚	✓	⊠	📁
1		⬆	⬃	⬄	⬅	℮	←	●	⬆	☺	⬆	📂
2	↓	⬇	☽	⬆	♌	⅋	♦	◎	⬆	☹	◆	📄
3	✿	⬉	☾	✄	♍	●	♦	⬆	☝	☺	❄	📄
4	→	➡	☽	⬆	♎	○	◆	③	☞	●	✝	📄
5	↑	⬋	☽	⬆	♏	■	❖	☜	☜	☠	✚	📧
6	⬉	⬊	⬆	♐	♐	□	◆	☆	☞	♪	✜	⌛
7	⬋	⇐	⬆	⬆	♑	□	⊠	⊕	☝	☞	✠	⌨
8	←	⬈	⬆	✻	♒	☐	◹	⊕	☟	✈	✡	🖱
9	⇑	℘	⬆	♊	♓	□	⌘	⊕	✋	☼	☾	🖱
A	☝	⮌	⬆	💻	★	✦	○	✳	⬆	⊕	✧	⍤
B	☚	⮎	⬆	✂	◷	⊞	◷	✿	⇕	✗	⬆	℃
C	💾	✉	🔔	▪	⇨	⬂	☿	✲	ॐ	"	ॐ	✺
D	☎	◑	♉	🌡	⊠	◔	🎧	□	⇓	▫	☾	▲
E	✉	▭	☺	💾	⬈	⬆	☑	◈	⇔	▫	♐	∀
F	✎	♈	✍	✂	⊕	⊙	✺	♉	⬂	⊞	⊠	

And here's how it's done: Select a symbol from the second table. Remember the coordinates (← = A1) and take the symbol to be used from the first table (A1 = ß). Then write in the text : ^F2200ß).

6.1.4　Change line spacing (^Lx)

You can set the line spacing (lines per inch/LPI) for different fonts using the **^L1** to **^L9** variables, or set automatic line spacing with **^LA**.

When laying out text, note that the DirectFax editor sets line spacing to match the font at the **start of the line**. If you use larger fonts later in the line, they may overlap the previous line. For this reason, always specify the largest font in a line at the start of the line. You can then proceed to use the font you require. Example:

^F2104^F2105This all to ^F2104your satisfaction,..........

6.1.5　CPI settings with proportional fonts (^CFx)

Fonts 2103 to 2115 are **proportional fonts** which may cause visual confusion if used in conjunction with right-justified **numeric tables** because the characters and digits are different sizes.

This problem is resolved with a range of CPI commands. These **fix** proportional fonts to a specified width, allowing precision layout and justification.

The following **CPI fixing commands** are available:

- **^CFxx** (CF01..CF99) specifies the number of pixels per character
- **^CFA** adjusts pitch automatically

^CFN　returns to proportional font width

6.1.6　The Position command (^P)

The **^P** command positions the virtual cursor at the specified point in the text. The command inserts the text following to the required position in the fax. The following options are available:

- **^P(xxx,yyy)** positions the cursor to the X,Y coordinates in millimetres (X=column in mm, Y=line in mm)
- **^P(*,yyy) ^P(xxx,*)** positions in unchanged (*) column/line
- **^PS** saves the current cursor coordinates for later use
- **^P(S,S)** positions to the column/line saved with ^PS
- **^P(N,yyy) ^P(xxx,N)** positions to the last specified column/line

Example
^PS^P(50,150)This text begins at coordinates 50/150 mm.

^P(S,S)This text begins at the position saved with "PS".

Note
If there is an error in the code or a selected position is not available, DirectFax issues a warning and continues using the current position.

6.1.7　Line and box commands (^B)

Use these commands to insert a range of lines and boxes in any thickness to create paragraph highlighting and other effects. The command syntax looks like this:

^B(x1,y1,x2,y2,LT,LD)

    x1/y1 The coordinates of the top left corner of the line or box

    x2/y2 The coordinates of the bottom right corner of the line or box

    LT   The line type (1..8)

        1 _____

        2 ___ ___ ___ ___ ___

        3 __ __ __ __ __ __ __

        4 _ _ _ _ _ _ _ _ _ _ _ _ _

        5 . . . .

        6 _ ___ _ ___ _ ___ _ ___ _

        7 _ __ _ __ _ __ _ __ _ __ _

        8 .. ..

    LD   The line thickness in pixels (1..99)

Example 1
^B(30,50,170,50,1,8)

draws a horizontal, unbroken line of thickness 8 (approx. 1 mm) from coordinates 30 mm from left and 50 mm from top to coordinates 170 mm from left and 50 mm from top. Note that for lines, the two Y coordinates (horizontal) or the two X coordinates (vertical) are identical.

Example 2
^B(30,50,170,200,5,3)

draws a finely dashed rectangle of thickness 3. The first coordinates (top left corner) are 30 mm from left and 50 mm from top. The second coordinates (bottom right corner) are 170 mm from left and 200 mm from top.

Note
If there is an error in the code or the coordinates are incorrect, DirectFax issues a warning and does not execute the command.

6.1.8   Tabs (^t)

The default tab grid is 9 tabs at intervals of approx. 1 inch from the left margin. The tabs can be changed and reset with the following control codes:

Standard tabs are:
-                 TAB1 at approx. 15 mm
-                 TAB2 at approx. 38 mm

- TAB3 at approx. 60 mm
- TAB4 at approx. 83 mm
- TAB5 at approx. 105 mm
- TAB6 at approx. 128 mm
- TAB7 at approx. 150 mm
- TAB8 at approx. 173 mm
- TAB9 at approx. 195 mm

Valid ranges for tabs:

- Portrait: 1 - 200 mm
- Landscape: 1 - 300 mm

ERRMSG(69) occurs and the tab remains unchanged if you specify an invalid tab.

ERRMSG(70) occurs if you attempt to jump to an invalid tab. This can only happen when changing from portrait to landscape format.

Examples

- **^t5(*)**   Set tab 5 to cursor position
- **^t3(N)**   Set tab 3 to default
- **^t2(mm)**   Set tab 2 to millimetre position
- **^t(21,52,83,,,129)**   Set tabs 1-9 to millimetre position
- **^tN**   Set all tabs to default value

Use these controls for tab jumps:

- **^t1 - ^t9**   Jumps to tab 1 / 9
- **^t***(blank)*   Jumps to next tab right
- **^ttt(blank)**   Jumps *n* tab right

Examples

- ^t4   Jump to tab 4
- ^t   Jump to the next tab right
- ^tttt   Jump 4 tabs right
- ^t5(*)   Set tab 5 to current cursor position
- ^t5(N)   Set tab 5 to default position
- ^t5(156)   Set tab 5 to 156 mm
- ^t(21,67,83,,,120)   Set tab 1 to 21 mm, tab 2 to 67 mm, tab 3 to 83 mm and tab 6 to 120 mm. The other tabs remain unchanged.
- ^tN   Set all 9 tabs to default values

Continuation line

If you type **^+** at the end of a line, the following line is treated as a continuation line. No line feed.

6.1.9   Landscape (^Q)

Text in landscape format. The **^Q** command switches to landscape format or back. Except at the beginning of the first page, it inserts a **page break**.

6.1.10 Rotate (^Qx)

Rotates text. Use the **^Q*** command to rotate the text that follows by 90 degrees. Use **^QN** to return to the centre of rotation after rotating text with **^Q.**

You can also use **^Q(x,y)** to specify XY coordinates for rotation. For example, ^Q(150,10).

6.1.11 Left margin (^LMx)

(Left margin). Use the control **^LMxxx** to set the left margin to xxx mm. **^LM*** sets the margin to the current cursor position. **^LMN** sets the margin to the default width.

6.1.12 Notes on mixing graphics

Whichever method you choose to mix a graphic into a fax, the creator of the fax must ensure that there is sufficient space for it.

If you mix a form graphic such as a delivery note with the spool data, it will need to be justified in the same way as printing to a preprinted form.

Justification can be as simple as positioning the graphic. With complicated forms however, it can be considerably more complex matching the text to the graphic.

If your fax is distorted at the right and bottom margins between text and graphic, you will need to create a new form. To do this, you could calculate the maximum vertical and horizontal distortion in the original fax and use a PC graphic editor to drag and compress it.

6.1.13 Position graphics in a mix fax ^gLOGO(x,y)

You can position logos and other graphics anywhere on the page by specifying the **coordinates**. For example **^gLOGO(100,150)**. This example positions the top left corner of the graphic at 100 mm horizontal (X axis) and 150 mm vertical (Yaxis). These coordinates apply to A4 pages.

Note:

Note that the top left corner of a graphic (for example a company logo in the middle of the page) may include white space to the left of the logo itself, so that the graphic does not appear to be centred. To correct this, you could create a copy with the graphic editor, and use the *Move* function to remove the white space, thereby centring the graphic on the page.

When working with mix faxes, all logos are converted to the object type ***USRSPC** and stored in the library DIRECTFAXF. This is done **automatically** the first time you use a graphic in a mix fax, which takes some time. It is not required for subsequent faxes.

If a logo is **changed**, the USRSPC object is automatically replaced. USRSPC objects normally allow high-performance processing.

6.1.14 Insert/attach TIF files (^ATTACH)

Documents archived as TIF format graphics can be processed directly by DirectFax. Insert the following command anywhere in the text:

```
^ATTACH FOLDER/SUBFOLDER/FILE.TIF
```

^ATTACH always inserts a page break. The TIF-file is imported from the named folder, unpacked, scaled and inserted as a DirectFax graphic to the mix fax.

6.1.15 Improve performance with serial faxes

Advertising faxes must be high quality and sent in large numbers. The high quality requirement means using graphics and varying fonts, which place a heavy load on iSeries resources and performance.

On older machines, mixing time can be longer than the time it takes to actually send the fax. If the program is required to mix for two or more fax lines, available line time may not be fully exploited.

The following are two methods of improving performance.

6.1.15.1 Mix optimisation (^OPT)

Mix optimisation is particularly effective for documents that contain a large number of **text constants**. In most cases, only the address and the salutation are variables. The advertising text is a constant and forms the body of the fax.

Coding
Activate **mix optimisation** by placing **^OPT(Name)** in the first text line of the advertising fax. The name must conform to iSeries naming conventions. The maximum length is **8 characters**. This name is used for the work files and USRSPCs created by the mix program in QTEMP.

Process
Optimisation begins with the second fax with the same name in the OPT code. DirectFax compares the fax content (fax 1 with fax 2, fax 1 with fax 3 etc.) line for line. Identical lines are marked as constants and mixed. Only the variable elements require mixing. Documents without the OPT code can be processed without influencing the optimisation process. If a line previously marked as a constant changes in a new fax, it is set to variable and mixed in subsequent faxes. This lengthens mixing time somewhat, but no user intervention is required.

Restrictions
There are a number of restrictions in the optimisation process. Variable lines must be pure text lines. They cannot be overlaid with graphics or lines. The last constant line before a variable line cannot contain any font changes that affect the variable line. In other words, font changes using ^Fxxxx must be within the variable line itself. We recommend that you send at least optimised 3 test faxes to internal numbers to check that these restrictions have not produced any problems in your finished faxes.

Note:

Mix optimisation is not recommended for documents with few constants, because the time required for optimisation may exceed its benefits. Use mix optimisation only when there is a clear benefit.

6.1.15.2 Premix (PREMIX/^PRE)

If you create **night faxes** several hours before they are due to be sent, the time prior to the actual transmission can be utilised effectively by the mix process. The faxes can then be sent at full transmission speed.

Coding
PREMIX defaults for all documents can be set with the command **CHGFAXVAL.** For single documents, use the **^PRE** code in the first text line of the document.

Process
The premix process does not interfere with faxes to be sent immediately. Priority structures ensure that mixing is not started until higher priority faxes have been sent. PREMIX is assigned priority 60 so that normal processing on the iSeries is not affected. The priority can be set by changing the value at position 79/80 of DIRECTFAXF/FAXDTAARA. The value "99" deactivates the function or entry of any value other than 60 corrects it.

Note:
You can suppress the premix function for the current session by running the command CHGFAXVAL and setting the PREMIX parameter to *NO. The mix program validates this function once per mix process.

Test fax
Always send a **test fax** to check that your document layout is as you intend and to ensure that nothing is distorted.

6.1.16 Reducing memory for PC serial faxes (COPYFAX)

You can **optimise memory use** on the iSeries for identical serial faxes created on the PC. Assuming approximately 100 KB per fax page, a serial fax containing 10,000 pages would require 1 GB on the iSeries for several days. COPYFAX can reduce that requirement to less than 10%. To use this function, serial faxes must be **identical**. Faxes are not identical if each contains a different salutation. The memory usage cannot be reduced with COPYFAX at this point.

Activate the function by entering "**C**" at position **87** in FAXDTAARA and then restarting DirectFax. If you then create a serial fax with a **call distributor group** on the PC in which all faxes are **identical**, a full fax is generated on the iSeries for the first fax only. For all other faxes, DirectFax generates only header records of approx. 1 KB per fax in the file FAXSTAT.

When you send serial faxes, DirectFax temporarily duplicates the first fax for the fax currently being processed and deletes it once it has been successfully sent. Faxes not successfully sent must be deleted manually. Because it is required for all others, the first, or reference, fax in the series cannot be deleted.

6.2   Control codes in the fax text

Control codes beginning with the **^** character (hex '5F') allow you to add a range of variables and functions to your fax text.

6.2.1   Control codes for date/time etc.

DirectFax control codes can be placed in fax text as placeholders for current system values like date and time. Each code begins with **^,** followed by "**U***x*", where *x* is one of the following variables:

^UD	Creation date in format DD.MM.YY
^UT	Creation time in format HH:MM:SS
^UA	Salutation (personal addressing) in serial faxes
^UN	Internal fax sequence number
^UC	Internal CSI identification
^UX	Text field from the fax user profile (for example for the user name if maintained in the profile as it should appear in the fax
^UM	Name of the member/spool file from which the fax document was created
^UF	Fax recipient If an address book entry was selected, ^UF will contain the key and the fax number, otherwise only the fax number is displayed. (ie: PETERS/0405591908). Note that the coding is determined at creation time and subsequent changes have no effect.
^UR	Subject line from the fax text description (applies only to the DirectFax editor commands EDTSNDFAX and WRKSPLFAX). The subject is stored in the field XCHREF in the file FAXSTAT.
^UE	The sender's e-mail address from the EMAIL parameter in the fax user profile

Ensure that lines containing control codes are long enough to hold the variables inserted.

6.2.2   Attribute codes (fonts, highlighting etc.)

You can insert control codes that alter the appearance of the fax in the fax text. The fax control codes can also be used to manipulate and format data produced by application programs. Lists, invoices, orders etc. can be formatted using these attribute codes. Every code begins with '^' (hex 5F) followed by an alphabetic or numeric character.

^C0	Start 10 CPI (characters per inch)
^C2	Start 12 CPI
^C7	Start 17/20 CPI (approx. 18.5 CPI)
^CN	Return to standard CPI (global fax CPI)
^L6	Start 6 LPI (lines per inch)
^L8	Start LPI 8
^LN	Return to standard LPI (global fax LPI)
^U1	Start underline

^U0	End underline
^B1	Start bold
^B0	End bold
^R1	Start **r**everse
^R0	End reverse
^PA	Page feed
^S0	Suppress skips (^NOSKIP)
^S1	Resume **s**kips (^SKIP)

Restrictions: A change of pitch from 17/20 to 10 or 12 CPI cannot be revoked with ^CN.

The special functions **^S0** or **^NOSKIP** support compression of large documents containing many blank pages or lines. This reduces transmission time and paper use. This code must appear in the fax text. When faxing spool entries with **WRKSPLFAX**, you can use F6 "Enter cover letter" to create a cover letter called NOSKIP, a single line containing the value ^NOSKIP in upper case characters. You can then use ^S1 or ^SKIP in the fax text to turn off ^NOSKIP.

Note
These codes are not printed or faxed.

6.2.3   Control codes for address code data fields

All data fields in the address code file can be retrieved with the **^&Field name** (^ = X'5F') code in the fax text. This is useful for serial faxes and advertising campaigns. Example:

^&!kanam1   ^&KAKURZ> /^&%KAINTN

^&KANAM2

^&KASTR

^&>KALKZ ^&+>"-" ^&</KAPLZ ^&KAORT

Dear^&KAPA" Sir or Madam,"

In addition to the data parameters, you can also use the following **control characters**.

WARNING: These control characters are not supported on the PC.

!   Insert data without displacing the line content

>   No filler after data (right-justified)

<   Data left-justified (for example for post codes)

%   Suppress leading zeros (zero = 0)

/   Suppress leading zeros (zero = blank)

-   Ignore parameter, if the previous line contained data

+   Insert parameters, if the previous line contained data

"..."   Constant data between "..." replaces empty field

The control characters can be appended to the field name or set between & and the field name. For "..", they must be appended to the field name. Examples:

^&!KANAM1 or ^&kanam1!

There must be at least one space between the parameter and the text that follows it. Field names are not case-sensitive.

Dear^&KAPA" Sir or Madam,"

This example places the constant between the quotes ".." if the data field KAPA is empty.

^&>KALKZ ^&+>"-" ^&</KAPLZ ^&KAORT

This interesting combination works as follows: **^&>KALKZ** retrieves the country code. **>** ensures that the data that follows (e.g. post code) is right-justified without spaces. The + in **^&+>"-"** checks the previous data field (KALKZ) for a value. If the field is empty, the – constant is inserted, otherwise nothing is inserted. **>** right-justifies the entry. **^&</KAPLZ** retrieves the zip code. **<)** left-justifies it and / suppresses leading zeros. **^&KAORT** retrieves the city from the data field KAORT. Depending on whether a country code was available, the processed line looks as follows: D-22111 Hamburg or 22111 Hamburg.

The following is a list of all data fields in the address code file:

KAKURZ	Record key, address code, k004712
KAMCD	Search term, matchcode
KAINTN	Internal record number (important with duplicates)
KANAM1	Name
KANAM2	2. Name line
KAAP	Contact
KASTR	Street
KAPLZ	Post code
KAORT	City
KALKZ	Country code
KAVORW	Area code
KATEL	Phone number
KAFAX	Fax number
KAKENN	CSI (verification code)

KAPASalutation

KAFID   KAFID   records

KAPRIV   User name (user ID) for private addresses

KAADRS   Type P/G (private/group)

KAADRG   Address group name

KAAINF1   Additional information field 1

KAAINF2   Additional information field 2

For serial faxes, you can create a call distributor group when importing data from an external database to the address code file.

For processing the **international area code** a field containing the country code (auto code) is expected. According to the contents of this field the **area code** is determined from the DirectFax country code file. However, if the country code field contains the international country code, the numerical content is prefixed to the fax number.

6.2.4   Graphic codes for signatures, logos etc.

^gNAME
In addition to the default headers and logos from the user profile, you can also insert other graphics. Do this by inserting control codes in the text. The syntax is **^g***XXXXXXXXX* where *X* represents the name of the graphic. Note that the **g** is lower case while the graphic name is upper case. Example:

Best regards

^gREGARDS

The user must be authorised to use the graphic. The authorisation can be user-specific or general access (*PUBLIC). For details on maintaining rights, refer to the section "Manage logo/graphic rights".
With the exception of mix faxes (MIXFAX), inserted graphics always fit to the **full page width**. Variable text can be sent with the graphic only in mix faxes. Graphics can of course include scanned text.

Graphic codes in OfficeVision documents should only occupy a single text line. The OfficeVision Editor might otherwise insert expected page breaks. Always allow enough space after the code for a graphic by inserting the necessary number of empty lines. See chapter *Notes on the fax document format* (CHAPTER 4.3.1, PAGE 24). and *NOTES ON MIXING GRAPHICS* (CHAPTERS 6.1.12 PAGE 98)

Other control codes for graphics:

Note:
The following codes (HLGO, BLGO, HLGOF, BLGOF) must be entered in the <u>first text line</u> of the document.

^HLGO(header logo)

This code disables the default header logo from the user profile and inserts the graphic named between the brackets.

^BLGO(footer logo)

This code replaces the default footer logo.

Note:

Header and footer <u>text</u> is ignored in mix faxes. Only logos are allowed.

^HLGOF(header logo next page)

By default, the same header logo is used on all pages. This code allows you to specify a different header logo starting at page 2. Set ^HLGOF(*NONE) to suppress header logos from page 2. ^HLGOF(Name) inserts the header logo *Name*.

^BLGOF(footer logo next page)

By default, the same footer logo is used on all pages. This code allows you to specify a different footer logo starting at page 2. Set ^BLGOF(*NONE) to suppress footer logos from page 2. ^BLGOF(Name) inserts the footer logo *Name*.

6.2.5   Control codes for fax release (^SIGN)

Some companies and government agencies require documents to be signed by 2 authorised signatories. DirectFax supports up to 3 authorised signatories.

To activate the release function, enter the code **^SIGN(Name)** at the location in the fax text at which you want the signature to appear. To use ^SIGN, the fax user profile must contain the name of a signature graphic. Use **^FREE(Name)** if you do not maintain signature graphics.

The fax is sent to the queue with the status *HLD release expected* and preprinted if a log printer is specified. You can suppress the preprint by entering "A" at position 88 in the FAXDTAARA data area. Having reviewed the fax, the user specified in brackets (not the creator of the document) can release it with option 6.

^SIGN1(NAMEA) ^SIGN2(NAMEB) ^SIGN3(NAMEC)

^SIGNx() with a digit (x=1..3) sets the release sequence. Signatory 2 cannot release the fax before signatory 1, and so on.

^SIGN(NAMEA) ^SIGN(NAMEB) ^SIGN(NAMEC)

If the number is not used in ^SIGN, the sequence of releases is irrelevant. A maximum of 3 names can be specified. Names used twice are counted as one name. The function is not executed if you specify 4 or more names. Instead of inserting a graphic, ^SIGN(Name) inserts ?SIGN(Name) into the text.

At each release, DirectFax inserts the **signature graphic** specified in the signatory's user profile at the location of ^SIGN in the text.

Release is with **option 6** in the fax queue (WRKFAXSTS). Waiting faxes are identified using the fax status. These faxes are displayed at the beginning of the queue. Option 6 opens a window displaying the signatory's name and prompts for release. If the user is not authorised for release, the input fields are locked.

A **substitute** can be designated if one of the authorised signatories is unavailable. The signature graphic of the person actually authorising the release is inserted. N=No retains the graphic of the original signatory. Fax release cannot be revoked. Authorised users can however set the status HLD in the usual way with option 3.

Rationalised signature release for iSeries faxes in WRKFAXSTS with *SIGN and option 66

The function ***SIGN** has been added to the command **WRKFAXSTS** to facilitate the release process for iSeries faxes with the status **HLD release expected*.

*SIGN instead *ALL in the User field displays only faxes for which a release is required from the current user.

The user can start the release process with option **66**. The fax content is displayed as with option 5. F12 or Enter displays the next screen. The fax can be released in this screen as with option 6.

A new switch has been added that suppresses preprint for faxes waiting for a ^SIGN(Name) release. Set position 88=A in FAXDTAARA to suppress the preprint even if a printer has been specified.

Signature release for iSeries faxes on the PC client (PREMIX)

iSeries faxes with the status **HLD release expected* generally do not contain graphics because the graphic to be added depends on the release signatory. These faxes are difficult to read on the PC, making life difficult for the reviewer.

DirectFax's new PREMIX process is designed to rectify this problem by rendering such faxes legible. When the fax is released and the signature graphic assigned, the mix process is repeated before the fax is sent.

To use the premix function, set "Premix for all faxes" to ***REQ** or ***ALL** with the command **CHGFAXVAL** and F4. *NO suppresses the premix function.

Warning: The PREMIX process has a <u>low priority</u>. It is executed only if no other FAXMIX job takes priority over it. It is a good idea to plan some time for PREMIX into your work schedule.

Fax user profiles and signature graphics

To use **^SIGN**, all users with signature rights must have a DirectFax user profile with a **signature graphic** entered in the **ULOGO** parameter. **Substitutes** for authorised signatories must be entered with F6 in option 8 in the user profile. The substitute must have signature authority **SGN** = **X**.

^FREE(Name)

This function is similar to ^SIGN except that no signature graphic is inserted.

^SIGN

This code, without name and brackets, inserts the signature graphic specified in the profile for the current user (fax owner). The same effect can be achieved with ^gUNAME. For use with standard, non-critical documents.

^SIGN(*CURRENT,X,Y)

This variant of the ^SIGN code combines graphic insertion with X/Y positioning. *CURRENT specifies the current user, or fax owner. The following combination can also be used: **^SIGN2(COURTNEY,110,*)** inserts the signature for the user COURTNEY 110 mm from the left margin in the current line (*) after COURTNEY has released the fax as the second signatory.

6.2.6   Control code for security (^EXC)

The code ^EXC in the **first** text line of a document gives the owner exclusive rights to that document. The last 4 digits of the fax number are hidden in the fax queue. Access to other users, including *FAXOPR and QSECOFR, is denied.

QSECOFR can delete the fax with the command RMVFAXMBR if required. No log is printed.

The log printed after the fax has been successfully sent is defined by the user. Note that others may be able to view the spool file or printout if a log printer has been specified.

Faxes protected with ^EXC are deleted from the file FAXE immediately after dispatch. Standard faxes are held in the file for several days (see also ^RET0).

6.2.7   Control code for saving disk space (^RET0)

RET0 Retain=0, saved for zero days. Use this code in the **first** text line to delete a fax immediately after it has been successful sent. With advertising faxes, this can free an enormous amount of memory. Note that the disk space is not physically available until the files FAXE and MIXT4P are reorganised during the midnight restart.

6.2.8   Control code for sender identification (^CSI)

The sender ID (CSI) is set with the command CHGFAXCSI and transmitted with every fax. If *SYSVAL is retained in the fax user profile, the CSI also appears in the fax header.

You can also insert the code **^CSI(Identification)** in the first line of the document to overwrite the default CSI from the user profile.

When this function is used, the standard CSI should contain the international fax number ("+49 40 5591908").

7.0 User tasks for fax dispatch

The fax status can be displayed and manipulated both before and after dispatch.

7.1　Manage outgoing and sent faxes

Outgoing faxes can be viewed and processed on an iSeries terminal or on a PC. The rights required are maintained in the fax user profile (see the *Restrictions* parameter).

7.1.1　Work with send status on an iSeries terminal (WRKFAXSTS)

The command **WRKFAXSTS** allows you to view the fax queue and history. In most cases, fax entries cane be accessed only the owner. Exceptions to this rule can be maintained with the command WRKFAXPRF(*Work with fax user profiles and rights).*


```
                    Work with DirectFax status (WRKFAXSTS)

 Type choices, press Enter.

 Faxes for user . . . . . . . . . .   *ALL        Name, *ALL, *, *SIGN
 Department . . . . . . . . . . . .   *ALL        Name, *ALL, *
 Number . . . . . . . . . . . . . .   *ALL
 Recipient  . . . . . . . . . . . .   *ALL
 Options  . . . . . . . . . . . . .   *NEW        *OLD, *NEW
 Position to    . . . . . . . . . .   *TOP        *TOP, *BOT
 View . . . . . . . . . . . . . . .   *STATUS     *HISTORY, *STATUS




                                                                    Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

0022 - WRKFAXSTS parameters

The command WRKFAXSTS has 7 parameters.

Faxes for user (USER)
Specifies whether all available faxes or only faxes for a specific user are displayed when the program is started. The value * defaults to the current user. ***SIGN** displays only faxes for which a release is required from the current user (the ^SIGN function).

API/display   fax   from   application:
The command *WRKFAXSTS USER(FX#0034567)* starts the status display and positions at fax sequence number 34567. An IBM 3489 terminal is required to display PC faxes with WRKFAXSTS. Both sent and unsent faxes are displayed. This function is useful with **applications** that can read the fax ID (sequence number) from the file FAXSTA14 **Application Key** to display the status with WRKFAXSTS.

Department (GROUP)
Specifies whether all available faxes or only faxes for a specific user group are displayed when the program starts. User groups are maintained with the command WRKFAXPRF. User group names must begin with "$". For more details, please refer to WORK WITH DIRECTFAX USER PROFILES AND groups (WRKFAXPRF), PAGE 152.

Number (DIAL)
Specifies whether all available faxes or only faxes to a specific number are displayed when the program starts. Only figures are compared. The entry is treated generically. Only fax numbers greater/equal the entered value are displayed.

Recipient (NAME)
Specifies whether all available faxes or only faxes to a specific recipient are displayed when the program starts. You can specify partial names to include all recipients containing the string entered. The recipient name field is filled if you use an address code to send, or if you select option 8=Send options to specify a recipient in *Work with DirectFax send status*.

Options (OPTIONS)
This parameter is intended for users who have worked with DirectFax Version 1. It allows you to work with the new SAA option lists or to specify ***OLD** if you are more comfortable with the Version 1 options.

Start position (START)
The sort sequence in *Work with DirectFax send status* is similar to that in WRKSPLF. The display is organised into 3 groups: group 1 displays faxes currently being processed, group 3 displays faxes on hold and group 2 displays all other faxes (night rate groups) sorted by sequence number.

START(*TOP) positions at the beginning of the fax queue. with **START(*BOT)** positions at the end.

View (VIEW)
The parameter **VIEW(*STATUS)** displays either "current", unsent or deleted faxes. **VIEW(*HISTORY)** displays all sent or deleted faxes. You can toggle between these views with F11 in W*ork with DirectFax send status*.

The command WRKFAXSTS or the corresponding option in the DirectFax User menu displays the following screen:

0023 - Work with DirectFax send status, view 1

The screen displays a list of pending faxes. The list is organised into 3 groups: group 1 displays faxes currently being sent, group 3 displays faxes on hold and group 2 displays all other faxes (night rate groups) sorted by sequence number

If a large number of entries are displayed, use the **Position to fax number** option to position the display on the required number. F18 positions at the end of the list. Sequence number 1 or F17 positions at the beginning of the list.

Selection criteria

The display header contains the following selection fields: **User, department, fax number, recipient**. The values entered in these fields are used for selection. The list will contain only faxes corresponding to these selection criteria. The selection criteria correspond to those of the WRKFAXSTS command described above. If no entries match the selection criteria, the display remains empty.

Note: The default maximum number of records searched when you enter selection criteria is 5000. You can change this with a 2-digit entry in data area FAXDTAARA position 124. The value '10' increases the number of records to 10000. Blank resets to the default 5000.

Fax status:

The transmission program status is displayed at the start of the list. Statuses are as follows:

ACTIVE
The transmission program is active and ready to send faxes in accordance with priority settings.

NOT ACTIVE
The transmission program is inactive. No faxes are sent. The program must be restarted with STRDIRFAX (menu option 1).

HOLD
The <u>entire</u> fax queue is held. The transmission program is active but nothing is dispatched. Use **RLSFAXQ *ALL** to release the queue. The command for setting to hold is **HLDFAXQ *ALL**. If DirectFax is terminated with ENDDIRFAX and then restarted, the hold status is automatically revoked. You can also use F13 (USRHLD) to set faxes for a specific user to HOLD. For details, see below.

RECIEVE
An incoming fax is being processed.

Terminating
The command ENDDIRFAX has been run. No faxes are sent. The transmission program is ended.

Restarting
The Restart function is active. The monitor program has interrupted the transmission program and is now attempting a restart.

Data displayed

Fax SeqNo

A unique sequence number for the fax entry. The number is assigned automatically by the fax program.

User
Name of the sender.

Next attempt
Date and time of the next scheduled send attempt.

Pty - Priority
The priority with which the fax is processed.

Send status
Displays the current fax status. Statuses are as follows:

Ready	The fax is ready for dispatch. If there are no time restrictions, the fax is sent in order of priority.
*HLD	The fax is **held** and will not be sent. The text following *HLD indicates the reason. If no text is displayed, the fax has been manually held by a user.
Verify	The fax is **held** because option "**V**"=Preprint or "**H**"=Hold was selected in the "Enter recipient" screen. The fax must be manually released after checking the preprint or viewing with option 5.
.......**USRHLD**	All faxes for a user have been held with **F13** (command HLDFAXQ Name). If the F13 was unintentional, use **F14** (RLSFAXQ Name) to reverse it. Use **F20** for details on the user and time.
!MAX	The fax has been held after 20 unsuccessful attempts to send and cannot be released with Reset. Most users release *HLD status faxes without looking into the reason they are on hold. This parameter forces to user to examine the status and make corrections if required. A limited number of further attempts are now allowed.
Preparing	The fax is being prepared by the fax server. The transmission program then receives a start order and the status changes to "iSeries to box". 3-5 faxes can display this status simultaneously. If a fax retains this status for longer than 10 minutes, there may be a problem with the transmission program.
iSeries to box	The fax is being passed to the DCE fax box.
Send pending	The fax modem is attempting to dial the recipient's number. This status is maintained until an error occurs (for example no connection) or until shortly before the transmission process ends.
Sending	The fax modem has connected, received the recipient's CSI and is sending data. After successfully sending, fax is removed from the fax queue and displayed in the history view.
Mix request	A **mix fax** is currently being processed. Mixing is started **automatically** if the fax is due or if the PREMIX function has selected it. On completion, the status changes to "Ready".
Mix job in JOBQ	Fax is queued for mixing.
Mix job active	A mix fax is being created.

Mix warning	An **unexpected error** has occurred during the mix process (e.g. line feed or a missing font). A message is sent to the user (DSPMSG user name). The fax can still be released with option 1 or deleted with option 4. Incomplete mix faxes may be empty, incomplete or contain layout problems. The reason must be clarified in any case!
Busy	The recipient's fax was busy. The configured number of repeat attempts are made, after which the status is set to *HLD.
Invalid ID	The recipient ID does not match the verification code. The fax cannot be sent to this recipient.
Transmission error	Parity checks occurred during transmission.
No connection	A connection could not be made. The recipient's fax device may be faulty or the fax number is incorrect. Check the number by dialling it from a normal phone. If you hear the typical beeping sound, the number is valid.
Line error	Possible causes may be: bad line quality, the iSeries is overloaded and slow, or the job priority is too low. Note that the fax may have been only partially transmitted. Check the file FAXHIST (DSPFAXHST) to determine whether the problem is with the transmitting or receiving device. If the problem recurs, call the Hotline.
No dial tone	Technical problems with the fax line (provider or exchange). If all faxes display this status, check the cable connection from the fax box to the phone socket (TAE6). If the error occurs only occasionally, either not enough external lines are available, or you may need to configure a dial pause (P/W) for outside lines (analog modems only).
Recipient incompatible	The recipient fax device is incompatible. The recipient device is a phone or an answering machine.
^gLOGO error	One or more graphics (for example signatures) have been used without authorisation. Display the fax with option 5 and search "**?g**". Identify and resolve the problem, delete and create a new fax. Graphics are not sent with faxes with this error.
^SIGN/FREE error	The required signature release function can not be executed because one of the named users has no signature graphic entry in the ULOGO parameter in their user profile. Proceed as described for the ^gLOGO error.
Problem fax	A unidentified error has occurred**.** The status is set to *HLD. The transmission status is not identifiable. If this error recurs for a specific fax, the cause may be invalid graphic data or bad line quality. If the error recurs frequently, contact the Hotline.
Send problem/xx	The fax was not sent or partially sent. A temporary communication problem between the program and the fax modem has occurred, so the problem is not identifiable. The number(xx) identifies the box state prior to this error. **20**=Box began send attempt, **24**=Box received CSI identification.

Release expected	The fax is held and waiting for release by an authorised signatory. This status occurs if the fax contains the control code ^SIGN(Name). Faxes with this status are placed at the start of the queue.
Mail edit	The document is being edited and sent from the DirectFax mail program.
Mail error	An error occurred while sending the mail. Use option 8 to correct the mail address and release the corrected document.
GRP wait	The fax is waiting for the group fax function. After a defined interval, the fax is bundled with other faxes to the same recipient and sent as a group of faxes. The group wait delay is a system default set with CHGFAXVAL.
Empty fax	Transmission has been stopped because no text or graphics have been found. This is usually due to an error in the application used to create the fax.

Receiver formation

Displays the recipient's name, address code, salutation or fax number. The program decides which information is displayed. Fields are read in the order shown above. The first entry found is displayed.

F11 toggles the **view** to display the following columns:

```
11.04.05 07:36:13   Work with DirectFax send status            RENGEL
                                           Faxstatus: !!!  INACTIVE   !!!
   Position to fax number. . . _____    Department *ALL_____
   User selection  . . . . . . *ALL____    Faxnumber: *ALL_____
Enter selection and confirm                Recipient: *ALL_____  (Name)
    2=Edit          3=Hold     4=Delete    5=Display     6=Release      7=Image
    8=Send options  9=Print  12=Mail      16=Disp.+rel.  20=Mix export
    cur.   Last try      Cur/Tot Typ Pages
A  FaxNo  Date     Time Retries    Doc/Snd Pol Printer    Fax number
_     491 08.03.05  9:48 99    2 FAX   1        *NONE      00498191968100
_     517 30.03.05 12:37 99      SPL   1        *NONE      968100




                                                              Bottom
F3=Exit        F5=Refresh      F10=History    F11=View    F12=Cancel
F13=Hold user  F14=User release  F17=Begin    F18=End     F24=More keys
```

0024 - Work with DirectFax send status, view 2

Last attempt
Date and time of the last unsuccessful attempt to send.

Attempts current/total
The total current number of send attempts. This value is set to zero by manual HLD/RLS settings.

Type
The fax type or origin. The following list shows the valid types and whether they are modifiable:

FAX Created manually with the DirectFax editor (DFE). The fax text can be manipulated with option 2=Change.

OFC Created in OfficeVision with option 3. The OFC text can be changed with option 2=change. OFC documents faxed with the RUN instruction are converted to type SPL.

SEU Created with the Source Entry Utility, an IBM license program. The fax text can be changed with option 2=Change.

GRF A graphic fax created with option 1=Fax from WRKFAXGRF, Work with DirectFax graphics. No changes are allowed.

SPL A document imported from a spool entry. This may be a printed OFC document or any list from any OUTQ. Option 2=Change is ignored as there is no file or document available for direct access.

PCF A PC text file imported as a graphic. Only the fax number and priority are modifiable.

Pages doc/snd.
The number of pages transmitted. Displayed in two columns: the total number of pages and the number of pages sent.

Resolution
The resolution used to send the fax. **G=Coarse, F=Fine.**

Printer

Specifies the log printer. If set to *NONE, the log is not printed. You can change or delete the printer with the change option. If the fax was created by a PC user with DirectFax/PC, the device must be a PCL5-capable printer.

Fax number

This column displays the number to be dialled. This setting can be modified with option 8=Send options.

Options

1=Reset

Resets faxes set to Hold either manually or after repeated attempts to send. Further attempts are now allowed. Do not use Reset unless the cause of the problem has been resolved. Faxes marked with **!MAX**, indicating the maximum 20 repeat attempts, cannot be reset. In this case, change the fax number or delete the fax.

2=Edit

Option 2 allows available text be edited. Faxes created from spool entries, DirectFax/PC users or from OV/400 cannot be edited.

3=Hold

The fax is held until option 6=Release is selected.

4=Delete

Deletes the fax from the queue. In the **History** view, **F4=Delete** permanently removes sent or deleted faxes.

5=Display

Displays the content of the fax. Serial fax with control codes for data fields are displayed with customer/supplier data. PC faxes are not displayed.

6=Release

Releases a fax set to Hold.

7=Image

Allows you to view faxes created with DirectFax/PC on an IBM 3489 terminal.

8=Send options

Allows you to change send options such as recipient number and priority before the fax is sent.

9=Print

Prints the fax text.

12=Mail

Allows you to forward an outgoing fax by e-mail. Only available if the iSeries is configured as an e-mail server.

16=Disp. + rel.

This option is used for signature release (^SIGN) for faxes with the status "*HLD release expected". First use option 5 to display the fax content and then the signature release window (option 6). This option is designed for working with multiple faxes requiring release.

20=Mix export

Converts a mix fax to a DirectFax graphic. You can then use WRKFAXGRF to edit the graphic, for example to export it as a PC bitmap graphic.

30=Resend

Allows you to resend previously sent faxes in the History view. You will be prompted for send options. The following actions are available:

- **Enter**: The fax is released and resent.

- **F12**: The fax remains on hold in the queue.

- **Change**: Allows you to change the fax number and other parameters before sending with Enter.

Specific otpion for exceptions
66=view fax contents and release signature
88=reset MIX status to MIX requirement, because the graph was changed later.

Function keys

F3=Exit

Ends the fax status program.

F5=Refresh

Refreshes the display. If you are viewing the beginning of the fax queue, use F17 instead. F5 may distort the displayed data a little if used instead of F17.

F10=History

Displays sent or manually deleted faxes sorted descending by date. Only the options 5=Display, 7=Image, 9=Print and 30=Resend are available in this view. You can also search by from/to date. Option 30 is only available for faxes that have not been deleted.

The **content** of sent and deleted faxes can be viewed for at least 3 days before the data records are removed. Reorganisation is started automatically during the DirectFax-restart at midnight, and is carried out only once a day (even if DirectFax must be restarted repeatedly). The status *Display possible* indicates that fax content can be viewed. The status *No display* indicates that text and graphic data have already been removed. You can use CHGFAXVAL to change the period for which fax content is stored. Note that this requires additional disk space.

F11=View

Toggles the view to display additional information. Press F11 again to return to the original view.

F12=Cancel

Cancels the program.

F13=Hold user/USRHLD

Temporarily prevents processing of the current users fax documents (use F14 to release). All faxes for the user display the status **USRHLD**. This function is useful for making last-minute corrections before sending. Unfortunately this key may be pressed mistakenly when F3 was meant. Use F20 to validate which queues were held and from whom the status was issued.

F14=Release user

Releases a user fax queue set to **hold** with F13. See F13 above.

F17/18=Top/Bottom

F17 jumps to the **first page** of the fax queue and displays faxes matching selection criteria. **F18** jumps to the **last page** of the fax queue and displays faxes matching selection criteria. Use F17 rather than F5 to refresh the display if you are viewing the top of the fax queue.

F20=User status

Displays a list of all fax queues on hold. Used to check who set the fax queue to hold and when. See F13 above.

F21=Command line

Displays a command line. You can disable F21 for users and user groups in the fax user profile. The parameter is SECF21. For more information on disbling F21, see **FAX USER PROFILES AND** , PAGE 152.

7.1.2   Print unsent faxes

The command **PRTDIRFAX** allows you to **print unsent faxes in order to send them by post**. You can start the print with option 10 in WRKFAXSTS. When first called, the function prompts for the override definitions (printer, OUTQ, form type, CPI etc.) required for printing. These OVRPRTF definitions can be created with the command WRKOVRPRT (see menu GO FAXCNFG2). To print different fax types, end and restart WRKFAXSTS to enter the new OVRPRTF definitions.

7.1.3   Send statistics (DSPSNDSTAT)

These **statistics** allow you to check the **send success rate** by hour or day. Note that the statistics are compiled from DirectFax History entries, not from pending faxes. If no parameters are entered, the current date is displayed. With a multiline version, the success rate for each line is displayed, making it easier to identify modem errors. Running the command with F4 allows you to enter a range of selection and control parameters.

7.2   CHKFAX - Check DirectFax incoming and outgoing

You can include this command in the user startup program to check outgoing faxes for any errors requiring user intervention and to check for new incoming faxes. A range of control parameters designed to maximise user efficiency are available.

The command can be executed interactively from the FAX and FAXOPR menus, or as a batch job. The checks are run separately for each user. Messages and actions are displayed only if user intervention is required. An example of an action would be to automatically run WRKFAXSTS when user intervention is required.

```
                        Check FAX (CHKFAX)

Type choices, press Enter.


User . . . . . . . . . . . . . . .     *              Name, *
Signatures (Release):
  Test . . . . . . . . . . . . . > *YES            *YES, *NO
  When existing . . . . . . . . > *WORK            *WORK, *INFO, *MSG
Outstanding outgoing faxes:
  Test . . . . . . . . . . . . . > *HLD            *ALL, *HLD, *NO
  When existing . . . . . . . . > *WORK            *WORK, *INFO, *MSG
New incoming fax:
  Test . . . . . . . . . . . . . > *NEW            *ALL, *NEW, *ASSIGN, *NO
  When existing . . . . . . . .   *INFO            *WORK, *INFO, *MSG
Control program:
  Test . . . . . . . . . . . .    *NO              *YES, *NO
  If inactive . . . . . . . . .   *INFO            *START, *INFO, *MSG
Queue status:
  Test . . . . . . . . . . . .    *NO              *USR, *SYS, *ALL, *NO
  If hold . . . . . . . . . . .   *INFO            *RLS, *INFO, *MSG
                                                                    Bottom
F9=All parameters   F11=Keywords   F14=Command string   F24=More keys

Already at bottom of area.
```

0025 – Sample CHKFAX parameters for a fax user

```
                        Check FAX (CHKFAX)

Type choices, press Enter.


User . . . . . . . . . . . . . . .     *              Name, *
Signatures (Release):
  Test . . . . . . . . . . . . . > *no             *YES, *NO
  When existing . . . . . . . . > *info            *WORK, *INFO, *MSG
Outstanding outgoing faxes:
  Test . . . . . . . . . . . . . > *no             *ALL, *HLD, *NO
  When existing . . . . . . . . > *info            *WORK, *INFO, *MSG
New incoming fax:
  Test . . . . . . . . . . . . . > *no             *ALL, *NEW, *ASSIGN, *NO
  When existing . . . . . . . .   *INFO            *WORK, *INFO, *MSG
Control program:
  Test . . . . . . . . . . . .    *yes             *YES, *NO
  If inactive . . . . . . . . .   *INFO            *START, *INFO, *MSG
Queue status:
  Test . . . . . . . . . . . .    *all             *USR, *SYS, *ALL, *NO
  If hold . . . . . . . . . . .   *INFO            *RLS, *INFO, *MSG
                                                                    Bottom
F9=All parameters   F11=Keywords   F14=Command string   F24=More keys

Already at bottom of area.
```

0026 - Sample CHKFAX parameters for a fax operator

Check input values

*NO
The check will not be executed.
*YES
The check will be executed.

Outgoing fax *ALL/*HLD
*ALL checks if the user has faxes for sending. ***HLD** checks if there are any faxes on hold.

Incoming fax *ALL/*NEW/*ASSIGN
*ALL checks for incoming faxes for the user. ***NEW** checks for new, unopened faxes. ***ASSIGN** checks for faxes that have not been assigned to a user.

Queue *USR/*SYS/*ALL

Checks whether fax outqueues are on hold. ***USR** checks the user's queue only. ***SYS** is positive if the DirectFax transmission program is not allowed to send any faxes. ***ALL** checks whether any user queues are on hold.

Actions

The action specified for a check is started only if the result is positive. No action is initiated if the result is negative.

*WORK
Runs the program required to resolve the problem. This option is not available for batch jobs.

*INFO
Displays a message in the status line. Do not use this option for batch jobs.

*MSG
Sends a message to the user who ran the command. Use this option if you are running batch jobs.

*START
Starts DirectFax.

*RLS
Releases the outqueue.

7.3   Preprint and log print

The DirectFax **preprint** and **log print** functions produce 2 print files, **FAXVORAB** and **FAXPROTO**.

The print attributes on these files can manipulated using the CHGPRTF command. In addition, the **WRKOVRPRT** command (Work with overrides) offers a flexible method of intervening in the print process.

Preprints and fax logs that are not created from OV/400 or from spool files are printed with a 6 character displacement on the left margin to facilitate filing. Because of this, A4 laser prints must be printed with 12 CPI to prevent truncation of the right margin.

The **overflow line** is in this respect problematic, because the fax program inserts information lines (for example ^gLOGO1) and its own headings, which collide with the page break determined by OfficeVision or contained in the spool entry. To overcome this problem, the print program is designed to suppress **unnecessary blank pages or feeds**. However, this may result in the print being slightly distorted or the original spool attributes being ignored. The PRTF overflow is set to 65, not 66.

8.0 Fax receipt

The INCPRT parameter in the CFGDIRFAX command determines whether DirectFax accepts incoming faxes and how it distributes them. You can also use the incoming fax function in some cases to generate logos and signatures.

8.1 Notes on fax receipt

Fax receipt is quite a complex topic. It makes little sense, for example, to replace your standard fax device with the iSeries if you do not intend to take advantage of its electronic distribution options.

The **automatic** distribution of data opens a totally new catalog of questions and requirements (software and hardware) that need to be resolved in advance. Please refer to chapter 9 if you intend to implement these functions.

8.2 Fax receipt for terminal users (WRKINCFAX)

Incoming faxes receive a sequence number which is notified in a message. Technical data including date and time are stored in the file FAXINCH. Use the command WRKINCFAX (Work with incoming faxes) to list incoming faxes and enter a description of each fax.

Authorisation to work with incoming faxes

In the user profile, you can grant, revoke or limit a user's rights to work with incoming faxes. If the user does not have an individual user profile, the *ANY profile determines the rights applied. If the *ANY profile does not exist, the user is restricted to his or her own faxes. The authority for specific functions (such as deleting incoming faxes) can be set using option 8 in the WRKFAXPRF command. The same method is used for outgoing faxes).

When you run **WRKINCFAX** (Work with incoming faxes) or select the corresponding menu option, the following screen is displayed:

```
 10:18:54   7.03.05      Work with incoming faxes              SES

   Start at  . . . .:  _____                    Status: ALL  ALL, NEW, OPN
   Fax for user ID  : *ALL_____   Name, *ALL, *NONE   Dept .: *ALL_____
 Enter selection and confirm
    1=Fax      2=Change      3=Import graphic   4=Delete    5=Display
    6=Print    8=Attributes  9=Transfer        10=Notes    11=Archive ...
 Op  No.    User      Description             E-Date   Time  Sts Tgt.No.
 _   0000171            TOOLMAKER SOFTWAR *NOTE 15.05.03  9:36 OPN        1
 __  0000362            toolmaker SOFTWARE      31.03.04  9:44 NEW 109    1
 __  0000363            08:                     02.04.04  9:22 NEW 109    1
 __  0000364            08:                     02.04.04  9:51 NEW 109    1
 __  0000365            09:                     02.04.04 10:18 NEW 109    1
 __  0000366            09:                     02.04.04 10:33 NEW 109    1
 __  0000367            09:                     02.04.04 10:45 NEW 109    1
 __  0000368            08:                     13.04.04  9:47 NEW 109    1
 __  0000369            09:                     13.04.04 10:04 NEW 109    1
 __  0000370            09:                     13.04.04 10:55 NEW 109    1
 __  0000371                                    13.04.04 11:13 NEW        1
 __  0000372            10:                     13.04.04 11:44 NEW 109    1
                                                               More...

 F3=Leave   F5=Refresh   F6=Import graphic   F12=Cancel   F23=More options
```

0027 - Work with incoming faxes (WRKINCFAX)

The program displays a list of received faxes. Use page up/down to scroll through the list. You can also enter a number in the "Position to" field to go to that number.

WRKINCFAX *Work with incoming faxes* contains the selection field *Group/department*. Assuming that groups/departments are enabled in the DirectFax user profiles and that faxes have been assigned to users, this field allows you to limit the display to specific user/department groups.

Data displayed

Fax no.
The sequence number assigned by the system to the received fax.

User
The fax owner. New faxes have no owner. The owner can be assigned manually or automatically using the automatic routing function. (Chapter NOTES ON FAX RECEIPT AND DISTRIBUTION, PAGE 179). If the user assigning the fax works with an IBM 3489 terminal, he can display the incomimg fax prior to assigning it. The same functionality is available using the PC command WRKINCFAX (see chapter DISPLAY INCOMING FAXES , PAGE 311 Once assigned, the new owner's user profile is displayed in this column.

Description
A short description of the fax. TSI data (the transmitter identifier, usually the number) is displayed here. Enter the description directly after the fax identifier using option 2=Change. For example, this might be a description of a logo. If a note has been entered for the fax with option 10=Note, "*NOTE" appears after the description.

R date/time
Receipt date and time.

Sts - Status
An incoming fax can have one of two statuses:

- NEW - New, unopened
- OPN - Opened (printed, displayed)

Target dialling

Shows the received target dialling information. This is string including the digits 0-9 and the * and # characters. This information can be used for automatic distribution purposes. For more information, refer to the section on *Automatic distribution of incoming faxes.*

Pag- Number of pages

Displays the size of the received fax. 50 KB approximates roughly to an A4 page.

To process an incoming fax, enter an option in the left column.

Options

1=Fax

Sends the received fax to any standard fax device. You will be prompted for the fax number.

2=Change

Allows you to change the description.

3=Import graphic

Converts the received fax for use with DirectFax. The command TRFFAXGRF **(Load fax as graphic)** is used for this purpose. This function is described elsewhere (CHAPTER 6.12).

4=Delete

Deletes **graphic** data and the fax description. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Display

This function is available only to users of an IBM 3489 terminal. Displays the contents of the received fax.

6=Print(PCL/IPDS)

This option calls the command **PRTINCFAX** (Print incoming fax), which allows you to print the fax graphics on a PCL5 or IPDS printer. See below for more details.

8=Attribute

9=Forward

Assigns owner status for the incoming fax to one or multiple users. If more than one user is specified, the fax appears separately for each user in the display. Users are identified in the *User* column. Each copy also receives its own sequence number. Notes are not copied if any.

10=Note

Allows you to add a note to the fax.

11=Archive

12=Mail

Allows you to forward an incoming fax by e-mail. Only available if the iSeries is configured as an e-mail server.

Administrator   functions:
Option **90**=*Repeat distribution* allows you to repeat automatic distribution for an incoming fax. Useful for example if you have made changes to the distributor   list.
You can use option **91** to set a fax manually to OPN and option **92** to reset to NEW.

99=Rgs. - Reorganise
Reconstructs the fax T4 code if problems occur while attempting to load an incoming fax as a graphic to an IBM 3489 terminal.

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Load graphic

F12=Cancel

8.2.1   Distribute fax using the iSeries SNDINCFAX command

This command allows you to forward an incoming fax to any internal or external number. The fax is distributed "as is" to the number you enter. When you run SNDINCFAX and F4 or select option 1=Fax in WRKINCFAX (Work with received fax), you will be prompted for the following parameters.

Parameters

Number of the received fax(INCNBR)
Enter the internal sequence number of the fax.

Fax number (DIAL)
Displays the last number dialled. This can be confirmed or changed. This is usually the number of a nearby in-house fax device.

8.2.2   Print fax using the iSeries PRTINCFAX command

PRTINCFAX allows you to print an incoming fax on a PCL5 or IPDS printer. Response time can be unfavourable due to the high resolution (7,7 line/mm **x** approx. 8 column/mm) and due to the extensive graphic functions in OS/400. For this reason, always run this command in batch mode. Regular printing on IPDS printers is not recommended.

The **PCL5 log print** is available on all **iSeries mix faxes.** The PCL5 print produces an "as is" copy of the document.

Parameters

Number of the received fax(INCNBR)
Enter the sequence number of the incoming fax.

Printer (PRTDEV)
Enter the name of the printer.

Printer type (PRTTYP)
This parameter is defaulted to *PCL. *IPDS can be used if required, but can adversely affect system performance.

Note:
The printer specified must be capable of printing graphics. The connector type (Twinax, network, Y adapter, screen terminal connection, PC emulator, TCP/IP, print server etc.) may also negatively affect print quality. If any of the hardware or software components involved in the print process is incorrectly configured, the data stream may be printed as blank pages.

Place in JOBQ
Input options:

*YES   The command is executed in batch mode (recommended).
*NO   The command is executed interactively.

Job description (JOBD)
Name of the job description for batch mode. The job description may include the subsystem for data processing.

Library (LIB)
The library in which the JOBD can be found.

9.0 Administrator tasks

The actual **sending of a fax** executes as a background process. The FAXQ is checked regularly for new entries which are the sent via the fax modem.

9.1 Daily tasks

There are a number of tasks to be done regularly.

9.1.1 Start DirectFax (STRDIRFAX)

After entering the command **STRDIRFAX** (Start DirectFax), press F4 to prompt for command options. You can also run this command from the FAXOPR menu.

Notes:
DirectFax can be started **automatically** using the program entered in the QSTRUPPGM system value (usually QSTRUP). Only **STRDIRFAX** needs to be entered as all other parameters are defaulted to the previously entered manual settings. Note that the subsystem **QCMN** must be active when this command   executes.

The **automatic start** can also be executed using the command ADDFAXAJE, which in turn executes in **QBATCH** using the **JOBD(STRDIRFAX)** in the library **DIRECTFAX .**

```
                    Start DirectFax (STRDIRFAX)

 Type choices, press Enter.

 Priority of FAX control progra     20        20, area   : 10-70
 Run interval . . . . . . . . . .   10        10, area    : 05-30 seconds
 Factor for spooled file test . .   10        10, 0=no test,   area 01-95
 Factor for PC-Fax file test  . .   90        00, 0=no test,   area 01-95
 Start DirectFax monitor  . . . .   *YES      *YES, *NO
 End time (if inactive) . . . . .   000000    Zeit
 End time (finally) . . . . . . .   000000    Zeit
 Command at end . . . . . . . . .           _____


 Priority of dispatch program . .   10        15, area: 10-40
 Priority of SPL transfer progr     50        50, area: 20-90
 Priority of mix program  . . . .   50        50, area: 20-90
 Priority of PC transfer progra     50        50, area: 20-90
 Priority of EMail send program     50        50, area: 20-90
                                                              Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display       F24=More keys
```

0028 - Start DirectFax

Parameters

Fax control program priority (FAXPRTY)
A job priority of **20** is suggested. Values range from **10** to **70**. It determines the job priority compared with other jobs running on the system. The lower the value, the higher the priority. The user responsible for system management sets these values.

Run interval (INTERVAL)

A value between **05** and **30** seconds setting the interval at which the FAXQ is checked. The lower the value, the higher the system load. The higher the value, the longer it takes to send fast faxes. An interval of 10 seconds is recommended.

Factor for spool file test (FAKTOR)

A value between **0** and **95**. This value determines the interval at which the virtual print queue DIRFAXPRT is checked. A value of 0 means the interface is inactive and the queue is not checked. The factor determines the frequency with which the program checks for new faxes in the queue. Value 10 means that the queue is read every 10 program cycles. A factor is of 10 is recommended. For further information please refer to chapter „Fax SPOOL files automatically".

The factor also determines the frequency with which an active DFI (**DirectFax interface**) is referenced.

Factor for PC fax file test (PCFAKT)

A value between **0** and **95**. This value defines the validation interval for the interfaces to the PCs responsible for data transmission. A value of 0 means the interface is inactive and the file is not checked. The lower the value , the greater the load on the system. A value greater than zero is useful only if the optional software "PC Accessibility" is activated (special password and payment required). If required, a factor of 90 is recommended. Faxes transferred from a PC are loaded immediately via DTAQ. The check interval should therefore be large.

Start the DirectFax monitor (MONITOR)

The monitoring program is a function within the FAX CONTROL program. It checks the status of the transmission program and the fax lines. If the transmission program generates an error, the monitoring program can detect its state and intervene. See below for a description. The values allowed are *YES and *NO. *YES activates the monitor.

End time (when inactive)   (CHKTIME)
End time (final)   (ENDTIME)

Enter these optional parameters to end automatic fax transmission at a specified time. The time can be entered as a 4 or 6 digit number with or without separators (examples: 2000 or 20:00:00). In order to restart DirectFax, run the STRDIRFAX command.

There are two possibilities available to automatically stop the fax program : Two time parameters to automatically stop the fax program are available. **CHKTIME (End time when inactive)** sets the time at which the fax program ends when there are no faxes to be sent.

ENDTIME (End time final) sets a fixed time for the program to end. The following combinations are also possible:

CHKTIME + ENDTIME blank or 000000:

The fax program does not end automatically. Use the commands ENDDIRFAX or ENDSBS DIRECTFAX to shut down.

CHKTIME entered, ENDTIME blank or 000000:

The fax program ends automatically if no transmission requests are made within 8 hours of CHKTIME. (Use FAXDTAARA, positions 51-52 to default a value other than 08.)

CHKTIME blank or 000000, ENDTIME entered:

The fax program ends automatically at ENDTIME.

CHKTIME + ENDTIME entered and ENDTIME > CHKTIME:

The fax program ends automatically if no transmission requests are made in the period CHKTIME to ENDTIME. The program always ends at ENDTIME.

Note:
When CHKTIME is reached, at least 50 cycles (1 cycle approx. 10 seconds/STRDIRFAX parameter) must pass without transmission requests before the automatic end is executed. For this reason, the inactivity check is limited to about once every 10 minutes. (Use FAXDTAARA, positions 53-54 to default a different interval between 01 and 99 for special cases.)

End option (command) (ENDOPT)
Allows you to enter a maximum 256-character command to be executed after the timed transmission program end. Possible commands could be a MSG or SBMJOB command. The command is optional.

Transmission program priority (PTYSND)
A job priority of **15** is suggested. Values range from **10** to **40**. The transmission program loads directly to the fax modem and should not be manipulated in any way. The lower the value, the higher the priority. If the priority is too low, line and communications errors, including the "Host underrun" error, can occur. A priority of 10 may be necessary on chronically overloaded systems.

SPL loading program priority (PTYSPL)
A job priority of **50** is suggested. Values range from **20** to **90**. The SPL loading program validates the OUTQ DIRFAXPRT and loads text documents to DirectFax.

Mix program priority (PTYMIX)
A job priority of **50** is suggested. Values range from **20** to **90**. The mix program mixes graphics and text documents. It uses very performance-intensive MI routines for this purpose.

PC loading program priority (PTYPC)
A job priority of **50** is suggested. Values range from **20** to **90**. The PC loading program checks the DirectFax/PC interface and loads PC FAX graphics files to DirectFax.

Transmission program e-mail priority (PTYMAIL)
A job priority of **50** is suggested. Values range from **20** to **90**. The DirectFax e-mail server processes fax document to be sent by e-mail and passes the data to the iSeries API.

Configure fax box (CFGBOX)
This is an additional parameter used with the old DCE fax box. To view it, press F10 and page up.

When you enter the parameter and confirm with Enter, the fax transmission program is started as a background job.

Starting the DirectFax **subsystem** clears the DIRECTFAX job queue in the library DIRECTFAX with **CLRJOBQ**.

9.1.2　End DirectFax (ENDDIRFAX)

End DirectFax (ENDDIRFAX)

The command ENDDIRFAX terminates the DirectFax background transmission program. No transmission occurs until DirectFax is restarted with the STRDIRFAX command.

A delay of 60-999 seconds can be specified with this command. The default value is 120 seconds. This value allows transmissions currently being processed to complete. The end command is then passed to the program. The DirectFax subsystem is ended on completion of the wait period.

Note

This value should be set high enough to allow all jobs being processed to terminate normally. DirectFax can be also be terminated using the commands ENDSBS DIRECTFAX or PWRDWNSYS.

9.1.3　Monitor fax line (Monitor)

The monitoring program can be used to automatically monitor communications. It runs as a function within the fax control program and checks the status of the transmission program and fax modem at regular intervals. If the transmission program gets stuck in the ICFW status, the monitoring program can intervene and attempt to clear up the situation.

Activate the monitoring program by specifying ***YES** in the **MONITOR** parameter when starting DirectFax (STRDIRFAX).

After a monitoring program intervention, the fax status is changed to *HLD. If such problems recur frequently, you may have a **hardware** or **configuration error**. All components should then be checked thoroughly. Fax configuration should also be checked thoroughly. Ensure that other system components, such as dial-up connections, are not the cause of the problem. If this doesn't resolve the problem, call our Hotline 040-5591962).

9.1.4　Print send log/cost centre list (DSPSNDSTS)

The command **DSPSNDSTS** (Print send status) enables the **listing** and **clean up** of the DirectFax status file and the work file FAX. It prints a **cost centre list** and a **box statistics** for multiline configurations.

When you enter the command or select the corresponding menu option, the following list screen is displayed:

```
                   Print DirectFax dispatch log (DSPSNDSTS)

Type choices, press Enter.

Print from date  . . . . . . . .                    Datum
Print to date  . . . . . . . . .                    Datum
User . . . . . . . . . . . . . .   *ALL            Name, *ALL
Delete faxes? Archive/*ARC . . .   *NO             *NO, *DLT, *ARC, *YES








                                                                Bottom
F3=Exit    F4=Prompt    F5=Refresh    F10=Additional parameters    F12=Cancel
F13=How to use this display       F24=More keys
Parameter FROMDATE required.                                        +
```

0029 - Print send status

Parameters

Print from date (FROMDATE)
Enter the start date for the log entries. The date can be entered with or
without separators.

A **date** less than **40** is interpreted as 20xx.

Print to date (TODATE)
Enter the end date for the log entries. The date can be entered with or
without separators.

The format is the same as for "From date".

User selection (USER)
The default value ***ALL** can be replaced by a user name to log only faxes
sent by that user.

Delete faxes? Archive/*ARC (DELAFTER)
To delete status records after printing, enter ***YES**. The data in the file
FAXSTAT is physically deleted and cannot be recovered. However, disk
space is not freed until you reorganise with the RGZFAXFIL command. The
default value is ***NO**.

Note: The program contains a special function that clears all faxes **without** a send
        date from History if the parameters are set as follows.

```
FROMDATE 010190
TODATE   010190
USER     *ALL
DELAFTER *YES
```

The following additional parameters can be viewed with **F10**:

Phone cost per unit (COSTS)

Defaulted to the cost per unit. This value can be changed if required (see below).

Currency symbol (SYMBOL)
Defaulted to the currency symbol (for example EUR) for the cost per unit. This value can be changed if required (see below).

Send log

The **send log** contains the following information:

- the period in which the faxes were processed
- the fax sequence numbers assigned by the system
- the name of the user who sent the fax
- the address code and the name of the recipient
- the fax number or mail address of the recipient
- the salutation and/or subject
- the send date and time and the fax priority code

Transmission duration
The column "**ZT**" indicates the **transmission time in seconds**. The is the time from the beginning of the transmission to the box and the last confirmation message from the box. This value is higher if there are multiple send attempts, for example if the line is busy. **Total transmission time** in seconds is displayed at the end of the list.

Call units (call charges)
The column "TE" displays the **number of call units** if your equipment can receive Telecom charge impulses (Optional equipment! Only available with ISDN and a license).

Transmission speed
The column "**FaxG**" displays the **fax speed**, that is the transmission speed in **baud** " (bits per second). Most transmissions are at 14400.

If the **line quality is poor**, the transmission rate is **9.600** or **7.200**. Anything less than 9.600 indicates a transmission problem.

Assign the fax line
In multiline configurations, the number of the line that **last** transmitted the fax is displayed under "**B**" (=Box), to the right of the "**Pty**" column.

Cost centre list

The cost centre list contains the following information:

- The fax transmission **period**
- A **sum line** for each cost centre showing
  - Cost centre
  - Number of faxes
  - Send time in minutes
  - Number of call units
  - Fax costs
- **Transmission minutes in hours** below the sum lines

- The **cost per call unit**, including currency symbol

Unlike the send log, this list **cannot be limited to specified users**. The cost centre list contains all data for the period specified even if you print the send log for a specified user.

Default costs per call unit are stored as parameters in the command DSPSNDSTS. Execute the command using **F10** to display and change them. For a permanent change use this command:

```
CHGCMDDFT CMD(QUSRSYS/DSPSNDSTS)
    NEWDFT(' KOSTEN(O,O6)        SYMBOL(EUR)' )


CHGCMDDFT CMD(DIRECTFAX/DSPSNDSTS)
    NEWDFT(' KOSTEN(O,O6)        SYMBOL(EUR)' )
```

Box statistics

Box statistics are created only if the multiline version was active and 2 or more boxes were in use in the specified period. The list contains the following information:

- The fax transmission **period**
- A **sum line** for each boxes showing:
  - Box number
  - Number of faxes
  - Send time in minutes
  - Number of call units
  - Fax costs
- Transmission minutes in **hours** and **costs per unit**, including currency symbol, below the sum lines

Due to **rounding differences**, there may be some variance from the values shown in the cost centre list. These figures allow you to **compare line use**.

Send statistics (DSPSNDSTAT)

Another way to compare line use is to display send statistics with the command DSPSNDSTAT. Use this command to display line use by hour.

9.2 Data exchange by e-mail (SAVOBJPCD/RSTOBJPCD)

You can use the DirectFax command **SAVOBJPCD** to export an object, a group of objects or all objects in a library to a PC file in a shared folder. You can then attach this file to an e-mail.

The command **RSTOBJPCD** can be used to restore the PC file. This is a fast way to receive or send urgent program updates or other iSeries files using e-mail via the Internet. If you need help with this function, call the Hotline.

9.3 Fax name and address book

DirectFax allows you to create an address book for fax recipients. Names and fax numbers can be entered directly or imported from a user database file (see corresponding chapter in this manual).

DirectFax **address codes** provide a fast and convenient way of addressing faxes. You can enter address codes directly or select them from a list. You can also group addresses in call distributor groups. These are described in the section titled *Distributor groups* on page 138.

DirectFax address codes are available to all DirectFax users, whether they work on an iSeries terminal or on a PC. PC users can display, edit and delete address codes. The codes are maintained on the iSeries.

Whether iSeries terminal or PC, different possibilities in the administration of short addresses and the distributor groups are available. These are separated described in the following chapters for every user group.

Notes on the key field (double keys):
The addresses codes have a 15-character alphanumeric key field that enables **duplicate keys**. If the name Smith, for example, is used as key, it is unlikely that it will be unique.

Duplicate keys are distinguished by an **internal sequence number**. If you work with manual addresses, this means that you will have to select the correct address in a dialog. However, if you import the addresses from an external file (commands WRKUSRTRF and EXCUSRTRF), the sequence numbers are generated automatically. This can lead to problems with call distributor groups and the send log.

We therefore recommend that you **avoid using duplicate keys**. Instead use unique customer and supplier numbers with a prefixed ID) as keys. DirectFax will find an address code even if the internal number is different, but only if no duplicates are found. If you have any problems with this feature, contact the Hotline.

9.3.1   Working with address codes on an iSeries terminal (WRKFAXKA)

The command WRKFAXKA (Work with DirectFax address codes) or the corresponding option from the DirectFax User menu displays the following screen:

```
7.03.05  10:44:17          Work with DirectFax addresses              SES
                                          Select address group: _____
Position to address  . . . _____
Position to matchcode . . . _____

Enter selection and confirm
  2=Change   3=Copy   4=Delete   5=Display   7=Rename

   Adress             Name                   Del Zip   City
▌  k08001             Theo Schulze *DEMO*      D   89005 Bergisch Stumpftal
_  k99999             Toolmaker HOTLINE        D   22457 Hamburg
_  lkjhn              lkjh                     lkj kljh  lkjh
_  DEMO               DEMOFAX Empfaenger       D   86916 Kaufering
_  HOTLINE            Toolmaker HOTLINE        D   22455 Hamburg
_  Wiesner            Wiesner                  D   97772 Oberbach




F3=Exit   F5=Refresh   F6=Create   F12=Cancel
                              (c) Toolmaker Software GmbH 2005, Version 5.40b
```

0030 - Work with address codes

The screen shows a list of available address codes. Use page up/down to scroll through the list. The address code (key), name, post code and city are displayed. If you search in the "Position to matchcode" field, the first column changes from "Address code" to "Matchcode" and the list is sorted by search term.

Input fields and options

Position to address code
Use this field to position in the list of address codes. If previously the matchcode view was active the view switches to address code.

Position to matchcode
Use this field to position in the list of available search codes (matchcode). If previously the address code view was active, the view switches to matchcode.

Option (left input column)
Enter one of the following options in this column:

2=Change
The record is displayed in a new window and can be changed. This process is described later in more detail in chapter enter address code.

3=Copy
Copies the existing master record. The field values of the existing record are displayed in a further screen with the option to enter a new address code (search criteria).

4=Delete
Deletes the address code. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Display
Displays the existing record with fax recipient data in a new window.

7=Rename

Rename the address code. You will be prompted for the new name.

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Creates a new address code. This option is described in detail below.

F12=Cancel
Returns to the previous screen.

Enter address code

You can use F6=Create to create a new address code or option 2 to change an existing one. The following screen is displayed:

```
 7.03.05  10:44:45        Work with DirectFax addresses              SES

Enter data and confirm

Address group (key)   .  k99999                    Import path   DEMOPFAD1
Matchcode (search value)  TM-HOTLINE               Address grp.  _____
Name 1 . . . . . . . .   Toolmaker HOTLINE
Name 2 . . . . . . . .   _____
Street . . . . . . . .   Frohmestrasse 11 j
Zip/ city. . . . . . .   22457   Hamburg
Country. . . . . . . .   D    Deutschland
Contact person . . . .   _____
Title  . . . . . . . .   r Herr Woidt,_____
Additional Info 1 and 2. _____
                         _____

Country code (as info)              preferred. .  _        F=Fax
Area code  . . . . . .   _____                              M=Mail
Telephone number . . .   040-5591962
Telefax number . . . .   040-5591908     Checksum  /CSI _____
EMail address  . . . .   _____

F3=Exit   F4=Help   F5=Refresh   F12=Cancel
                         (c) Toolmaker Software GmbH 2005, Version 5.40b
```

0031 Change address code

Input fields

Address code
This is the master record key. It can be a name, part of a name or an abbreviation. It is important to prefix the code with a letter. The rest of the code can be characters or digits. 1-15 characters are allowed. Please note the comments on duplicate keys at the beginning of this section.

Imported from path XXXXX
Indicates that the data has been imported from a user file. Changes made here should also be made in the original file. If they are not, and the original file is imported again, changes will be lost

Matchcode
An alternative search option that allows you to search for surname, company name etc.

Name	**1**
Name	**2**

Street

Post code / City

Use these fields to enter the address information. The field "Name 2" is optional.

Country

The country code sometimes used for car registration plates. Used to prefix the fax number with a country code. New country codes must be added to the table. For more information, see "Working with country codes" below.

CSI

CSI is a transmission security feature. If a value is entered, transmission is only possible if the recipient CSI matches the one here. This function is not recommended.

Personal addressing

Allows you to enter a salutation (for example *Dear Mr Courtney*) for serial faxes. The salutation is included in the serial fax includes with the ^UA **control code**.

Personal address P/G

Manual addresses can be marked as personal/private. **Private addresses (P)** can be changed and used only by the owner. **Group addresses (G)** can be used by the owner and users authorised by the owner. This option is not available for imported entries. To convert an imported address to a private address, blank out the path name at the top right. (Use field exit for this purpose)

Dial

Country	code
Area	code
Phone	prefix
Fax	prefix

The "**Fax number**" field contains the actual fax number. This field can include the whole fax number including country and area codes. However, in terms of organisation, it is better to maintain separate fields.

The **area code** is taken from the field above. The country code is taken from the field described under "Address codes". To keep them legible, you can separate digits with the slash (/). The slash is ignored by DirectFax when dialling.

Function keys

F3=Exit

Exits the program.

F5=Refresh

Refreshes the display. Changes that have not been saved with Enter will be lost.

F12=Cancel

Returns to the previous screen. Unsaved changes are lost.

9.4   Call distributor groups

In DirectFax, you can maintain call distributor groups for **serial faxes** to multiple recipients. These are used to group fax numbers or address codes.

You can create a call distributor group when importing data from an external database to the address code file.

9.4.1   Work with call distributor groups on a terminal (WRKFAXKWG)

The command WRKFAXKWG (Work with DirectFax call distributor groups) or the corresponding option in the DirectFax User menu displays this screen:


```
 7.03.05  10:45:54           Work with address groups                SES
                                           Select address group: _____
Position to . . . . . . . . . . . . . . _____

Enter selection and confirm
  2=Change   3=Copy   4=Delete   5=Display   7=Rename

  Address group    Description
▌ #DEMO1           Example Adress group
















F3=Exit    F5=Refresh    F6=Create    F12=Cancel
```

0032 - Work with address groups

The program displays a list of existing call distributor groups. The name, beginning with "**#**", and a short description are displayed. Use page up/down to scroll through the list. You can enter a name in the "Position to" field to reposition the display.

Names beginning with **#PATH** have been generated automatically from user database records (command WRKUSRTRF/EXCUSRTRF). The text for these entries also begins with ***GEN**. Changes are lost if the path is refreshed.

You can select a group in the left column with one of the following options.

Options

2=Change
Allows you to change an existing call distributor group. This process is described later in more detail.

3=Copy

Copies an existing group. In a new window, the list of recipients for the group being copied is displayed, and you can enter the name of the new group.

4=Delete

Deletes a group. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Display

Displays a group.

7=Rename

Renames a group. You will be prompted for the new name.

Function keys

F3=Exit

Exits the program.

F5=Refresh

Refresh the display. Unsaved changes will be lost.

F6=Create

Creates a new group. This option is described in detail below.

F12=Cancel

Returns to the previous screen.

Enter address group

Use F6 to create a new address group or option 2 to change an existing group. The following screen is displayed:

0033 – Change address group

The name, the description and a list of recipients for the group is displayed.

Input fields

Recipient

In the recipient field, you can enter either a fax number or an address code. The fax number is used if no master record has been saved. To use short names, the name must be stored with an address and a fax number. If you do not know the address code, you can use F4 to display a list.

CSI (verification code)

Press F10 to display the CSI field. The field is not usually entered. If you want to check the recipients CSI before a fax is sent, enter it here. This value overrides any CSI entered for the address code. The values entered here are compared with the recipients CSI. If they do not match, the fax is not sent. Only use this function if required for security reasons. The digits on the right are internal record keys.

Personal addressing

Allows you to enter a salutation (for example *Dear Mr Courtney*) for serial faxes. The salutation is included in the serial fax includes with the ^UA control code.

Notes:

When you have entered the address codes or fax numbers, save the call distributor group. To do this, press Enter to validate the entries, then press Enter to save. Any errors must be corrected before the record can be saved. If you press F3 or F12, changes will be lost. It would be a good idea to remove an erroneous short address line, in order to save the other data.

Function keys

F3=Exit

Exits the program. Unsaved changes are lost.

F4=Prompt

Allows you to select address codes.

F5=Refresh

Refreshes the display. Changes that have not been saved with Enter will be lost.

F10=CSI

Switches to a 2-line display and shows the CSI field.

F12=Cancel

Returns to the previous screen. Unsaved changes are lost.

9.5 Import address data from other applications (WRKUSRTRF)

On many systems, there are existing databases containing **addresses, phone numbers** and **fax numbers**. You will no doubt want to use this data. With DirectFax, you can restructure and import this data without the need for any programming.

Note

The file containing the data to be imported must contain a **field description**. **IBM/36 files cannot be imported.**

The following describes how to define and use an import path for data from an external user file. This path can be used to update and import the data.

Use the command WRKUSRTRF (Work with user data transfer) to display this screen:

```
7.03.05  10:48:27          Work with DirectFax import path            SES

Position to . . . . . . . . . . . . . _____

Enter selection and confirm
  1=Execute   2=Change   3=Copy   4=Delete   7=Rename

  Path        Description                   File      Library   Rec.format
¦ DEMOPFAD1   Example                       KDDEMO    DIRECTFAXF KDDEMOF
_ FAX400ADR   FAX400 Adressen aus TTXADR    TTXADR    FAX401    TTXADRF












F3=Exit   F5=Refresh   F6=Create   F12=Cancel   F20=Delete path data
```

0034 - Work with DirectFax import path

A list of existing import paths is displayed. For each path, a name and description are shown. Each path refers to a record format in a database file. Use the "Position to" field to reposition the display. You can enter the following options in the left column.

Options

1=Execute
Imports from the user database file. Before the import, all existing records imported from the path are removed from the DirectFax master file.

With the import, you can create a **call distributor group** for use with serial faxes. You will be prompted to create a group. If you select *YES, a call distributor group is created with the name #PATH and the path name. For example, #PFADTEST. If the group already exists with the same name, it is overwritten. Existing groups are also deleted if you select *NO. Because the import changes record numbers, it would be unusable anyway. You can use F19 to submit the import as a batch job. For more information, see F19 below.

2=Change
Allows you to change the selected path. This is described in detail below.

3=Copy
Copies the path. You will be prompted for the new name. Records in the call distributor group from the path being copied are not affected. If required, they can be removed with the command CLRUSRTRF or F20.

4=Delete
Deletes the path description. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel. Records in the call distributor group from the path being copied are not affected. If required, they can be removed with the command CLRUSRTRF or F20.

7=Rename
Renames the path. You will be prompted for the new name. You can use F12 to cancel. Records in the call distributor group from the path being

---

DirectFax

copied are not affected. If required, they can be removed with the command CLRUSRTRF or F20.

Function keys

F3=Exit
Exists the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Creates a new import path. This is described in detail below.

F12=Cancel
Returns to the previous screen.

F19= Submit
This key is available if you have selected option 1=Execute and the call distributor group parameters are displayed. F19 submits **EXCUSRTRF** to the job queue as a batch job. You can also press Enter to execute the job interactively.

Note
The following is an example CL program that can be used to submit these jobs to for night processing. The example first updates the paths "hwtest" and "kddemo", then reorganises the files to remove deleted records.

```
PGM
MONMSG CPF0000
EXCUSRTRF TRFID(hwtest) KWG(*no)
EXCUSRTRF TRFID(kddemo) KWG(*yes)
RGZPFM FILE(DIRECTFAXF/FAXKA)
RGZPFM FILE(DIRECTFAXF/FAXKWG00)
ENDPGM
```

If error CPF4128 *Objects required for file FAXKAxxx not available* occurs, you can disable automatic file reorganisation by entering N at position 85 in the data area FAXDTAARA.

F20= Delete path data
Executes the command CLRUSRTRF" Delete imported user records" to remove records from the address code file. You can also delete records from deleted or renamed path descriptions. CLRUSRTRF does **not** affect the actual path description.

Define import path

Use F6 to create a new import path or option 2 to change an existing one. The following screen is displayed:

```
  7.03.05  10:49:00     Work with DirectFax import path            SES

 Enter selection and confirm

 Import path  . . . . . . . . . .  KDDEMO

 Description  . . . . . . . . . .  Customer Demofile

 Database file (source) . . . . .  KDDEMO

   Library  . . . . . . . . . . .    DIRECTFAXF

 Member . . . . . . . . . . . . .  *FIRST

 F3=Exit    F12=Cancel
                         (c) Toolmaker Software GmbH 2005, Version 5.40b
```
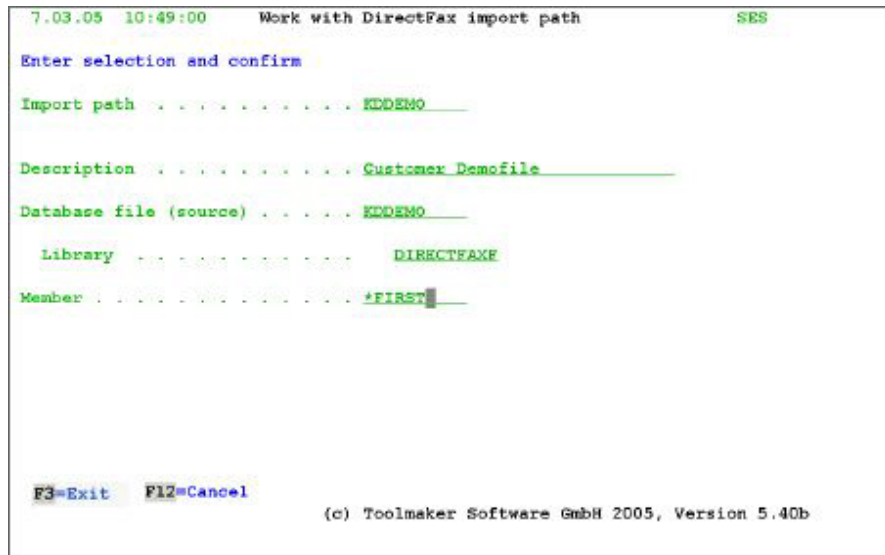
0035 - Import path file specifications

Parameters

Copy path
Name of path to be created (max. 10 characters). The name must be unique.
Alphanumeric characters are accepted. Use a letter as the first character.

Description
A description of the path.

Database file
The name of the physical or logical file from which the data will be imported
to the DirectFax address code file.

Library
The name of the library containing the database file.

Member
Name of file member containing the records to be imported.

The file is validated and a list of format names is displayed. Select using
option **1**. You can cancel at any time with F12.

Import path - select fields

When you select a format with option 1, the following screen is displayed:
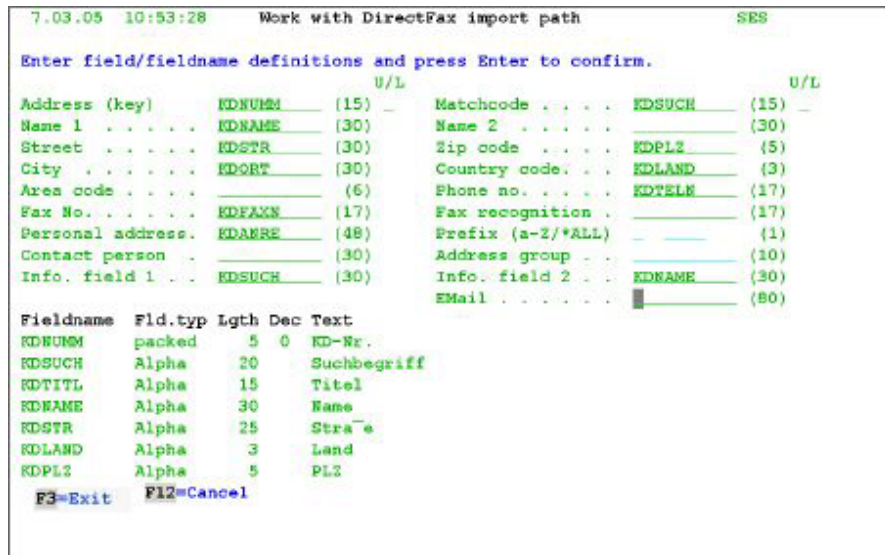
0036- Import path field entries

Use the upper half of the screen to map user file **field names** to the DirectFax master file.

The lower half of the screen displays a list of field descriptions for the selected file. Use page up/down to scroll through the list.

Input fields

Field lengths in the DirectFax master file are shown after the field description. Shorter fields mapped from the user file are left-justified. The remainder of the field is blanked out. Longer fields are truncated.

Address code (key) (15)
This is the key field for the **DirectFax address code file**. The key must be unique. Start with a letter to distinguish it from a fax number. Because keys in user files are usually numeric, this field is automatically prefixed with the letter k if a numeric field is specified for the user file.

Matchcode (15)
Enter an alphanumeric string beginning with the surname or company name. This value can be used as a search criteria.

U/L (Upper/Lower)
Allows you to convert the address code and match code key fields to upper or lower case. **U** converts to upper case. **L** converts to lower case. If nothing is entered, the case from the user file is used. Case conversion can also be done later with the command CVTADRKEY, described below.

Name 1 (30)
Name 2 (30)
Street (30)
City   (30)
Post code   (5)
Country code (3)
The field names and lengths here match those in most user files. The field "Name 2" is optional. The other fields are filled during the import.

Area code (6)

If the user file contains a separate field for the area code, it can be entered here. Most numbers include the area code, in which case this field remains empty.

Phone number (17)
Fax number (17)

Used to hold the corresponding alphanumeric fields from the user file. Special characters or spaces are ignored when dialling.

Fax CSI (17)

CSI is a transmission security feature. If a value is entered, transmission is only possible if the recipient CSI matches the one here. Most user files do not maintain this value. Even if the user file maintains this value, you will generally not want to use it.

Personal addressing (48)

Accepts the salutation (for example *Dear Mr Courtney*) text field if it is maintained in the user file For serial faxes, this field can be inserted into the fax text with the ^UA control code.

Prefix (a-Z/*ALL) (1)

Numeric fields (for example customer number) imported into the address code master file are assigned a **letter prefix** for the alphanumeric key field. You can define that letter here. **a** to **z** and **A** to **Z** are allowed. If nothing is entered, **k** is assumed.

If you include ***ALL** after the letter, it is prefixed to all address code and matchcode key fields. You might use this function to group customers and suppliers separately.

Use ***KEY** to prefix only address code key fields (numeric and alphanumeric).

Description of the field list from the user file

Field name

This field maps the fields in the user file to the DirectFax master file.

Field type

Indicates whether the field is numeric or alphanumeric data. Numeric fields can be packed, zoned or binary.

Length

The length specification is important. The mapped field should be long enough to contain the incoming data.

Dec (decimal places)

Indicates the number of decimal places for numeric fields. Numeric fields are not processed during the import.

Text

The field description from the user file.

If all descriptions are not displayed on one page, use Page up/down to scroll. The data on the upper half of the screen remains unchanged.

You can exit at any time with F3. Unsaved changes will be lost. Use F12 to return to the previous screen.

Import path - Select records

```
7.03.05  10:52:51     Work with DirectFax import path           SES

Enter compare data and press Enter. Enter OR for every new group.
  Tests:  EQ, NE, LE, GE, LT, GT

AND/OR  Fld.              Test   Value(Fld, Value or  Char.)
     1  KDFAXN            NE        ' '
 █   2  _____        __       _____
 ___ 3  _____        __       _____
 ___ 4  _____        __       _____
 ___ 5  _____        __       _____
 ___ 6  _____        __       _____

Fieldname  Fld.typ Lgth Dec Text
KDNUMM     packed    5   0  KD-Nr.
KDSUCH     Alpha    20       Suchbegriff
KDTITL     Alpha    15       Titel
KDNAME     Alpha    30       Name
KDSTR      Alpha    25       Straße
KDLAND     Alpha     3       Land
KDPLZ      Alpha     5       PLZ

 F3=Exit   F12=Cancel
```

0037 - Selecting data records from the user file

Use the upper half of the screen to select records from the user file. Selection criteria can include comparison operators.

The lower half of the screen displays a list of field descriptions for the selected file. Use page up/down to scroll through the list.

Input fields

Entries in the upper screen area are optional. If no selection criteria are specified, all records are imported from the user file. In most cases, you will select criteria that import only fields containing fax information relevant to DirectFax.

Field
The name of a field in the user file. Available fields are displayed in the lower half of the screen.

Test
A two-digit code for the operator. The following values are allowed:

EQ   EQUAL

NE   NOT EQUAL

LE   LOWER OR EQUAL

GE   GREATER OR EQUAL

LT   LOWER THAN

GT   GREATER THAN

Value (field, number or constant)

This field contains the comparison the value. The value can be a field from the user file or a constant. **The field types must match**. Numeric data can only be compared with a numeric value. Alphanumeric data can only be compared with alphanumeric data. The values must also be the same length.

AND/OR

The condition entered can be expanded using the AND/OR operators. The following values are allowed:

AND The AND operator. The user file record is selected only if both conditions are met.

OR   The OR operator. The record is selected one of the conditions is met.

A maximum of 6 conditions is allowed.

Examples

1. You want to select only fields in the user database file in which the field "KDFAXN" contains a fax number.

   Condition: KDFAXN   NE   '   '

2. You want to select only customer numbers from 100500 to 100999 from the field LFNUMM but exclude fields with 'L' in the field LFSTAT.

   Condition:
   ```
           LFNUMM    GE    100500
   AND   LFNUMM    LE    100999
   AND   LFSTAT     NE    'L'
   ```

You can use "Page up/down" to scroll through the field descriptions in the lower half of the screen. The data on the upper half of the screen remains unchanged.

Use F3 to exit. Unsaved changes will be lost. Use F12 to return to the previous screen.

Use Enter to save. The definition record is added to the file. The program then displays a list of existing paths.

To use the newly entered definitions, select it with 1=Execute in the option field. The import program starts. It first deletes any records created when the path was last used, then loads the fields selected with the definition from the user file to the DirectFax address book.

You can also use option 1=Execute to update previously imported records. Use the command **CLRUSRTRF PFADID(Name)** (clear transferred user data) or F20 to delete records in a path, or ***ALL** to clear all paths. Manually created records that do not contain a path are not deleted. Bevor deleting or importing, ensure that the records are not being used by another job.

The DirectFax master file allows **duplicate keys**. If you specify a duplicate key when faxing, you will be prompted to select.

9.5.1 Upper/lower case for searching in addresses (CVTADRKEY)

Allows you to convert address code and matchcode values to upper or lower case when importing records from a user database. **U** converts to upper case. **L** converts to lower case. If nothing is entered, there is no conversion.

Searches are case-sensitive.

Convert later with CVTADRKEY

The command CVTADRKEY allows you to convert records already in the DirectFax address file. You can specify the path for conversion.

Name   Convert address records with this path name.

*ALLPATH   Convert addresses imported from all paths.

*OTHER   Convert manual addresses (no path)

*ALLADDR Convert all addresses

*LOWER   Converts upper to lower case

*UPPER   Converts lower to upper case

You can convert address code and matchcode fields separately.

9.5.2 Create call distributor group from file (CRTKWGFF)

Use CALL CRTKWGFF to convert a database file (name INPUT) with a fax number at characters 1-20 into a distributor list with the name #SERIE#. You will find more details in the member CRTKWGFF in the source file QRPGSRC in the library DIRECTFAX. The libraries DIRECTFAX and DIRECTFAXF must be included in the *LIBL. You might want to make a copy of the source file in one your own libraries for this purpose.

9.6 Work with country codes (WRKFAXLKZ)

Use the command WRKFAXLKZ to maintain fax country codes. A country code master record must exist to use the country code in address code entries.

Notes on correct use
Before using DirectFax address codes, note the following: Do the fax numbers in the master file include the country and area codes? If yes, the country code should not be entered in the country code file. If they already exist, the must be blanked out. The records themselves do not need to be deleted.

Reason: The country code would otherwise be added to the fax number twice.

Suppress leading zeros

If country code (e.g. 0043) and area code (e.g. 07455) are both part of a number, the leading zero in the area code is omitted for most countries. From version 3.30, this is supported in al DirectFax programs. The prefix parameter allows you to specify exceptions such as Italy. If not entered, the zero is omitted. If the parameter is set to 0, the full area code is used.

The command **WRKFAXLKZ** or the corresponding option from the DirectFax User menu displays the following screen:

0038 - Work with country codes

The screen shows a list of available country codes. A country code consists of the number and a short description. Use page up/down to scroll through the list. You can also enter a code in the "Position to" field to go to that code.

Fields

Country code
1 to 3 characters corresponding to country codes sometimes used for car registration.

Description
The country.

Area code
The area code. The number is 1 to 6 digits left-justified.

You can select a country code in the left column with the following options.

Options

2=Change
Opens a window in which you can change the number and description.

4=Delete
Delete the country code. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel. The original code is restored if you cancel F4.

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Creates a new record.

F12=Cancel
Returns to the previous screen. Unsaved changes are lost.

9.7 Maintain fax templates and source files

To allow iSeries users to create faxes with EDTSNDFAX, you need a **source file** template. This section describes how to create the source file and create and maintain templates.

9.7.1 Create DirectFax source file (CRTFAXSRCF)

Source files are used to store fax text edited with the DirectFax editor and to store fax templates. CRTFAXSRCF creates a new, empty source file in the library DIRECTFAXF. **F** indicates file. If you create the source file from the DirectFax Configuration 2 menu, all parameters except the name are defaulted. When you select the option, the following screen is displayed:


```
                    Create FAX source file (CRTFAXSRCF)

Type choices, press Enter.

Source file name . . . . . . . .    _____     Name
Library  . . . . . . . . . . . .    _____     Name
Record length  . . . . . . . . .    92_____        Zahl
Description  . . . . . . . . . .    'Faxtext for ...                  '
____
Public authorisation (*PUBLIC)      *ALL____       *ALL, *CHANGE, *USE, *EXCLUDE
Edit authorisation . . . . . . .    *NO_           *YES, *NO




                                                                       Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0039 - Create a DirectFax source file

Enter the source file name. Use descriptive names such as the name of a user or department. Do not use names such as FAX... or DIRFAX... to avoid conflicts with existing DirectFax master files. The library name and description can also be edited.

Enter *ALL for "General authority" to make the source file available to all users. To restrict the file to a single user, set *EXCLUDE and *YES for "Edit authority". This runs EDTOBJAUT after the file is created, where file rights can be assigned. Note that users require *ALL authority to create new faxes.

Warning:

Once created, do not rename or copy the file to another name. This can cause the program error CPF4135. If you need a copy, create a new source file and copy the required members with PDM. To duplicate all members, use CPYF with the parameters MEMBER(*ALL) and TOMBR(*FROMMBR).

9.7.2   Editing and saving templates

Templates provide a **standard text templates** for new faxes. Template text is edited using the DirectFax editor. Changes are stored in the file **FAXMASKE** in the library DIRECTFAXF. This is now described.

1.   Select **option 1** from the **Fax** menu as if creating a new fax.

2.   Enter a **name** for the DirectFax text. The name cannot already   exist

3.   In **template name**, enter the name of the template you want to   edit and press Enter.

4.   The editor displays the template text for editing.

5.   Then use **F3** (or **F23** in the old editor). Set **Replace** to **Y** to save the template.

6.   Press **F3** twice to return to the menu.

9.8   Fax user profiles and rights

Every DirectFax must have a user registration. You can simplify this process by grouping users or creating a registration record with the name ***ANY**. User registration defines the DirectFax rights available to the user and the dialog defaults for the user. This section describes how to maintain user profiles and a range of related security issues.

9.8.1   Work with DirectFax user profiles and groups (WRKFAXPRF)

You can create a user profile for each DirectFax user. The profile contains all the parameters required to work with DirectFax.

Group profiles for ease of administration

To simplify administration, you can group users in **group profiles.** Departments or users with similar authority should be grouped together.

This makes subsequent changes easier. For example, if the name of the fax header logo changes, only one entry is required make the change for all users in the group.

A group profile name always begin with **$.** Create user profiles first. Maintaining group profiles is basically the same as maintaining user profiles. They contain all the parameters (logos, rights, restrictions etc.) required for the group or department.

Then create the first user profile. The value ***GRP** defaults the values in the group profile. Only specific values like the name of a signature logo need to be entered directly.

Now test the profile with the group users and make changes if required. As administrator, you can then use **option 3** to make up to 10 **copies** of the profile for the users in the group or department. Make any user-specific changes required.

For example, if the user MILLER is assigned to the group $SALES and the *Default header logo* parameter is set to *GRP, the fax program retrieves the actual graphic name for the header logo from the group profile $SALES.

Working with profiles

Use the command WRKFAXPRF (Work with DirectFax user profiles) or select the corresponding option from the DirectFax Operator menu to display this screen:

0040 - Work with DirectFax user profiles

The program displays a list of existing profiles. A profile consists of the user name and a short description. You can use the "Position to" field to position within the list. Select profiles in the left column with one of the following options:

Options

2=Change
Changes the profile. This is described below in the section on DirectFax user profiles.

5=Display
Displays the profile. All input fields are protected.

4=Delete
Deletes the profile. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

Function keys

F3=Exit

Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Creates a new profile. This is described below in the section on DirectFax user profiles

F12=Cancel
Returns to the previous screen.

Enter a DirectFax user profile
Use F6=Create to create a new DirectFax user profile. The following screen is displayed:

```
                    DIRECTFAX userprofile (CHGFAXPRF)

 Type choices, press Enter.

 Faxuser profile . . . . . . . . > WOIDT        Name, *ANY
 Description . . . . . . . . . .   'Sicherheitsbeauftragter / DEMO'
 Special authority . . . . . . .   *SECOPR       *GRP, *SECOPR, *FAXOPR...
 Group profile:
   Name . . . . . . . . . . . .   *NONE         Name, *NONE, *SAME
    Protect group fields . . . . .  *NO          *YES, *NO
 Cost center . . . . . . . . . .   '     '       Zeichenwert, *GRP, *SAME
 Default fax header (Text/Logo):
   Object . . . . . . . . . . .   *LOGO         *TXT, *LOGO, *GRP, *NONE...
   Name . . . . . . . . . . . .   DEMOLOGO      Name, *GRP
 Default fax footer (Text/Logo):
   Object . . . . . . . . . . .   *NONE         *TXT, *LOGO, *GRP, *NONE...
   Name . . . . . . . . . . . .                 Name, *GRP
 Signature logo . . . . . . . . .  *NONE         Name, *NONE, *SAME


                                                                    More...
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

0041 - Fax user profile, page 1

Use option 2=Change to edit existing data. **F6=Create** displays an empty screen. Enter the name of the user profile or *ANY for a default profile. Except for *ANY and $Group, the name must be an existing system user ID.

Input fields :

Fax user profile (USRPRF)
The name of the user and the DirectFax profile. The name must be the name used to sign on to the iSeries. Other values allowed are:

ANY: Use *ANY to create a default profile. Default values are extracted if the current user has no private user profile.

$nnnnnnnnn: Profiles beginning with the dollar sign are **group profiles**. See the introduction to this section for an explanation of group profiles.

Description (TEXT)
A 30-character description of the profile.

Special authority (SPCAUT)

Allows you to assign special rights to the user. The values allowed are:

NONE: The user has no special rights. The user can execute all commands in his own profile but has no rights to other profiles.

SECOFR: The user has the authority for all DirectFax commands.

FAXOPR: **FAXOPR** assigns QSECOFR authority for the "Work with the DirectFax queue" menu. Not allowed for the ***ANY** profile

NOSND: Allows the DirectFax user to create a fax, but not to send. The fax is subject to review by another user before it can be sent. The user can print or delete the fax from the queue, but cannot change or release it. Only users with adequate authority (*FAXOPR for example) can change or release the fax. If a default printer is defined in the user profile, the fax is printed automatically and the status is set to ***HLD.** If no printer is specified, the fax is set to hold but not printed.

GRPOPR: The user has administrative authority for all users in the group.

GRP: The user has the same rights as the rights defined in the group profile.

SAME: If the user profile is changed: The user rights remain unchanged.

Group profile, name (GROUP)
To associate the user profile with a group profile, enter the name of the group profile. See the introduction to this section for an explanation of group profiles. The values allowed in this field are:

$nnnnnnnnn: The group profile name. DirectFax group profiles must begin with $.

NONE: The user is not assigned to any group profile.

SAME: If the user profile is changed: If a group profile has been assigned, it remains unchanged. If not, none is assigned.

Group profile, field protection
Enter *YES for field protection or *NO for no field protection. Protection is for group profile entry fields in other DirectFax dialogs such as WRKFAXSTS.

Cost centre (COSTLOC)
Allows you to enter a **1-5 character** alphanumeric name for the cost centre. Cost centres are listed on the send log. (SEE ALSO **PRINT SEND LOG/COST CENTRE LIST (DSPSNDSTS)**, PAGE .130)

Default fax header, Type (DFTHDR)
The fax header is inserted automatically at the top of the first page of a fax. This value defines the type of header inserted. The values allowed are:

TXT: In the field *Default fax header, Name*, the name of a member in the file DIRECTFAXF/FAXTEXTE. The content of this member is faxed before the user text. The text can also contain a ^g instruction referring to the graphic. This also faxes the graphic.

LOGO: In the field *Default fax logo, Name*, the name of a DirectFax graphic. The graphic is faxed before the user text.

GRP: A reference to the same field in the group profile.

NONE: No value, no default header.

Standard fax header, Name
The name of the text or graphic faxed before the user text. The values allowed are:

Name: If *Default Fax header, Type* is *TXT, this entry refers to a member in the file DIRECTFAXF/FAXTEXTE. If the value in this field is *LOGO, refers to a DirectFax graphic file. The user must have authority for the logo (SEE ALSO "DISABLE FUNCTIONS FOR FAX OWNER", PAGE 167).

The **header text** can contain a (^g) graphic instruction.

FOR MORE INFORMATION ON CREATING AND MAINTAINING GRAHPHICS, PLEASE REFER TO "WORK WITH DIRECTFAX GRAPHICS (WRKFAXGRF)", PAGE 170. FOR MORE INFORMATION ON CREATING AND MAINTAINING FAX SOURCE FILES, PLEASE REFER TO "MAINTAIN FAX TEMPLATES AND SOURCE FILES", PAGE 151.

GRP: A reference to the same field in the group profile.

Standard footer (Type, Name) (DFTBOT)
The default footer is placed automatically at the bottom of the first page of the fax.

The parameters are the same as for the default header.

Signature logo (SIGNLOGO)
Use *Signature logo* to specify a DirectFax graphic. This is the graphic used as the user's signature. It can be inserted anywhere in the fax with the ^SIGN instruction. The instructions ^SIGN(), ^SIGN1() and ^SIGN2() also use this entry. The user must be authorised to use the logo.

Scroll to page 2:


```
                  DIRECTFAX userprofile (CHGFAXPRF)

 Type choices, press Enter.

 Log printer:
   Name . . . . . . . . . . . . .   *NONE          Name, *GRP, *NONE, *SAME
   Protect group fields . . . . .   *NO            *GRP, *YES, *NO


 Log printer PCL5 (graphics):
   Name . . . . . . . . . . . . .   *NONE          Name, *GRP, *NONE, *PRTDEV...
   Output Queue (OUTQ) . . . . .    *SAME          Name, *GRP, *DEV, *SAME
   Library . . . . . . . . . . .    *SAME          Name, *GRP, *LIBL, *SAME
 Resolution high/low:
   Adjustment . . . . . . . . . .   *DFT           *GRP, *FEIN, *GROB, *DFT...
   Protect group fields . . . . .   *NO            *GRP, *YES, *NO
 DFE DirectFax editor:
   Source file . . . . . . . . .    *PRV           Name, *GRP, *PRV, *USER...
   Protect group fields . . . . .   *NO            *GRP, *YES, *NO


                                                                    More...
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

0042 - Fax user profile, page 2

Log printer/output queue, Name (PRTDEV)
Enter a printer ID or OUTQ to automatically print the fax when it is sent. The values allowed are:

Name: The name of the printer or OUTQ.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

NONE: The fax is not printed unless the user specifies a printer.

DIRFAXPRT should never be entered here.

Log printer/output queue, Field protection
If field protection is set, then the user cannot change the printer when sending.

Graphic log printer PCL5, Name (PCLDEV)
This entry is for faxes from PC applications. You must specify a PCL5-compatible printer. The printer must be connected to the iSeries, for example with ClientAccess. The values allowed are:

Name: The name of a PCL5-compatible printer connected to the iSeries.

PRTDEV: Refers to the value in *Log printer.*

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

NONE: No automatic log printing for PC faxes.

Graphic log printer PCL5, OUTQ
The OUTQ to which the log is printed. The values allowed are:

Name: The name of the OUTQ.

DEV: The OUTQ has the same name as the printer.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Graphic log printer PCL5, Library
The name of the library containing the OUTQ.

Resolution (Fine/Coarse), Setting (RESOL)
Allows you to enter a default value for the resolution. The values allowed are:

DFT: The resolution is set to the value entered in the "Recipient" dialog. If nothing is entered, resolution defaults to **COARSE** even if the graphic was scanned with fine.

FINE: Defaults the value F for Fine when the user sends a fax. If the user is authorised, this value can be changed to "G".

COARSE: Defaults the value G for Coarse when the user sends a fax. If the user is authorised, this value can be changed to "F".

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Resolution (Fine/Coarse), Field protection

Defines whether the user is authorised to change the suggested value for resolution.

Scroll to page 3:

```
                    DIRECTFAX userprofile (CHGFAXPRF)

Type choices, press Enter.

DFE DirectFax editor:
  Library . . . . . . . . . . .   DIRECTFAXF     Name, *GRP, *PRV, *NONE...
  Protect group fields . . . . .  *NO            *GRP, *YES, *NO
DFE DirectFax editor:
  Member . . . . . . . . . . . .  *PRV           Name, *GRP, *PRV, *NONE...
  Protect group fields . . . . .  *NO            *NO
  Recipient in picture 1 . . . .  *NO            *GRP, *YES, *NO, *SAME
DFE masks:
  Source file for DFE masks  . .  *DFT           Name, *GRP, *DFT, *SAME
  Protect group fields . . . . .  *NO            *GRP, *YES, *NO
DFE masks:
  Library . . . . . . . . . . .   *DFT           Name, *GRP, *DFT, *SAME
  Protect group fields . . . . .  *NO            *GRP, *YES, *NO
DFE masks:
  Name . . . . . . . . . . . . .  *BLANK         Name, *GRP, *BLANK, *SAME
  Protect group fields . . . . .  *NO            *GRP, *YES, *NO
                                                                    More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0043 - Fax user profile, page 3

DirectFax editor defaults (DFESRCF, DFESRCL, DFEMBR)

These 3 entries are the defaults suggested by DirectFax when the user creates a fax. If the *Field protection* field is set to *YES, the user cannot change the defaults. The values allowed for the fields
Source   file
Library
Member
are the same. The values allowed are:

Name: The name of the library/source file/member.

*GRP: A reference to the same field in the group profile.

*PRV: Defaults the last value used.

*BLANK: No value suggested. The user must always enter a value.

*SAME: If the user profile is changed: The existing entry is retained.

*NONE: The user is not authorised to use the function EDTSNDFAX.

Recipient in screen 1 (DFEPIC1)

When sending a fax with the DirectFax editor, the user first enters the fax text and then the recipient. If entered, this field prompts for a recipient in the first screen, "Select DirectFax file". This reduces the number of screens to be scrolled when sending a fax. It is also a good way to set template variable values (e.g. ^&KANAM1) before text editing. The values allowed are:

*NO: The EDTSNDFAX command displays all 3 screens to the user. 1. The name for the new text and the template name. Screen 2: Text entry. Screen 3: Recipient and other dispatch information (log printer etc.)

YES: Displays "Select DirectFax file" when the user executes EDTSNDFAX. This screen allows the use to enter a name for the new text and a template for the fax. The following input fields are also displayed. These fields would normally be displayed in a separate screen after text entry. Recipient, CPI/LPI, Log printer, Resolution etc. The user requires only 2 steps to send a fax: 1. The text name, template and recipient information, Screen 2: Text entry. No further recipient information is required on exit with F3.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

DirectFax editor template defaults DFEMSKF, DFEMSKL, DFEMSKM

These 3 entries are the defaults suggested by DirectFax for the source files containing the fax templates. If the *Field protection* field is set to *YES, the user cannot change the defaults. The values allowed for the fields
Source file
Library
Member
are the same. If nothing is entered, the defaults defined with the command CHGFAXDFT are used. The values allowed are:

Name: The name of the library/source file/member.

DFT: Use the default value from CHGFAXDFT.

GRP: A reference to the same field in the group profile.

PRV: Defaults the last value used.

BLANK: No value suggested. The user must always enter a value.

SAME: If the user profile is changed: The existing entry is retained.

Scroll to page 4:

```
                     DIRECTFAX userprofile (CHGFAXPRF)

 Type choices, press Enter.

 Group name for address book:
   Name . . . . . . . . . . . . . .   *NONE       Name, *GRP, *NONE, *SAME
   Protect group fields . . . . .   *NO         *GRP, *YES, *NO
 OfficeVision document/function     *PRV        Name, *GRP, *PRV, *CMD...
 Folder . . . . . . . . . . . . .   *PRV

 Disable folder creation  . . . .   *NO         *GRP, *YES, *NO, *SAME
 SEU text entry program:
   Source file name . . . . . . . .   *NONE       Name, *GRP, *PRV, *USER...
   Protect group fields . . . . .   *NO         *NO
 SEU text entry program:
   Library  . . . . . . . . . . . .   DIRECTFAXF  Name, *GRP, *PRV, *NONE...
   Protect group fields . . . . .   *NO         *NO
 SEU text entry program:
   Member . . . . . . . . . . . .   *PRV        Name, *GRP, *PRV, *NONE...
   Protect group fields . . . . .   *NO         *NO
                                                                 More...
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

0044 - Fax user profile, page 4

Group name for address codes, Name (ADRGROUP)

Enter the name of an address group to display only that group to the user. If *Field protection* is set to *YES, the user can work only with the addresses assigned to the group. Benefits: Customers, supplier and other logical entities can be grouped in a file. Remote offices accessing the fax system can be restricted to relevant addresses.

Note: You can create an address group for each path when importing from addresses from external database files (WRKUSRTRF).

OfficeVision document/function (OVDOC)
Folder (OVFLR)
IBM's license program OfficeVision/400 provides three options for creating documents: A) the command EDTSNDOFC, B) the *RUN instruction and C) entry of the fax number in the document details. The fax profile fields described here apply to options A and B.

When an OfficeVision/400 user creates a fax, this field and the next field (*Folder for OfficeVision)* are mandatory. They define the folder used by DirectFax to save outgoing faxes. If nothing is entered, the default values from CHGOFCDFT are used. The values allowed are:

document name: The name entered is defaulted when the user runs the command EDTSNDOFC. The file and the folder specified in the next field must exist.

*PRV: The last document specified for EDTSNDOFC is suggested.

*BLANK: No document suggested for EDTSNDOFC The user must enter a name.

*NONE: EDTSNDOFC is disabled.

*CMD: Enter the command to be called instead EDTSNDOFC in the field *folder name.* For example WRKDOC or STROFC 6 .

*SAME: If the user profile is changed: The existing entry is retained.

*GRP: A reference to the same field in the group profile.

Source file for SEU (SEUSRCF)
Library for SEU (SEUSRCF)
Source member (SRCMBR)
If you use the IBM License Program SEU (Source Entry Utility), you can default three values for the command **EDTSNDSEU** (Edit and send a fax with SEU). If you enter nothing, the default values from **CHGSEUDFT** are used. Names or special values (*USER, *PRV, *LIBL, *CURLIB, *NONE) are accepted. The special value *NONE disables EDTSNDSEU. If the *Field protection* field is set to *YES, the user cannot change these values when creating or changing a fax.

Scroll to page 4:

```
                    DIRECTFAX userprofile (CHGFAXPRF)

Type choices, press Enter.

Night fax is standard  . . . . . .   *NO        *GRP, *YES, *NO, 1-5, *SAME
F21-Command line disabled  . . . .   *NO        *GRP, *YES, *NO, *SAME
Restriction at WRKFAXSTS  . . . . .  *NO        *GRP, *YES, *OWN, *NO, *SAME
Restriction at WRKSPLFAX  . . . . .  *NO        *GRP, *YES, *OWN, *NO, *SAME
Restriction at WRKINCFAX  . . . . .  *NO        *GRP, *YES, *OWN, *NO, *SAME
Restriction at HLDFAXQ  . . . . . .  *NO        *GRP, *YES, *OWN, *NO, *SAME
Assigned fax line (Multiline)  .     *ANY       *GRP, *ANY, 1-8, *SAME
Forms name for Mixed fax . . . . .   *NONE      Name, *GRP, *NONE, *SAME

Header ID (CSI)  . . . . . . . . .   *SYSVAL
Store fax text (days)  . . . . . .   *SYSVAL    00-99, *SYSVAL, *GRP, *SAME
Convert spc.Char/BOX:
  Type of translation table  . .     *NONE      *GRP, *NONE, *CHAR...
  Translation table  . . . . . .     *SAME

                                                              More...
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0045 - Fax user profile, page 4

Default to night fax (DFTNIGHT)

DirectFax supports up to five "rate groups". These can be configured with the command EDTTIMTBL. Use this parameter to default a rate group for the user. The values allowed are:

YES: Defaults N for night rate in the *Enter recipient* screen. This corresponds to rate group 1. The default value can be overwritten.

NO: The default *NO allows the user to decide whether a fax is a night fax.

1-5: Defaults one of the five night rates for the user (see command EDTTIMTBL). This value can be overwritten.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Disable F21 command line (SECF21)

F21 is available in many DirectFax dialogs. It displays a command line for OS/400 commands. The value ***YES** disables the key for the user.

Restrictions for WRKFAXSTS (SECSTS)

This parameter defines the faxes displayed in the *Work with DirectFax status* dialog (WRKFAXSTS). The values allowed are:

NO: No restrictions. The user sees all faxes for all users. The dialog options (Change, Display, Release etc.) are only available for the users' own documents. *SECOFR, *FAXOPR or *GRPOPR authority is required to edit other users documents.

OWN: The user can only work with his own faxes with WRKSPLFAX. Other users' faxes are not displayed.

YES: Complete Restrictions. The user may not use the command WRKINCFAX. Outgoing faxes cannot be maintained. Neither own faxes nor faxes from other users

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Restrictions for WRKSPLFAX (SECSPL)

This parameter defines the spool files displayed in the "*Work with spool files*" (WRKSPLFAX) dialog. The values allowed are:

NO: No restrictions. The user can see and work with all spool files for which he has OS/400 authorisation.

OWN: The user can only work with his own spool files with WRKSPLFAX.

YES: Complete Restrictions. WRKSPLFAX is disabled.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Restrictions for WRKINCFAX (SECINC)

This parameter can be used to restrict the display in "*Work with incoming fax*" (WRKINCFAX). The values allowed are:

NO: No restrictions. The user can see all incoming faxes for all users. The user can maintain faxes assigned to him manually, by an administrator or by an automatic routing program. If the user has *SECOFR or *FAXOPR rights, he can maintain faxes assigned to other users.

OWN: With WRKINCFAX, the user can view and maintain only faxes assigned to him.

YES: Complete Restrictions. WRKINCFAX is disabled.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Restrictions for HLDFAXQ (SECHLDQ)

F13=HLDFAXQ and F14=RLSFAXQ can be used to hold and release the outgoing fax queue. This parameter defines whether a user is authorised for hold and release, and if so, for which users.

To hold the complete fax queue, set HLDFAXQ to *ALL from the command line. You can reverse this with RLSFAXQ *ALL. Note that both commands can only be used when the fax program is running. When the program is restarted, all held queues are released automatically.

The values allowed are:

NO: No restrictions. The user can set the USER parameter to a user, a group or *ALL with the commands HLDFAXQ and RLSFAXQ.

OWN: HLDFAXQ or RLSFAXQ are available only for the users' own faxes.

YES: Complete Restrictions. Disables HLDFAXQ/RLSFAXQ.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Assigned fax line (Multiline) (FAXLINE)

This parameter is only available if you use more than one modem in a multiline version of DirectFax). It allows you to assign a specific fax line to a user. It is applied immediately to all faxes that do not contain an ^FLINE instructions.

The values allowed are:

ANY: The users faxes are sent on the first available fax line.

1..8: The lines 1/8 can be directly assigned. Faxes without the ^FLINE instruction are defaulted to the entered value.

Benefit: A charge summary can be created for user groups or lines.

Disadvantage: May not fully exploit line transmission capacities. When fax traffic is heavy, one line may be idle while others are working at full capacity.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Form name for mix fax (FORM)
The name of a form. This form overlays the fax text. This function is similar to the "Overlay" function in AFP. The ^FORM() instruction in a fax overrides the form specified here.

Do not enter other graphics in this field. Forms are maintained with the command WRKFAXFRM. This is described elsewhere in this document.

Do not use header and footer logos (the DFTHDR and DFTBOT parameters) when using forms.

The values allowed are:

Form name: The name of the form to be used. Use WRKFAXFRM to maintain forms. The user must be authorised for the named form (option 10 in the WRKFAXFRM display). You find more information in the in the section covering fax forms.

NONE: No form is defaulted. A form can be included with the ^FORM() instruction in the fax text.

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Header identification (CSI)
The CSI printed in the user's fax header. The values allowed are:

Any value: This text identifies the sender in the fax header. Special characters should be avoided as they may cause errors.

SYSVAL: The default set with CHGFAXCSI for **fax line 1** is used**.**

GRP: A reference to the same field in the group profile.

SAME: If the user profile is changed: The existing entry is retained.

Store fax text (RETAIN)
The number of days the fax text is retained after the fax is sent. This parameter applies to the fax content only. The status information is saved independent of this parameter and not removed until files are reorganised.

The commands are DSPSNDSTS, set parameter DELAFTER to *YES for delete and RGZFAXFIL for reorganise.

Note: You can display sent faxes with WRKFAXSTS and F10=History.

The values allowed are:

Number: The number of days the fax text is retained. The values allowed are 0-99. To delete the text immediately after it is sent, set 0. This is recommended for advertising faxes.

*SYSVAL: The value from the RETAIN parameter in CHGFAXVAL is used. The default is 3 days.

*GRP: A reference to the same field in the group profile.

*SAME: If the user profile is changed: The existing entry is retained.

*YEAR and *PERM: The maximum retain value at system level is 99. At fax profile level, RETAIN also allows other values. ***YEAR** retains the fax for 366 days. ***PERM** equals 10 years. Use these values only for important documents. Use an archiving tool in conjunction with the DirectFax archiving interface for the majority of faxes.

Convert special characters/box (TRANSLBOX)

In multi-language environments, incorrectly converted special characters can be corrected using a small DirectFax **translation table**. Enter the name of a table (max 20 characters) or a data area. This parameter is valid for text faxes from a DCE fax box. For mix faxes, see TRANSLMIX.

If ***CHAR** is entered in field 1, enter a table name in quotation marks in field 2. The values must be entered in pairs. For example 'äàöò'.

If ***DTAARA** is entered in field 1, enter a 10-character data area in the library DIRECTFAX in field 2. The DTAARA contains 256 characters. Characters 1-50 are the characters to be converted. Characters 51-100 are the replacement characters.

```
                    DIRECTFAX userprofile (CHGFAXPRF)

Type choices, press Enter.

Convert spc.Char/MIX:
  Type of translation table  . .   *NONE        *GRP, *NONE, *CHAR...
  Translation table  . . . . . .   *SAME
Special phone/fax service:
  Select phone/fax no. . . . . .   *NONE        *GRP, *NONE, ''0'', *ALL
  Service area code  . . . . . .   *SAME
Header following pages MIXALL  .   *DFT         Name, *GRP, *DFT, *NONE...
Footer followind pages MIXALL  .   *DFT         Name, *GRP, *DFT, *NONE...
Header/footer logo also on PC  .   *SYSVAL      *GRP, *SYSVAL, *YES, *NO...
EMail address  . . . . . . . . .   *NONE

Preferred send type  . . . . . .   *SYSVAL      *GRP, *SYSVAL, *FAX, *MAIL...
Language . . . . . . . . . . . .   ENG          Name, *GRP, *SYSVAL, *SAME


                                                                  Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0046 - Fax user profile, page 5

Translate special characters/mix (TRANSLMIX)

This parameter translates special characters for mix faxes. The parameters are the same as for TRANSLBOX.

Special phone/fax service (SRVPRV)

For use with private-enterprise **service providers**. Allows you to specify a character identifying the provider and a prefix. All faxes beginning with the character specified receive the prefix. This can save money by allowing you to assign providers by user and cost centre. Use ***ALL** to enable the function generally.

Header and footer logo continuation pages MIXALL (DFTHDRF)

By default, both of these parameters are set to ***DFT**. The page 1 header and footer are repeated on all other pages. If *NONE, continuation pages have no header and footer logos. Specify a **graphic name** to insert the graphic beginning at page 2. ***GRP** refers to the values entered in the group profile.

Note:

These two parameters are only valid for the MIXALL technique. It also offers the possibility for special handling of the continuation pages (from page 2). The ^HLGOF() and ^BLGOF() codes in the first text line of a document can also be used.

Header and footer logo on the PC (LOGOPC)

This parameter specifies that the profile logo is used for PC faxes in exactly the same way as for iSeries faxes. The default value is ***SYSVAL**. This refers to the DirectFax system value of the same name, defaulted to *NO. ***YES** enables the function. ***NO** disables it. ***GRP** refers to the values in the group profile.

Note:

The function is recommended when space considerations for logo's are made when editing such documents on a PC. Otherwise overlays may occur !. Note also that, because it uses the Mix function, this process is performance-intensive on the iSeries.

E-mail address

The user's sender e-mail address. If nothing is entered, the central postmaster address from CFGFAXMAIL is used. To include the sender's name, the syntax is as follows:

' "Name" <name@domaene.xx>'

This e-mail address is also used if the function *Send fax messages by e-mail to user* is enabled (see *MAIL parameter in WRKFAXMSG). Without this address, fax messages cannot be sent by e-mail.

Preferred send type

At user level, specifies either *FAX or *MAIL. The default value *SYSVAL refers to the setting configured with CFGFAXMAIL.

Language

Sets the dialog language at user level. The values supported are DEU, ENG, FRA and ITA. The default value *SYSVAL refers to the language setting in the DirectFax system values. The language for DirectFax commands can only be changed for all users with CHGFAXVAL.

Function keys

F3=Exit

Exits the program.

F5=Refresh

Refreshes the display. Changes not saved with Enter will be lost.

F12=Cancel

Returns to the previous screen. Changes not saved with Enter will be lost.

9.8.2   Notes on DirectFax security (WRKFAXSEC)

Each user is authorised to manage their own faxes and FAXQ if the parameter value *NOSND is **not** set in the fax user profile. Functions like display, change and delete are then allowed.

The command **WRKFAXSEC** allows a fax user to authorise other users on an individual basis. The command is not available in a menu, but can be executed with 8=Fax user authorisation from the WRKFAXPRF command. Before implementing this option, consider the following:

Extended fax authorisation (*FAXOPR, *GRPOPR, *SECOFR)

For general authorisation for every fax on the system, the user needs *FAXOPR rights. QSECOFR has these rights by default. Do not use the command WRKFAXSEC for this function. General group rights are granted with the value ***GRPOPR**. All DirectFax commands are available to users with ***SECOFR** rights.

Limited fax authorisation (*NOSND)

Allows the user to edit fax documents **not to send them**. The fax is reviewed and sent by another user. This is achieved by setting ***NOSND** (do not send) in the fax user profile. For more information, please refer to the previous chapter.

Signature regulation

This restriction is activated using the **^SIGN(xxx)/^FREE(xxx)** codes. When enabled, only authorised signatories can release a fax.

Note that the fax owner **assigns rights** to edit his fax to other users. To do this, however, the user will require the assistance of a *SECOFR administrator.

The command **WRKFAXSEC** displays the following screen:

```
                    Work with DirectFax security (WRKFAXSEC)

Type choices, press Enter.

User name . . . . . . . . . . .   _____     Name
```

0047 - Edit authorisations

Parameters

User name (USER)

The name of the user assigning the authorisation.

Enter the name and press Enter to display this screen:

0048 - List of user rights

The screen shows a list of existing users and authorisations assigned to them. New users can be added with F6. Users can be deleted by blanking out the field. Enter X against an authorisation to assign it. Remove the X to revoke an authorisation.

The following functions are available in the **outgoing** fax queue:

- **DSP/PRT**   Display/print fax text
- **CHG NBR**   Change fax number
- **CHG TXT**   Change fax text
- **DLT**   Delete fax from queue
- **HLD/RLS**   Hold or release a fax.
- **RES**   Reset unsuccessful fax
- **CHG ADR**   Authorisation to edit type G
  addresses in the DirectFax address book. Type P (private) entries can only be edited by the owner.
- **SGN/FRE**   SIGN/FREE signature authorisation

The following functions are available in the **incoming** fax queue:

- **DSP/PRT**   Display/print fax content
- **DLT/RGZ**   Delete/reorganise incoming fax
- **TRF**   Forward fax to other users
- **SND**   Send fax
- **CHG**   Change fax information

User and function columns

In the "User" column, you can enter a special value and a list of names. Use it with the "Function" columns to assign or revoke the following authorisations:

<u>**User Function   Rights**</u>

*PUBLIC	**X**	General authorisation for all users not listed here.
*PUBLIC	_	Not authorised for unlisted users.
		(*PUBLIC without X is the same as omitting it).
Name	**X**	Authorisation for this user independent of *PUBLIC.
Name	_	Not authorised for user independent of *PUBLIC.

9.8.3   Disable functions for fax owner

Users have all rights to their own fax documents, including display, change, release and delete.

Restrictions can be entered in a variety of ways.

*NOSND in the user profile grants only Display and Delete authorisation.

For signatures, the **^SIGN(xxx)/^FREE(xxx)** codes can be used to impose release restrictions. When enabled, only authorised signatories can release a fax.

Fax owners can authorise **other users** to work with their documents. This is done with option 8 from the WRKFAXPRF dialog. The new user can be entered with F6 and the authorisations assigned by selecting them with X.

You can also use this function to limit the owners rights by entering the owner name and removing the X as required. The authorisation program checks first, whether a record for the user name exists in the list before assigning all rights on the fax to the owner.

9.8.4   Maintain logo/graphic rights (WRKLGOSEC)

To prevent indiscriminate use, it is advisable to maintain authorisations for logos and graphics.

To do this, enter the command WRKLGOSEC and press F4 or use option 8 (Edit authorisation) in the WRKFAXGRF dialog. The following screen is displayed:

```
                    Work with logo security (WRKLGOSEC)

 Type choices, press Enter.

 Logo description . . . . . . . .    ▮▮▮▮▮▮▮     Name
```

0049 - Logo authorisation

Parameters

Logo description (LOGO)
A 10-character name for the graphic file.

Enter the name and press Enter to display this screen:

```
11.04.05  08:34:16          Work with logo authorisation          RENGEL

Logo . . . . . . . . . DEMOLOGO

Enter current authorisation and confirm

User        Use
PUBLIC        X










 F3=Exit   F5=Refresh   F6=Create   F12=Cancel
                        (c) Toolmaker Software GmbH 2005, Version 5.50a
```

The dialog shows a list of existing authorisations for the logo. Existing authorisations can be edited or new authorisations can be granted with **F6=Create.**

Input fields

User and use

In the "User" column, you can enter a special value and a list of names. Use it with the "Use" column to assign or revoke the following authorisations:

User Use   Rights

*PUBLIC	**X**	General authorisation for all users not listed here.
*PUBLIC	**_**	Not authorised for unlisted users. (*PUBLIC without X is the same as omitting it).
Name	**X**	Authorisation for this user independent of *PUBLIC.
Name	**_**	Not authorised for user independent of *PUBLIC.

Examples:

1. Allow   logo   for   all   users
   Solution: Enter *PUBLIC with X

2. Only   two   users   may   use   this   logo
   Solution: Enter both names with X in the list

3. Exclude   two   users   from   using   the   logo
   Solution: Enter PUBLIC with X and the two user names without X

Function keys

F3=Exit
Exists the logo security program.

F5=Refresh
Refreshes the display of existing authorisations. Names and authorisation not yet saved in the file will be lost.

F6=Create
Opens a window in which you can enter new names and authorisations. Scroll to display more lines if required.

F12=Cancel
Returns to the previous screen. Changes not saved with Enter will be lost.

9.9   Graphics, signatures and logos

DirectFax allows you to add **enterprise logos**, **signatures** and other graphics to a fax. The term graphics is used for all graphic elements in the following. Graphics are stored in the files **FAXGLGH** and **FAXGLGO** on the iSeries. Graphics are not transferred to the modem until they are required. Burning graphics on the EPROM is not supported in DirectFax.

This section of the manual deals with managing graphics on your system.

Making graphics available to DirectFax

To use a graphic in DirectFax, you must scan it and transfer it to the iSeries. There are a number of ways to do this.

1. Fax the graphic to the **modem** and use option 3 (TRFFAXGRF) to load the graphic directly to DirectFax. This requires no technical effort, is very flexible and suitable for signatures. However, the graphic may be a little distorted.

2. Scan the graphic to a PC. Use a graphic editing program to convert it to **monochrome bitmap** with **200 dpi** resolution. Transfer the graphic to a shared folder on your iSeries. Load the graphic with the command **CVTFRMBM**. This produces a high-quality graphic, but scanner and graphics software is required.

   Tip: The bitmap must be A4 size, or **1728 pixels**. If CVTFRMBMP rejects the graphic as invalid, try opening the BMP file in **PAINT**, changing a pixel and saving it as new.

3. Use a PC graphics program to touch up simple forms. Create a mix fax on the iSeries containing sample text from a document such as a purchase order or reminder. Export it to a bitmap file in a shared folder with option 30 (Mix export) and transfer it to a PC. Create the form by adding the graphic elements. Rub out the text, leaving the finished graphic. Transfer it to the iSeries as described above. This method produces a very clean graphic, and the form fits exactly to the text. It does however require some graphics software and editing.

9.9.1 Work with DirectFax graphics (WRKFAXGRF)

The command WRKFAXGRF (Work with DirectFax graphics) brings up the following screen:

0051 - Work with DirectFax graphics

The program shows a list of existing graphics. Use page up/down to scroll through the list. You can enter a name in the "Position to" field to reposition the display.

You can select a graphic in the left column with the following options.

Options

1=Fax

Sends the graphic as a fax. You can use this option to test new graphics or logos from incoming fax documents. In a continuation screen (Command: SNDGRFFAX) an in-house fax device can be entered. You can also include a description with the fax.

2=Edit

Option 2 executes the command EDTFAXGRF (Edit fax graphic), which allows you to edit the graphic on a terminal. The command is described later in detail. CHAPTER 6.15, PAGE 206.

Note: The program automatically checks for an active **DirectMedia** server on the PC when editing DirectFax graphics with WRKFAXGRF option 2. If found, the graphic is converted to TIF, transferred to the PC and opened for editing in Paint. The edited graphic is automatically returned from the PC when saved. To use another PC graphic editor, specify the name in positions 496-515 in data area FAXDTAARA2. If nothing is specified (default), Windows Paint is opened.

3=Copy

Copies an existing graphic to the FAXGLGO file. You will be prompted for the new name. If you don't want to delete, use F12 to cancel.

4=Delete

Deletes the graphic from the DirectFax file. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Show image

DirectFax graphics can be displayed with an IBM 3489 terminal. See chapter 15 for more information.

9=Print

Prints the graphic to a PCL5-compatible printer.

7=Rename

Renames the graphic. You will be prompted for the new name. Use F12 to cancel.

8=Authorisations

Runs the command WRKLGOSEC, which allows you to maintain user authorisations for the graphic. This process is described elsewhere in detail.

12=Mail

Allows you to forward a DirectFax graphic by e-mail. Only available if the iSeries is configured as an e-mail server.

13=Description

Allows you to change the description.

14=Bitmap

Executes the command CVTTOBMP *Convert graphic to bitmap*. You can convert to BMP, TIF or PDF format and save the file to a shared folder. From there, it can be transferred to a PC, edited and reloaded. See also F6 below.

Function keys

F3=Exit

Exits the program.

F5=Refresh

Refreshes the display. Unsaved changes will be lost.

F6=Load graphic

This function loads a graphic to DirectFax. F6 displays a menu with the following options:

1. **Load fax from PC file to IFS**. The command **CVTFRMSTMF** is described below.

2. **Load graphic from incoming fax**. Converts a received fax for later use in DirectFax. The command **TRFFAXGRF** *Load fax as graphic* is described below.

F12=Cancel

Returns to the previous screen. Unsaved changes are lost.

F23=More options

Scrolls through the options available in the display.

F24= More keys

Scrolls through the function keys available in the display.

9.9.2 Convert an IFS graphic (CVTFRMSTMF)

Use **F6** (Load graphic) and option **1** or **CVTFRMSTMF** and **F4** to import a BMP or TIFF graphic to DirectFax. The command **CVTTOBMP** converts a DirectFax graphic to a PC graphic (see option 14 in WRKFAXGRF).

If you have a PC connected to the iSeries, you can use PC graphics as DirectFax logos. The graphic must be saved as a monochrome bitmap (.bmp) to an IFS folder on the iSeries You can use Microsoft Paint, included with Windows, as the graphic editor.

The command **CVTFRMSTMF** displays the following screen:


```
                    Convert stream file to fax (CVTFRMSTMF)

Type choices, press Enter.

Stream file  . . . . . . . . . .    test.bmp


Format . . . . . . . . . . . . .    *TIFF        *TIFF, *BMP
Graphic name . . . . . . . . . .    test         Name
Description  . . . . . . . . . .    'test logo                '
Space before . . . . . . . . . .    ____         0-100 millimeter
Space after  . . . . . . . . . .    ____         0-100 millimeter
Scaling graphic  . . . . . . . .    *NO          *YES, *NO
Replace graphic  . . . . . . . .    *NO          *YES, *NO




                                                                   Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```
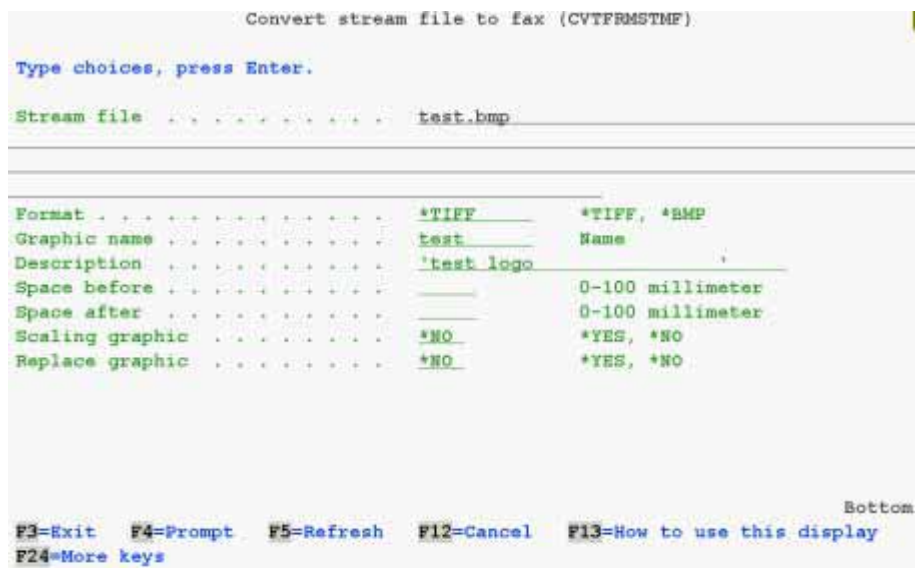
0052 - Convert graphic

Parameters

Stream file
The name of the PC file in the iSeries IFS including the path.

Format
*BMP for bitmap or *TIFF for TIFF format.

Graphic name (GRFNAM)
The name of the graphic in DirectFax. This name is entered in the DirectFax user profile or in the fax (with ^gNAME) to include the logo in a fax.

Description (GRFBEZ)
A short description of the graphic.

Space before (BEFORE)
The white space before the graphic in millimetres.

Space after (AFTER)
The white space after the graphic in millimetres.

Scale graphic
Specifies whether the graphic is scaled to fit the page or left at original size.

Replace graphic (REPLACE)
*YES deletes existing graphics before conversion. *NO does not delete.

Enter the parameters and press Enter to convert and import the graphic to DirectFax. User and/or user group authorisations must be edited before the graphic can be used. To edit, use **WRKLGOSEC** (Work with logo/graphic authorisations) or **option 8** in the menu **WRKFAXGRF** (Work with DirectFax graphic).

9.9.3   Load fax as a graphic (TRFFAXGRF)

Use **F6=Load graphic** and option **2** or the command **TRFFAXGRF** and **F4** to load a received fax to DirectFax as a graphic.

To capture a signature as a graphic by faxing it, sign a sheet of white paper (in black ink for clear contrast) at the position you want it to appear on the fax. Measure the distance from the margins to the left of the signature in millimetres. You will need these measurements later.

Fax the page. Set the resolution to **FINE**. The modem answers the call and passes the T4 data to the fax program. A sequence number is assigned an a message is sent to QSYSOPR or another message queue ("Fax number x stored in FAXINC"). This number is important and should be noted.

Use TRFFAXGRF to display this screen:

```
                        Import Fax as graphic (TRFFAXGRF)

Type choices, press Enter.


Name of graphic  . . . . . . . .   _____        Name
Description of graphic . . . . .   _____
Number of incoming fax . . . . .   _____        Zahl
Begin with graphic . . . . . . .   _____            2-300 millimeter
Length of graphic  . . . . . . .   _____            5-300 millimeter
Space before . . . . . . . . . .   0___             0-100 millimeter
Space after  . . . . . . . . . .   0___             0-100 millimeter






                                                                   Bottom
F3=Exit    F4=Prompt    F5=Refresh    F12=Cancel    F13=How to use this display
F24=More keys
```

0053 - Load fax as graphic

Parameters

Graphic name (GRFNAM)

The name of the graphic in DirectFax. This name is entered in the DirectFax user profile or in the fax (with ^gNAME) to include the logo in a fax. The name must be unique.

Description (GRFBEZ)

A short description of the graphic.

Number of received fax (INCNBR)

Enter the number under which the graphic was stored in the file FAXINC.

Start position of graphic (START)

The distance in millimetres from the top margin to the first element of the graphic. This distance must be exact to within 1-2 millimetres. The minimum value allowed is 2 mm. The maximum is 300 mm. If these values are imprecise, the graphic may not or only partially load.

Length of graphic (LENGTH)

Specifies the length (height) of the graphic in millimetres. Add 1-2 mm to the actual measurement. Again, if this value is imprecise, the graphic may not or only partially load.

Space before (BEFORE)

This parameter is only used in exceptions and is not usually entered. The white space before the graphic, included in the finished fax graphic. This value is not related to the distance from the top margin to the graphic. A value between 0 and 100 is accepted. A distance of 5 mm is generally used.

Space after (AFTER)

This parameter is only used in exceptions and is not usually entered. The white space after the graphic, included in the finished fax graphic. This value is not related to the distance from the bottom margin to the graphic. A value between 0 and 100 is accepted. A distance of 5 mm is generally used.

Enter the parameters and press Enter to convert the graphic and save it to the file FAXGLGO.

Grant graphic authorisations

User and/or user group authorisations must be edited before the graphic can be used. To edit, use WRKLGOSEC (Work with logo/graphic authorisations) or option 8 in the menu **WRKFAXGRF** (Work with DirectFax graphic). The user converting the graphic is authorised automatically.

9.9.4   How to create a DirectFax graphic

Note:

You cannot execute this function with standard DirectFax user **rights**. You must have DirectFax ***SECOFR** rights or log on as **QSECOFR**.

Task

You want to create a new or edit an existing DirectFax graphic. This might be a logo or a signature. In both cases, you have the graphic on paper.

Step 1 – Check and fax the original

The original should be black and white. If you need to copy from a colour original, use a good photocopier.

Fax the original to the modem from a conventional fax device with a **high resolution**. Note the time. If the fax is unsuccessful, check the following:

- The fax number was wrong.
- The DirectFax transmission program was not running (option 1 in GO FAXOPR).
- DirectFax is not configured for incoming faxes (option 1 in GO FAXCNFG. *Incoming fax control* must be set to *FILE or *DTR).
- The modem is set to *Send only* (option 12 in GO FAXCNFG, param. *Control lines 1-8* must be empty or _).

Step 2 - Find the fax

Select the Operator menu with **GO FAXOPR** and option 9 *Work with incoming faxes*. A list of received faxes is displayed. The fax should be the last entry in the list.

Check the date and time columns. You can also check the file size with option **8** *Attributes*. An A4 page is about 40 - 80,000 bytes. If you cannot find the fax, change the fax user entry to ***ALL** and press **F18.** The fax may already have been assigned to a user. The fax itself can be displayed on a 3489 terminal or on a PC with the DirectFax PC software.

Step 3 - Create the new graphic

Having found the fax, select option **3** *Import graphic* and press Enter. The input fields in the *Import fax to graphic* dialog are as follows"

Graphic name (GRFNAM)

A name for the *graphic*. Use only alphanumeric characters. No special characters are accepted. If you are recreating an existing *graphic*, use a working name such as NEW_LOGO, so that the existing *graphic* can continue to be used.

Graphic description (GRFBEZ)

Overwrite the text in quotes with your own description.

Number of the received fax(INCNBR)
The number is defaulted by the system.

Start position of *graphic* (START)
Take a **ruler** with millimeter scale. Measure the distance from the <u>top margin</u> of the page to the <u>first black point</u> of the *graphic.* E.g. a typical value would be 8 mm. Enter this value here when starting.

Length of *graphic* (LENGTH)
On the original page, measure the size of the *graphic* from the <u>first black point</u> to bottom. E.g. a typical value would be 35 mm. Enter this value here with length.

Space before (BEFORE)
Do not enter this field. Leave the default value 0.

Space after (AFTER)
Do not enter this field. Leave the default value 0.

Note:
Please **note** the millimetre values for later use.

Press Enter. The program now loads the graphic from the fax and creates a DirectFax graphic with the name you have specified.

The following status message is displayed:

> ***Fax xxxxx imported as graphic/logo***

Step 4 – Check and fax the new graphic

Exit the program with F3 and select option **8** *Work with graphics and authorisations* from the Operator menu.

Select the graphic you have just created. Use option **1=Fax** to send the graphic to a standard fax device.

Compare the fax to the original. Check the following:

- If the graphic is slanted or distorted, you will have to repeat the process.
- If the graphic is cut off the top, reduce the first millimetre value and add it to the second value.
- If the graphic is cut off the bottom, increase the second millimetre value accordingly.
- If a part of the fax protocol line visible above the graphic, increase the first value and subtract it from the second value.

Warning:
If the faxed graphic is not of sufficient quality, delete it with option 4, exit and repeat the process from step 2. Reload the graphic with adjusted millimetre values.

Step 5 – Check name and authorisation

When you are satisfied with the faxed graphic, select option **7** to *rename* it. If you are replacing an existing file, use ENDDIRFAX or GO FAXOPR, option 2 to close DirectFax. Then, from the *Work with graphics and authorisations* dialog, use option 4 to delete or option 7 to rename the grahic. Then rename the new graphic with option 7.

Select option **8=Authorisations** to open the *Work with fax logo authorisations* dialog. Use F6 and select the users you want to authorise with X, or authorise all users by entering ***PUBLIC X**. Only one user is usually authorised for signature graphics. You can revoke authorisations by blanking out the X for the user.

Restart the DirectFax **transmission program** with STRDIRFAX or option 1 in the FAXOPR menu.

Test the new graphic by faxing it to a standard fax machine.

9.9.5 Display/print a DirectFax graphic (DSPFAXGRF)

You can display or print (paper or file output) DirectFax graphics with the command DSPFAXGRF.

0054 - Displaying fax graphics (DSPFAXGRF)

Parameters

Graphic name (GRFNAM)
Name of the logo for display or print

Output (OUTPUT)
Input options:

*PRINT   Prints the graphic to an IPDS printer. Note: For technical reasons, the printout is slightly reduced. The ratio is 1:1,09.

*   Displays the graphic on screen. The options available are the same as in the IBM license program QUERY/400.

*OUTFILE   Outputs to an outfile.

Printer (PRTDEV)
The name of the printer. The printer must be an IPDS printer. This parameter is only required for OUTPUT(*PRINT).

Character for pixel (CHAR)
For OUTPUT(*OUTFILE) or OUTPUT(*), enter the character used to represent a pixel in the graphic.

Output (FILE)
If OUTPUT(*OUTFILE) is selected, enter the target file name. The file is created automatically by the system. This is the working file used by the DirectFax editor during editing. Output files cannot be edited in the current version.

Library (LIB)
If (OUTPUT (*OUTFILE) is selected, the name of the library for the output file.

9.10   Maintain forms (WRKFAXFRM)

In DirectFax, **forms** are special graphics created with a **form definition**. A scanned total page graphic can also represent a form image and be mixed with text from a spool file; however this chapter deals with forms and not with simple graphs (logos).

Forms can be built from multiple graphics mixed with text. They can contain lines and boxes. The first page can be different to the pages that follow.

There are 3 options available for using forms:

- By enter the ^FORM instruction in the first text line
- By entering a form name in the fax user profile
- By entering a form name in an AutoFax definition

Form names can have a maximum of **8 characters**. DirectFax uses the last two characters to differentiate between forms on page 1 and those on continuation pages. All mix fax commands are available.

First/continuation pages

If different forms are required for the first page (*FIRST) and the continuation pages (*SECOND), the *FIRST definition is overlaid on the first page and the *SECOND definition on all other pages. You can also define a cover sheet form (*COVER).

What are the benefits of forms?
The entry in the fax user profile, the AutoFax definition or the ^FORM() code load the form at transmission time. This means that serial faxes with varying fonts and graphics are processed much faster than with the traditional mix technique. Repetitive work and system resource use is reduced to a minimum.

The command WRKFAXFRM *Work with form definitions* displays this dialog:

0055 - Work with form definitions

To create a new definition, use F6 in the WRKFAXFRM dialog to enter a new form name, and select **F** for *FIRST for the first page. The DirectFax editor is started automatically for editing. Example:

^gABKOPF(1,1)
^gABFUSS(1,250)
^B(120,50,180,60,1,4)
^P(123,58)^F2108Order   confirmation

This   form   definition   specifies   the   following:
- Insert graphic ABKOPF at coordinates 1,1

- Insert graphic ABFUSS at coordinates 1,250

- Draw a rectangle from 120,50 to 180,60 with line1 and 4 pixels

- Position at 123,58 (i.e. within the rectangle)

- Switch to font 2108 Bookman 16 points bold

- Write "Order confirmation" into the rectangle

You can use these techniques to create the complete form. Generate the lines required with the ^B() command.

Further notes on the instructions, that you can insert you find in the SECTION, PAGE 91.

After the form is defined and saved, use **option 14** to compile**.** The form is translated to T4 code and saved to a user space, which allows very fast processing during fax dispatch.

Form authorisations
Use 10 to authorise users for the form. You can authorise all users with the *PUBLIC value.

9.11   Notes on fax receipt and distribution

Warning:
Automatic incoming fax distribution is <u>not</u> available to DirectFax Lite users.

DirectFax can receive incoming faxes and save them to a file on the iSeries. It is important to realise that incoming faxes are graphics, not text files.

A image-capable terminal such as the IBM 3489 or a PC with the optional DirectFax PC software is required to display these graphic files.

Incoming faxes can also be printed. You can print to a PCL5 printer on the iSeries or to a PC printer with the DirectFax PC software.

If you want to manage fax receipt with DirectFax, note the following:

- If fax traffic is heavy, there may be capacity problems with the fax modem. The line would be constantly "busy" it would be practically impossible to receive incoming fax. In this case a second line is recommended.

- It would be a waste of resources not to use the automatic distribution feature on the iSeries and the PC. If you only need to print, a standard fax device would be more suitable.

DirectFax can automatically reroute incoming faxes to a users by either assigning the fax directly or by fax copies to users.

In both cases, fax data is not duplicated. Incoming faxes are stored in the file FAXINC, where they are assigned an **owner**. The user thinks data has been duplicated but in actual fact he sees the file directly associated to his user name.

DirectFax allows **electronic distribution** of incoming faxes. Some adjustments to your telephone systems and organisation may be required.

Because the fax content is a graphic, it cannot be automatically distributed. The only readable information is the **CSI identifier**, which is different for each machine. In specific situations, automatic distribution by CSI number may be useful. DirectFax supports this method with the command WRKFAXDTR. For more information, see the function ***CSI** below.

In **exchange** systems, every employee has an extension number. This number is known by the respective business partners and allows a reliable and direct connection. If every employee also had **direct internal fax number,** the automatic distribution of incoming fax could be realized.

Modern digital phone systems support <u>virtual</u> extensions which can be redirected to another number. This can be used by the fax modem. The essential thing is that the original extension number is redirected to the modem.

A number of DirectFax installations have implemented this solution in conjunction with an **ISDN** fax router. ISDN is well suited because the digital data includes the caller and the called number. This solution is not possible with an analog modem.

If you are considering **ISDN**, allow for at least 100 extensions.

Dial Tone Routing (DTR) and destination information

The method used to forward incoming faxes in DirectFax is called **Dial Tone Routing** (**DTR**). This means that the dial tones determine the distribution. The extension number received from the box is called **destination** information.

Activate incoming fax processing

To enable incoming fax distribution, set the parameter **INCPRT** in the command **CFGDIRFAX** to ***DTR.**
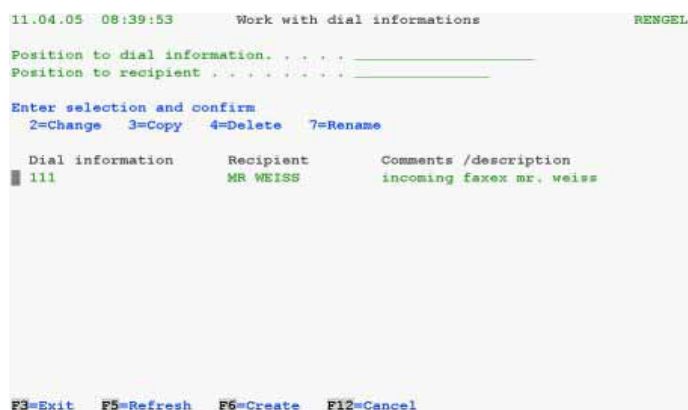
This allows DirectFax/PC users to view faxes on the PC, print to a PCL5 printer or reroute to another fax number. A message can be also be sent to the iSeries user, or a defined substitute. The fax can also be forwarded by e-mail.

9.12 Automatic incoming fax distribution (WRKFAXDTR)

Warning:
Automatic incoming fax distribution is <u>not</u> available to DirectFax Lite users.

Use the command **WRKFAXDTR** to maintain distributor information. When you run the command or select the corresponding option in the Configuration 2 menu, the following screen is displayed:

```
11.04.05  08:39:53       Work with dial informations              RENGEL

Position to dial information. . . . . _____
Position to recipient . . . . . . . . _____

Enter selection and confirm
  2=Change   3=Copy   4=Delete   7=Rename

  Dial information      Recipient        Comments /description
█ 111                   MR WEISS         incoming faxex mr. weiss

F3=Exit   F5=Refresh   F6=Create   F12=Cancel
```

0056 - Work with destination information: WRKFAXDTR

A list of existing entries is displayed. Use page up/down to scroll through the list. You can use the "Position to" fields to position within the list. The columns and sort sequence displayed depend your search.

Options

2=Change
Allows you to change an entry. This is described in detail later in this section.

3=Copy
Copies an entry. You will be prompted for the new destination information. The strings allowed are described below under "Enter/change destination information".

4=Delete

Deletes the entry. You will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

7=Rename
Renames the entry. You will be prompted for the new destination information. The strings allowed are described below under "Enter/change destination information".

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Creates a new entry. Details in chapter 6.18.1.

F12=Cancel
Returns to the previous screen.

Enter/change destination information
Use F6=Create to create a new entry or option 2 to change an existing entry. The following screen is displayed:

0057 - Enter/change destination information;

after CHGFAXDTR

Input fields

Destination information / :CSI (Key field)
This field contains either the destination information or the incoming CSI prefixed a colon. The following describes the more complicated option. For details on the *CSI method, refer to the parameter descriptions for "Forward fax to".

This number is a form of **exchange number**. This number is assigned internally and then given to business partners (customers and suppliers). It must be **unique**.

Transparency can be maintained within larger organisations with clearly defined hierarchies. For example, if the unknown number "201013" is

included on an incoming fax, the **generic entry** "**201.**", allows you to reroute all unassigned numbers beginning with 201 to the right department or group. The dot is used as the wildcard because "*" may be included in the string.

The special value ***OTHER** allows the rerouting of non-assignable numbers to a specific recipient, who can then forward it.

The special value ***NONE** directs all incoming faxes with no destination information whatsoever to a recipient who then decides where the fax goes. This could also be combined with the special function *CSI.

Note:
*NONE should **always** be defaulted when working with INCPRT (*DTR parameter). This applies even if you do not have the DTR hardware.

The special values ***BOX1**, *BOX2..8 in the DirectFax multiline version allow fax forwarding based on the line number. For example, if 2 fax lines are active (one for company A and one for company B), the fax could be sent to the appropriate company line.

When using the new send program, the syntax ***BOX:**<u>Line name</u> is now supported (for line name, see WRKFAXLIN).

Recipient description
This name can be assigned as required. It must exist but does not have to be unique. It should be descriptive, allowing you to find destination information if the number is not known. Depending on company structure, it may be a department, room number, a group or even a device description.

Comment
You can use this field to supplement the recipient description.

Fax user name
The user to whom the incoming fax is assigned. This user is the fax owner, with all owner rights. The user can process the incoming fax on a PC as they arrive.

Incoming message to user (Field 1)
If not logged on, divert to (Field 2)
To notify the user named in the previous parameter with an iSeries message when a fax arrives, enter the value ***OWNER**. The user name can also be entered directly. You can also specify a substitute for the message if the owner is not logged on in field 2. The message is always sent to the owner's queue if the owner is not logged on. If no name is entered, no message is sent.

Print to PCL printer (Name, OUTQ, Lib)
Incoming faxes can be automatically printed to a PCL5 printer connected to the iSeries. Because it is unpacked and scaled, conversion of the fax T4 code to a printable ASCII data stream is very processor-intensive.

Notes:
Printing is only successful on a **PCL5** capable printer. The printer must be connected to the iSeries and all components involved (network, adapters etc.) must be capable of transferring the data stream. If blank pages or hieroglyphs are printed then try to repeat the function on a differently configured printer. If no PCL printers are available, print to a device

connected directly to the PC instead. *IPDS printing is not recommended as a long-term solution.

Additional function or *CSI
Function parameter/destination
In most cases, the assigned owner and PCL printer are sufficient. This option offers an additional method for processing. Special values and parameter functions can be used to initiate the following actions:

*USER
This function allows the fax to be assigned to a user if the fax number above has not been entered. Otherwise it creates a **copy** of the fax assigns the **user** entered for *Function parameter/destination*. No message is sent.

*FAX
This function forwards the incoming fax **to a fax device.** The *Function parameter/destination* should contain the fax number (e.g. 0405591908 or 233i) to which the incoming fax is rerouted.

*IPDS
Forwards to an IPDS printer. This function is not recommended. It requires extensive system resources. In the *Function parameter/destination* parameter, enter the printer ID (for example PRT15). The printer must have sufficient memory and must be graphic-capable and configured as *IPDS.

*PGM
Forwards to an application. In the *Function parameter/destination* parameter, enter the qualified program name (for example Lib1/Prog22). The program is run with CALL. The following parameters are passed:

```
Incoming fax number:    5-character, alphanumeric
Destination information:    20-character, alphanumeric
Recipient description: 15-character, alphanumeric
```

*CSI
This is a special function that identifies the recipient using the incoming CSI identifier. The *Function* parameter must be empty and the parameter *Target information* must contain the value *NONE. The following example describes the function:

Example: The following entries exist in the file FAXDTR:

Destination info   Function   Parameter

1. ***NONE   *CSI** _____

2. **:+49405591908*USER**   SMITH

3. **OTHER *USER**   JONES

A fax with the CSI '+49405591908' is received. Because DirectFax is not configured for hardware DTR, the program finds the first entry ***NONE** (no DTR info received) and the special function ***CSI**.

The program then uses the CSI key '**:+49405591908**' to access the file FAXDTR. The entry ':+49405591908' is found. This entry forwards the fax to user SMITH.

If the file access is unsuccessful (because the identifier is unknown), the program takes the forwarding definitions from the entry ***OTHER** (assigned to JONES in this example).

*MAIL

Forwards by e-mail if the iSeries is configured as a mail server. The *Function parameter/destination* parameter must contain the complete e-mail address for the recipient.

*DOM

Forwards to a Lotus Domino Server for distribution to Lotus Notes users. *Function parameter/destination* must contain faxin@dirfaxin. DIRFAXIN is a domain in **DirectFax Connector for Lotus Notes**. This is described elsewhere in this document. Look up the headwords mailin, Faxin database, Dirfaxin domain, inbound. Unlike *MAIL, *DOM forwards the fax with a coded subject line to the Domino Server.

The command line:

```
FAXINC%<CSI>%<NST>%<Seq.No.>%<Receipt          date/time>
%<Pages>%<User>%
```

Example:
FAXINC%%968151%29.04.2002 17:33%08%HGR%

Function keys

F3=Exit

Interrupts destination data entry and exits the program.

F5=Refresh

Refreshes the display. Unsaved changes will be lost.

F12=Cancel

Returns to the previous screen without saving changes.

9.13 The archive interface for incoming faxes

Incoming faxes can be passed in TIF format either automatically or manually to an third party archiving system.

9.13.1 Licensing

Fax archiving is an **optional** supplement to the DirectFax software available from Version 5. A separate **password** (license with product code DF450AR) is required on the iSeries. Customers updating from 4.01 to 5.xx with a permanent license for 4.01 can use the function.

A new **license code** for the archiving feature is required in the following situations:

- The first time you use it

- If you switch to another iSeries

- If you upgrade to a newer model

You do **not** need a licensed password to update within Version 5. Use the command **CHKDIRFAX** to check the license status. **AR=1** indicates that you are licensed for archiving.

Note: **STRDIRFAX** cannot be executed if the configuration (CHGFAXVAL) parameter *Archive mode* is set to **I** (incoming) or **A** (outgoing) and you are not licensed for FAXMAIL.

9.13.2 Process

There are three steps in the archiving process:

Convert the fax to TIF or PDF format and output a file to a folder.

Start the archiving process with a third party program call.

Delete the PC file and fax if required.

9.13.3 C#onfiguration

The interface is configured with the command **CFGFAXARC.** The following parameters must be entered once in dialog:

```
11.04.05          Configure DirectFax archive interface          RENGEL

 Enter selection and confirm

 Archive parameter for inc. Faxes:
   Archive mode  . . . . .   M           N=No archive, M=Manual, I=by entry
   Reorg. before export  .   Y           Y=Yes N=No
   Single pages/file . . .   N           Y=Yes N=No
   File format . . . . . .   *TIFF       *TIFF, *PDF
   Path for File Export  .
     QDLS/GSSFAXIN

   Archive command



   Single archive call . .   N           Y=Yes N=No
   After successful archiving
     Delete File . . . . .   Y           Y=Yes N=No
     Delete incoming fax .   Y           Y=Yes N=No

 F3=Exit   F4=Prompt   F5=Refresh   F10=Outg.faxes   F12=Cancel
```

0058 – Archive interface

A#rchive mode
Determines the method of archiving.

M Manual archiving with option 11 from the command WRKINCFAX

I Automatic archiving after receipt

N No, archiving is disabled

R#eorg before export
Y=YES activates a resource intensive-reorganisation of the received T4 code. This is done to avoid problems converting to TIF format. N disables T4 reorganisation.

CFGFXARC_BF02
CFGFXARC_BF01_ARCMOD
CFGFXARC_BF01_ARCRGZ

S[#]ingle pages/file

Specifies whether a PC file is created in the IFS for each page (for example with Solitas).

N   No. A PC file is created for each incoming fax.

Y   Yes. Creates a PC file for each page (for example with Solitas, file name DF0004711_n.tif, where n is the page number).

F[#]ile format

Specifies the PC file format.

*TIFF TIF format

*PDF PDF format (Acrobat Reader)

P[##]ath for file export

Specifies the **IFS path** for archiving. For the EBCDIC folder file system on the iSeries, prefix with **QDLS/**. Example for the folder ARCHIVE: **QDLS/ARCHIVE** If the path is incorrect or the folder does not exist, an error occurs and archiving is cancelled.

C[####]ommand for archiving

Enter the command for the archiving system. The command and the required parameters can be found in the archive system documentation.

DirectFax offers the following parameter variables:

&DOC	The name of the TIF file
&PATH	The path for the TIF file
&INCNBR	The sequence number of the incoming fax
&CSI	The incoming CSI
&INCTIM	The time the fax was received (HHMMSS)
&INCDAT	The date the fax was received (YYMMDD)
&TIME	Current time at call (HHMMSS)
&DATE	Current date at call (HHMMSS)
&OWNER	The incoming fax owner
&PAGES	The number of pages

[#] CFGFXARC_BF01_ARCSNGPAG
[#] CFGFXARC_BF01_ARCFORMAT
[#] CFGFXARC_BF01_PATH1
[#] CFGFXARC_BF01_PATH2
[#] CFGFXARC_BF01_CMD1
[#] CFGFXARC_BF01_CMD2
[#] CFGFXARC_BF01_CMD3
[#] CFGFXARC_BF01_CMD4

&USER The current user

&JOB The current job name

&JOBNBR The current job number

Example of parameter variables in an archiving command:

```
ARCTIFF FILE('&DOC') PATH('&PATH')
    KEY1('FAX&INCNBR') KEY2('&INCDAT')
```

S[#]ingle archive call
Specifies whether the archiving command is executed for each page (for example with Solitas).

N No. The command is executed once per fax. This applies even if the *Single pages* parameter has been set to Yes.

Y Yes. The command executes for each page in the file.

D[#]elete file
If set to **Y=Yes**, deletes the file created in the folder specified above after archiving. If **N=No**, the file is not deleted.

D[#]elete incoming fax
Y=Yes deletes the fax from the DirectFax file FAXINC after archiving. If **N=No**, the fax stays in the file until it is deleted manually. Y=Yes should only be used if the interface has been adequately tested.

An **archiving API** is available which, in combination with the function ***PGM** and the CL program **ARCINCDTR**, allows you more flexible control of the archiving process. For more information, please refer to the command WRKFAXDTR *Automatic fax distribution*.

9.14 The archive interface for outgoing faxes

Outgoing faxes can be passed in TIF format either automatically or manually to an third party archiving system. Only mix faxes are supported.

Note: In modem installations, all faxes are mix faxes. DCE installations may also produce text faxes. These are not archived.

9.14.1 Licensing

Fax archiving is an **optional** supplement to the DirectFax software available from Version 5. A separate **password** (license with product code DF450AR) is required on the iSeries. Customers updating from 4.01 to 5.xx with a permanent license for 4.01 can use the function.

A new **license code** for the archiving feature is required in the following situations:

[#] CFGFXARC_BF01_ARCSNGCAL
[#] CFGFXARC_BF01_ARCDLT
[#] CFGFXARC_BF01_ARCDLI

- The first time you use it

- If you switch to another iSeries

- If you upgrade to a newer model

You do **not** need a licensed password to update within Version 5. Use the command **CHKDIRFAX** to check the license status. **AR=1** indicates that you are licensed for archiving.

Note: **STRDIRFAX** cannot be executed if the configuration (CHGFAXVAL) parameter *Archive mode* is set to **I** (incoming) or **A** (outgoing) and you are not licensed for FAXMAIL.

9.14.2 Process

There are three steps in the archiving process:

Convert the fax to TIF or PDF format and output a file to a folder.

Start the archiving process with a third party program call.

Delete the PC file and fax if required.

9.14.3 Configuration

Configured the interface with the command **CFGFAXARC** and **F4.** The following parameters must be entered once in dialog:

0059 – Archive interface

Archive mode
Determines the method of archiving.

N No, archiving is disabled

M **Manual** archiving with option 11 from the command WRKINCFAX and **automatic** archiving with a name supplied with the code ^ARCNAM()

A Automatic archiving of all sent faxes

Single pages/file:

Specifies whether a PC file is created in the IFS for each page (for example with Solitas).

N No. A PC file is created for each outgoing fax.

Y Yes. Creates a PC file for each page (for example with Solitas, file name DF0004711_n.tif, where n is the page number).

File format
Specifies the PC file format.

*TIFF TIF format

*PDF PDF format (Acrobat Reader)

Path for file export
Specifies the **IFS path** for archiving. For the EBCDIC folder file system on the iSeries, prefix with **QDLS/**.

Example for the folder ARCHIVE: **QDLS/ARCHIVE**

If the path is incorrect or the folder does not exist, an error occurs and archiving is cancelled.

Archiving commands
Enter the command for the archiving system. The command and the required parameters can be found in the archive system documentation.

DirectFax offers the following parameter variables:

&ARCNAM	Archive name from the code ^ARCNAM()
&DOC	The name of the TIF file
&PATH	The path for the TIF file
&FAXNBR	The sequence number of the outgoing fax
&DIAL	Fax number
&ADDRESS	The address key
&REF	The subject line
&APPKEYA	Application key A
&APPKEYB	Application key B
&SNDTIM	The time the fax was sent (HHMMSS)
&SNDDAT	The date the fax was sent (YYMMDD)
&TIME	Current time at archiving call (HHMMSS)
&DATE	Current date at archiving call (HHMMSS)
&OWNER	The outgoing fax owner
&USER	The outgoing fax owner

&PAGES	The number of pages
&CSI	The incoming CSI
&JOB	The current job name
&JOBNBR	The current job number
&CURPAG	The current page number
&CRTDAT	Fax created on
&CRTTIM	Fax creation time

Example of parameter variables in an archiving command:

```
ARCTIFF FILE('&DOC') PATH('&PATH')
    KEY1('FAX&FAXNBR') KEY2('&SNDDAT')
```

Single page archive call
Specifies whether the archiving command is executed for each page (for example with Solitas).

N   No. The command is executed once per fax. This applies even if the *Single pages* parameter has been set to Yes.

Y   Yes. The command executes for each page in the file.

After archiving
Delete file
If set to **Y=Yes**, deletes the TIF or PDF file created in the folder specified above after archiving. If **N=No**, the file is not deleted.

9.14.4 Subsequent archiving of outgoing faxes

In **automatic** archiving of outgoing faxes, the faxes are submitted to the archiving interface immediately after they are sent.

Faxes already in the History view can also be automatically archived with a command call. In the procedure now described, you can also archive faxes manually (archive mode M), for example to archive faxes for a specific user.

Archived faxes are assigned an internal identifier so that they are not archived again the next time the command is run.

Procedure:
Use the command **CHGFAXVAL** and F4 to note the number of days entered in the *Retain fax content* (RETAIN) parameter on page 2.

Use **DSPSNDSTS** F4 to start printing a send log. In the *Print from date* parameter, enter the current date minus the days from the RETAIN parameter.

In *Print to date*, enter the current date.

Leave *User selection* at *ALL or enter a user name to archive only that users' faxes.

When deleting faxes? *When archiving enter* ***ARC** for later archiving of outgoing faxes.

When you execute the command, a send log for the specified period is printed and faxes which have not yet been archived are archived.

9.14.5 Special archiving (^ARCNAM)

The **^ARCNAM()** code has been added to control the archive interface for outgoing faxes. For example, if you want to archive only reminders, you could add ^ARCNAM(REM) to the ^FAX control line.

If you have selected M=Manual in CFGFAXARC *Configure archive interface* and F10 "Outgoing faxes in archive mode", only faxes which have received a name from ^ARCNAM() are archived.

You can use &ARCNAM to pass the archive name in the archiving command.

An 80-character input field for special ^CODES has been added to parameter page 2 in **AutoFax**. You could enter ^ARCNAM(REM) there.

9.14.6 Example 1 archive interface (outgoing)

In most cases, fax archiving is done with third-party products that allow you to copy documents to an archive and retrieve them as required.

The example here shows how the **DirectFax archiving interface for outgoing faxes** works with a user-defined program. In this example, the PC file (TIF or PDF) created by DirectFax in the IFS is renamed to include a key (supplier no.) and the send date. A log file containing a range of information is also written, which can be queried with DataXPress or SQL when you want to retrieve specific faxes.

Note: A separate license is required to use the archiving interface (Product code: DF450AR).

9.14.6.1 The archiving process

After <u>successfully</u> sending a fax or mail, the graphic content is saved as a TIF or PDF file in the iSeries IFS and processed by the archiving command.

9.14.6.2 Configuration

Archiving mode (manual or automatic) is set during configuration (CFGFAXARC, F10 Outgoing faxes).

```
 Enter selection and press Enter.

 Archive parameters for outgoing faxes:
   Archive mode. . . . . .   M          N=no archive, M=Manual, A=All
   single pages/file  . .   N           Y=Yes, N=No
   File format. . . . . .   *PDF        *TIFF, *PDF
   Path for file export  .
     /Toolmaker/DirectFax400/Temp


   Command for archiving
     TSTARCOUT ARCNAM('&ARCNAM') DOC('&DOC') PATH('&PATH') FAXNBR('&FAXNBR'
     ) USER('&USER') SNDDAT('&SNDDAT') APPKEYA('&APPKEYA') APPKEYB('&APPKEY
     B')

   Single archive call . .   N          Y=Yes, N=No

   After successful archiving
     delete file . . . .   N            Y=Yes, N=No
```

In this example, **only order faxes** (ORDER) are archived. Configuration is first set to **M**=Manual. To ensure that the faxes are automatically archived, the application must pass the archive name **ORDER** with **^ARCNAM(ORDER)** in the ^FAX control line. This automatically processes faxes with the archive name even though they are set to manual. If you are using AUTOFAX, specify ^ARCNAM(ORDER) in the input line for special ^Codes on page 2 of the fax parameters.

The **path used for file export** is the existing folder **/Temp** in **/Toolmaker/DirectFax400** in the IFS (not QDLS!).

The **archiving command** used is the user-defined command **TSTARCOUT**. The command parameters are set with predefined **variables** by DirectFax (see list in manual, section 9.14.3). Variables must be enclosed in single quotes (Example: '&ARCNAM').

9.14.6.3 Command TSTARCOUT

TSTARCOUT is the simple user-defined archiving command referred to above.

You can find the command source code in the file QCMDSRC in DIRECTFAX. It looks like this:

```
   CMD        PROMPT('Example Archiv Command Outfax')
   PARM       KWD(ARCNAM) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(ARCNAM)
   PARM       KWD(DOC) TYPE(*CHAR) LEN(12) CHOICE(' ') +
                PROMPT(DOC)
   PARM       KWD(PATH) TYPE(*CHAR) LEN(80) CHOICE(' ') +
                PROMPT(PATH)
   PARM       KWD(FAXNBR) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(FAXNBR)
   PARM       KWD(USER) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(USER)
   PARM       KWD(SNDDAT) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(SNDDAT)
   PARM       KWD(APPKEYA) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(APPKEYA)
   PARM       KWD(APPKEYB) TYPE(*CHAR) LEN(10) CHOICE(' ') +
                PROMPT(APPKEYB)
```

The advantage of using such commands is that they ensure that the parameter lengths are correct. Because the names are self-explanatory, no parameter text is required.

9.14.6.4 CL program TSTARCOUT

The CL program TSTARCOUT accepts all parameters in the command and executes two functions.

1. Move and rename the PC file

2. Add a record to the log file

You can find the program source code in the file QCLPSRC in DIRECTFAX.

In addition to variable definitions and error handling, the program also contains the following important lines:

```
 ORDER:      IF          COND(&ARCNAM = ORDER) THEN(DO)
             CHGVAR      VAR(&OLDOBJ) VALUE(&PATH *TCAT '/' *TCAT &DOC)
/*           SNDMSG      MSG(&OLDOBJ) TOUSR(QPGMR) */
             CHGVAR      VAR(&NEWOBJ) VALUE('/Toolmaker/' *CAT +
                           &ARCNAM *TCAT '/' *CAT &APPKEYA *TCAT +
                           '_' *CAT &SNDYMD *TCAT '_' *CAT &DOC)
/*           SNDMSG      MSG(&NEWOBJ) TOUSR(QPGMR) */
MOVFILE:     MOV         OBJ(&OLDOBJ) TOOBJ(&NEWOBJ)
```

If the archive name = **ORDER**, the path and file name for the current location (&OLDOBJ) and for the destination folder (&NEWOBJ) are concatenated.

The destination folder in this example is ORDER (contained in the variable &ARCNAM) and is located in the folder /Toolmaker. You can create the **ORDER folder** with the following command:

MD DIR('/Toolmaker/ORDER')

The line **MOVFILE** uses the **MOV** command to move and rename the PC file containing the graphic (TIF or PDF) created by DirectFax.

Line marked with /* and */ are inactive. They are included to help analyse variables during the test phase.

9.14.6.5 RPG program ADDARCOUT

This is a little RPG program that adds a record containing all parameters passed to the log file ARCOUTP in the library DIRECTFAXF. The log file allows you to search all faxes and retrieve the location of the PC files. Retrieval tools and methods are not included in this description.

You can find the program source code in the file QRPGSRC in DIRECTFAX.

9.14.6.6 Important notes

The source code described above is intended only as an example of possible user-defined archiving. It can be modified to meet your requirements. For example, you might want to save more or different fax information, or to make PC file names more descriptive. You could even move the files from the IFS to a PC and burn archive CDs monthly or annually.

Warning: If you want to use the source members and the file ARCOUTP for your own solution, you must first copy all sources to another library, rename them and change the source to meet your requirements. Source files in the library DIRECTFAX may be overwritten during a DirectFax update!

9.14.7 Example 2 archive interface (&REF)

In most cases, fax archiving is done with third-party products that allow you to copy documents to an archive and retrieve them as required.

The example here shows how the **DirectFax archiving interface for outgoing faxes** works with a user-defined program. In this example, the PC file (TIF or PDF) created by DirectFax in the IFS is **moved and renamed**. The name is defined by the application with ^REF() in the ^FAX control line (e. g. "Invoice 12345").

CL programming is required.

Note: A separate license is required to use the archiving interface (Product code: DF450AR).

9.14.7.1 The archiving process

After <u>successfully</u> sending a fax or mail, the graphic content is saved as a TIF or PDF file in the iSeries IFS and processed by the archiving command.

9.14.7.2 Configuration

Archiving mode (manual or automatic) is set during configuration (CFGFAXARC, F10 Outgoing faxes).

```
10.01.06              Configure DirectFax archive interface            WOIDT

 Enter selection and press Enter.

 Archive parameters for outgoing faxes:
   Archive mode. . . . . .   M            N=no archive, M=Manual, A=All
   single pages/file  . .   N            Y=Yes, N=No
   File format. . . . . .   *PDF         *TIFF, *PDF
   Path for file export  .
     /Toolmaker/DirectFax400/Temp


   Command for archinving
     TSTARCOUT2 ARCNAM('&ARCNAM') DOC('&DOC') PATH('&PATH') FAXNBR('&FAXNBR
     ') USER('&USER') SNDDAT('&SNDDAT') REF('&REF') ARCPATH('Toolmaker')


   Single archive call . .   N            Y=Yes, N=No

   After successful archiving
     delete file . . . .   N            Y=Yes, N=No
```

In this example, only faxes with an archive name are archived. Configuration is first set to **M**=Manual. Faxes without archive names are not archived.

To ensure that the faxes are automatically archived, the application must pass the archive name **FAXARC** with **^ARCNAM(FAXARC)** in the ^FAX control line. If you are using AUTOFAX, specify ^ARCNAM(FAXARC) in the input line for special ^Codes on page 2 of the fax parameters.

The **path used for file export** is the existing folder **/Temp** in **/Toolmaker/DirectFax400** in the IFS (not QDLS!).

The **archiving command** used is the user-defined command **TSTARCOUT2**. The command parameters are set with predefined **variables** by DirectFax (see list in manual, section 9.14.3). Variables must be enclosed in single quotes (Example: '&ARCNAM').

The destination path can be specified with the ARCPATH parameter. Do not include the slashes at the beginning and end of the path. They are added automatically.

9.14.7.3 Command TSTARCOUT2

TSTARCOUT2 is the simple user-defined archiving command referred to above.

You can find the command source code in the file QCMDSRC in DIRECTFAX. It looks like this:

```
CMD          PROMPT('Example Archiv Command Outfax2')
PARM         KWD(ARCNAM) TYPE(*CHAR) LEN(10) CHOICE(' ') +
               PROMPT(ARCNAM)
PARM         KWD(DOC) TYPE(*CHAR) LEN(12) CHOICE(' ') +
               PROMPT(DOC)
PARM         KWD(PATH) TYPE(*CHAR) LEN(80) CHOICE(' ') +
               PROMPT(PATH)
PARM         KWD(FAXNBR) TYPE(*CHAR) LEN(10) CHOICE(' ') +
               PROMPT(FAXNBR)
PARM         KWD(USER) TYPE(*CHAR) LEN(10) CHOICE(' ') +
               PROMPT(USER)
PARM         KWD(SNDDAT) TYPE(*CHAR) LEN(10) CHOICE(' ') +
               PROMPT(SNDDAT)
PARM         KWD(REF) TYPE(*CHAR) LEN(50) CHOICE(' ') +
               PROMPT(REF)
PARM         KWD(ARCPATH) TYPE(*CHAR) LEN(50) CHOICE(' ') +
               PROMPT(ARCPATH)
```

The advantage of using such commands is that they ensure that the parameter lengths are correct. Because the names are self-explanatory, no parameter text is required.

9.14.7.4 CL program TSTARCOUT2

The CL program TSTARCOUT2 accepts all parameters in the command and moves and renames the PC file.

You can find the program source code in the file QCLPSRC in DIRECTFAX.

In addition to variable definitions and error handling, the program also contains the following important lines:

```
 ORDER:       IF          COND(&ARCNAM = FAXARC) THEN(DO)
              CHGVAR      VAR(&OLDOBJ) VALUE(&PATH *TCAT '/' *TCAT &DOC)
/*            SNDMSG      MSG(&OLDOBJ) TOUSR(QPGMR) */
              CHGVAR      VAR(&NEWOBJ) VALUE('/' *CAT &ARCPATH *TCAT +
                            '/' *CAT &REF *TCAT '.' *CAT &TYPE)
/*            SNDMSG      MSG(&NEWOBJ) TOUSR(QPGMR) */
MOVFILE:      MOV         OBJ(&OLDOBJ) TOOBJ(&NEWOBJ)
```

If the archive name = **FAXARC**, the path and file name for the current location (&OLDOBJ) and for the destination folder (&NEWOBJ) are concatenated.

The file name is made up of the &REF parameter (Subject) and the extension (PDF or TIF).

Warning: The application has to ensure that each subject and file name is unique. If it did not, previously archived faxes would be overwritten.

The destination folder is passed with the parameter &ARCPATH from the command.

The line **MOVFILE** uses the **MOV** command to move and rename the PC file containing the graphic created by DirectFax.

Line marked with /* and */ are inactive. They are included to help analyse variables during the test phase.

9.14.7.5 Important notes

The source code described above is intended only as an example of possible user-defined archiving. It can be modified to meet your requirements. For example, you might want to save more or different fax information, or to make PC file names more descriptive. You could even move the files from the IFS to a PC and burn archive CDs monthly or annually.

Warning: If you want to use the source members for your own solution, you must first copy all sources to another library, rename them and change the source to meet your requirements. Source files in the library DIRECTFAX may be overwritten during a DirectFax update!

9.15   Fax TIF files with ^ATTACH

A new DirectFax interface allows you to send **TIF files** (groups 2, 3 and 4) as part of a fax document.

An **attach instruction** in a mix fax adds a page break and inserts a single or multiple page TIF file.

The TIF file must be stored on the iSeries as a **monochrome graphic.** The TIF graphic is scaled to avoid problems with page size, resolution etc.

The TIF file conversion is a very resource-intensive process that can last several minutes. This is particularly so for 2-dimensional TIF graphics.

To insert the page break and the TIF file, use the following command:

`^ATTACH FOLDER/SUBFOLDER/FILE.TIF`

This command is available only for **mix faxes**.

9.16   Delete faxes and reorganise files

The most frequently used files in the library DIRECTFAXF are reorganised and cleared of deleted records when the subsystem is restarted, usually at midnight.

These are the files FAXE, MIXT4P, MIXG3P, FAXHIST and the PCL converter files PCLT4P and PCLTXTP and FAXAPF.

If the RETAIN parameter *Retain fax content* in CHGFAXVAL is a large number of days, you selected a longer period for retaining faxes and you accepted the corresponding consumption of disk space. Reduce the number of days to free up disk space. Automatic DirectFax reorganisation will clear the records deleted within two days.

The main files, **FAXSTAT** (outgoing fax header records) and **FAXINC** (incoming fax files) are not automatically cleared. If fax traffic is heavy, these files can get very big. For reorganisation to make sense, unused records must first be deleted.

You can use the command **DSPSNDSTS** to print a send log and at the same time **delete** unwanted outgoing faxes from the **History** view. To do this, select a date range and set the parameter DELAFTER to *YES.

To reorganise, you must have QSECOFR ***ALLOBJ** rights.

With the command **RMVFAXMBR**, you can delete unsent faxes. For example, these might be advertising faxes set to hold after unsuccessful send attempts F4 displays selection parameters for the command. A delete log is printed automatically.

You can use **RMVINFAX** to delete unwanted **incoming faxes** by date. For example, RMVINFAX FAXNBR(*ALL) DATE(010102) would clear all incoming faxes from 1.1.2002 from the files FAXINC and FAXINCH.

RMVOLDMBR deletes members from source files by date. DirectFax uses sources files to store fax text. Most are named after the user who creates them.

To clear disk space after deleting, the files must be reorganised. Third party products are available that reorganise libraries containing deleted records.

in DirectFax, the command **RGZFAXFIL** reorganises all files in the library DIRECTFAXF. Run it as a scheduled job (WRKJOBSCDE) with *ALLOBJ rights at a time when the subsystem is not active and there is no fax traffic.

9.17 Change send priority for serial faxes (CHGFAXPTY)

You can change the send priority for serial faxes for specified users with the command **CHGFAXPTY**. For example, a series of 1,000 faxes without a night rate will block any other faxes in the queue for an extended period. You can get around this by sending a fast fax. As administrator however, you can also use CHGFAXPTY and the user name to set the fax priority to one of the five night rates.

In the command CHGFAXPTY for changing fax priority in WRKFAXSTS, 2 new priorities are allowed. 0=Normal fax, 9=Fast fax.

9.18 Change fax banner graphic

The fax header, or banner, has been redesigned in 5.50. The sequence number is now 7 characters and Courier has been replaced by a proportional font. This means more data can be displayed in each section. The graphic template for the banner is a TIF file in the IFS in the following folder:

/Toolmaker/Directfax400/system

3 files are used for faxing:

```
fax_hdr_lgo.tif     Active banner
fax_hdr_dfx.tif     Original banner as a backup
fax_hdr_nodfx.tif   Alternative banner without the
                    writing DirectFax
```

You can modify the files *fax_hdr_lgo.tif* or *fax_hdr_nodfx.tif* with a PC graphic editor and then set the modified file as the active banner by copying it to *fax_hdr_lgo.tif*.

The file *fax_hdr_dfx.tif* is a backup of the original banner shipped by Toolmaker. It should not be modified or deleted.

The **header** for DirectFax PCL protocols has also been adjusted. The files are:

```
pcl_hdr_mix.tif     Outgoing fax
pcl_hdr_inc.tif     Incoming fax
pcl_hdr_grf.tif     Graphic test
```

10.0 The DirectFax editor

A range of editors can be used to create the faxes. They are described below.

10.1   The DirectFax editor

The DirectFax editor can be used to edit fax documents and to maintain fax templates. This section describes how to work with the DirectFax editor.

After entering all the required parameters, press Enter to start the DirectFax editor. The following screen is displayed:

0060 - Edit fax

About the DirectFax editor

Any amount of text can be entered between the lines ***** **Start of data** ***** and ***** **End of data** *****. You can use function keys to add and delete lines as required. **Control codes** allow you to add variables including **date, time, salutation, fax sequence number, CSI, graphics, logos** and **address fields** anywhere in the text.

When laying out your text, remember that **headers and footers**, which are not visible in the editor, will probably be added before the fax is sent. It's a good idea to familiarise yourself with the content of headers and footers.

The DirectFax editor is easy to learn. Functions are executed with the function keys at the bottom of the screen. You can use F24 to display more keys.

The Editor always starts in "Overwrite" mode. Switch modes with the "**Insert"** key. Existing text is pushed to the right as long as there is space in the line. Overwrite mode is always restored when you press Enter.

Function keys

F1=Select

Selects the line of text in which the cursor is positioned so you can copy or move it. The line is displayed with column separators or in blue, depending on your monitor. If you select a second line below the original selection, all lines between the two selections are treated as a block and displayed as selected. Text is deselected when you copy or if you press F13.

F2=Copy
Moves the lines selected with F1 to the line following the cursor position. The selection is removed.

F3=Exit
Exits the Editor and displays a screen in which you can save the file. You can enter a brief description of the fax in this screen. Press Enter to save the changes. Use **F3** to exit without saving. Use **F12** to return to the Editor (for example if you have pressed F3 unintentionally).

F4=Delete
Deletes the line in which the cursor is positioned. All lines below are rolled up.

F5=Insert
The behaviour of F5 depends on the **cursor position**.

>If the cursor is **within** the line, the line is **separated** at the cursors position. The characters to the right of the cursor are moved to the next line, leaving space to enter text. You can then use F6 and option 1 to format the paragraph.

> If the cursor is at the **beginning** of the line, an empty line is inserted before the current line.

> If the cursor is at the **end** of a line, an empty line is inserted **below** the cursor. The cursor remains in the current position.

F6=Functions
Displays the following submenu:
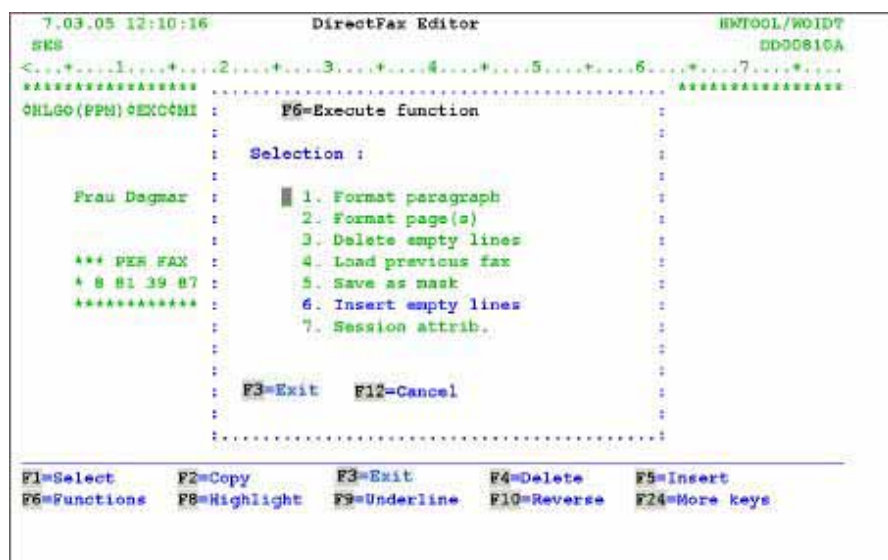
0061 - F6=Execute function submenu

Format paragraph

Selects the paragraph in which the cursor is positioned and uses the session definitions for left and right margin to wrap the text. A paragraph is a block of text beginning and ending with an empty line. If you have already selected text, only the selection is formatted.

Format pages

Inserts a page break.

Delete empty lines

Deletes all empty lines at the end of the document. This is also done automatically when you save the text.

Load last fax

Loads the content of the last fax created by the current user. You will be prompted to overwrite any existing text.

Save as template

Saves the text as a template in the file FAXMASKE.

Insert lines

Inserts empty lines at the end of the text, leaving space to enter more text. You can add **singl**e lines with **F5** at any time**.** Excess empty lines at the end of the text are removed when you save.

Session definitions

Opens a window displaying session definitions such as left/right margin etc. See F18=Session definitions.

F8=Bold
Formats the line bold, beginning at the word in which the cursor is positioned. The bold formatting is maintained when printed. To format a single word bold, press **F8** and then **F11**. To format a section of a line bold, position the cursor at the end of the section and press F11.

F9=Underline
Underlines the text to the right of the word in which the cursor is positioned. The underline formatting is maintained when printed. To underline a single word, press **F9** and then **F11**. To underline a section of a line, position the cursor at the end of the section and press F11.

F10=Reverse
Reverses the display for the line in which the cursor is positioned. Reverse formatting is maintained when the fax is printed. To reverse a single word, press **F10** and then **F11.** To reverse a section of a line, position the cursor at the end of the section and press F11.

F11= Disable bold, underline, reverse

Stops any formatting begun with F8, F9 and F10. You can also use this key to **remove** formatting, particularly at the start of a line. The cursor must be in front of the word. Another way to remove attributes is to simply overwrite the hidden field attributes in the space in front of the first word of the formatting with the space bar.

F12=Cancel
Interrupts any open functions goes one step back.

F13=Selection off
Removes any selections made with F1.

F14=Move
Moves the lines selected with F1 to the line after the cursor position. The selection is removed.

F15=Split
Splits the screen into two halves. The upper half of the screen displays the text to be edited. The lower half displays text from another fax. Lines from the second fax can be selected and copied to the upper half of the screen. **Cancel:** Return to full screen with F15.

Advises
The **first F15** opens a window where you can select a **file/fax**. You can use F4 to open a list for selection. You can scroll in the second file when the cursor is positioned in the lower half of the screen. The Editor numbers the lines at the left margin in the lower half of the screen, allowing you to move the cursor from line to line with the **Arrow** and **Tab** keys. Although the numbering on the left appears like an input area, input is not allowed. To copy data to the upper screen half, select F1 and use F2 to copy.

F16= Delete block
Deletes a block selected with F1.

F18=Session
Displays the following window, where you can change session definitions:

0062 - F18=Session

Paragraph formatting
Left margin

Sets the left margin for paragraph formatting. Default = 1.

Right margin

Sets the right margin for paragraph formatting. Default = 79.

Display
Scroll factor

Sets the number of lines scrolled up and down. The scroll factor is automatically adjusted when the screen is split and restored when you return to normal screen size.

Column factor

Sets the number of columns (characters) scrolled when you press F19 (left) or F20 (right).

Display size

Display size **1=24x80** represents a screen of 24 lines x 80 columns. On terminals and PCs that support it, **2=27x132** reduces the character size to support 27 lines x 132 columns.

Notes:
The DirectFax editor can switch from **80** to **198** characters at any time. The data is stored in the source file (record length 80) in a wrapped line format (^+). Please verify the **CPI setting** (^C7= 17 CPI for up to 132 characters), otherwise the text may not fit on the printed page.

F24= More keys
Displays more function keys at the bottom of the screen.

Page up/down
Allows you to scroll through the text. On a divided screen, the cursor position determines which screen is scrolled. The "Scroll factor" entry sets the number of lines scrolled.

After editing the fax text, use F3 to exit. Enter in the following screen a description of the text file you have just created. Press Enter to save to the source file. If you press **F3 again**, your data will **not be saved**. Use F12 to return to the editor.

0063 - Exiting a member - saving data after editing

10.2 Upgrade the DirectFax editor

If you have been using DirectFax editor for some time, you may still be working with the old version. You can recognise the old Editor from the **Scroll factor** field at the top right of the screen. We recommend that you upgrade to the new Editor, which has improved functionality, in particular for backing up text.

Continuous text backup
In the old Editor, all changes were lost if the session ended abnormally. With the new Editor, changes can be restored after a crash. When you restart the Editor after a crash, you will be notified that changes have not be saved. You can then decide to restore or discard the changes.

Activate the new Editor

It can be time-consuming to train users for the new Editor, so you may not want to make it available to all users. Here are the options:

General activation for all users

```
CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA (179 1))
    VALUE('1')
```

Activate/deactivate for individual users
Enter ***E1** anywhere in the **Description** field in the DirectFax user profile (WRKFAXPRF). ***E0** disables activation of the new Editor for the user and the old Editor is started.

In new installations, the new DirectFax editor is automatically activated.

10.3 The DirectFax graphic editor

About the DirectFax graphic editor

Existing graphics can be edited. For example when a logo does not reach the desired quality.

Note: The program automatically checks for an active **DirectMedia** server on the PC when editing DirectFax graphics with WRKFAXGRF option 2. If found, the graphic is converted to TIF, transferred to the PC and opened for editing in Paint. The edited graphic is automatically returned from the PC when saved. To use another PC graphic editor, specify the name in positions 496-515 in data area FAXDTAARA2. If nothing is specified (default), Windows Paint is opened.

Lines and columns can be added or deleted. Ranges can be copied, deleted, moved, filled or reversed. Most functions are **context-sensitive.**

The Editor is easily learned. All functions are called using the standard function keys. These are shown at the bottom of the screen. You can use F24 to display more keys.

You can use **any character** to represent a pixel. The resolution used for fax graphics is 7.7 lines/mm and 8 columns/mm. Note that this resolution produces some distortion in the Editor. The Editor allows an 80 or 132 character display.

Line and column coordinates can be entered at the top left corner of the screen for the purpose of cursor positioning.

Edit

Start the Editor with the command **EDTFAXGRF** (Edit fax graphics). The Editor can be used to load and edit graphics from a traditional fax device.

```
                    Edit FAX graphics (EDTFAXGRF)

Type choices, press Enter.

Name of graphic  . . . . . . . .  ▌_____     Name
```

0064 EDTFAXGRF command

Parameters

Graphic name (GRFNAM)

Defines the name of the graphic to be edited.

```
 DÖTTGER                    Edit graphic: GSSLOGO1   Toolmaker 28.3.
   Position
 Line /column
   161.00  977  ..:....9....:....0....:....1....:....2....:....3....:....4....:..
   161.00 XX     XXXXXXXXX          XXXXXX  XXX
   162.00 XX     XXXXXXXXXXXX       XXXXXXX  XXX
   163.00 XX      XXXXXX XXXXXX     XXXXXX  XXX
   164.00 XX     XXXXXXXXXX XXXXX      XXXXXX  XXX
   165.00 XX    XXXXXXXXXXXXX XXX     XXXXXX   XXX
   166.00 XX    XXX XXXXXXXXX XXX     XXXXXX   XXX
   167.00 X     XXXX XXX  XXX  XXX    XXXXXX  XXXX
   168.00 X     XXX  XXX XXXX  XX    XXXXXXX  XXX
   169.00 X     XXX XXXXXXXX  XXX    XXXXXXX  XXX
   170.00 X     XXX XXXXXXX   XXX    XXXXXXX  XXX
   171.00       XXX XXXXXXX   XXX    XXXXXXX  XXXX
   172.00       XXX XXX XXX   XXX    XXXXXX   XXX
   173.00       XXXX XXX XXX  XXX    XXXXXX   XXX
   174.00       XXX XXXX  XXX XXX    XXXXXXX   XXX
   175.00       XXXXXXXX  XXXXXXX     XXXXXX   XXX
   176.00        XXXXX    XXXXXX     XXXXXX   XXX
   177.00       XXXXX   XXXXX      XXXXXXX  XXX
   178.00       XXXXXXXXXXXXXX       XXXXXX  XXXX
   179.00       XXXXXXXXXXXXX       XXXXXX   XXX
   180.00          XXXXXXX         XXXXXX   XXX
_____
F1=Copy, F2=Move, F3=Exit, F4=Delete, F5=Insert, F12=Cancel, F19=left, F20=right, F24=mor keys
```
The Graphic Editor (EDTFAXGRF)
Do you recognise the detail from the Toolmaker logo? (The ®)

Function keys

F1=Copy

The cursor position represents the beginning of the data block being copied. The question "**Copy what?**" is displayed at the bottom of the screen. You then position the cursor on the lower right hand corner of the data block and press Enter. The selected block is displayed in reverse.

The cursor can now be placed on the **target position**. The target position is always the top left corner of the target block. You can cancel copying with F12. No further editing is possible while you are copying.

F2=Move

The same as the Copy command, except that the data is removed from the source area.

F3=Exit

Exits the Editor and prompts you to save the changes. (More details coming up.)

F4=Delete

Deletes the line in which the cursor is positioned. All other lines move up. See also F23.

F5=Insert

Inserts a blank line after the cursor position.

F12=Cancel

Cancels the current command (Copy, Move etc).

F13=Defaults

Executes the command CHGEDTDFT, allowing you to change the default settings for the Editor. The parameters for this command are described in the chapter "Configuring DirectFax".

F14=Delete block

Deletes a data block and prompts you to fill it with spaces. Otherwise as F1=Copy.

F15=Reverse block

Reverses the display for the selected block. Otherwise as F1=Copy.

F16=Block

Fills the selected area. Otherwise as F1=Copy.

F17=Insert columns

Allows you to insert graphic columns. The area to the right of the cursor is shifted to the right. Note that if the right margin exceeds 1728 columns, then data may be lost.

F18=Delete columns
Deletes graphic columns and shifts the area right of the cursor to the left. The right margin of the graphic is filled with spaces. See also F23.

F19=Left
Moves the display to the left.

F20=Right
Moves the display to the right.

F21=System command
Displays a window in which IBM iSeries system commands can be entered.

F23=Delete empty lines/columns
A very convenient command for deleting empty columns and lines around the graphic. When you press F23, you will be prompted to specify the number of columns and lines to be deleted. If you leave the default value of 9999, the graphic is moved to the top left corner. If any lines or columns contain a pixel (X), the delete is cancelled.

F24=More keys
Displays more function keys at the bottom of the screen.

Page up/down
Used to scroll backwards and forwards through the graphic. You can also scroll with F7 and F8.

Exit
When you have finished editing the graphic, press F3. This window will prompt you to **save**:
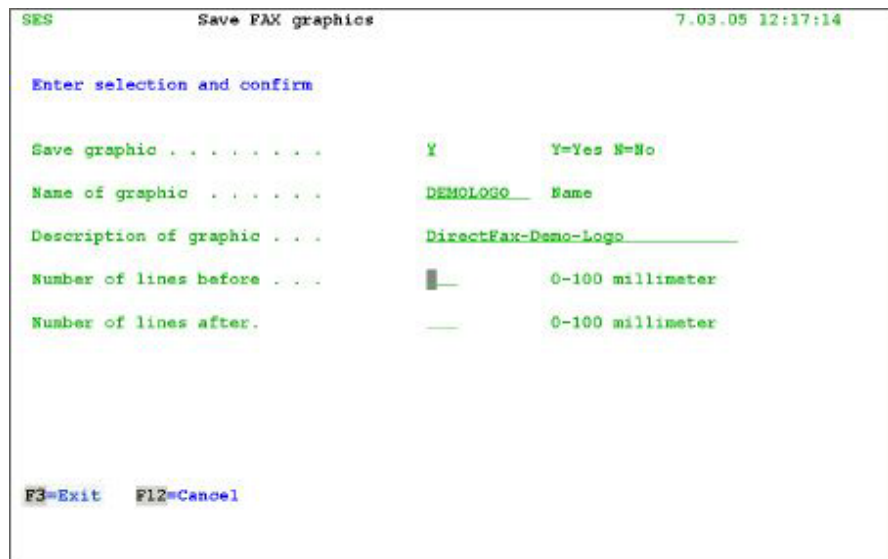
0065 - Save fax graphics

Options

Save graphic
- **Y=Yes**   Saves the changes

N=No Exits the Editor without saving changes

Graphic name
A name for the graphic being saved. The image is created if it does not exist.

Graphic description
A short descriptive text.

Space before/after
Number of empty lines before/after the graphic in mm.

Function keys in the "Save" window

F3=Exit
Return to the Editor.

F12=Cancel
Same as F3.

11.0 Installation

Important
Each new version of DirectFax includes a **Guide to installation** on the CD. Always use the latest version of the guide. You can find more information on new versions on our website at www.toolmaker.de. Please follow the instructions on installation carefully.

11.1   The DirectFax shareware function

DirectFax is now delivered with a **use restriction** which makes it possible to fax **without** entering a password. This **shareware** version allows you to send up to **5 faxes per day** and is ment as an incentive for prospects. The control program then terminates and some menu options are blocked. DirectFax can be started again the following day.

The functionality is similar to the DirectFax **Lite Version**. Some functions, including AutoFax, automatic fax distribution, image display and MIX commands are disabled if you do not have a valid license for the system or if the test period has expired.

11.2   11.6 Delete DirectFax from your system

To remove DirectFax and all of its components from your system, first stop all activities with DirectFax, exit all fax menus with F3, ensure that the libraries DIRECTFAX and DIRECTFAXF are not in use, and log on as QSECOFR. Then enter the following command:

```
CALL DIRECTFAX/DROPDIRFAX
```

The program duplicates itself to the library QUSRSYS and then starts a background job to delete DirectFax. Deleting all DirectFax objects can take 10-15 minutes. When completed, a message is sent to the QSYSOPR message queue (Text: - DIRECTFAX DROPPED - JOB LOG PRINTED -)

12.0 DirectFax Lite

DirectFax Lite is an inexpensive version of DirectFax with less functionality than the full version.

The DirectFax **PC** components operate without restriction in conjunction with the Lite version.

12.1   Restrictions in DirectFax Lite

The following functions are **not** available in the Lite version:

Automatic incoming fax distribution.

Automatic fax distribution The Auto fax function (automatic. fax dispatch without programming)

The layout and design options described in the chapter C*reating mix faxes* (fonts, lines and boxes, graphics etc).

Transmitting spool files with *AFPDS, *USERASCII or *ADVSCS data streams.

Image display on a 3489 screen.

13.0 Configuration on the iSeries

After a first installation or a new release, DirectFax must be configured by QSECOFR or another user with the same rights.

13.1 Configure the DirectFax connection (CFGDIRFAX)

Warning: This configuration command is used if you are working with the standard transmission program. If the **MIXALL** parameter in the command CHGFAXVAL is switched to the new transmission program with ***EXT**, use the command **WRKFAXLIN**. This command is described in the next section.

After successfully installing the hardware, the communication line must be configured. It is important that the resource name for the line (e.g. CMN01) and that no other devices are configured to these lines. The line description, if it already exists, must have the status "Disconnected".

Internal faxing is described in detail at the end of this section.

Enter the command CFGDIRFAX (Configure DirectFax) or select the corresponding option from the DirectFax configuration menu to display this screen:

```
                   Configure DirectFax (CFGDIRFAX)

Type choices, press Enter.

Line description:
  Dial type . . . . . . . . . . . > *PULSE       *PULSE, *DTMF
  External dial prefix . . . . . > *NONE        Zeichenwert, *NONE
Communication description:
  Line description . . . . . . . > DIRECTFAX    Name
  Controller . . . . . . . . . .   DIRECTFAX    Name
  Device . . . . . . . . . . . .   DIRECTFAX    Name
  Resource name . . . . . . . . > LIN02        Name
DIRECTFAX printer device:
  Controller . . . . . . . . . .   DIRFAXPRT    DIRFAXPRT
  Printer  . . . . . . . . . . .   DIRFAXPRT    DIRFAXPRT
DIRECTFAX userprofile . . . . .   DIRECTFAX    Name
Fax receipt control  . . . . . > FILE         *NONE,*FILE,*PC,IPDS-Printer
Activate AutoFax function  . . .  *YES         *NO, *YES
Activate EMail function  . . . .  *YES         *YES, *NO
Redialing interval . . . . . . .  10           1-60 minutes
                                                              More...

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

0066 – Configure DirectFax

Parameters

Exchange line description (DIALOPT)
The dial tone setting is defaulted with the Dial type parameter. Set either the more common **pulse** (*PULSE) or **multi-frequency** (*DTMF). This depends on the type of network to which the fax modem is connected.

The Dial prefix parameter is important if the modem is connected to an internal exchange. You will usually need a one-digit prefix to dial an outside line through an internal exchange. Enter that digit here. Otherwise leave the value ***NONE**.

If a **dial pause** is necessary for technical reasons, then enter "**P**" or "**W**" after the external line prefix. Please test to see which setting works best with your system. (**P=P**ause of 4 seconds, **W =W**ait for dial tone) Digital phones (Siemens Hicom) that support analog devices require this setting be defaulted to *DTMF without a pause or wait.

Internal exchange systems can fax internally within the exchange or externally using the dial prefix. More details at the end of this section.

Note:
Problems will occur if the box is connected to an internal exchange but the dial prefix is set to *NONE. If so configured, all faxes are set to the status "Busy". For more information, see "*Troubleshooting*".

Communication description (COMDEV)
These fields are defaulted to the factory setting. Description entries with the name DIRECTFAX are created by the configuration program or included in delivery.

The resource name is the logical description associated with the V24 interface. LIN011 stands for line 01 on port 1. This description must correspond to the hardware configuration.

The DirectFax printer device (PRTD)
These fields are defaulted to the factory setting. Description entries with the name DIRFAXPRT are created by the configuration program or included in delivery. They should not be changed.

The DirectFax user profile (USRPRF)
Enter the name of the user profile to be used by the DirectFax transmission program. The default value is the shipped profile DIRECTFAX.

Fax receipt control (INCPRT)
The fax modem can receive faxes. The following options are available:

*NONE   Disables fax receipt.

*FILE Faxes received are saved as graphics in the file FAXINC. Use WRKINCFAX and option 6 to print as a graphic to an IPDS printer (performance-intensive), or option 9 to transfer to a PC. Option 3 imports the graphic files as logos.

*DTR Dial Tone Routing/DTR is a function for the automatic distribution of incoming faxes. The command WRKFAXDTR controls automatic incoming fax distribution. We recommend the value ***DTR**.

Printer   You can also enter a printer ID (e.g. PRT28) for an **IPDS** printer (e.g. IBM 4028) here. Every incoming fax is converted in a batch job to an IPDS data stream and printed as a graphic. The printer must have sufficient memory for a graphic page (minimum 2 MB). The IPDS conversion is resource and performance-intensive. We recommend that you do not specify a printer.

Activate the AutoFax function (AUTOFAX)
The AutoFax function imports spool entries from the OUTQ DIRFAXPRT or a corresponding OUTQ configured with **WRKATFDEF** (Work with AutoFax definition). This function allows you to fax documents such as orders without any programming requirements. *YES activates the function. *NO disables the AutoFax function. AutoFax is not available in DirectFax Lite.

Redial interval (WWINTER)

Specify an interval of between 1 and 60 minutes. This is the interval the transmission program waits before redialling a number after a failed attempt. 5 or 10 minutes is recommended.

Maximum redial attempts (MAXWAHL)

Between **1 and 10** attempts can be defaulted. This is the number of redial attempts if a fax cannot be sent because of a problem with the line or a busy tone. The redial interval applies between attempts. 2 to 3 attempts is recommended.

Note that, because some problems occur after connection, too many redial attempts can be expensive.

Fax box type (BOXTYP)

To view this parameter, press F10 and page up. This is a two-character value which determines the type of fax box or modem and the number of fax lines.

The default value for modems is:

M0

In multiline-version, the second character indicates the total number of lines. For 2 lines, enter M2. For 5 lines, M5.

Adapting for a RISC PCI Bus (CHGPCI)

This parameter applies only to the old **DCE fax box**. To view it, press F10 and page up.

Important:

The following applies only if you work with an old **DCE fax box** and DirectFax is installed on a newer **RISC** iSeries with a **PCI bus**, for example models 150, 250, 170 270, 6xx, 7xx, 8xx etc.

The **V.24 interfaces** on the **PCI bus** of the newer RISC models are multi-protocol interfaces and have different properties to the traditional V.24 SPD interface. This may lead to problems if you try to fax with a DCE fax box. The parameter CFGPCI deals with these problems.

It default value is:

*SAME (no change). To configure DirectFax for a PCI bus system, change the value to

*PCI and confirm the new configuration with Enter. The value *PCI changes setting in a number of DirectFax data areas. If you have set the value to *PCI unintentionally, use the value

*SPD to restore the original configuration.

13.1.1 Faxing internally

An exchange system requiring a prefix digit for external lines can also be used to fax internally. There are no call charges. In multiline versions, all fax lines must be connected to the exchange and dial prefixes must be supported. To configure internal faxing, call CFGDIRFAX with F4 or option 1

---

in the FAXCNFG menu and enter 'I' (internal) before the dial prefix (for example 'I0').

This setting is normally sufficient in modern digital telephone systems. Older installations may require 'I0W' or 'I0P', where P=Pause of 4 seconds, W =Wait for dial tone). The digit 0 is assumed as the dial prefix in the examples above, but it can be any digit. If you are using a multiline version, you will need to configure each line separately.

To fax a document internally, the number called is the exchange and the fax number followed by 'i' or 'I'. Upper and lower case are both accepted.

Examples: 12I   **355i**   6020I

No spaces or other characters are allowed within the number. The I must be followed by blanks. The number including the 'I' cannot exceed 6 characters.

In some situations, there is an alternative approach: Use the command

```
CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA (58 1)
     VALUE('3')
```

to set the length value to 3, indicating that all fax numbers with 3 digits or less are recognised as "internal" numbers. If you use this method, very short external numbers can be identified by appending 'e' or 'E'. For further information, call our Hotline.

13.2   Work with DirectFax lines (WRKFAXLIN)

When you update to the **new, enhanced transmission program** with the command CHGFAXVAL (parameter MIXALL = *EXT), option 1 in the menu FAXCNFG changes from CFGDIRFAX to **WRKFAXLIN**.

WRKFAXLIN opens a dialog in which you can create and maintain fax lines. It also allows you to view the line status and display statistics on sent and received faxes.

The **standard** DirectFax license allows 1 active fax line. Each additional line requires a separate license. If you activate more lines than you have licenses, the transmission programs started will be ended when the number of licensed lines is exceeded.

You can terminate, change and restart an active fax line from the configuration program without restarting the DIRECTFAX subsystem.

Note: If you operate a Bintec router, you can find instructions on configuring the hardware and fax line in chapter 24. Information on configuring the W&T ComServer can be found at the end of this chapter.

The new transmission program allows you to assign multiple fax lines to a **pool**. This makes it possible to control outgoing fax distribution at group, company or corporate level from the application or from the fax user profile.

Data flow between the transmission program and the units can be recorded in **trace files**. These are PC text files saved in the iSeries **IFS** in the folder /Toolmaker/DirectFax400/Debug/. Where problems arise, these files can be retrieved, zipped and sent to the Hotline. On newer systems, you can also view the text files with the command WRKLNK and option 5. The filename contains the line name and start time. A new file is created each time the line

is started. The files are deleted after the interval in days defined during configuration.

The screen sequence displayed depend on the line and unit type. The parameters required to configure a modem on a V.24 interface are different to those required to set up a Bintec router in a TCP/IP network.

When you select the menu option or run WRKFAXLIN, the following window appears:
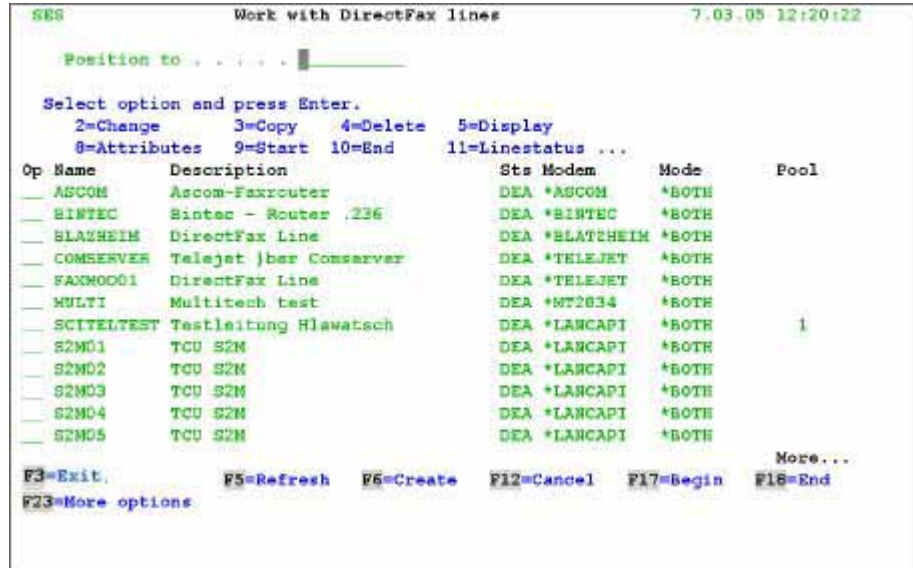
0067 – Work with DirectFax lines

The program displays a list of configured fax lines.

Input fields and options

Go to
Enter a line name to jump to that name in the list.

Option
Enter one of the following options in this column:

2=Change
Changes the configuration entry if the line status is END (Ended) or DEA (Deactivated). Configuration displays are described in greater detail in "Configure fax line" below. You can display configuration data for active lines with option 5.

3=Copy
Copies a configuration record.

4=Delete
Deletes a configuration record. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

5=Display
Displays the configuration record for a line.

8=Attribute

Displays line attributes and statistics on sent and received faxes.

9=Start
Starts a fax line that has been ended. The subsystem and control program must be active.

10=End
Controlled or immediate end for the active fax line. You can then change the line configuration parameters with option 2 and restart the line with option 9.

11=Line status
Displays the status of a V.24 line with the command WRKCFGSTS *LIN.

12=Reset counter
Resets the statistics fields. You will be prompted to confirm the counter delete. If you don't want to delete, use F12 to cancel.

14=Work with job
If the fax line is active, displays the transmission program's job menu in the subsystem.

18=Terminal
Activates the V.24 line and starts the iSeries terminal program STRITF. This dialog allows modem AT commands.

19=Control Data
The Control Data Structure for special fax parameters in line configuration can now be edited with option 19. Changes should only be made in consultation with the Hotline. The following flags are currently accepted at position

01	internal ID for fax line (cannot be changed)
02-03	ISDN controller number (internal use)
04	reserved (nospeak)
05-06	"04" = use ISDN bearer capability Audio
07	reserved (line error)
08-11	Time lock for fax line (from-to hour)

Timed disabling of a fax line
Fax lines can now be locked for use for defined periods of the day or night. This can be required in a particular situation when one of the 2 ISDN B channels need to remain open in the daytime for another device. Use option 19 in WRKFAXLIN to change the Control Data Structure at positions 8-11. Example:

0618 Line is locked from **06** hours to **18** hours (in WRKACTJOB, the job shows DLY-15). Do not change the other values in the display. Save with Enter. Job or subsystem restart not required. Time ranges, e.g. **2208** (22 to 08 hours also supported).

Function keys

F3=Exit
Exits "Work with DirectFax lines".

F5=Refresh

The display is refreshed. Unsaved changes will be lost.

F6=Create
Allows you to configure a new fax line. For more details, see "Configure fax line".

F12=Cancel
Returns to the previous screen.

F17=Beginning
Jumps to the beginning of the list.

F18=End
Jumps to the end of the list.

F23=More options
Scrolls through the options available in the display.

Configure fax line

F6=Create can be used to configure a new fax line or to change an existing one with option 2. The following screen is displayed:

```
                    Change DirectFax Linedescription

  Type in changes and press Enter

       Line  . . . . . . . . . .   FAXMOD01
       Description . . . . . .     DirectFax Line
       Active  . . . . . . . .     N            Y=Yes N=No
       Line pool . . . . . . .     _
            Serve base pool?       Y            Y=Yes N=No
       Connection type . . . .     *V24         *V24, *TCP
       Modem . . . . . . . . .     *TELEJET     *TELEJET, *ASCOM, *BLATZHEIM
       Modem driver. . . . . .     *CLASS2      *CLASS2, *CLASS2.0, *BLATZHEIM
       Mode  . . . . . . . . .     *BOTH        *RCV, *SND, *BOTH
       Process. incoming faxes    *DTR          *NONE, *DTR, *FILE, IPDS printer

       Dial type . . . . . . .     T            T=Tone, P=Pulse
       Dial prefix . . . . . .     0
       internal call allowed .     N            Y=Yes N=No
       Length internal number.     _

       CSI . . . . . . .           MNE TEST
                                                              more ......
   F3=Exit   F4=Select   F12=Cancel
```

0068 - Entering/changing a line description – screen 1

The program displays the first configuration screen for fax lines. If you are creating a new entry, set the parameters and then press Enter to display the next screen. In change mode, you can scroll forwards and backwards with the scroll keys.

Input fields

Line
Name of the line description Enter a valid iSeries object name. We recommend a naming convention that reflects the type of line and the sequence number. For example, FAXMOD01 for fax line 1, modem, or BINTEC2 for fax line 2, Bintec router. If the last character in the name is a digit, it is used as the line number in the send statistics (command DSPSNDSTAT).

Description
A description of the fax line.

Active
Y=Yes activates the configuration entry. This starts the transmission program for a fax line when the subsystem is started. If you enter N=No, the line is not started.

Line pool
This parameter is not set in most cases. However, if you are using multiple fax lines and you want to access them from the fax user profile or from the application, you can assign lines to a pool. We recommend that you use letters for pool assignments to differentiate them from line numbers, but numbers are also allowed.

Base pool?
Y=Yes is the default value. The line can send faxes that do not belong to a pool. If you enter N=No, only faxes with the pool ID for the line can be sent.

Connection type
Specifies the connection type.

*V24   Communication via V.24 interface (e.g. modem).

*TCP   Device is connected to a LAN and has a TCP/IP address (e.g. ComServer, Bintec or Retarus mass fax line).

Modem
Specifies the type of modem or router:

*TELEJET   Telejet fax modem 28.8 or 33.6 (analog)

ASCOM   Ascom Digital fax router (ISDN, 2 channels)

*BLATZHEIM   Blatzheim BM33k6 ISDN hybrid modem (1 channel)

*ZYXEL   Zyxel 2864 ID (ISDN, 1 channel)

*INT2771   Internal iSeries modem (analog)

*BINTEC   Bintec router (e.g. Bianca Brick XS with Office fax module)

*RETARUS   Retarus mass fax line

Modem driver
Specifies a driver for the device:

*CLASS2   Class 2 modem type (standard for Telejet+Ascom)

*CLASS2.0 Class 2.0 modem type

*BLATZHEIM   Driver for Blatzheim modem

*ZYXEL   Driver for Zyxel 2864 ID

*INT2771   Driver for internal iSeries modem

*CAPI   CAPI driver Bintec router

Mode
Defines whether faxes can be sent and/or received:

*RCV	Receive only
*SND	Send only
*BOTH	Both, receiving and sending (must be entered for modem type *RETARUS)

Process incoming faxes
Specifies what happens to incoming faxes if you have allowed them in the Mode parameter.

*NONE	Not processed
*DTR	Dial Tone Routing – automatic distribution
*FILE	Saves to the DirectFax incoming file
Printer	Prints to an IPDS or PCL printer

Dial type
T	Tone (fast digital dialling)
P	Pulse (seldom required with modern systems)
	This is the dial type for analog modems.

External calls
Specifies the prefix digit for external calls, usually 0 or 99, for modems connected to an internal exchange. Do not enter this parameter if the modem is directly connected. If a pause is required after the prefix, enter P or a comma. (e.g. 0,).

Allow internal calls
Y=Yes, N=No The prefix digit is automatically added to the fax number if the modem is connected to an internal exchange. This is not required when sending internal faxes that do not incur call charges. You can identify internal faxes by appending an I, for example 20I, or by the length of the number (see next parameter). This parameter must be set to N for modem type *RETARUS.

Internal number length
Defines the length of internal numbers if required. Usually 2 to 5 digits.

CSI
Identifies the fax line. This entry overwrites the central CSI (see command CHGFAXVAL, parameter CSI), but can also be overwritten by a user identification in the user profile. The ID can be up to 20 characters long and can contain the sender's fax number or the company name. Special characters should be avoided as they may cause errors. This is especially true with internal modems.

More…

If you are entering a new line description, use *Enter* to display the next screen. If you are changing an existing description, use *Page up*. The following screen is displayed:

0069 – Enter/change line description – Page 2

Input fields

Exchange
Area   code
Country code
As the local calls market was opened up, some providers experienced connection problems if a local fax number contained the area code. Until the area code was removed, the fax could not be sent. The transmission program uses the values here to filter out country codes (e.g. 0049) and area codes (e. g. 0049). The exchange number is provided for information purposes only.

Modem trace days
Function trace days
Trace data can be recorded to monitor modem performance and analyse errors. Enter a number of days from 1-999 (recommended: modem trace 3 and function trace none) to switch on tracing and specify the period for which records are kept. DirectFax automatically deletes trace data when the specified period expires. Trace file names are made up of the name of the fax line and the start date, including time. They are saved as PC text files in the IFS folder **Toolmaker/DirectFax400/Debug.** You can view them with WRKLNK and option 5. If technical problems occur, you can take these files from the IFS folder, zip them on the PC and send them to the Hotline for analysis. Please call before sending any files.

Send wait time
Receive wait time
Specifies the interval in seconds for which the program waits for a send or receive signal from the modem. The default value is 4 for both.

Loudspeaker
Controls the modem's speaker, which allows you to hear the modem connecting and transmitting.

0=Off (default)

1=On till connect (dialling only)

2=Always on

Number of rings

Specifies the number of rings before the modem answers the call. The default value is 1. You can use this option to coordinate multiple devices connected to a single phone socket.

Speed in bps

Specifies the maximum fax speed of the modem. Use the digits 1 to 5 to specify the bps (bits per second) of the modem. The default value is 14,400.

0=2.400

1=4.800

2=7.200

3=9.600

4=12.000

5=14.400

Optimise to bps

Use this parameter to specify the maximum fax speed that can be used to optimise the fax data stream. Optimisation is designed to reduce the quantity of data actually sent through the line. This also requires sufficient processor speed at the moment the fax is sent. If you have unexplained problems faxing, reduce this parameter in increments (you may want to contact the Hotline) before reducing the speed parameter.

Maximum send attempts

Specifies the maximum number of dial attempts allowed before a fax is set to hold and user intervention is required. This value is usually 3 to 5 attempts.

Redial

Sets the delay in minutes before a failed attempt is redialled. This value is usually 5 to 10 attempts.

More…

If you are entering a new line description, use *Enter* to display the next screen. If you are changing an existing description, use *Page up*.

If you have selected ***V24** as the **Connection type** in the first screen, the following screen is now displayed:
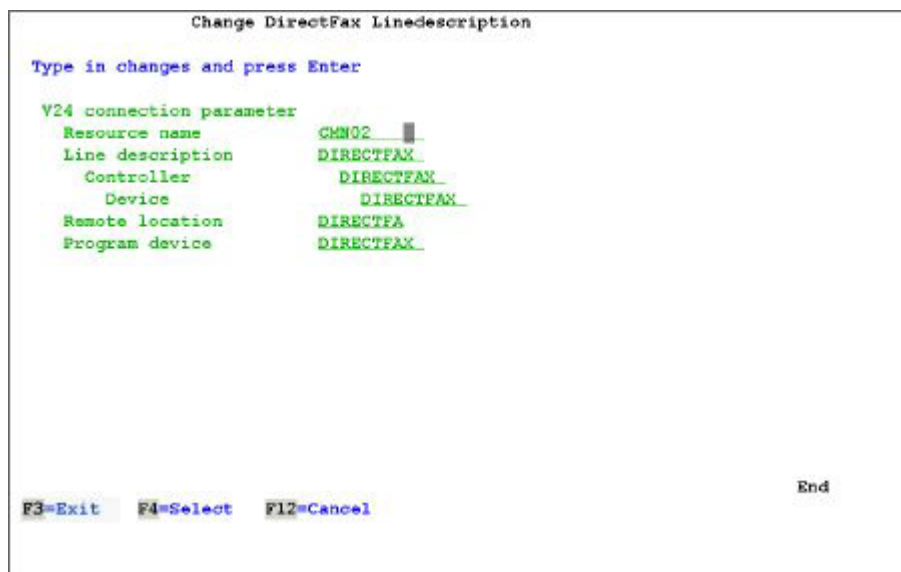
0070 - Entering/changing a line description – V.24 connection parameters

V.24 connection parameters
To operate a modem line on an iSeries V.24 interface, you must enter 6 parameters. Configuration objects are created when you save the parameters. The names must be valid OS/400 object names.

Input fields

Resource name
Name of the V.24 communications line to be used by DirectFax. Use the IBM command WRKHDWRSC *CMN to list available interfaces.

Line description
Controller
Unit
These 3 parameter specify the names of the configuration objects required to operate the V.24 line. Names commonly used are for example DIRECTFAX or DIRFAX01. The names must be unique. We recommend using the same names for all 3 objects.

Remote location
A unique 8-character name identifying the line. Assuming that each fax line has a unique name, you can use the first 8 characters of the line name.

Program device
Internal program device for the V.24 interface. We recommend using the line name.

More…

If you are entering a new line description, use *Enter* to display the next screen. If you are changing an existing description, use *Page up*.

If you have selected ***TCP** as the **Connection type** in the first screen, the following screen is now displayed:
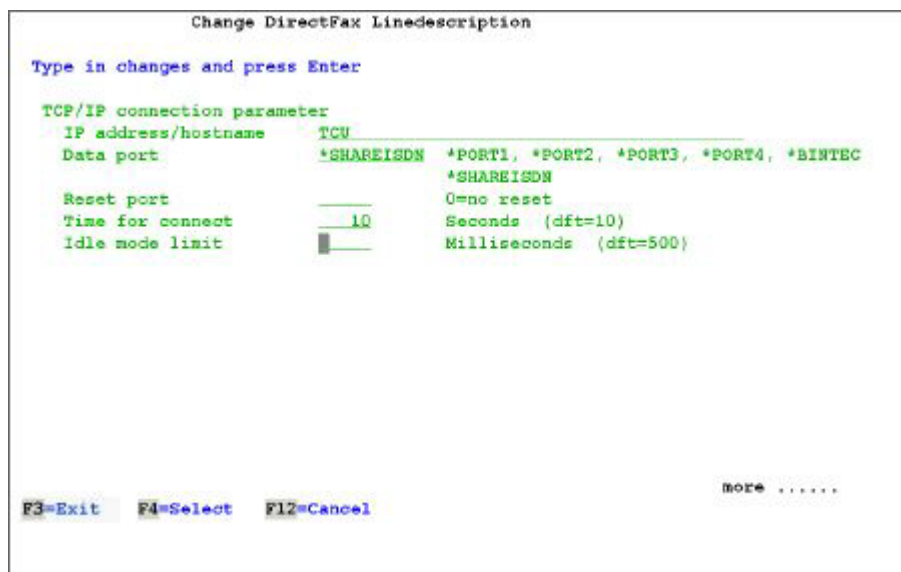
0071 - Entering/changing a line description – TCP/IP connection parameters

TCP/IP connection parameters

To operate a modem with a W&T ComServer or to use a Bintec router, enter the host name and port number here.

Input fields

IP address/host name

We strongly recommend that you enter the host name here and not the IP address. You can map the host name to the device IP address by entering option 10 in CFGTCP. Entering the IP address directly can lead to errors in some configurations.

Data port

The data port used for fax communications specified by the device manufacturer. You can enter either a port number or a special value. If communication is over the internet, the port number depends on the router configuration at the receiving end.

W&T ComServer

*PORT1   8000

*PORT2   8100

*PORT2   8200

*PORT4   8300

Bintec router

*BINTEC   2662 (formerly *RCAPI)

TCU/ShareISDN

*SHAREISDN   6000

Note: Port 3000 shown in the screenshot above is an example used for a Bintec router with internet access. It is not a default value.

Reset port

If required, specifies the port number used to reset the device. This function is not usually required. The default value is 0 or blank.

Connection time

Specifies the maximum time in seconds in which the device must respond. The default value is 10 seconds.

Idle mode limit

Specifies the time in milliseconds for which the program waits for data from the device before releasing the data record for processing. The default value is 500 (half a second).

More…

If you are entering a new line description, use *Enter* to display the next screen. If you are changing an existing description, use *Page up*.

If you have selected an **ISDN device** as the **Modem** in the first screen, the following screen is now displayed:

0072 - Entering/changing a line description – ISDN parameters (MSN)

ISDN parameters

Allows you to enter fixed MSN numbers or MSN number ranges to specify the calls to which the modem or router on the ISDN S0 bus reacts. If no value is entered, the device responds to all calls, assuming that incoming faxes are allowed. The entries here apply to DirectFax installations using automatic fax distribution. If MSN numbers or ranges in modem or router configuration (hardware configuration)

Input   fields

ISDN Controllers (1-99)

If you are working with a **TCU4** or **TCU8**, enter a controller number for the additional ISDN controllers on the Scitel card (each controller corresponds to an ISDN line with 2 B channels). Here's an example for a TCU8 with 4 ISDN controllers on a card:

Line name   Controller   B channel   Value

TCU01	1	1	empty (default)
TCU02	1	2	empty
TCU03	2	1	**2**
TCU04	2	2	**2**
TCU05	3	1	**3**
TCU06	3	2	**3**
TCU07	4	1	**4**
TCU08	4	2	**4**

Fixed MSN
You can enter up to 8 MSN numbers.

MSN ranges
You can enter up to 4 number **From – To** ranges. Example: 001 – 500
(accepts a call to exchange 255 but not to 605).

If you have selected ***RETARUS** as the **Modem type** in the first screen, the
following screen is now displayed:

```
                  DirectFax Leitungsbeschreibung ändern

 Änderungen eingeben und Eingabetaste drücken.

  TCP/IP Verbindungsparameter
    IP Adresse/Hostname      fax4win1.faxolution.net_____

    Benutzer                 uuuuuuuuu_____
    Kennwort                 ppppppppp█_____




                                                                Ende

F3=Verlassen    F4=Auswahl    F12=Abbrechen
```

298   Retarus settings

TCP/IP connection parameters
To operate a Retarus line, enter the host name and port number here.

Input fields

IP address/host name
Enter the host name supplied by Retarus here.

User
This is the user name supplied by Retarus.

Password

Specify the password for the user.

13.3 Change own CSI (CHGFAXCSI)

Use the command **CHGFAXCSI** and F4 or the corresponding option from the DirectFax configuration menu to enter or change your own CSI. This can be the company name or a phone or fax number.

Parameters

Own CSI (CSI)

The command displays an input field for each fax line in which you can enter a 20-character ID enclosed in quotes. The CSI should not contain <u>any</u> special characters. The asterisk "*" should not be used under any circumstances.

If you want to use the fax number as the ID, enter the number of the receiving device rather than the number of the fax modem.

13.4 Change DirectFax system values (CHGFAXVAL)

CHGFAXVAL and F4 displays the current settings for editing.

0073 - Change DirectFax system values (CHGFAXVAL), page 1

Parameters

Restart (RESTART)

*YES terminates and restarts the DirectFax transmission program (if active) in order to apply the changes you make. If you specify *NO (default), changes are not applied until the next time STRDIRFAX is executed.

DirectFax banner (BANNER)

Adds the defaults for the fax header (ID, number of pages, date and time. By default, the parameter is set to ***DF400**. *FAXBOX prints a black bar at top

and bottom of the fax (DCE fax box only). With a DCE fax box, *NONE suppresses the header completely. With *SAME, settings remain unchanged.

End of fax (EOFAX)
If you set *DF400 in the previous parameter, "End of fax" is printed by default at the bottom right of the last page. To suppress it, set *NO.

Page length in lines (PAGELEN)
Specifies the number of pages per fax page for text from the DirectFax editor. With a standard font size, each page contains approximately 66 lines. This parameter has no effect on formatted pages from spool files or Office documents.

Group send (GRPSND)
Used to describe the process of sending multiple faxes as a group to a single recipient. By default, the parameter is set to *REQ (as required). *ALL applies to all faxes, *NIGHT limits the function to night rate faxes and *NO disables the function.

Fast faxes are always sent **immediately** and are not grouped. You can use the fax parameter ^GRP(0) for more detailed control of groups. The value 0 in brackets sets the group delay to zero, meaning that the fax cannot be grouped. A different value of for example 10 sets the group delay to 10 minutes and overrides the system defaults.

The group fax function can be configured with the following parameters:

Maximum number of pages (MAXPAGE)
Limits a group send to the defined maximum number of pages. The default value is 10 pages. The higher the value, the higher the risk of transmission errors. The same applies to the following parameters.

Maximum number of faxes (MAXFAX)
Limits the maximum number of faxes per group.

Delay in minutes (WAIT)
The default value is 3 minutes, which means that a fax must be at least 3 minutes in the fax queue before the program checks for other faxes to the same recipient. The lower the value, the smaller the probability of finding other faxes to the same recipient, thus reducing the potential for cost savings.

Allow differences at (ALWDIF)
Faxes to the same recipient may have different properties. The following parameters define the differences accepted or rejected for grouped faxes.

Resolution
The default value *YES specifies that the first fax in the group determines the resolution (fine or coarse). If you set *NO, only faxes with the same resolution are grouped.

User
The default value *NO specifies that only faxes originating from a single user can be grouped. *YES lifts the restriction.

Dispatch time
The default *NO specifies that only faxes pending for dispatch at the same time (day or night) can be grouped. *YES lifts the restriction.

Protect EDTSNDSEU fields (PROSEU)
- File
- Library

*NO (default) specifies no input protection for these fields. *YES specifies that input fields can be protected.

Protect F18 in EDTSNDOFC (PROF18)

*NO (default) allows the user create a new folder with F18 when working with the command EDTSNDOFC. *YES locks F18 if not overridden in the user profile.

Use the scroll keys to display page2:

```
                  Change DirectFax system values (CHGFAXVAL)

Type choices, press Enter.

Night fax is standard  . . . . .    *NO         *YES, *NO, *SAME
JOBQ for Autofax test  . . . . .    QINTER      Name, *SAME
Midnight restart enabled . . . .    *YES        *YES, *NO, *SAME
Premix for all Faxes . . . . . .    *REQ        *REQ, *YES, *NO, *SAME
Page length for mix fax  . . . .    305         100-310 mm, *SAME
Fill last mix fax page . . . . .    *NO         *YES, *NO, *SAME
Retain fax content . . . . . . .    02          00-99 days, *SAME
OFC fax dial with KEYWORDS  . . .    *NO         *NO, *FAXCODE, *KEYTEXT...
Fax control program job log  . .    *NORMAL     *NORMAL, *ON, *OFF, *SAME
Mix fax optimisation . . . . . .    *REQ        *REQ, *OFF, *SAME
Control of boxes 1-8 . . . . . .                see F1-help text
Log print OVRPRTF  . . . . . . .    *DEV        *DEV, *OUTQ, *SAME
Header/footer logo also on PC  .    *NO         *YES, *NO, *SAME
Fax modem support (MIXALL)  . . .    *YES        *YES, *NO, *EXT, *SAME
Language . . . . . . . . . . . .    *ENG        DEU, MNC, ITA, FRA, ENG...
Activate AFP/PCL interface . . .    *YES        *YES, *NO, *SAME
                                                              More...

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display        F24=More keys
```

0074 - Change DirectFax system values (CHGFAXVAL), page 2

Default to night fax (DFTNIGHT)

The default *NO allows the user to decide whether a fax is a night fax. *YES specifies that N for night fax is always suggested in the *Enter recipient* screen. This value can be changed by the user. Night fax settings can also be made at user profile level.

JOBQ for AutoFax test (JOBQATF)

When testing AutoFax definitions with WRKATFDEF, the test jobs are sent by default to the job queue QINTER to speed results. Use this parameter to set another queue (QBATCH for example) if for any reason QINTER is not available. Note: For technical reasons, this job must be submitted to a JOBQ and cannot be executed directly.

Midnight restart enabled (ALWRST)

The DirectFax subsystem is automatically ended and restarted at midnight every day. This disposes of the "rubbish" created by numerous active jobs. *NO suppresses the midnight restart. This has the negative effect that jobs running in the subsystem become slow and wasteful of system resources after a few days. In addition, regular file reorganisation is interrupted.

Premix for all faxes (PREMIX)

*NO specifies that mixing does not occur until prior to dispatch time. The default value *REQ allows mixing at the next opportunity for faxes containing the code ^PRE in the first text line. *YES specifies that every mix fax is

mixed soon as possible. Premix is explained in detail elsewhere in this document.

Page length for mix fax (MIXLEN)
Allows you to specify the page length in millimetres for mix faxes. The default value is 305 mm. Image compression and unwanted page breaks may occur if the page length is too long. A4 laser fax devices are particularly prone to problems with longer page lengths.

Fill last mix fax page (FILLST)
This function is designed to prevent truncation of the last page on fax devices that use paper rolls. The default value *YES fills the last page of a mix fax to A4 size. *NO ends the fax after the last text or graphic line.

Retain fax content (RETAIN)
Determines the number of days the fax text is retained in the files FAXES and MIXT4P after dispatch. Default is 2 days. A value of 0 discards the text immediately after dispatch. The higher the value entered, the more memory is required to retain the faxes. This may impair performance.

OFC fax dial with KEYWORDS (RTVDOC)
*NONE (default) disables this OfficeVision function.

*KEYTEXT searches for the recipient fax number using the defined OFC document keywords. All keywords not prefixed ^ are searched. Keywords prefixed with ^ are interpreted as fax codes (for example ^NIGHT).

*FAXCODE specifies that only ^ keywords are processed. The fax number must then be as follows: ^FAX012345;. Other fax codes (for example ^NIGHT) are recognized and processed. .You will find more details on this function in the chapter titled WITH THE OFFICEVISION/400® TEXT EDITOR, PAGE 24.

Fax control program job log (JOBLOG)
The default value *NORMAL prints a job log only if required. *ON enables the log for all jobs. *OFF disables the log.

Mix fax optimisation (FAXOPT)
*REQ (default) allows mix fax optimisation in documents containing the code ^OPT(Name). *OFF disables optimisation.

Control of boxes 1-8 (BOXCTL)
Allows a range of functional restrictions and enhancements if you use multiple fax lines. The parameter value is an 8-character string in which each character represents a fax line.

'_' or blank indicates that no function is active and the line works as configured.

'S' indicates "Send only"

'R' indicates "Receive only"

'B' indicates send from the private queue only

'C' in addition to 'B', release recipient

'F' indicates that the fax program decides if incoming data should be received. DCE fax boxes only. This prevents collisions when SEND/RECV jobs run simultaneously on a single DCE line.

'0' deactivates the line without terminating the transmission program.

Changes to this parameter are applied after about 1 minute. There is no need to restart the fax program.

Warning: This parameter applies only to the old transmission program. BOXCTL values are ignored once the MIXALL parameter is set to *EXT (new transmission program). The values used instead are the line configuration parameters in WRKFAXLIN.

Log print OVRPRTF
The default value *DEV specifies that the name of the print in the OVRPRTF command for the log print refers to the device. *OUTQ specifies that the name refers to the OUTQ. You must specify *OUTQ if you work with remote printers.

Header and footer logo on the PC (LOGOPC)
This parameter in conjunction with the DirectFax user profile specifies that the profile logo is included for faxes from DirectFax/PC (Word etc.) just as it is for iSeries faxes.

The default value is ***NO**. ***YES** activates the function for all DirectFax users set to ***SYSVAL** in the corresponding parameter.

Note:
The function is recommended when space considerations for logo's are made when editing such documents on a PC. Otherwise overlays may occur !. Note also that, because it uses the Mix function, this process is performance-intensive on the iSeries.

Fax modem support (MIXALL) (MIXALL)
This parameter is defaulted to ***YES**. Do not set it to *NO unless you are using an old DCE fax box. *YES specifies that all faxes are mix faxes.

Upgrading your hardware from DCE fax boxes to modems is described elsewhere in this document.

The value ***EXT** has been added to the **MIXALL** (Extended) parameter. Use this value with the new transmission program. Values:

*NO   For DCE fax boxes, MIX optional

*YES Modem support, all faxes are mix faxes

*EXT Extended modem support, new transmission program, also supports Bintec router and W&T ComServer

When you first switch to ***EXT**, the configuration parameters previously held in data areas are transferred to the file DFFAXLIN. Option 1 Configuration is changed automatically from the old command CFGDIRFAX and F4 to the new command **WRKFAXLIN**.

Language
Specifies the language displayed in the DirectFax user interface. Use *SYSVAL in the fax user profile to point to this parameter. Menus and command displays are not affected by this parameter. *SAME retains the original setting. The following languages are available:

DEU   German

MNC   Multinational/Switzerland

ITA   Italian

FRA   French

ENG   English

Activate AFP/PCL interface

If you intend to use the interfaces for processing AFP or PCL spool files, set this parameter to *YES. This has the same effect as entering A at position 153 in the FAXDTAARA data area.

```
                 Change DirectFax system values (CHGFAXVAL)

Type choices, press Enter.

PCL converter version . . . . .   *AS400          *PC, *AS400, *SAME
TCP/IP-Adr. PCL converter PC . .  *192.168.100.24
PCL X value text conversion . .   *DFT            Zahl, *DFT, *SAME
PCL Y value text conversion . .   *DFT            Zahl, *DFT, *SAME

                      Additional Parameters

DIRECTFAX printer device:
  Controller . . . . . . . . . .   DIRFAXPRT      DIRFAXPRT
  Printer  . . . . . . . . . . .   DIRFAXPRT      DIRFAXPRT
DIRECTFAX userprofile . . . . .   DIRECTFAX      Name, *SAME
Activate AutoFax function . . .   *YES           *YES, *NO, *SAME
Activate EMail function . . . .   *YES           *YES, *NO, *SAME
Redialing interval . . . . . . .  05             1-60 minutes
Maximum send attempts . . . . .   02             1-10 attempts

                                                            Bottom
F9=All parameters   F11=Keywords   F14=Command string   F24=More keys
```

0075 - Change DirectFax system values – additional parameters

PCL converter version

If the interface is licensed for the native PCL converter, set this parameter to *AS400.

PCL TCP/IP address converter PC

If you are using the old external PCL converter on a PC which can convert *USERASCII SPLFs (PCL format) to fax format, enter the fixed IP address for the converter PC.

PCL X value text conversion
PCL Y value text conversion

Allows you to change the coordinates for PCL text conversion if required. Best done in consultation with the Hotline. The default value is *DFT.

You can use **F10** to display **additional parameters**. These are identical to the CFGTDIRFAX parameters and are stored at the same location. When working with the **new transmission program** and the new configuration command **WRKFAXLIN**, change these parameters with F10.

13.5   Set night rate times (EDTTIMTBL)

The command EDTTIMTBL in the menu FAXCNFG, option 4, allows you to flexibly define send times and night rates. In the dialog, you can set **5 rates** for each weekday at half-hour intervals.

You can also maintain a **public/national holiday table** for each year by flagging holidays with the day number. For example, for May 1 1996, enter 7 for Sunday. You can toggle the rates display to compare rates for each day.

The 5 rate descriptions are derived from German Telekom rate structures. They do not describe functions. You can use your own companys' rate structures or any other structure required.

Notes on optimising fax costs

Lets assume the cheapest night rate is from 2 to 5 am. Fax traffic will inevitably be heavy during these hours, increasing the error rate through busy signals and so on.

If you have more than 75 faxes to send at a transmission rate of 25 per hour, the 3 hour period will not be sufficient. The remaining faxes would not be sent until the following night. This is generally not acceptable.

You will therefore need to extend the night rate period beyond 5 or start it before 2. If you extend it beyond 5, you exploit the night rate fully but pay more for the hours following it. If you start earlier, you are forced to estimate the total time required to send all faxes. Starting to early means that you don't take full advantage of the cheapest rate. Start too late, and again there isn't enough time to send all faxes. And of course the number of faxes varies from day to day. The best solution is probably to split the difference by setting the night rate period to, say, 11 pm to 9 am.

Deregulation may also play a role, for example for advertising campaigns set to go out automatically to take advantage of weekend rates that may no longer exist.

In DirectFax, the night rate **N** is subdivided into five rates **1-5**, where 1 is N. Users and applications can specify any rate for a fax. For example, ^NIGHT(2) for night rate 2. The code **^NACHT(S)** is interpreted (S) as a high priority fax that is sent immediately.

Example of prioritising advertising faxes

You want to ensure that your standard faxes (order confirmations, reminders etc.) are sent immediately without setting the fast fax priority code. You also want to ensure that your mass advertising faxes continue to be sent. One way to do this would be to set rate group 5 to 0-24 in EDTTIMTBL (X in all columns), then to assign your advertising faxes to the group with the code ^NIGHT(5). Faxes with lower group numbers have priority within each rate group. Any standard fax or fax with a lower rate number will take priority and be sent before the group 5 advertising.

As a rule: Always assign a rate group 1-5 to mass faxes, whether they are created on the PC or on the iSeries. You can then use EDTTIMTBL at any time to make changes with immediate effect without the need to manually change anything.

13.6 Priority for small documents in the OUTQ DIRFAXPRT

You may want to assign a low priority to large spool files in the OUTQ DIRFAXPRT to avoid delays in faxing other documents in the queue. Depending on machine performance, it can take up to an hour to generate a document containing several hundred pages.

Requirements Activating the function: Set DIRECTFAXF/FAXDTAARA on position 195 to '6' = spool files greater 100 pages default to priority 6, 196-198=200 means, react by 200 pages.

13.7 Change fast fax password (CHGPRIKEN)

Fast, or high priority faxes require a password. You can change the password with the command CHGPRIKEN (Change fast fax password). In the screen that appears, enter the old password first, then the new password. The password is saves in the PRIKEN data area.

The password can contain letters and digits. The maximum length is 5 characters. The password shipped by DirectFax is "**QUICK**".

If a user flags a fax with **B** for fast fax but does not enter the password, the fax is processed according to the FIFO (first in, first out) principal.

Parameters

Old password (OLDKENN)
Enter the old password. The characters are not displayed.

New password (NEWKENN)
A string of 1 to 5 letters and digits.

13.8 Manage fax messages (WRKFAXMSG)

This program is used to administer the messages displayed while working with DirectFax. You can specify the message text recipients. Fax confirmation and error messages are usually sent using **SNDMSG** on the iSeries, but they can also be sent by e-mail.

WRKFAXMSG (Work with DirectFax messages) or the corresponding option in the Configuration menu displays the following screen:


```
 7.03.05  14:08:57       Work with DirectFax messages              SES




Enter selection and confirm
   2=Change   4=Delete

 FC Description                                  1. User ID 2. User ID
▌00 FAX not sent  &
_ 01 FAX sent   &                                *USER
_ 02 Box-CSI: &
_ 05 Receive time: & seconds
_ 09 &
_ 10 Transmit data &
_ 11 FAX not sent, no dial tone  &               *USER      *LAST
_ 12 Wrong CSI   &                               *USER      *HOLD
_ 13 Busy, FAX held  &                           *USER
_ 14 No connection  &                            *USER      *LAST
_ 15 FAX line error  &                           *USER
_ 16 Disconnection during transmission  &        *USER
_ 17 Incompatible fax machine   &                *USER      *HOLD
_ 19 Transmission error  &                       *USER
F3=Exit   F5=Refresh   F6=Create   F10=Fold   F12=Cancel
                       (c) Toolmaker Software GmbH 2005, Version 5.40b
```

0076 - Work with DirectFax messages

Note

This program is normally used to change the **message recipient**. Creating and deleting messages should only be undertaken in the context of DirectFax programming. Any messages you delete will be restored during the next DirectFax update.

Input fields

Option
The input field for selecting one of the following options:

2=Change
Allows you to change the message text and recipient. The text can be changed or translated to another language. The character & is used as a wildcard for variables inserted into the message when it is sent.

You can enter **0 to 9 users or special values**. Most message contain a single name or value.

*USER sends the message to the user who initiated the message or the fax owner. ***SYSOPR** sends the message to the system operator MSGQ. User names are validated. Enter nothing if you do not want to send the message. Specify recipients only for important messages. This avoids too many interruptions for users. Never delete message entries.

If you set the parameter to ***MAIL**, DirectFax sends the message by e-mail to the address specified in the fax user profile. This is to support PC users with no access to a 5250 session. To use this value, the DirectFax e-mail function must be configured as described in chapter 17, and the new transmission program must be selected (CHGFAXVAL F4, MIXALL parameter set to *EXT). E-mail is not sent if no address is found in the fax profile (WRKFAXPRF, EMAIL parameter).

The value ***HOLD** in the second or higher user name field specifies that user intervention is required before further send attempts. Used with messages such as "No connection".

The value ***LAST** in the second or higher user name field specifies that a message is sent to the user only after the last unsuccessful redial attempt. This function is automatic for message 13 (busy).

4=Delete
Removes messages from the file. You will be prompted to confirm the delete. Cancel with F12. We recommend that you do not delete message entries. Any messages deleted will be restored during the next DirectFax update. Messages are not sent if none of the 10 user fields are entered.

Function keys

F3=Exit
Exits the program.

F5=Refresh
Refreshes the display. Unsaved changes will be lost.

F6=Create
Allows you to create a new message ID, text and recipient.

F10=Fold
Toggles between single and double-line display. The double-line display shows all users. Single-line shows only users 1 and 2.

F12=Cancel
Returns to the previous display.

Page up/down
Allows you to scroll through the messages. Note that there may be more data even if the + is not displayed at the bottom right of the screen.

13.9   Default values for the DirectFax editor (CHGFAXDFT)

Use the command **CHGFAXDFT** to set the defaults for **EDTSNDFAX.** The following screen is displayed:

```
                    Change default values EDTSNDFA {CHGFAXDFT)

Type choices, press Enter.

Source file  . . . . . . . . . .   ▮              Name, *USER, *NONE, *PRV
  Library  . . . . . . . . . . .   *LIBL          Name, *LIBL, *CURLIB...
Member . . . . . . . . . . . . .   *NONE          Name, *NONE, *USER, *PRV
```

0077 - Default values for the DirectFax editor

The DirectFax editor is described later in this manual. Edited text is stored in source files. This function sets the default parameters for the editor if nothing is specified in the DirectFax user profile.

Parameters

Source file (SRCFILE)
The following values are valid for source file names:

Name Default the file name entered

*USER   Use the user ID as the file name

*PRV Use the previous name

*NONE   Disables the editor

Library
Specifies the library in which the source file is stored. The following entries are valid for library names:

Name Default the library name entered

*LIBL Use the library list

*CURLIB   Use the current library

---

*USER   Use the user ID as the library name

*PRV Use the previous name

*NONE   Disables the editor

Member (SRCMBR)
The name of the fax text. Valid entries are the same as for source files. We recommend that you avoid fixed names and work with *PRV instead.

13.10 Default values for OfficeVision/400 (CHGOFCDFT)

Use the command CHGOFCDFT to set the defaults for EDTSNDOFC. The following screen is displayed:

```
                    Change EDTSNDOFC default value (CHGOFCDFT)

Type choices, press Enter.

Document . . . . . . . . . . .   *PRV          Name, *USER, *PRV
Folder . . . . . . . . . . . .   *PRV

Lines per Inch (LPI) . . . . .   _             6, 8
Characters per Inch (CPI) . . .  __            10, 12, 17, 20
```

0078 - Default values for OfficeVision/400

You can also use the **OfficeVision** (OV/400) editor to enter your fax text. This is a licensed IBM product that requires the product library QOFC. The OFC editor stores the files as documents in folders. This function sets the default parameters for the editor if nothing is specified in the DirectFax user profile.

Parameters

Document (SRCDOC)
The name of the fax text. We recommend that you avoid fixed names and work with *PRV. This displays the name of the previous document, which can then be edited. You can also use the value *USER, which sets the user ID as the document name.

Folder (SRCFLR)
The folder name can contain up to 80 characters. The values ***PRV** (previous) and ***USER** (user ID) are allowed.

Lines per inch (LPI)
You can specify **6 or 8 LPI** for the line density of the fax. This value is defaulted to the "Enter recipient" screen. It can be edited there if required.

Characters per inch (CPI)
You can specify **10, 12, 17 or 20** characters per inch for the fax text. This value is defaulted to the "Enter recipient" screen. It can be edited there if required.

13.11 Default values for SEU/400 (CHGSEUDFT)

Use the command CHGSEUDFT to set the defaults for EDTSNDSEU. The following screen is displayed:

```
                      Change EDTSNDSEU defaults (CHGSEUDFT)

 Type choices, press Enter.


 Source file . . . . . . . . . . .   *PRV         Name, *USER, *NONE, *PRV
   Library . . . . . . . . . . .     DIRECTFAXF   Name, *LIBL, *CURLIB...
 Member . . . . . . . . . . . . .    *PRV         Name, *NONE, *USER, *PRV
```

0079 - Default values for SEU/400

SEU is the system source editor normally used to enter program code. Edited text is stored in source files. This function sets the default parameters for the editor if nothing is specified in the DirectFax user profile.

Parameters

Source file (SRCFILE)
The following values are valid for source file names:

Name Default the file name entered

*USER   Use the user ID as the file name

*PRV Use the previous name

*NONE   Disables the editor

Library
Specifies the library in which the source file is stored. The following entries are valid for library names:

Name Default the library name entered

*LIBL Use the library list

*CURLIB   Use the current library

*USER   Use the user ID as the library name

*PRV Use the previous name

*NONE   Disables the editor

Member (SRCMBR)
The name of the fax text. Valid entries are the same as for source files. We recommend that you avoid fixed names and work with *PRV instead.

13.12 Default values for the graphic editor (CHGEDTDFT)

The command **CHGEDTDFT** is used to set the defaults for EDTFAXGRF. The following screen is displayed**:**

```
                  Change default line (CHGEDTDFT)

Type choices, press Enter.

User profile . . . . . . . . .   *PUBLIC      User, *PUBLIC, *
```

0080 - EDTFAXGRF

The editor allows you to edit DirectFax graphics. A detailed description of the graphic editor can be found later in this manual.

Parameters

User profile
The following values are allowed:

Name Defaults the specified user name

*PUBLIC Sets the standard default.

* The current user

Options

Scroll
The following values are allowed:

- **F** Scroll one **F**ull page
- **H** Scroll **H**alf a page
- **C** Scroll from the **C**ursor position

1-20 Scroll the specified number of lines. The values allowed are: 1-20 in a 132-character display and 1-17 in an 80-character displayDisplay)

Move
Sets the number of columns scrolled for F19=Left and F20=Right.

- **F** **F**ull screen
- **H** **H**alf screen
- **C** From **C**ursor

1-999 Scroll the specified number of columns.

Screen size
Defines the size of the editing screen.

- **1** 27x132 character display

2 24x80 character display

Pixel representation
Sets the character used to represent a pixel .

Mix type (copy/move)
This parameter determines how the selected and target areas are overlaid when you copy or move.

O Overlays the target area. Example:

Selected Target area Result

```
XXX          XX           XXX
 XXX          XX            XXX
  XXXX         XX            XXXX
    XXX         XX              XXX
```
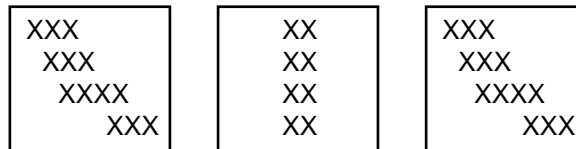
M   Mix the selected area with the target area. Example:

Selected   Target area Result

```
XX           XX          XX  XX
 XXX          XX           XXXX
  XXXXX        XX           XXXXX
      XX        XX             XX  XX
```
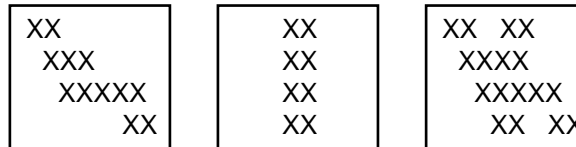
I   Inverse (overlaid pixels are blanked out). Example:

Selected   Target area Result

```
XX           XX          XX  XX
 XXX          XX           XX  X
  XXXXX        XX            X    XX
      XX        XX             XX  XX
```
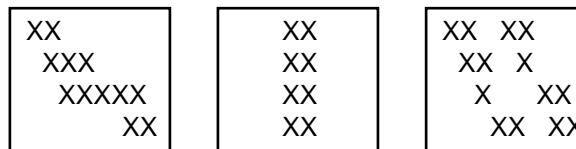
Note
All CHGEDTDFT defaults can be changed by the user with F13 in the graphic editor.

Function keys

F3=Exit
Exits the program and saves the changes.

F12=Cancel
Exits the program without saving the changes.

13.13 Change line speed (CHGSPEED)

This command applies only to the old DCE fax box. It is ignored if you use a modem.

The transmission program automatically sets this parameter to *HIGH if the DCE fax box is working at 9,600. CHGSPEED need only be changed in exceptional circumstances, usually in consultation with the Hotline.

Parameters

Target line speed (TGTSPEED)
The default is ***HIGH**, 19200 baud. *LOW sets a speed of 9600 baud.

Fax box line number (BOXNR)
The fax box line number is defaulted to 1. If more than one fax box is in use (DirectFax multiline version), the command must be repeated for each line.

13.14 Control log and preprint (WRKOVRPRT)

The following does not apply to PC faxes.

Preprint and log print use the printer files (PRTF) **FAXVORAB** and **FAXPROTO** respectively. These files are shipped with the DIRECTFAX library. For general changes to suit your environment, copy these files to the library DIRECTFAXF and then make the changes as required with CHGPRTF. Because the files are stored in DIRECTFAXF, the changes are retained after the next DirectFax update.

General changes to printer files are frequently not sufficient to control all printer types. Some models can't handle 12 CPI and produce an error to which you must respond.

The PRTFAXTXT command has been added to the print program PRTFAXTXT to allow **fax logs** with third party **archiving software**. The content of the field **XCHPA** in the file FAXSTAT can be printed in the first line of the file header.

This is an information field. For single faxes, it contains personal addressing information. When faxing from applications, it can contain the customer, supplier, order number and so on. The following control options are available:

At position 185 in the data area FAXDTAARA, enter

2 to always print the content of XCHPA.

All other character (except blank) are interpreted as **comparison characters**. If **position 1** in XCHPA contains this value, the content of XCHPA is printed in the log.

The fax log heading has been changed to accommodate the new fax sequence number, extended from 5 to 7 characters. This can have negative effects with regard to automatic archiving of the fax log. If you use third party archiving software, please check that the new heading works.

With OfficeVision (OFC) faxes and faxes from applications (SPL), the left margin can be widened 6 characters for filing by entering the value "06" at position 49-50 in the data area FAXDTAARA. Documents created with the DirectFax editor have this margin by default. Use "00" to deactivate this function.

After a fax is processed, the log print is executed by the fax control program (FAXCTL) under the user DIRECTFAX, so the owner name is inserted in the user data (USRDTA) field in the spool entry.

The program has been changed so that the USRDTA default in the OVRPRTF command now takes precedence over the FAXCTL entry. If USRDTA is used by third party form or print control software, the OVRPRTF command can be used to set the USRDTA attribute to any required value.

You can use the command **WRKOVRPRT** to maintain print file override commands for each printer ID. This allows you to maintain separate parameters such as form name, paper tray, font and so on for each printer.

Use **WRKOVRPRT** (Work with override commands) and F4 to select the print type (V=Preprint, P=Log print). If you run the command without F4, it defaults to V. If you call it from the menu, the menu option sets the default. The program displays the following screen:

```
7.03.05  14:14:28          Work with override commands          SES
                              for DirectFax pre print

Position to printer ID  . . . . . . . . _____

Enter selection and confirm
    2=Change   3=Copy   4=Delete   7=Rename

  Printer-ID  Override commands
| DEMOPRT99   OVRPRTF FILE(FAXVORAB) CPI(12) DRAWER(2) HOLD(*YES)













F3=Exit    F5=Refresh   F6=Create   F12=Cancel
                          (c) Toolmaker Software GmbH 2005, Version 5.40b
```

0083 - Working with override commands (WRKOVRPRT)

A list of existing overrides is displayed. The second header line describes the current print type (log or preprint). You can use the "Position to..." field to position in the list. Enter the processing options in the left column.

Options

2=Change
Displays an existing override command for editing. The F4 prompt is available. Error messages are displayed at the bottom of the screen.

3=Copy
Allows you to copy a command. You will be prompted for the new device name.

4=Delete
Deletes the override command for this printer. In a further screen you will be prompted to confirm the delete. If you don't want to delete, use F12 to cancel.

7=Rename
Renames the printer. You will be prompted for the new name.

Function keys

F3=Exit
Exits the program.

F4=Prompt
Displays the command with description and parameter. If the command field is empty, the F4 prompt defaults to OVRPRTF FILE(FAX...).

F5=Refresh
Refreshes the display with current information from the file. Unsaved changes will be lost.

F6=Create

Allows you to create a new override command. You will be prompted for the name of the print device and the override command. After entering the name, use F4 to prompt for the parameters.

F12=Cancel
Returns to the previous screen without saving the changes.

13.15 Print log for PC fax (PCL print)

Most manufacturers now produce printers that support PCL (Printer Control Language) version 5 and greater. An example is the *Hewlett Packard* LaserJet. Such printers can be connected to the iSeries as workstation printers and can be used for printouts from DirectFax, Word or Excel. For PC prints, DirectFax passes an ASCII data stream as a spool file to the iSeries.

Warning: Print errors can occur if the printer is not PCL compatible.

Some new parameters in the **fax user profiles** control PCL printing:

PCL graphic log printer (PCLDEV)   Name, *PRTDEV, *NONE

OUTQ DIRFAXPRT   Name, *DEV

Library   Name, *LIBL

To activate PCL log printing, enter the name of a PCL compatible printer or use *PRTDEV to specify the default printer if it is a PCL printer. The value *DEV in the OUTQ parameter defaults to the printer name entered. A fixed name can also be entered. The library name set to *LIBL, which means the OUTQ must be available from the library list. You can also enter a fixed library name.

These parameter are defaulted to *NONE *DEV *LIBL in all DirectFax user profiles, including group profiles and *ANY. For PC faxing using PCL, the user profiles will need to be changed by an authorised user.

Because the log is not required for serial PC faxes, activating PCL at general, group and profile level can be problematic. PCL5 log printing can be suppressed for serial PC faxes. If you enter a night rate (1..5) in the data area FAXDTAARA at position 193, PC faxes set to that rate will not produce a log print.

A conversion from 200 to 300 dpi (Scaling) takes place and an optimised PCL data stream is generated. The data is then spooled in 500kb blocks per A4 page. This function is executed by the FAXPC job in the DIRECTFAX subsystem.

PCL print settings apply to all faxes created with the user profile. They cannot be changed for single faxes. This is because the settings must be made by an administrator.

13.16 Reorganise incoming faxes

Use the value 89=R in the data area FAXDTAARA in DIRECTFAXF to activate general **reorganisation of incoming faxes**. Reorganisation is performance-intensive, but ensures that incoming faxes are processed correctly.

13.17 Multiple languages at menu and command level

From Version 5.15, DirectFax includes the language library DIRFAXLENG, which allows users to choose the language displayed at menu and command levels.

CRTLNGLIB

This command generates DirectFax language libraries for

```
DEU  German
ENG  English
FRA  French
ITA  Italian
MNC  Multinational/Switzerland
```

To execute this command, you must have QSECOFR or group QSECOFR rights. The following parameters are required:

LANGID

The language code as indicated above.

LIB

The library name or *DEFAULT.

*DEFAULT takes the library name from "DIRFAXL" and appends the language code. For example, for English the library is: **DIRFAXLENG**. If the library does not exist, it is created. If the library exists, it is updated.

You can find more information on creating DirectFax language libraries below.

DLTLNGOBJ

This is a one-off command used to clear language objects (menus and commands) from the library DIRECTFAX before setting the new language. QSECOFR rights are required.

Warning: After executing DLTLNGOBJ, you must ensure that the user's language library is included in ***LIBL**. The position of DIRFAXLxxx in the library list is irrelevant.

The backup library **DIRFAXSCMD** (saved commands) is created before the objects are deleted by DLTLNGOBJ. This library is used by STRDIRFAX to execute jobs in the DIRECTFAX subsystem.

Note: The dialog language can also be controlled with DirectFax user profiles (WRKFAXPRF, parameter LANGID in CHGFAXPRF).

Create a DirectFax language library

1. Log on as QSECOFR

2. ENDDIRFAX

3. **CRTLNGLIB** F4 for each language

4. **DLTLNGOBJ** F4. Execute **once** to delete CMD+MNU in the library DIRECTFAX Confirm with *YES

5. **ADDLIBLE** DIRFAXLxxx (language)

6. STRDIRFAX

Restore menus and commands in DIRECTFAX

1. Log on as QSECOFR

2. ENDDIRFAX

3. **CRTLNGLIB** LANGID(**DEU**) LIB(**DIRECTFAX**)

4. STRDIRFAX

14.0 The DirectFax multiline version

The following describes the old transmission program, which is restricted to the **V.24 interface** and **8 fax lines**. The new transmission program, which uses TCP/IP and has no line restrictions, is described in the chapter Configuration, section 13.2.

DirectFax allows you to operate **up to 8 fax lines** through separate V.24 interfaces. The standard license includes **1** line.

To use additional lines, you will require additional interfaces and modems, Toolmaker licenses and a password with the product code DM400ML.

Multiline functions are grouped in the menu **FAXM**.

V24 interfaces
Each modem uses a separate line, so you will need a **separate V.24 interface** for each additional line. When you connect the modem, note the interface resource name (CMN01 or LIN011). You will need this later during configuration.

Call
You can display the multiline menu with

`GO FAXM`

. You must then **configure** each line with options 1-8.

14.1 Configure multiple fax lines

Use option 1 to configure the **defaults**. This defines the number of lines and line defaults.

Default values
Some values set here cannot be changed in the other lines. These include: **Printer device, user profile, redial interval and number of attempts.**

Box type
Box type (modem type) is an additional parameter displayed with **F10** on page 2. To use additional lines, it **must be set**.

If you are using a single line, set it to "M**0**". For **four** lines, set it to "M**4**". "M2" specifies 2 lines, and so on.

Exchange line description
The exchange line description can be **different for each line** if you use multiple exchanges. In most cases, all exchange line descriptions are identical.

Communication description
The communication description is **different for each line**. The first 8 characters - line, controller and device name - must be unique. We recommend the following convention: Communication description:

- 1. Box: DIRECTFAX
- 2. Box: DIRECTF**2**X
- 3. Box: DIRECTF**3**X
- 4. Box: DIRECTF**4**X

and so forth.

Hardware interface
The **resource name** specifies the hardware interface and must be different for each modem. Please check carefully which modem is connected where. Errors will lead to inexplicable later to communication problems when faxing.

Press Enter to confirm the configuration.

14.2   Fax transmission with the multiline-version

Preparation
The **server program** monitors and processes faxes with the status **"In preparation"** and passes the send request to a **DATAQ**. **The transmission programs work through the send requests in sequence.** Each transmission is confirmed to the server.

Capacity
To fully exploit available resources, the transmission program prepares an average of 3-5 faxes for each line, which means that up to 15 faxes can have status "**Preparing**" at any given time.

Redial
If a fax fails, **automatic redial** is activated.

Fax line downtime
Technical problems with a modem do not affect the other lines. In event of a permanent hardware problem, remove the defective device from the configuration.

Alternative fax line
The **multiline** version allows you to assign specified fax numbers to an **alternative** fax line. This function can be used if you experience compatibility problems. For example, some recipient devices will have problems if you are using ISDN with the ASCOM Digital Fax Router. The data area FAXNRSARA in DIRECTFAXF can hold a maximum of 50 20-character fax numbers. Enter the number of the alternative line (2..8) in the FAXDTAARA at position 139. If you have any questions on this topic, please contact the Hotline.

The **Alternative fax line** function is supported in the new transmission program from Version 5.

15.0 IBM 3489 terminal support (image display)

Incoming faxes, DirectFax graphics and outgoing mix faxes can be displayed on an IBM 3489 terminal.

See the image display options for the following commands: WRKINCFAX *Work with incoming faxes* (option 5), WRKFAXGRF *Work with DirectFax graphics* (option 5) and WRKFAXSTS *Work with DirectFax status* (option 7).

Graphics can be enlarged, rotated and reversed. The mouse is supported.

For graphics display problems such a vertical stripes, use option 'R' (Reorganise T4) to resolve the problem. This option is supported from Version 2.23. The graphic is expanded and repacked to correct coding errors.

Hardware requirements
The terminal must be connected to an "Enhanced Local Twinax Workstation Controller" with one of the following feature codes: #6050, #2661, #9146 or #9148. Older models do not support this terminal.

The terminal can also be operated with a 5494 Remote Control Unit R 3.0 or later.

Note
If these hardware requirements are not in place, a message indicating that the terminal does not support image display will be displayed. This can also occur on PCs with 5250 emulation. If the problem occurs on the PC, choose Start – Programs – DirectFax, and view incoming or outgoing faxes with a Windows graphics program.

An error workaround
Errors on 3489 terminals can be avoided in WRKINCFAX, WRKFAXSTS and WRKFAXGRF by disabling options 5 and 7 *Image display* for 3489 terminals. If you experience problems on other terminals, image display can be disabled for all terminals with the following command:

CRTDTAARA DTAARA(DIRECTFAXF/IMAGENO) TYPE(*CHAR) LEN(1) TEXT('Disable image display)

16.0 Private enterprise providers

Since the opening of the telecommunications market to private enterprise providers, most providers are selected automatically using pre-selection or low-cost routing. This presents no problem for DirectFax.

If you experience problems with pre-selection, find a cheaper provider or wish to use a fixed provider for any other reason, you can specify a provider at user level with the SRVPRV parameter in the DirectFax user profiles or, as now described, for all users. In case of technical problems the code 01033 (Telecom) could be used, to avoid the pre-selection procedure.

Configuration
Two values are required for the configuration. These are the identifier and the prefix. For long-distance calls, the identifier is "0". For international calls, it is "00". The identifier is not required and should be left blank if you reroute all faxes.

Use the following commands to configure these values:

1. `CHGDTAARA ARA(FAXCSI (451 25)) VALUE(´01033´)`
2. `CHGDTAARA ARA(FAXCSI (476 5)) VALUE(´0´)`
3. `ENDDIRFAX RESTART(*YES)`

Line 1 specifies the provider's prefix. Line 2 contains the identifier. Line 3 activates the function.

Fax lines 2-8
If you use the **multiline-version with 2 or more fax lines**, you must enter lines 1 and 2 for each line. You will need to change the name of the data area for each line. Enter FAXCSI2 for line 2, FAXCSI3 for line 3, and so on.

Deactivate
To deactivate this function, enter the following command:

`CHGDTAARA ARA(FAXCSI (451 30)) VALUE(´ ´)`

Restart DirectFax with ENDDIRFAX RESTART(*YES).

17.0 The e-mail function (FAXMAIL)

FAXMAIL is an **optional** supplement to the DirectFax software available from Version 5. A separate **password** (license with product code DF450EM) is required on the iSeries. Customers updating from 4.01 to 5.xx with a permanent license for 4.01 can use the function.

17.1 Licensing

A new **license code** for FAXMAIL is required in the following situations:

- The first time you use the FAXMAIL

- If you switch to another iSeries

- If you upgrade to a newer model

You do **not** need a licensed password to update within Version 5. Use the command **CHKDIRFAX** to display the license status for functions in the status line. **EM=1** indicates that you are licensed for e-mail.

Note: **STRDIRFAX** cannot be executed if the configuration (CHGFAXVAL) parameter EMAIL is set to *YES, the mail configuration (CFGFAXMAIL) parameter MAILSYS is set to *DIRECTFAX and you are not licensed for FAXMAIL.

FAXMAIL allows DirectFax to fax documents by e-mail using TCP/IP. Transmission is by router or network mail server, not by modem.

From Version 4.01, DirectFax uses its own, and not the iSeries, SMTP-Client.

17.2 Technical requirements for e-mail

The following infrastructure is required to send e-mail over the **internet**: Either

a **router** (Bintec/Cisco) in an Ethernet LAN with an ISDN connection

  or

your own **mail server** in the LAN (e.g. Exchange Server)

Anonymous mail routing (for the iSeries host) must be enabled. SMTP authentication is also supported from Version 4.02.

Note: E-mail <u>cannot</u> be sent by fax modem.

17.3 Configure TCP/IP

If you cannot **PING** the router or mail server, specify the **route** (*DFTROUTE) in CFGTCP option 2 that identifies the gateway to the network in the parameter NEXTHOP.

You may also need to configure a **Domain Name Server** in CFGTCP option 12 for internet mail servers (for example smtprelay.t-online.de). You could for example specify the router's IP address or 194.25.2.129.

17.4 Activate the e-mail function (CHGFAXVAL)

Use **CHGFAXVAL** F4 F10 to set the **EMAIL** parameter on page 3 to ***YES**. This activates the DirectFax **e-mail server** which runs under the job name FAXMAIL in the DirectFax subsystem.

17.5 Configure the e-mail interface (CFGFAXMAIL)

Use the DirectFax command **CFGFAXMAIL** and F4 to configure the defaults.

```
                    Configure DirectFax mail (CFGFAXMAIL)

 Type choices, press Enter.

 Postmasters EMail address  . . .    '"Toolmaker Hotline" <hotline@toolmaker.de>'

 Priority . . . . . . . . . . . .    *MAIL           *FAX, *MAIL
 EMail file type  . . . . . . . .    *TIFF           *TIFF, *TEXT
 Graphic format for dispatch  . .    *TIFF           *TIFF, *PDF
 PDF paper format . . . . . . . .    *A4             *A0, *A1, *A2, *A3, *A4...
 Reorganize before EMail dispat:
   Graphics . . . . . . . . . . .    *NO             *YES, *NO
   Incoming faxes . . . . . . . .    *NO             *YES, *NO
 Code page specific characters:
   Char.   `&`  . . . . . . . . .    '&'             Zeichenwert
   Char.   `"`  . . . . . . . . .    '"'             Zeichenwert
   Char.   `<`  . . . . . . . . .    '<'             Zeichenwert
   Char    `>`  . . . . . . . . .    '>'             Zeichenwert
 E-Mail system  . . . . . . . . .    *DIRECTFAX      *DIRECTFAX, *DIRECTMAIL
 DirectMail/400 mailbox . . . . .    *OWNER          Zeichenwert, *OWNER
                                                                 More...
 F9=All parameters   F11=Keywords   F14=Command string   F24=More keys
```

0084 - Configure the faxmail interface

Postmaster e-mail address
Enter the name of the postmaster for sent e-mail. The syntax is a follows:
"Sender name" <Sender@e-mail-adresse.xxx>
returns undelivered mail to the sender.

Note: DirectFax cannot monitor undelivered mail. DirectFax can send mail but it cannot receive it. For this reason, ensure that you specify a **sender** address that actually exists and is regularly queried , for example by a PC client or by DirectMail. With this e-mail send backs can be supervised and wrong addresses can be corrected.

Priority
Sets the priority if both fax number and e-mail address are available.

The values allowed are:

*FAX   Priority given to fax

*MAIL   Priority given to e-mail

E-mail file type

E-mail can contain both text and graphics. This parameter allows you to convert text from the iSeries to a graphic before it is sent as mail.

The values allowed are:

*TIFF   The fax is converted to a graphic and sent as an attachment

*TEXT The fax is sent as text. Text lines are inserted 1:1 in the e-mail. Attributes (bold, underline etc.) are not supported.

Graphic format

If the fax is converted to a graphic, specifies the format used.

The values allowed are:

*TIFF   Creates a TIFF file

*PDF   Creates a PDF file

PDF paper format

If converted to PDF, sets the paper size. Values are *A0, *A1 etc.

Reorganise before send

Allows you to reorganise graphics or incoming faxes before sending faxes by e-mail.

Code page characters

Allows the administrator to maintain code page characters for multinational environments.

E-mail system

Specifies the mail system used.

The values allowed are:

*DIRECTFAX   The DirectFax server is used

*DIRECTMAIL   The DirectMail server is used

DirectMail/400 mailbox

If you use DirectMail, enter the name of the mailbox used to send.

```
                    Configure DirectFax mail (CFGFAXMAIL)

  Type choices, press Enter.

  SMTP server . . . . . . . . . .    'localhost█_____
  _____
  _____
  TCP/IP port for SMTP . . . . . .   *SMTP       Zahl, *SMTP
  SMTP AUTH protocol . . . . . . .   *NONE       *NONE, *AUTO, *LOGIN...
  SMTP user  . . . . . . . . . . .   _____
  _____
  SMTP password . . . . . . . . .    _____
  _____



                                                                       Bottom
  F9=All parameters   F11=Keywords   F14=Command string   F24=More keys
```

0085 - Configure the faxmail interface, page 2

SMTP server (SMTPSRV)
Specify a name for the mail server. This can be a provider server (e.g. smtprelay.t-online.de), an internal mail server (mailserver1) or the iSeries (localhost). The value *AS400 is still supported but not recommended, as it may generate send errors.

TCP/IP port for SMTP (SMTPPORT)
*SMTP specifies that the default port 25 is used. You may need to specify a different port in some situations.

SMTP AUTH method (SMTPAUTH)
If the mail server requires SMTP authentication (registration as with POP3) select the method here. *NONE specifies: No authentication. *AUTO specifies that the method is determined by the interface. The other values are *LOGIN, *PLAIN and *SCHLUND (1&1).

SMTP user (SMTPUSR)
If authentication is used, specifies the user or account name for registration.

SMTP password (SMTPUSR)
If authentication is used, specifies the password for registration.

A switch has been added to **FAXMAIL** that deletes the **fax banner** (the header that appears at the top of each page) before the mail is created, so that the TIF or PDF attachment contains no reference to DirectFax. To enable it, set position **461** in the data area **FAXDTAARA2** in the library **DIRECTFAXF** to **R**.

17.6   Default text in the file ##COVER

Multiple file members can be used to provide default e-mail text in the source file ##COVER. The **fax content** is a PC file **attached** to the e-mail.

You can find sample members in the source file QAPISRC in DIRECTFAX. You can copy these members with PDM into the source file ##COVER in your DIRECTFAXF library. If ##COVER does not exist, create it with:

```
CRTSRCPF FILE(DIRECTFAXF/##COVER)
```

. The members are as follows:

##EMAILTXT   Outgoing fax as text

##EMAILTIF Outgoing fax as TIFF

##EMAILINC   Incoming faxes

##EMAILGRF   Fax graphics

Control lines at the beginning of the member ##EMAILTXT define the text separators within the e-mail:

STR: ========= DirectFax/400 ====================

SEP: ========= DirectFax/400 New Page ============

END: =========DirectFax/400 End of File ============

User-defined text
To provide flexibility in **multiple company** environments, the file name in **DIRECTFAXF** is now determined as follows. The member is always ##EMAILxxx.

Check for a **file** with the name of the **user**. If the member is not found then:

Search the DirectFax user profile file for a record with the name of the user and extract the group profile, for example $FIRMA1. Check for a file with the name of the group profile without $, for example FIRMA1. If the member is not found then:

Use the default text in the ##COVER.

17.7 Send e-mail from DirectFax

When faxing from the **DirectFax editor**, or from OfficeVision, SEU or WRKSPLFAX, you can use F10 in the "Enter recipient" dialog to enter an e-mail address.

Applications can add a control line containing the e-mail address in the spool file: **^FAX ^MAIL(hotline@toolmaker.de)**. ^FAX is important and cannot be omitted.

AutoFax can extract the e-mail address instead of the fax number from the spool file or address file.

You can use option **12** in **WRKFAXSTS** or **WRKINCFAX** to send an existing fax by e-mail.

With the *MAIL function, incoming faxes can be sent as e-mail with the **automatic distribution** feature.

17.8 Email subject line

If it is not passed, the e-mail **subject line** is generated automatically.

With the DirectFax editor, the member description is used (50 characters).

For spool files from the DIRFAXPRT OUTQ with a ^FAX control line, the ^REF() control can be used (max. 50 characters).

Autofax allows you to generate a variable subject for the e-mail with data from the SPLF (^REF).

On the PC. the "Personal addressing" field can be used (max. 48 characters).

For manual e-mail with option 12=Mail, you can enter the subject line in FAXMAIL.

17.9 Special notes:

T-Online
If you use T-Online as your provider, there are a number of problems with the SMTP protocol that do not occur with other providers. For example, test e-mail to your own address will not be delivered. To resolve these problems, visit the T-Online Service page and register with the **SMTP Relay Server**. There is a charge for registration. To find the page, do a Google search for: smtp relayserver t-online.de

Once there, specify "**smtprelay.t-online.de**" as the post router in the SMPT attributes.

Domain Name Service (DNS)
To convert host names to IP addresses, specify the IP address for a DNS server (e.g. 194.221.178.11 or 194.25.2.129) with option 12 in the menu CFGTCP. If you work with a router and it supports DNS, you can also specify the router's IP address. Select **LOCAL* as the search priority.

Temporary files
The following temporary files are created on the iSeries when e-mail is generated.

QDLS/FAXTMP   for TIF attachments
/FAXTMP   for MIME files (in older versions)
/Toolmaker/DirectFax400/Temp   (current version)

The file names are determined by job number and time. If the folders do not exist QDLS or IFS, they are created by DirectFax.

Mail address and priority fax/mail
When using the **^FAX control line** with automatic faxes from the DIRFAXPRT OUTQ, you can include the **^MAIL()** control to specify the e-mail address. The parameter **^MAILPTY(M)** determines the preferred method if both fax number and e-mail address are included (M=Mail, F=Fax).

You can also define e-mail addresses in **AUTOFAX**. With option 6 in the "Source for fax number" menu, you can now enter a fax number or e-mail address. Note that you must also define a position for the fax number or e-mail address with the *Data fields* option in the "Fax number" menu.

18.0 Lists

The following is a complete list of all DirectFax commands.

18.1   DirectFax commands

Note:
Commands in the library DIRECTFAX that are not listed here are for internal use only and should not be used.

COMMAND	FUNCTION
ADDFAXAJE	Automate STRIRFAX on IPL
CFGDIRFAX	Configure DirectFax connection
CHGFAXARC	Change DirectFax archive parameter
CFGCOMSRV	Configure W&T ComServer
CFGFAXBOX BOXNR(x)	Configure fax box x
CFGFAXMAIL	Configure e-mail interface
CFGISDNBOX	Configure ISDN fax box (DCE only)
CHGDFIPAR	Change DirectFax interface parameters
CHGDFTLIN	Change default line settings
CHGEDTDFT	Defaults for the graphic editor
CHGFAXCSI	Change box CSI
CHGFAXDFT	Defaults for the DirectFax editor
CHGDFIPAR	Change DirectFax interface parameters
CHGFAXPRF	Change DirectFax user profile
CHGDFIPAR	Change DirectFax interface parameters
CHGFAXVAL	Change DirectFax system value
CHGOFCDFT	Change OfficeVision defaults
CHGOVRFAXP	Change overrides for the fax log
CHGOVRFAXV	Change overrides for fax preprint
CHGPRIKEN	Change password for fast fax
CHGSEUDFT	SEU/400 defaults
CHGSPEED	Change line speed 9600/19200

CHKDIRFAX	Show password releasing
CHKFAX	Fax status validation
CHKFAXFIL	File conversions during installation
CLRUSRTRF	Delete loaded user records from FAXKA
CPYFAXGRF	Copy a graphic to another file
CPYSPLFSRC	Copy spool file to source member
CRTFAXSRCF	Create DirectFax source file for DirectFax editor (DFE)
CRTMIXGRF	Prepare graphic for mix processing
CRTSPLFAX	Send spool file without dialog (R/DARS interface)
CRTSPLFAX	Send spool file without dialog (from CLP)
CVTADRKEY	Upper/lower case address file conversion
CVTTOBMP	Convert fax logo to bitmap
CVTTOPCI	Convert received fax for PC
DROPDIRFAX (with CALL)	DirectFax uninstall
DSPDIRFAXV	Show DirectFax version
DSPFAXGRF	Show/print DirectFax graphics
DSPFAXHST	Show DirectFax history
DSPFAXPRF	Show DirectFax user profile
DSPSNDSTS	Print transmission protocol
EDTFAX	Edit fax with the old Editor
EDTFAXGRF	Edit fax graphics
EDTSNDFAX	Create and send fax
EDTSNDOFC	Send a fax with OfficeVision
EDTSNDSEU	SEU/400 fax text entry
EDTTIMTBL	Set night rates
EFAX	Edit fax with the new Editor
ENDDIRFAX	End DirectFax transmission program and subsystem

EXCUSRTRF	Execute path for loading user data
FAX (OFC document only)	Start fax receiver input from *RUN-instruction
FAXSPLF	Send spool file without dialog (from CLP)
GO FAX	Call user menu
GO FAXT	User menu with qualified command calls because of IBM Facsimile Support (D only)
GO FAXCNFG	Call configuration menu
GO FAXCNFG2	Call configuration menu 2
GO FAXM	Call multiline menu
GO FAXOPR	Call operator menu
GO FAXOPRT	Operator menu with qualified command calls because of IBM Facsimile Support (D only)
HLDFAXQ	Hold FAXQ
INSPSW	Password entry
PRTF	1:1 member test print
PRTINCFAX	Print a received fax
RECRTDTAQ	Create missing DTAQ's
RGZFAXFIL	Reorganise and clear all DirectFax-files
RLSFAXQ	Release FAXQ
RMVFAXAJE	Remove autostart entry from SBSD
RMVFAXMBR	Mass deletion of all **unsent** faxes
RMVOLDMBR	Remove old members from a source file
RSTOBJPCD	Restore SAVF (disc or e-mail)
SAVOBJPCD	Save iSeries objects for sending via e-mail
SNDGRFFAX	Send graphic/logo as test fax
SNDINCFAX	Send received fax
STRDIRFAX	End DirectFax transmission program and subsystem
TRFFAXGRF	Load received fax as a graphic
TRFTTXRSL	Load FAX400 serial lists to DirectFax

WRKATFDEF	Work with AutoFax definitions
WRKFAXALI	Work with DirectFax alias (font and graphic renaming)
WRKFAXDTR	Work with destination information (automatic incoming fax control)
WRKFAXFNT	Work with DirectFax fonts
WRKFAXFRM	Work with DirectFax form definitions
WRKFAXGRF	Work with graphics and logos
WRKFAXKA	Working with address codes
WRKFAXKWG	Work with call distributor groups
WRKFAXLIN	Work with fax lines (new transmission program)
WRKFAXLKZ	Working with country codes
WRKFAXMSG	Message management
WRKFAXPAR	Work with external SPL parameters
WRKFAXPRF	Work with DirectFax user profiles
WRKFAXSEC	Work with fax rights
WRKFAXSTS	Work with fax status
WRKINCFAX	Work with received faxes
WRKLGOSEC	Manage logo/graphic rights
WRKOVRPRT	Print file overwriting for pre and protocol printers
WRKSPLFAX	Send spool files as a fax
WRKUSRTRF	Load address codes from user file

18.2   The DirectFax menus

There are 5 menus available in DirectFax. The options available in each menu are described in this section. The commands themselves are described in separate sections.

To display a menu, use the command *GO menu name* (for example GO FAX).

You can also use F4 to display commands.

18.2.1 The Configuration menu (GO FAXCNFG)

```
FAXCNFG                    DirectFax Configuration-Menu
                                                    System:    S4444224
Select one of the following:

        1. Configure DirectFax              3. CHGSPEED for Faxbox (DCE)
        2. Change CSI                      13. Configure Faxbox    (DCE)

        4. Change Night-Rates
        5. Change Password for Quick-Fax
        6. Work with DirectFax Messages
        8. Change DirectFax Editor Defaults
        9. Change Office/400 Defaults
       10. Change SEU/400 Defaults
       11. Change Graphiceditor Defaults
       12. Change DirectFax Systemvalues
       20. DirectFax Operator-Menu          40. Multiline-Menu
       30. Configuration-Menu 2             90. Sign off    99. Display Version

Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

0086 - The DirectFax Configuration menu (FAXCNFG)

Option	Command
1	?CFGDIRFAX
2	?CHGFAXCSI
3	?CHGSPEED
4	EDTTIMTBL
5	?CHGPRIKEN
6	WRKFAXMSG
8	?CHGFAXDFT
9	?CHGOFCDFT
10	?CHGSEUDFT
11	CHGEDTDFT
12	?CHGFAXVAL
13	?CFGISDNBOX
20	GO FAXOPR
30	GO FAXCNFG2
40	GO FAXM
90	SIGNOFF
99	DSPDIRFAXV

18.2.2 The Configuration 2 menu (GO FAXCNFG2)


```
FAXCNFG2            DirectFax Configuration-Menu 2
                                                   System:   S4444224
Select one of the following:

     1. Automatic Distribution of incoming Faxes
     2. Configure Archiving incoming and outgoing Faxes
     3. Work with AutoFax Definitions
     4. Work with external DirectFax Spool-Parameters
     5. Work with Forms Definitions
     6. Overwrite Printerfile for FAXVORAB-Devices
     7. Overwrite Printerfile for FAXPROTO-Devices

    10. Create Sourcefile for Faxtext (DirectFax Editor)
    11. Configure e-Mail Distribution

    20. DirectFax Operator-Menu
    90. Sign off                            99. Display Version

Selection or command
===> _____

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

0087 - The Configuration 2 menu (FAXCNFG2)

Option	Command
1	WRKFAXDTR
2	CFGFAXARC
3	WRKATFDEF
4	WRKFAXPAR
5	WRKFAXFRM
6	WRKOVRPRT V
7	WRKOVRPRT P
10	CRTFAXSRCF ??LIB(DIRECTFAXF) ?-RCDLEN(*N)
11	?CFGFAXMAIL
20	GO FAXOPR
90	SIGNOFF
99	DSPDIRFAXV

18.2.3 The Operator menu (GO FAXOPR)

```
FAXOPR                      DirectFax Operator-Menu
                                                    System:    S4444224
Select one of the following:

      1. Start DirectFax transmission           13. Hold DirectFax Queue
      2. End DirectFax transmission             14. Release DirectFax Queue
      3. Start DirectFax TCPSERVER
      4. Import Adresses from User-Database
      5. Print transmission log and delete faxes
      6. Check DirectFax Program Status
      7. Work with User Profiles and User Rights
      8. Work with Graphics and Graphic Rights
      9. Work with incoming faxes

     20. DirectFax User-Menu

     90. Sign off                                99. Display Version

Selection or command
===> _____

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

0088 - The DirectFax Operator menu (FAXOPR)

Option	Command
1	?STRDIRFAX
2	?ENDDIRFAX
3	DIRECTFAXF/STRSRV
4	WRKUSRTRF
5	?DSPSNDSTS
6	?CHKFAX
7	WRKUSRPRF
8	WRKFAXGRF
9	WRKINCFAX
13	HLDFAXQ
14	RLSFAXQ
20	GO FAX
90	SIGNOFF
99	DSPDIRFAXV

18.2.4 The User menu (GO FAX)

```
FAX                       DirectFax User-Menu
                                                    System:     S4444224
Select one of the following

     1. Work with DirectFaxEditor and send Fax

     3. Work with OfficeVision and send Fax
     4. Work with SEU and send Fax
     5. Work with Spoolfiles and send Fax
     6. Check Status of own Faxes (incoming and outgoing)
     7. Work with Fax-Status
     8. Work with incoming Faxes

     9. Work with Addressbook
    10. Work with Addressgroups
    11. Work with Country Codes
    90. Sign off                              99. Display Version

Selection or command
===> ▮

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

0089 - The DirectFax User menu (FAX)

Option	Command
1	EDTSNDFAX
3	EDTSNDOFC
4	EDTSNDSEU
5	WRKSPLFAX
6	?CHKFAX
7	WRKFAXSTS
8	WRKINCFAX USER(*)
9	WRKFAXKA
10	WRKFAXKWG
11	WRKFAXLKZ
90	SIGNOFF
99	DSPDIRFAXV

18.2.5 The MULTILINE Configuration menu (GO FAXM)

```
FAXM              DirectFax Configuration-Menu -MULTILINE-
                                                    System:    S4444224
Select one of the following:

     1. Configure Faxbox 1            11. Start DirectFax transmission
     2. Configure Faxbox 2            12. End DirectFax transmission
     3. Configure Faxbox 3
     4. Configure Faxbox 4
     5. Configure Faxbox 5
     6. Configure Faxbox 6
     7. Configure Faxbox 7
     8. Configure Faxbox 8

    20. DirectFax Configuration-Menu   30. DirectFax Configuration-Menu 2
    21. DirectFax Operator-Menu
    22. DirectFax User-Menu
    90. Sign off                               99. Display Version

Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant   F16=AS/400 main menu
```

0090 – The -MULTILINE- (FAXM) configuration menu

Option	Command
1	?CFGDIRFAX
2	CFGFAXBOX BOXNR(2)
3	CFGFAXBOX BOXNR(3)
4	CFGFAXBOX BOXNR(4)
5	CFGFAXBOX BOXNR(5)
6	CFGFAXBOX BOXNR(6)
7	CFGFAXBOX BOXNR(7)
8	CFGFAXBOX BOXNR(8)
11	?STRDIRFAX
12	?ENDDIRFAX
20	GO FAXCNFG
21	GO FAXOPR
22	GO FAX
30	GO FAXCNFG2
90	SIGNOFF
99	DSPDIRFAXV

18.2.6 The Service menu (GO FAXSRV)

The menu **FAXSRV** contains all commands which are necessary for **problem analysis**. FAXSRV arose from the daily Hotline experience. It is intended to help IT users to execute commands efficiently without repeated contact with our Hotline. You can call the Service menu from any Fax menu with option 77, which is not displayed.

The FAXSRV menu is **protected**. You must have *ALLOBJ or DirectFax *SECOFR rights to use it. If you do not have these rights, option 77 is disabled. DirectFax *SECOFR rights should be granted to at least one fax user's profile. That user is then authorised for all DirectFax functions and commands without requiring *ALLOBJ rights. Because *SECOFR allows even users whose iSeries rights restrict them to selecting menu options to

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execute all DirectFax commands, working with our Hotline is easier and more productive.

18.3 DirectFax control codes and attributes

Note
<u>Control line</u> = ^FAX line in DIRFAXPRT spool entry

Control characters	Function	Page	Comments
^&KAADRS	Type P/G (private/group)	103	
^&KAFAX	Fax number	103	
^&KAFID	Path ID	103	
^&KAINTN	Internal record number	103	
^&KAKENN	CSI verification	103	
^&KAKURZ	Record key	103	
^&KALKZ	Country code	103	
^&KAMCD	Search term, matchcode	103	
^&KANAM1	Name	103	
^&KANAM2	2. Name line	103	
^&KAORT	City	103	
^&KAPA	Salutation	103	
^&KAPLZ	Post code	103	
^&KAPRIV	User name	103	
^&KASTR	Street	103	
^&KATEL	Phone number	103	
^&KAVORW	Area code	103	
^+	Continues parameters and text to the following line	61	
^AKEYA()	Application key data field A	61	Must be in control line
^AKEYB()	Application key data field B	61	Must be in control line
^ATTACH	Insert page break and TIF file	98	Mixfax only
^B(x1,y1,x2,y2, LT,LD)	Command for drawing lines and boxes x1/y1 Top left coordinates for line/box x2/y2 Bottom left coordinates for line/box LT Line type LD Line weight in pixels (1, ...99)	95	Mixfax only
^B0	End bold	102	
^B1	Start bold	102	
^BLGO( )	Replace default footer logo (profile)	61	Must be in control line
^BLGOF( )	Default footer logo next page	61	Must be in control line
^BLITZ( )	Fast fax with password in brackets	61	Must be in control line
^C0	Start 10 CPI	102	
^C2	Start 12 CPI	102	
^C7	Start CPI 17/20	102	
^CFA	Automatically adjust pitch to font size	93	Mixfax only
^CFN	Return to normal state (variable pitch)	93	Mixfax only
^CFxx	(CF01...CF99) CPI fixing sets character width in pixels	93	Mixfax only
^CN	Return to default CPI	102	
^CPIxx	CPI: xx=10, 12, 17 or 20	61	Must be in control line
^DIAL	Fax dial number (in conjunction with ^FAX)	61	Must be in control line
^F0011	Courier 10 CPI	93	Mixfax only
^F0085	Courier 12 CPI	93	Mixfax only
^F0223	Courier 15 CPI	93	Mixfax only

^F0256	Courier 17 CPI	93	Mixfax only
^F0280	Courier 20 CPI	93	Mixfax only
^F2103	Bookman 24 points bold	93	Mixfax only
^F2104	Helvetica 24 points	93	Mixfax only
^F2105	Helvetica 10 points	93	Mixfax only
^F2106	Helvetica 16 points	93	Mixfax only
^F2107	Bookman 10 points bold	93	Mixfax only
^F2108	Bookman 16 points bold	93	Mixfax only
^F2109	Helvetica 24 points bold	93	Mixfax only
^F2110	Helvetica 10 points bold	93	Mixfax only
^F2111	Helvetica 16 points bold	93	Mixfax only
^F2112	Helvetica 6 points bold	93	Mixfax only
^F2113	Helvetica 12 points bold	93	Mixfax only
^F2114	Helvetica 12 points	93	Mixfax only
^F2115	Helvetica 6 points	93	Mixfax only
^F2200	Symbol 10 points	93	Mixfax only
^F2201	Symbol 16 points	93	Mixfax only
^FAX	Non-printing control line taking parameters like fax number. Replaces the old ^h*xxx* line.	61	Control line
^FEIN	Fine resolution	61	Must be in control line
^FLINE	Default line for multiline	61	Must be in control line
^FREE[n]()	Release required (like ^SIGN() but **without** inserting graphic) n=1,2,3 or not specified (release sequence)	105	
^gLOGO	Insert graphic ("LOGO" is an example of a graphic name)	104	**g** must be lower case. **Name** must be UPPER CASE.
^gLOGO(x,y)	Logo coordinates	98	Mixfax only
^GROB	Coarse resolution	61	Must be in control line
^HALT	Hold fax (manual release required)	61	Must be in control line
^HLGO( )	Replace default header logo (profile)	61	Must be in control line
^HLGOF( )	Default header logo next page	61	Must be in control line
^h*xxxxx.*	Old fax dial number (xxxx is the fax number). Now ^FAX. This operator is still supported.	61	Old control line
^KST( )	Cost centre	61	Must be in control line
^L6	Start LPI 6	102	
^L8	Start LPI 8	102	
^L1 to ^L9	Lines Per Inch	95	Mixfax only
^LA	Automatic line spacing	95	Mixfax only
^LM*	Left margin at current cursor position	98	Mixfax only
^LMN	Return to default left margin	98	Mixfax only
^LMxxx	Left margin at mm millimetres	98	Mixfax only
^LN	Return to default LPI	102	
^LPIx	LPI: x = 6 or 8	61	Must be in control line
^MAIL	Mail address		Must be in control line
^MAILPTY	Fax/e-mail priority		Must be in control line
^MIX	Mix graphics and text (mixfax), <u>not</u> header and footer logos	91	Must be in <u>first</u> line
^MIXALL	Mix graphics and text, including header and footer logos	91	Must be in <u>first</u> line
^MTQ()	MoveToQueue (spool file to OUTQ)	61	Must be in control line
^NACHT	Night job (rate 1/N=Night rate)	61	Must be in control line
^NACHT(1...5)	Night job (rate 1…5)	61	Must be in control line
^NODFT	No default header and footer logos	61	Must be in control line
^NOSKIP	Suppress skips from this position	102	

^P(*,yyy) ^P(xxx,*)	Position in unchanged (*) column/line	95	Mixfax only
^P(N,yyy) ^P(xxx,N)	Position in last specified column/line	95	Mixfax only
^P(S,S)	Position in column/line saved with ^PS	95	Mixfax only
^P(xxx,yyy)	Position cursor at X,Y coordinates in millimetres	95	Mixfax only
^PA	Page feed	102	
^PA( )	Salutation (information for send log and status display)	61	Must be in control line
^PRT(PRTxx)	Log printer	61	Must be in control line
^PRT(*DFT)	Get log printer from user profile	61	Must be in control line
^PS	Saves current cursor coordinates for later use	95	Mixfax only
^Q	New page in landscape or portrait format (toggle)	97	Mixfax only
^Q*	Rotate text to ^QN	97	Mixfax only
^QN	End rotation	97	Mixfax only
^R0	End reverse	102	
^R1	Start reverse	102	
^R1	Start reverse	102	
^RET0	Retain=0, retain fax content 0 days, i.e. text deleted on send	107	Must be in first line
^R1	Start reverse	102	
^RNAME( )	Recipient name for status display	61	Must be in control line
^SDATE( )	Send date and optional time, 2-4 digits	61	Must be in control line
^SHIFT	Moves text 1…9 characters left (reduces margin)	61	Must be in control line
^SIGN ^SIGN(*CURRENT) ---->	Insert signature graphic from fax owner's user profile ^SIGN(*CURRENT,X,Y) positions at X,Y mm	105	Mixfax only with X/Y coordinates
^SIGN[n]()	Insert signature graphic specified in brackets after manual release n=1,2,3 or not specified (release sequence)	105	Mixfax only with X/Y coordinates
^SPLF(H)	Hold submitted spool file (not deleted)	61	Must be in control line
^STIME( )	Send time in hours/minutes	61	Must be in control line
^T	End of fax page = fax separator in spool	64	Must be last line of last page
^t(21,51,,,129)	Set tabs 1-9 to millimetre position	96	Mixfax only
^t*(blank)*	Jump to next tab	96	Mixfax only
^tN	All tabs to default	96	Mixfax only
^tn	Jump to tab n=1, 2,....9	96	Mixfax only
^tn(*)	Tab n to cursor position	96	Mixfax only
^tn(mm)	Tab n to mm position	96	Mixfax only
^tn(N)	Tab n to default position	96	Mixfax only
^ttt*(blank)*	Jump to n=ttt tab	96	Mixfax only
^U0	End underline	102	
^U1	Start underline	102	
^UA	Salutation in serial faxes	101	
^UC	Own CSI identification	101	
^UD	Date in format DD.MM.YY	101	
^UM	Name of source member	101	
^UN	Internal fax number	101	
^UR	Subject text from member description	101	(R=Reference)
^USER( )	Different fax owner	61	Must be in control line

^UT	Time in frmat HH.MM.SS	.101	
^UX	Text field from fax user profile	.101	
^VORAB	Preprint (manual release required)	.61	Must be in control line

19.0 Troubleshooting

Before contacting the Hotline, there are a number of standard checks you can do if you have problems faxing.

19.1   Errors

To ensure error-free functionality, check that the DirectFax hardware and software has been correctly installed and that the line has been correctly configured. The fax modem must be connected to the power supply. The cable connectors must be secure.

If problems occur, we recommend that you first check for DirectFax **error messages** in the QSYSOPR message queue with the command DSPMSG. Possible errors include no power, loose or unconnected cables, an incorrect line description (resource name CMNxx) during configuration, another application with the same line description has been started, or an IPL has resulted in a line description conflict. For more information on IPL problems, see option 1 in the OS/400 "HARDWARE" menu.

Use **WRKACTJOB** SBS (DIRECTFAX) to validate the transmission programs. If the status is **ICFW** (ICF WAIT), the program is waiting for an answer from the modem. If this status remains unchanged and you cannot send faxes, you will need to look elsewhere for the problem. To do this, first power down DirectFax with the command ENDDIRFAX.

Use the command **WRKCFGSTS *LIN** to check for other errors. Check the status of the 3 DIRECTFAX entries LIND, CTLD and DEVD. They should all display ACTIVE. If they have been disconnected, enter option 1 in the first line and reconnect them with F5. If they are still not active, another line may be using the DirectFax interface (resource LINxxx).

Use the command **WRKOUTQ DIRFAXPRT** to check if there are any faxes pending in the OUTQ. Faxes are sent only if the status is RLS and there are no errors shown in the "User data" column.

Terminate DirectFax with ENDDIRFAX. If this is unsuccessful, execute an abnormal end with **ENDSBS DIRECTFAX *IMMED**, check your hardware and then restart using STRDIRFAX.

Error: All faxes move to the status "No dial tone" or "No connection".

There is a problem with the telephone line. First check the phone and exchange to which the fax modem is connected. Ensure that the TAE6 connector is connected to the right phone socket. Connect a phone to the TAE6 connector and listen for a dial tone. If necessary, contact a telephone technician.

Error: All the fax change to status "engaged/busy"

There is a problem with obtaining an external line. First check the phone and exchange to which the fax modem is connected. External lines may not be allowed. If this problem occurs after installing a new version of DirectFax and you are using an old **DCE fax box**, check the following:

For external calls through an exchange, the prefix digit must be set, usually to 0 or I0 (internal calls allowed), with the command CFGDIRFAX and F4 (or GO FAXCNFG, option 1).

If the parameter is set to *NONE, DirectFax assumes that the box is connected directly to an external line. However if the box is connected to an exchange and the prefix digit is specified with the fax number (e.g. 00405591908), newer boxes set all faxes to "Busy"

Solution

Enter the following command:

```
CHGDTAARA DTAARA(DIRECTFAXF/FAXCSI (135 2))
    VALUE('A.')
```

Make sure you include the dot after the "A".

With multiline installations, enter this command for each line (2..8). The DTAARA FAXCSI must be changed to FAXCSI2 for line 2, FAXCSI3 for line 3 and so on.

End and restart DirectFax with ENDDIRFAX (RESTART *YES) after this process.

A firmware upgrade may also be the reason when the "WAIT" for response time period is shortened. Verify that the "DTD" parameter is set to 'B'.

The Toolmaker website
For a list of known problems and their solutions, visit www.toolmaker.de and click through to *Software*, *DirectFax*, *Support*.

Hotline

If you are still having trouble, call the HOTLINE at +49 (0) 40 559 19 62. Please have all job logs etc. at hand.

19.2   Exchange iSeries objects by e-mail

Toolmaker now offers this low-cost and fast method of exchanging iSeries files and programs for error analysis and smaller updates.

General requirements

- The iSeries Shared Forder function or similar must be available (this folder is mapped to drive I on the PC). You can also transfer the files with FTP.

Save iSeries object to PC file (command SAVOBJPCD)

You have a problem and want to send the log file to the Hotline for analysis. Please always call the Hotline to discuss the case before doing so.

The object (an iSeries log file) is saved with the command SAVOBJPCD to the shared folder. This is a DirectFax and not an IBM command.

```
SAVOBJPCD DOC(LOGFILE.SAV) FLR(DIRECTFA)
```

DOC is the PC file (here LOGFILE.DAT) in which the data is stored. Use the DOS naming convention (xxxxxxxx.xxx; name.extension).

DIRECTFA is an existing DirectFax folder on the iSeries that can be accessed from the PC. It is used as a temporary location for the file.

When you run the command, you will be prompted for **SAVOBJ** parameters, some of which need to be entered.

```
SAVOBJ OBJ(LOGFILE) LIB(DIRECTFAXF)
    OBJTYPE(*FILE) TGTRLS(V3R2M0)
```

LOGFILE is the name of the object. DIRECTFAXF is the library. Object type is optional. Target release should always be V3R2M0, so that the Hotline can open the save file regardless of release status. If this is not possible, use the lowest possible release.

When you press Enter, the object is saved to a Save file, reformatted and saved as a PC file named LOGFILE.SAV in the folder DIRECTFA.

Send PC file as an e-mail attachment

With Explorer, copy LOGFILE.SAV to your local drive. Create an e-mail addressed to **hotline@toolmaker.de**. Attach LOGFILE.SAV (you may want to zip it first) and send.

Save a PC file from an e-mail

In Outlook, click the attachment. Save the file to your local drive or directly to the iSeries in the save dialog. The file is saved as created in the shared folder on the source system (for example LOGFILE.SAV). Follow the instructions in the e-mail to restore the objects to the iSeries library.

Restore PC file on iSeries

The e-mail contains instructions on restoring objects from the PC file to the iSeries library. The command might look like this:

```
RSTOBJPCD DOC(LOGFILE.SAV) FLR(DIRECTFA)
```

Replace LOGFILE.SAV with the name of your PC file and DIRECTFA with the folder you wish to use.

The PC file is converted to a Save file and the objects it contains displayed with DSPSAVF.

Accepting this screen with Enter runs the command **RSTOBJ**. Enter the name of the saved library and change the name of the destination library if required.

```
RSTOBJ OBJ(*ALL) SAVLIB(DIRECTFAXF)
    RSTLIB(Name)
```

OBJ must be set to *ALL. DIRECTFAXF is the library specified in DSPSAVF as the backup library. Enter RSTLIB only if you want to restore to a library other than the original library.

20.0 Upgrade from DCE fax box to modem

Originally, **DirectFax** was shipped with a type 30 **DCE fax box** (9,600 baud). This was replaced with **2-30** fax boxes (14,400 baud) for analog and ISDN connections. Since 1998, DirectFax is shipped with an analog or ISDN **modem**. DCE fax boxes are no longer available and repairs are very expensive.

This section shows you how to upgrade DirectFax from a DCE fax box to a modem.

20.1 Requirements for modem use

- An iSeries **RISC** model with IBM Release V3R7 or higher is recommended.

  Note: We do not recommend using DirectFax with a modem on a CISC machine (models Fxx, 200, 3xx etc.) because reaction times and processor performance are usually inadequate. Modem use with a CISC machine almost always involves problems.

- **DirectFax** Version 3.02 or higher is required.

- **Asynchronous fax modem** with a **Rockwell chipset** (e.g. Telejet 28.8 or 33.6, Toolmaker Modem 33.6, ISDN Digital Fax Router, customers suggest also 1&1 SkyConnect 33.6).

  Note: The Hotline is unaware of any cases in which the modem shipped with the iSeries by IBM worked without error. This is usually because the chipset is not Rockwell-compatible. IBM ships many types of modem under its name. The Hotline does not have the capacity to support testing of other, usually low-cost, PC modems.

- You **cannot** operate a DCE fax box **and** a modem **simultaneously** on the iSeries.

20.2 Special features of faxing with a modem

- All faxes must be created as **MIX faxes**. The modem can only send T4 code. The MIX process requires additional iSeries processor capacity. To configure all faxes as MIX faxes, use CHGFAXVAL MIXALL(*YES).

- **Header and footer text** is not supported. Header and footer logos are.

- Each **additional line** requires a free V.24 interface and a separate license. The standard license includes **1** line.

- **Transfer rates** depend on the V24 interfaces and the capacity of the iSeries. Modems are usually capable faxing at approx. 14,400 baud. Realistically, however, this can only be achieved if the iSeries has the resources to fill the modem's communication buffer *on time*. If a buffer underflow occurs, DirectFax automatically reduces the transfer rate to the next lowest rate of 12,00 baud, retrying at 14,400 after an hour. On older machines, set position 151 in FAXDTAARA in DIRECTFAXF to '4' = 12,000 baud.

- The **ISDN Digital Fax Router** (DFR) is accessed by DirectFax as a modem. It has two channels and requires an ISDN S0 connection. An NTBA connection is recommended. A additional V.24 interface and license are required to use the second channel. The DFR is recommended if you intend to use **automatic fax distribution** or **charge detection**. In terms of speed, there is no real difference compared to an analog modem (older analog impulse modems excepted). If configured incorrectly, ISDN devices may produce connection problems that do not occur with analog modems.

- **Analog** modems do not support **charge detection**. The DCE fax box 30 with the charge option and the DCE fax box 2-30 can register the 16kHz call charge pulse and pass it to the iSeries transmission program. If you own a charge detection license, the telephone units are displayed in screen 2 of the fax status display. Newer models of the ISDN Digital Fax Router can also detect charges and pass them to the iSeries.

20.3   Detect fax box type

Users often find it difficult to determine which modem type DirectFax is using. Do the following to find out whether DirectFax is using a DCE fax box or a modem. You will need *ALLOBJ or DirectFax *SECOFR rights.

GO FAXCNFG

Select option 1

Hit F10

Scroll to page 2

Look for the "Fax box type" parameter

Exit with F12

If the parameter value is **30** to **38**, DirectFax is using a **DCE fax box**. If set to M0 to M8, DirectFax is using a modem.

To determine the DCE fax box model, do the following:

DSPFAXHST
Enter F200 into the search field and press F16

If a line is found with the value 52 to the left and including the character string DCE, the model is **DCE 2-30 fax box with a 14,400 baud** rate.

Replacing a DCE 2-30 fax box with a modem usually leads to transfer rate loss because the iSeries 7xx series can only utilise a 14,400 baud rate.

20.4   Changes to the application software

When upgrading from fax box to modem, note the following:

- If you work with **header, footer, or signature logos**, ensure that the spool files contain enough **space** for the graphic. The graphics may otherwise overlay the text. This occurs most frequently with spool files sent manually with option 5 in WRKSPLFAX.

- If you work with **text** headers and footers (*TXT and text name in the fax profile), you must convert them to **logos**. The modem ignores the *TXT entry in the profile.

- **^MIX** parameter settings are slightly different when using a modem. Work exclusively with **^MIXALL.** This ensures that the header and footer specifications in the profile are retrieved by the MIX program. ^MIXALL inserts header and footer logos into all pages in the fax. Otherwise the header is placed on the first page and the footer is placed on the last page.

- If you work exclusively with a PC client, faxes are ready to send when they reach the iSeries. There are no issues to resolve.

21.0 The DirectFax PC client

The DirectFax PC client is a Windows software package for creating faxes in Word or Excel. The faxes are then sent with the DirectFax iSeries software. The PC software also includes functions for managing incoming and outgoing faxes and for maintaining addresses and address groups.

21.1 Licensing

DirectFax/PC is an **optional** supplement to the iSeries software. A separate **password** (license with product code DF450PC) is required on the iSeries.

A new **license code** is required in the following situations:

- The first time you use the DirectFax PC client

- The maximum number of licensed users is exceeded

- If you switch to another iSeries

- If you upgrade to a newer model

- After upgrading DirectFax on the iSeries from Version 2, 3 or 4 to Version 5.xx You can check which version of DirectFax is in use with the command: DSPDIRFAXV

You do **not** need a licensed password to update within Version 5. Use the command **CHKDIRFAX** to display the license status for functions in the status line. **PC=1** indicates that DirectFax/PC is licensed.

21.2 Install DirectFax/PC – Important information

The software runs under all Windows versions. You may not be able to fax from PC software supplied by other providers. New Windows versions may also not be compatible. If you experience problems, check the Toolmaker website or call the Hotline for more information.

You do not have to update the DirectFax PC client each time you update DirectFax on the **iSeries**. The iSeries software is compatible with all older PC client versions.

However, you must update the iSeries software before you upgrade to a new version of the PC software. If you don't, you will experience problems on the PC. The new PC client requires functions not included in older DirectFax iSeries software.

DirectFax is shipped on CD. The CD contains both the iSeries and PC software components.

The PC software for Windows 3.1 is not included on the CD. It can be found in the DIRECTFA folder in QDLS on the iSeries.

If communication between PC and iSeries uses the **TCP/IP** protocol, you must set up the DirectFax **TCPSERVER** on the iSeries. This is described below.

Because some ports are not available, you may experience problems if the DirectFax client accesses the iSeries from outside the intranet through a firewall. Use the following parameters in FAXDTAARA2 in the library DIRECTFAXF to activate **port limitation**:

275-275=1   Activate port limitation

276-280=05000   First port number (e.g. 05000)

281-284=0050   Number of ports available to DirectFax/PC (e.g. 50)

You will experience socket errors if the number of free ports is too low. To <u>disable</u> port limitation, set 275-284 to blank:

CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA2 (275 10)) VALUE(' ')

21.3   Set up DirectFax TCPSERVER on the iSeries

The following configuration is required on the iSeries to use **DirectFax/PC** with **TCP/IP**.

Note
DirectFax/PC needs to be able to communicate with the iSeries in both directions. Missing or incorrect TCP settings can cause communication to fail.

To configure the iSeries, log on as **QSECOFR** or another user with equivalent rights.

21.3.1   Configure the iSeries with CFGTCP

Open the iSeries TCP/IP menu with the command **CFGTCP**.

In option 1, look up the **IP address** for the interface used by DirectFax to communicate with the PC. If your machine has more than one interface card, decide on an IP address. The DirectFax TCPSERVER uses only one IP address.

You will need to enter this address later when configuring the PC client with the **Administrator**. PCs using other IP addresses can communicate with the TCPSERVER using **routing entries** in option 2.

Example of an IP address:

192.168.1.1

Now select option 12 and check the **Local domain** and **Local host** entries**.** The names are user-defined. You can use the name iSeries. Avoid special characters.

Example 1

Local domain: TOOLMAKER.COM

Local host: S44P4711

Example 2

Local domain: TMS

Local host: iSeries

In option **10** (iSeries host table), enter the IP address selected with option 1 as shown below. **Example 2** (in conjunction with option 12)

Example 1

192.168.1.1 Host name: S44P4711.TOOLMAKER.COM

Example 2

192.168.1.1 Host name: iSeries.TMS

You can specify up to 4 host names for each IP address. This is usually just the host name. DirectFax/PC however requires the compound domain and host name.

Select option 2=Change and "**+**" at **More** to enter the name. If the IP address for your iSeries interface is not listed, add it to the host table with option 1.

If your iSeries has multiple TCP/IP interfaces, one **unique a**ddress must consist of the host and domain name. Multiple IP addresses with the same name in the host table (as with Load Balancing for example) produce an error in DirectFax.

Advises
These entries are important. Review them carefully. The DirectFax TCPSERVER will not run if CFGTCP is not configured correctly.

You cannot use the DirectFax PC-client via TCP/IP if your configuration does not correspond with the rules above and you do not want to change it. In this case contact the hotline.

21.3.2 Configure the DirectFax TCPSERVER

You can use the following call to run the configuration described below **automatically**. The routine assumes that your controlling subsystem is QCTL and your interactive subsystem QINTER. QINTER is recommended for a number of reasons including better performance and no job restrictions. Never use the DIRECTFAX or QBATCH subsystems for the TCPSERVER.

Configuration command for the DirectFax TCPSERVER:

CALL DIRECTFAX/CFGTCPFAX

The program executes the following commands:

ADDSRVTBLE SERVICE(DFAXSERV) PORT(50000) PROTOCOL(TCP)

Adds a TCP server entry. The port number 50000 must match the DirectFax/PC Administrator entries. The DFAXSERV and TCP entries must be upper case.

ADDJOBQE   SBSD(QINTER)   JOBQ(DIRECTFAXF/TCPJOBQ) MAXACT(*NOMAX) SEQNBR(777)

Assigns TCPJOBQ in the library DIRECTFAXF to the subsystem QINTER.

DIRECTFAXF/STRSRV

start the job TCPSERVER in QINTER.

The following two commands are also executed:

CRTDEVINTR DEVD(INTRADEV) RMTLOCNAME(INTRARMT)

ADDCMNE SBSD(QCMN) DEV(INTRADEV)

VRYCFG CFGOBJ(INTRADEV) CFGTYPE(*DEV) STATUS(*ON)

In most cases, these commands will have been executing when DirectFax was installed. They are required, however, if you have moved DirectFax to another iSeries by copying the DIRECTFAX and DIRECTFAXF libraries rather than installing.

21.3.3 Start and check TCPSERVER

Before starting TCPSERVER manually, check the server status with **WRKJOB TCPSERVER**.

- If no job is found, the last automatic start was unsuccessful or there is an error in your TCP configuration.
- If the job menu is displayed, use option 1 to check that the status is Active.
- If a list of jobs is displayed, one of them should be active.
- If more than one job is active, there is an error.
- The status JOBQ indicates that the job queue has not been assigned to an actice subsystem or is held.
- The status OUTQ indicates that the job has ended and the job log can be found in an OUTQ.

Everything is normal if there is **one active** job named **TCPSERVER**.

You can start TCPSERVER with

DIRECTFAXF/STRSRV

manually.

If you experience problems, please first work through the checklist above. If this doesn't resolve the problem, call our Hotline.

To end the job TCPSERVER, use WRKACTJOB, option 4=End and F4. Enter the value *IMMED: You can also use the command ENDSRV if the last STRSRV completed successfully.

21.3.4 Automatic TCPSERVER start

The job **TCPSERVER must be active** at all times while PC users are executing DirectFax commands. If it is not, PC users will receive errors such as *TCP connection refused* or *Server not found*.

If the QINTER subsystem or the whole system is ended, DirectFax TCPSERVER will need to be restarted.

You can start DirectFax TCPSERVER automatically with an Autostart job entry in a subsystem. To do this, execute the command **ADDTCPAJE** F4. Because it is the last subsystem to start, we recommend QBATCH. If you select another IBM subsystem, TCPSERVER may not start if the job QTCPIP in QSYSWRK has not completed.

The command DIRECTFAXF/STRSRV can also be added to **QSTRUP** (preferably after a DLYJOB of approximately 120 seconds).

You might also want to create a scheduled job with **WRKJOBSCDE** that executes DIRECTFAXF/STRSRV at the time you define. Starting TCPSERVER while it is already active presents no problems. The last program started ends automatically.

21.4   Install under Windows 95/98/NT/2000

The DirectFax PC client runs under all Windows versions from Windows95. The InstallShield program automatically detects the Windows version and installs the required components.

Information on installing under Windows NT/2000/XP Terminal Server can be found later in this section.

21.4.1 Authorisation/Administrator

To install under Windows NT/2000/XP, you must be logged on as the **Administrator**. Before installing on a Terminal Server, you must activate install mode (CHANGE USER /INSTALL). Install mode must be deactivated after the installation is complete. You can avoid having to do this by installing with **Control Panel – Add/Remove Programs – Install/Uninstall** instead of running SETUP.EXE.

You also need Administrator rights under WinNT etc. when you first set the **configuration parameters** in the DirectFax Administrator, because the configuration updates system files such as SERVICES.

21.4.2 Uninstall old version

Before installing a DirectFax/PC update, you must uninstall the old version of the software. Do this through **Control Panel – Add/Remove Programs - Install/Uninstall**. It is particularly important that you uninstall in this way if you are updating from Version 4.01 or older to Version 5.xx. This is because the update uses a different version of InstallShield.

21.4.3 Install the PC software

Control Panel - Add/Remove Programs - Install/Uninstall

If you are running WinNT, 2000 or XP, we recommend that you install using Control Panel - Add/Remove Programs - Install/Uninstall. This ensures that DirectFax is accessible to all users of the PC, not just the user who installed it. You can also use this feature in Win98 and Me. To install using Control Panel, first clear the panel that appears when you insert the CD with Escape.

Ensure that the latest DirectFax CD has been inserted into the drive. If it does not automatically run, double-click the file **InstDf.exe** to run it.

Choose the installation type. Standard installs the DirectFax PC Client only. Select Customised if you want to specify which components are installed.

0091 – Language
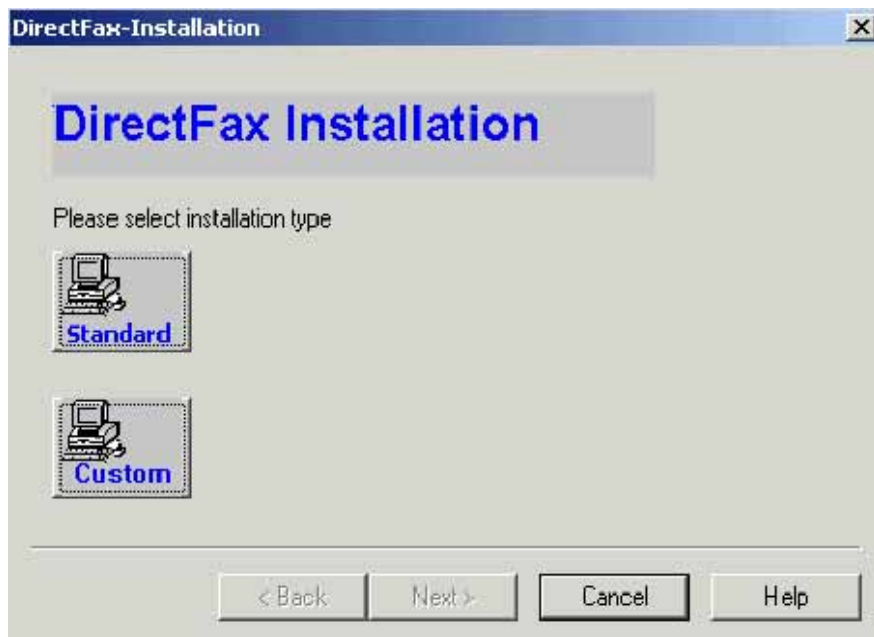
00092 - Installation
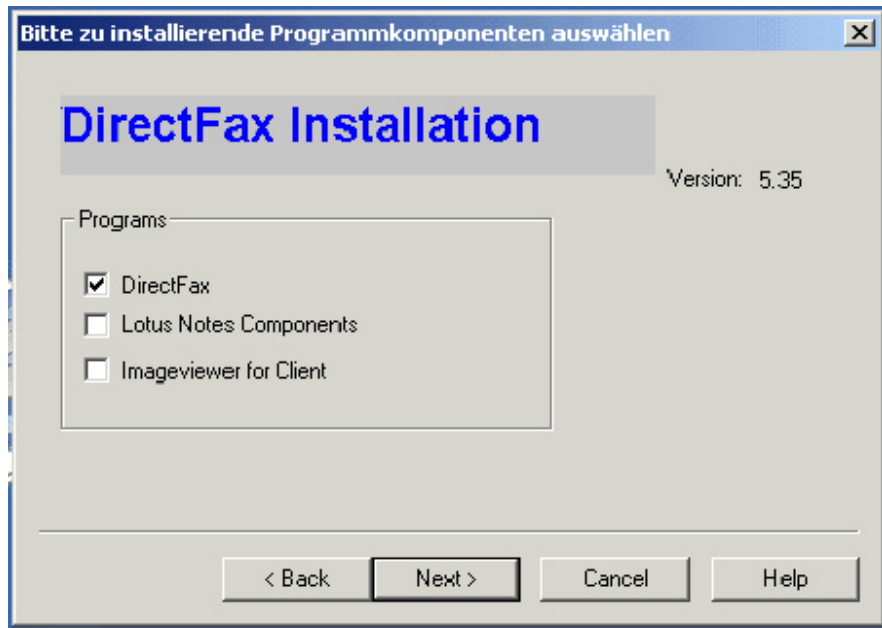
0093 - Select DirectFax PC Client installation type
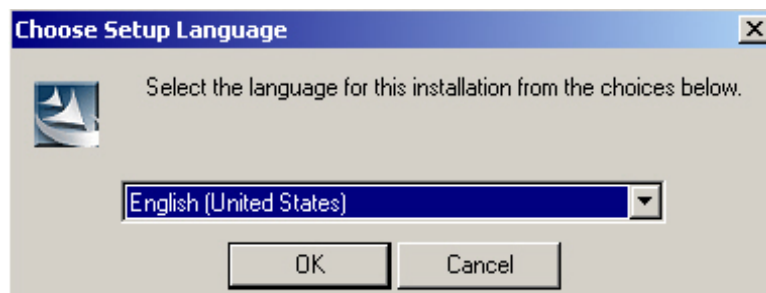
0094 - Language

The DirectFax Client is available in three languages. Select the language you want to install. German is the default language.
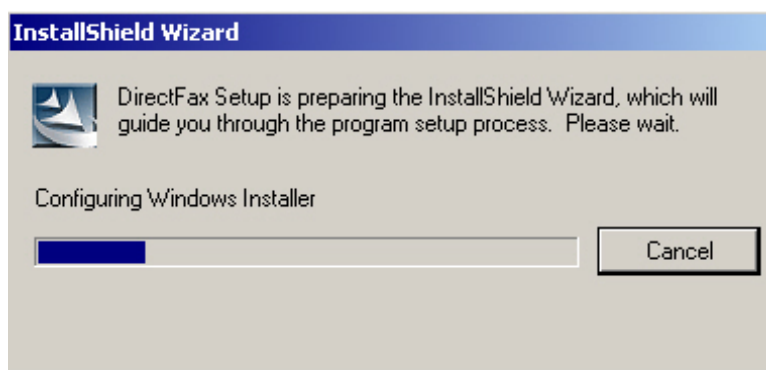
0095 - Installation progress indicator

InstallShield first checks your operating system version and environment definitions to ensure that the right OS components are installed.
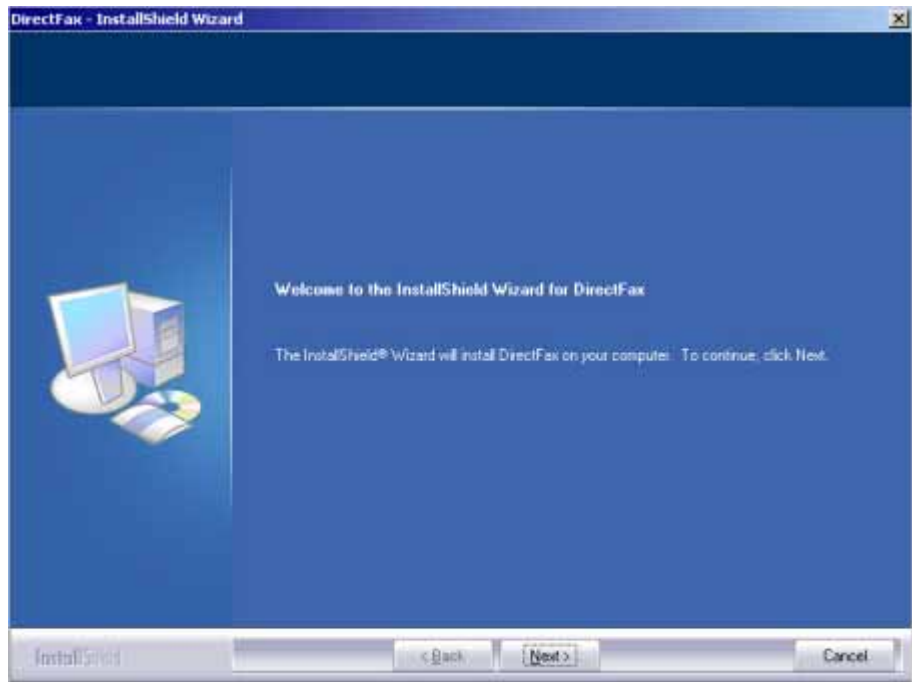
0096 – Welcome screen

InstallShield will guide you through the installation process. To continue, click "Next".
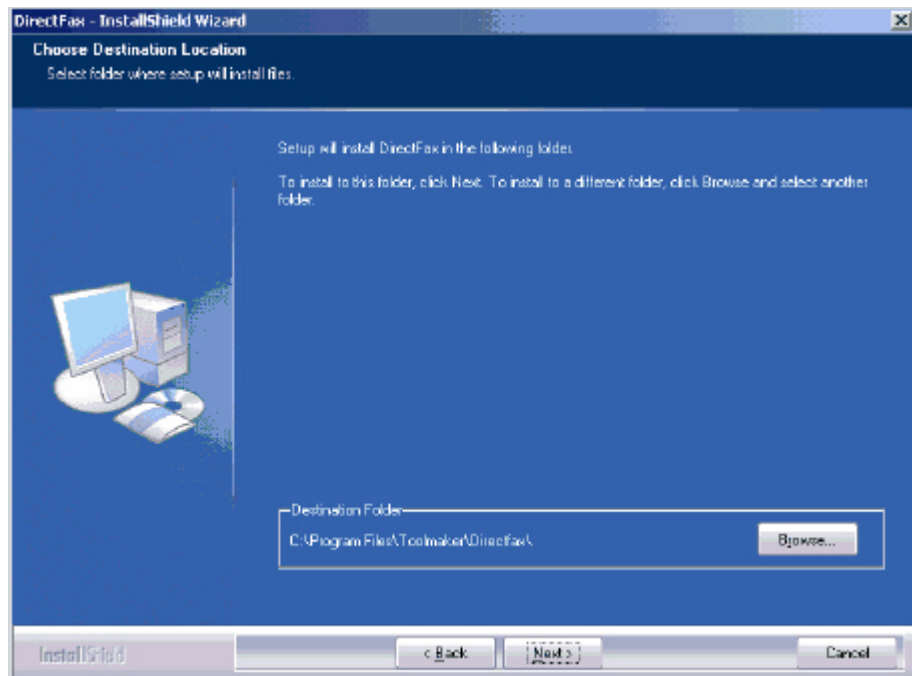
0097 – Select folder

The DirectFax PC Client copies files to the folder \Program Files\Toolmaker\DirectFax.
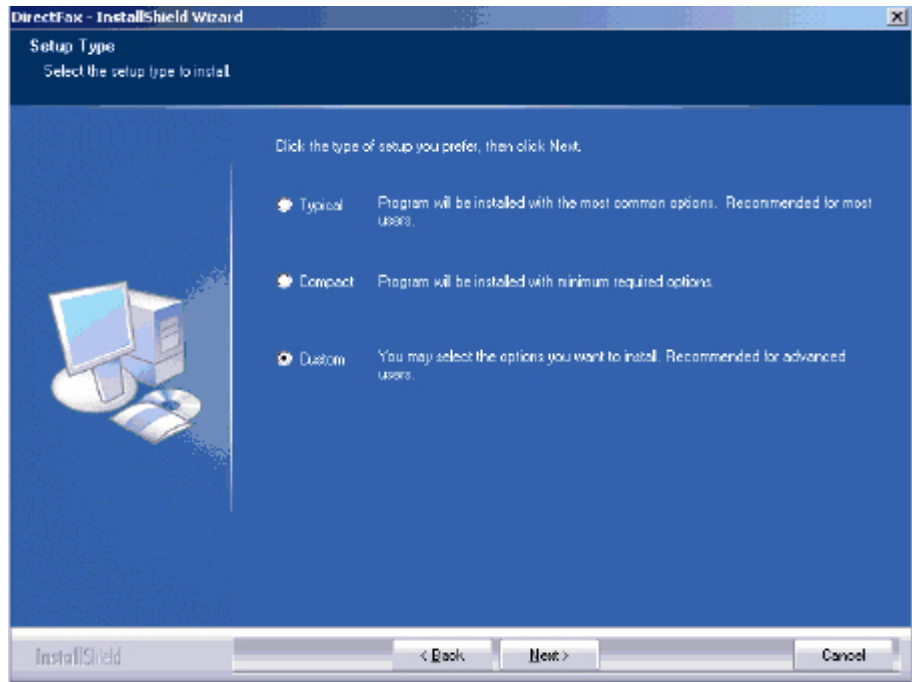
0098 – Set-up type

Choose "User-defined" if you want to select the program components to be installed.
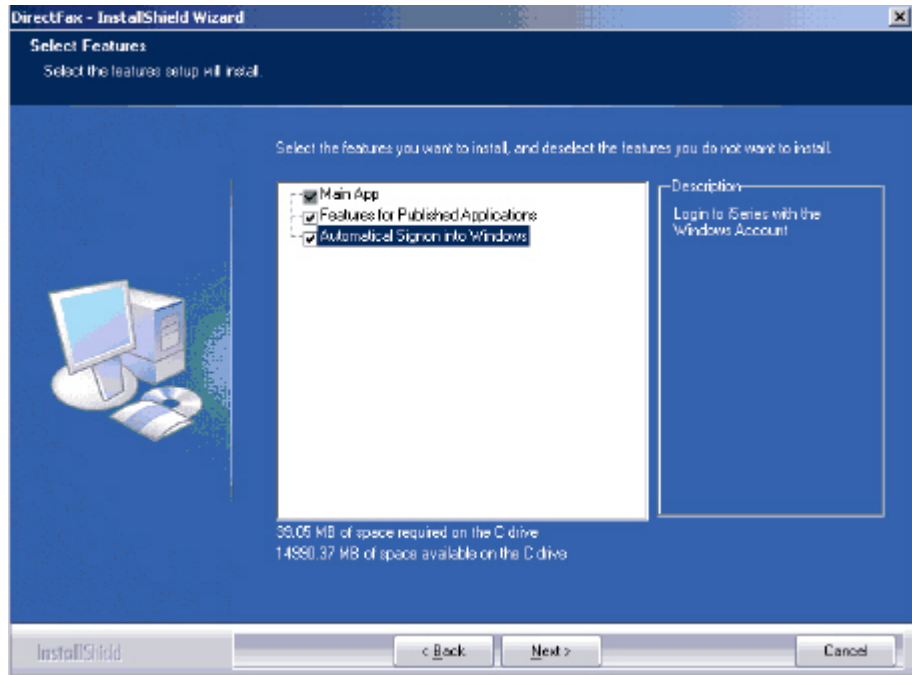
0099 – Select components

Features for Published Applications
You only need to install this feature if you maintain a Citrix environment with published applications.

Automatic log on to Windows
This function automatically logs you on to the DirectFax Client when you log on to Windows. To use this feature, the user name and password must be

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DirectFax

identical in Windows and on the iSeries, and the option must be enabled in DirectFax Administrator.

Please note that this function can lead to problems if used with single signon in a Novell environment. We therefore recommend that you do not use this feature in a Novell environment.
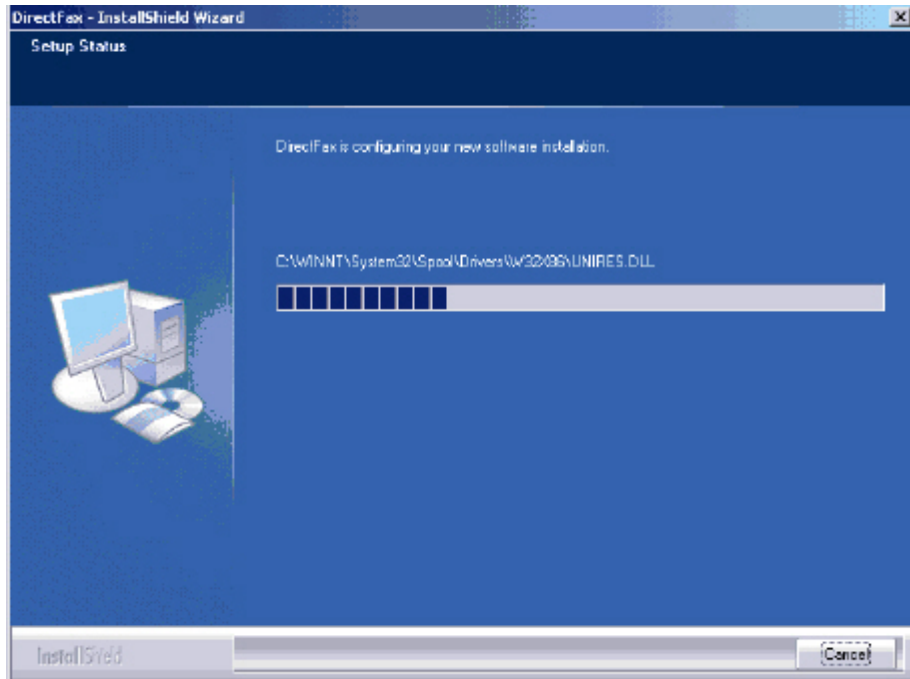
0100 - Installation progress indicator

The required files are now copied.
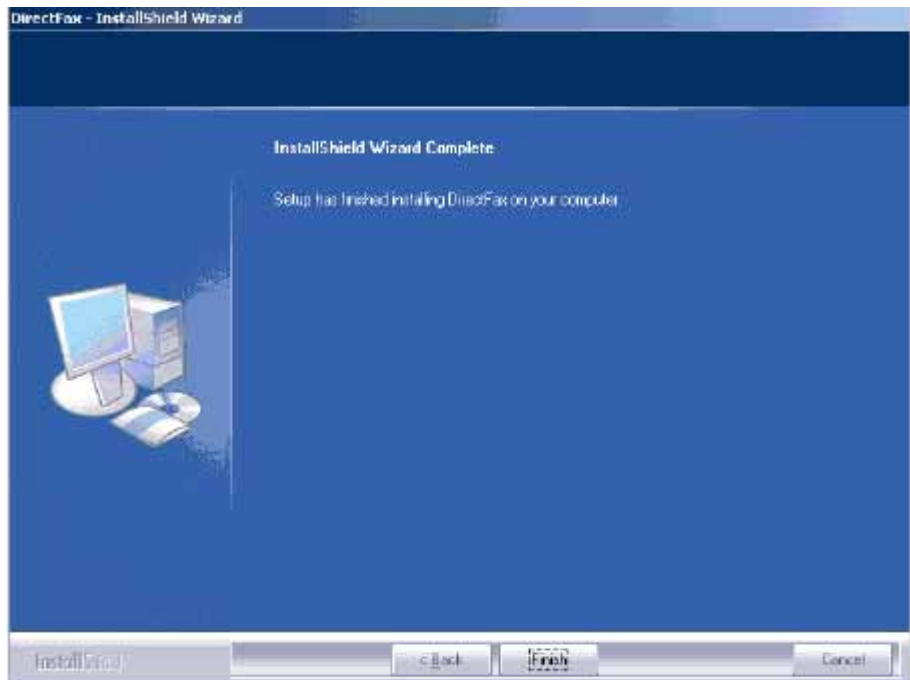
0101 – Installation complete

Choose "No" here. The online update feature has not yet been implemented.

To finish the installation, click "Finish".

21.4.4   Silent installation

In large environments in which you wish to install DirectFax on multiple PCs, you can start an unsupervised installation by running the installation file Setup.exe with parameter /r (`setup.exe /r`). When this installation is complete you will find the file setup.iss in your Windows directory. This file contains all parameters modified or used during the installation. You can now copy this file to the DirectFax installation folder and then run a batch installation with the command `setup.exe /s`. This installation does not require any user intervention. Afterward start the program `addserviceport.exe` with parameter `DFAXSRV` and `50000`.

If you now define your administrator settings and export the registry entries found in

\\HKEY_LOCAL_MACHINE\Toolmaker\DirectFax* and
\\HKEY_CURRENT_USER\Toolmaker\DirectFax*

to two files with the extension .reg, you can now run the command `regedit.exe /s filename.reg` in the same batch file as the Silent-Installation, thus minimising the work involved in configuring DirectFax. Only user ID and password must be entered manually if you don't use a standard user for the access to your iSeries system.

As a template for a complete, unsupervised installation please refer to the file silentsetup.bat in folder „silentsetup" on the installation CD.

21.4.5 Install printer driver (Win95/98/ME)

The printer driver *Directfax for iSeries* is automatically installed at the end of the installation process in **Windows NT/2000/XP**. **This is not the case in Windows 95, 98 and ME. You must install the printer driver manually for these operating systems.**

To install the printer drivers manually, procede as follows: Begin by clicking **Start** - **Settings** – **Printers – Add Printer**.

0102 – Printer symbol
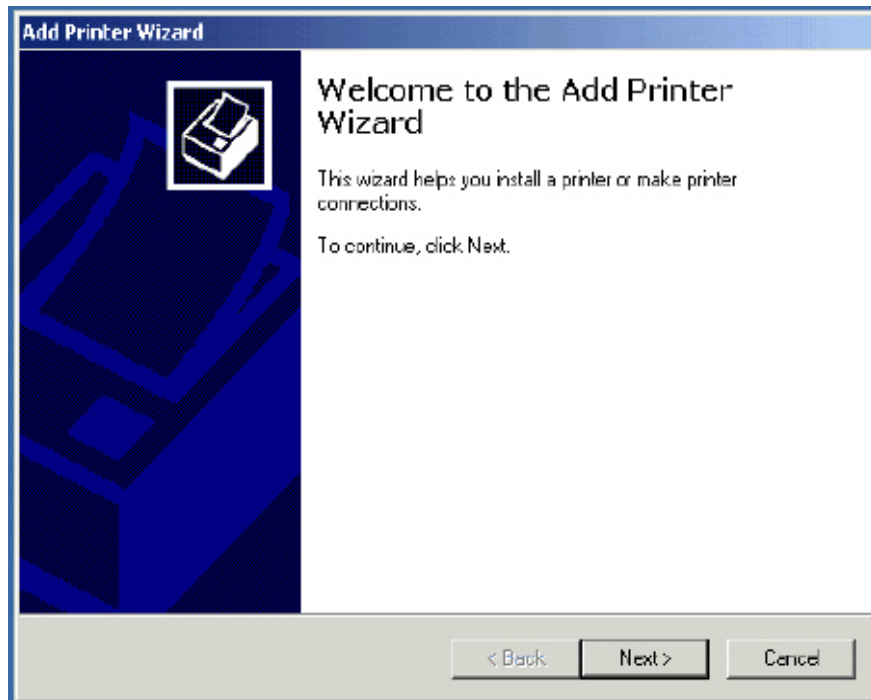
0103 - Printer installation wizard
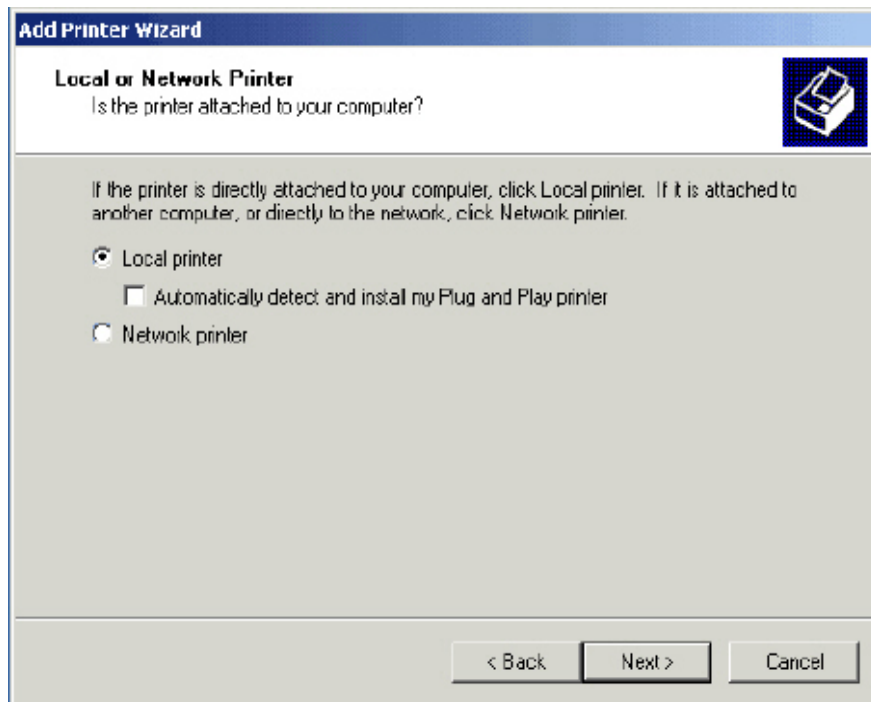
0104 - Select local printer
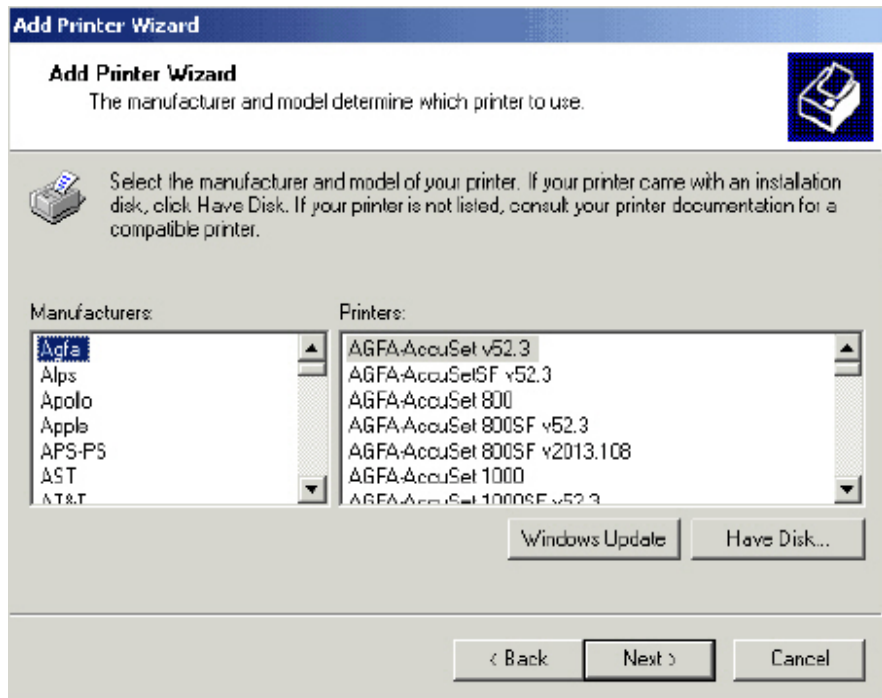
0106 - Select Have Disk…
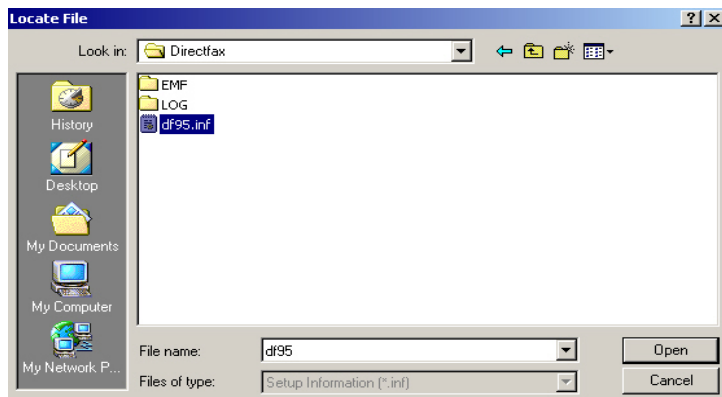
0107 – Select .inf file folder
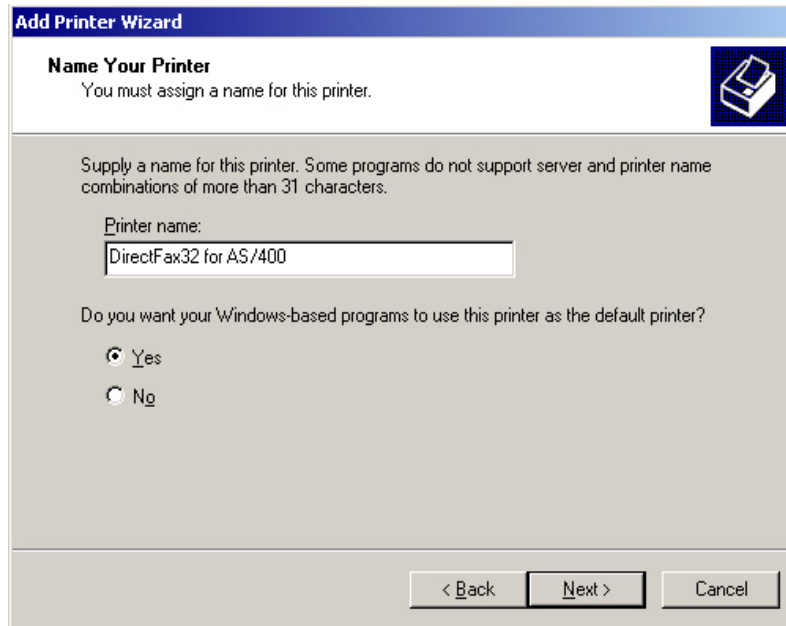
0108 - DirectFax driver
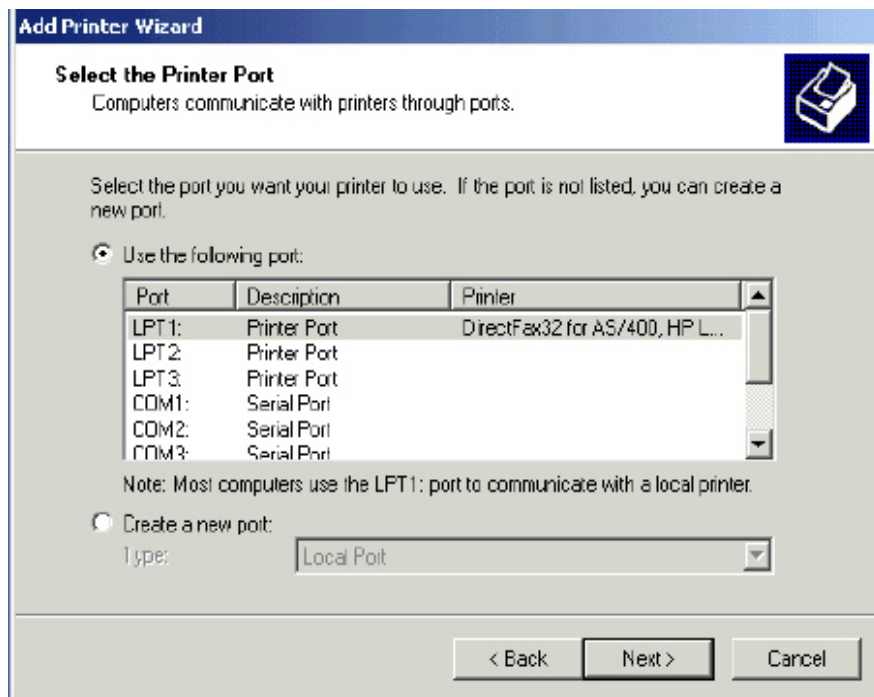
0105 - Local printer port

You may be prompted for the Windows 95 CD if DLLs need to be added or updated during the installation process.

DirectFax32 for
AS/400

0103 - Installed printer

21.5 #Administrator (Configuration)

To begin, start the **DirectFax** A**dministrator** on your PC and choose the connection type **TCP/IP**. Because system files are updated in WinNT/2000/XP, you must be logged on as Administrator the first time you run the DirectFax Administrator.

Running the Administrator in Windows
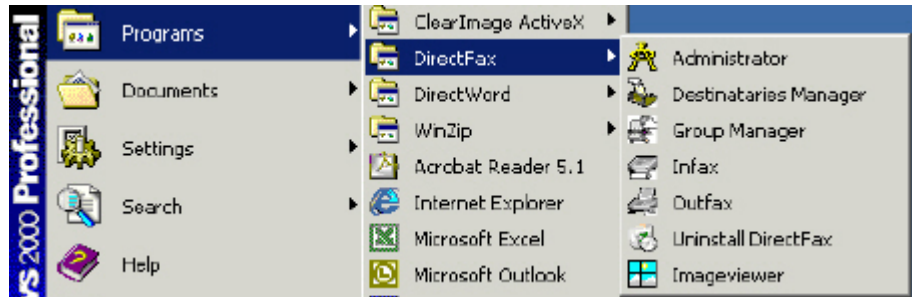
0110 - A#dministrator call under Windows
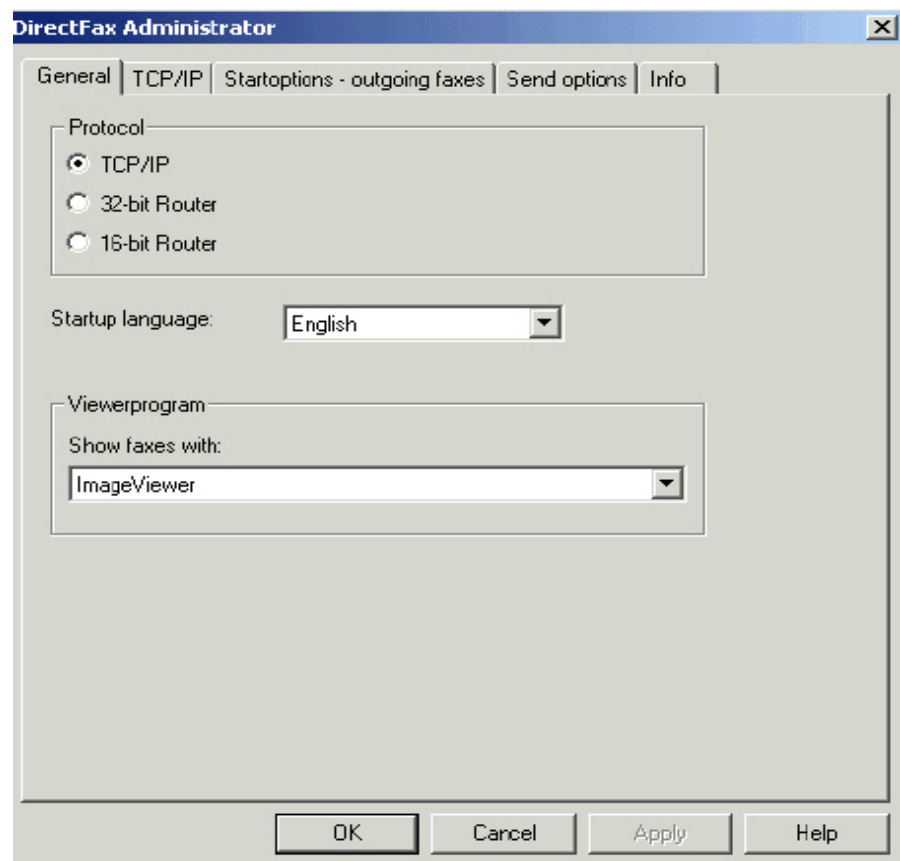
0111 - General administrator options

Protocol

HIDD_Admin_ADMINISTRATOR_DIALOG
HIDD_Admin_PROPPAGE1

Windows 9x/NT can use either TCP/IP (the default protocol) or the 32 bit router. Windows 3.x uses the 16 bit router. If using a router, ensure that it is installed on your PC.

Language
Currently, German and Italian are supported. Other languages will be supported in later versions.

New language
This function adds new language DLLs to your system.

Edit language
Changes the language description.
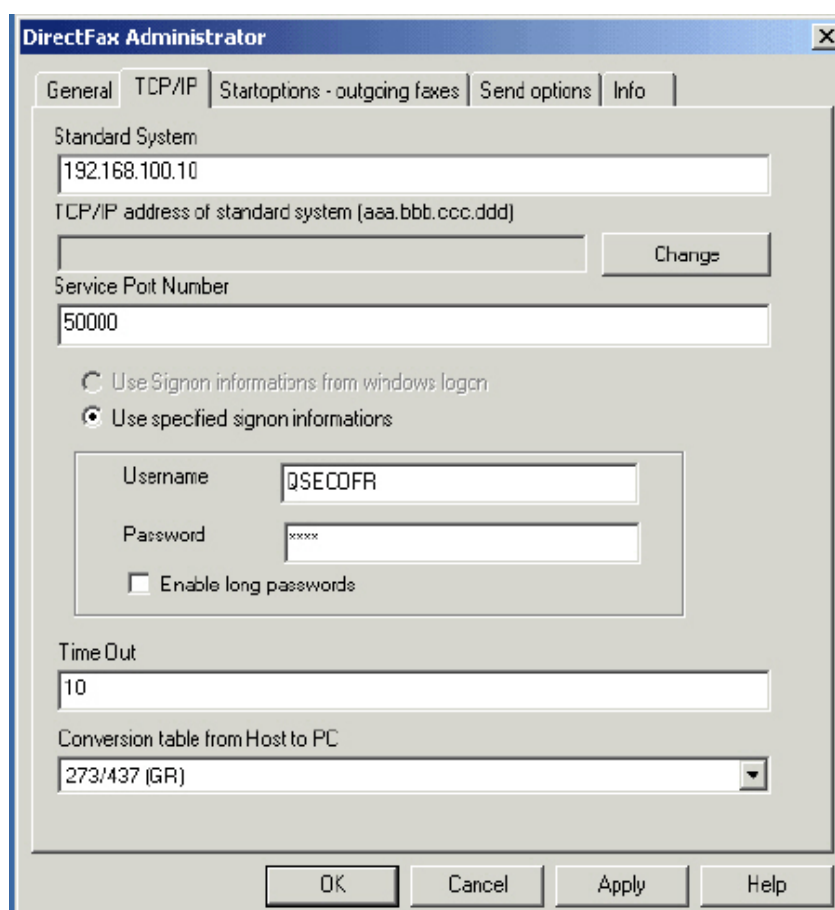
Set as default
Allows you to select the default language.

Viewer
Allows you to set the viewer you want to use to view incoming and outgoing faxes. Choose between the older Toolmaker T4-Viewer or the new, high-performance Imageviewer.

If you are using TCP/IP, now c[#]lick the TCP/IP tab.

0112 - The Administrator dialog

[#] HIDD_Admin_PROPPAGE2

Check and enter all fields carefully.

Standard system
The host name represented in Windows as a TCP/IP address.

TCP/IP address on default system
If this field is active after you enter the default system name and no TCP/IP address is displayed, enter your iSeries TCP/IP address. You can find it in the menu CFGTCP, option 1.

Service port number
Enter **50000** as the port number. It is important to ensure that the number of zeroes is correct. The port number must be the same as the number displayed on the iSeries under service name DFAXSERV with the command WRKSRVTBLE.

Log on
Here you can choose one of two options:

Use Windows log on information – if the Windows and iSeries user name and password are identical and if the option has been enabled during installation.

User-defined log on values – uses the values entered in the fields.

User name and password
If you leave both fields empty, the user will have to enter a user name and password each time he executes a DirectFax function.

If you enter a user name but leave the password field empty, the user will have to enter a password to execute a DirectFax function.

If you enter both fields, the user does not need to enter anything. However, if the user changes his password on the iSeries, it must also be changed here.

If it is not, the error message *TCP Server not found* is displayed. Each repeat attempt by the user to execute is treated as a failed attempt to log on to the iSeries. On reaching the number of **failed attempts** defined on the iSeries, the user's profile will be **disabled.** The system administrator will then need to restore the status ***ENABLED** on the iSeries with CHGUSRPRF Name F4. The PC user will then also need to correct the password the first time Start – Programs – DirectFax – Administrator is selected.

Avoid using QSECOFR if you specify a user name.

Enable long passwords
If this option is checked, passwords longer than 10 characters are allowed. If not, names and passwords are limited to 10 uppercase characters (default). This option can only be activated if the corresponding OS/400 function is active. If it is not, an error *Login failed* occurs, because name and password case are validated.

Timeout
Accept the value 10.

Character map
Set the conversion table corresponding to your language.
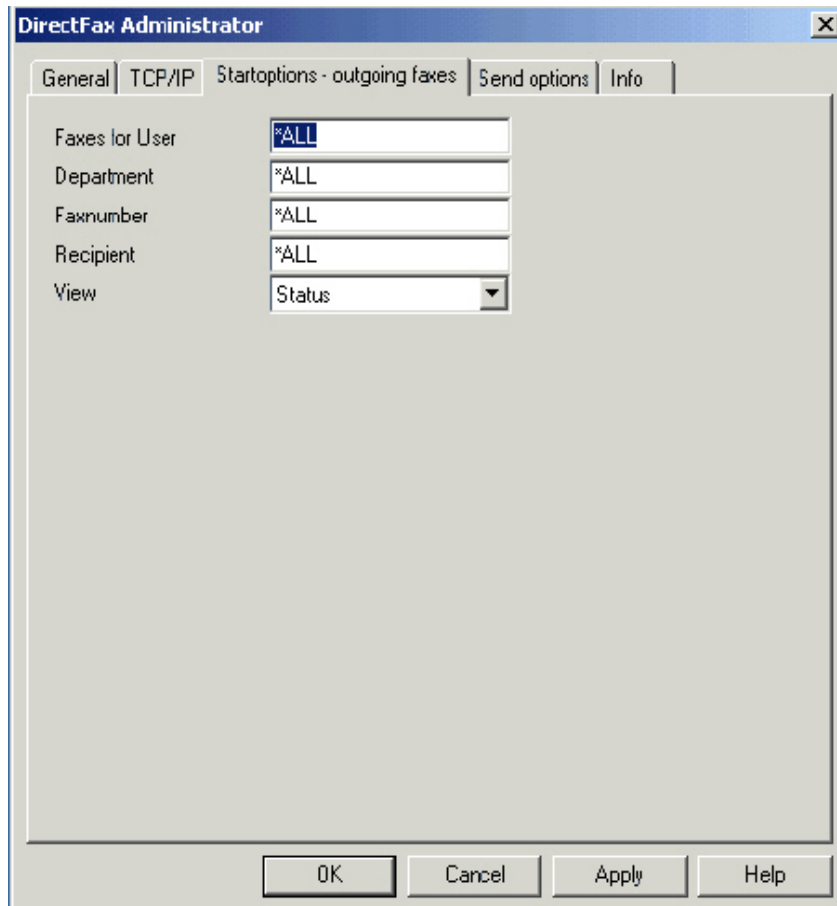
0113 – Start options

Use the **Start options - Outgoing fax** tab to set the default options for the **Outgoing fax** program.

Warning:

Under **NT**, the DirectFax Administrator must be started by each NT user at least once and closed with OK to ensure that the user-specific entries are added to the registry.

21.6 Windows Terminal Server and Citrix Metaframe with Windows Desktop

Installing to a Windows NT/2000/2003 Terminal Server is essentially the same as a normal installation if you have installed using Control Panel – Add/Remove Programs – Install, as described earlier in this section. Alternatively, you can proceed as follows:

To make the software available to all network users, activate a particular installation mode in Terminal Server. You can do this with the following command:

```
change user /install
```

After completing the installation, deactivate the mode with:

```
change user /execute
```

This installation mode is always activated if you install using the Add/Remove Programs dialog in Control Panel.

Because each users' name and password are written to the registry, you can ignore the **Folder for password** option on the TCP/IP tab in the DirectFax **Administrator**.

You must run the DirectFax Administrator once for each user. Enter the name and password. Once you have done this, all users can work with the DirectFax Client.

Warning: In some cases, you may experience authorisation problems for normal users. To avoid this, assign full access rights to the DirectFax folder and the files GEARxx.DLL in the Windows system folder for all users.

21.7 Citrix Metaframe and Published Applications

The term Published Applications is used to refer to the selected applications made available to Thin Client (NC) users under Citrix Metaframe. Because the Windows Desktop is not present in this environment, a number of actions must be taken before the user can fax from Microsoft Word.

To fax a document from a Published Application, the process NTPPSRV.exe must be executed in the application session to allow the fax recipient program to start.

The utility "LaunchAppWithDirfax" is provided to handle opening and closing the DirectFax print processor.

To print from a Published Application, it must be set up as follows:

0114 – Properties of Word + DirectFax application name
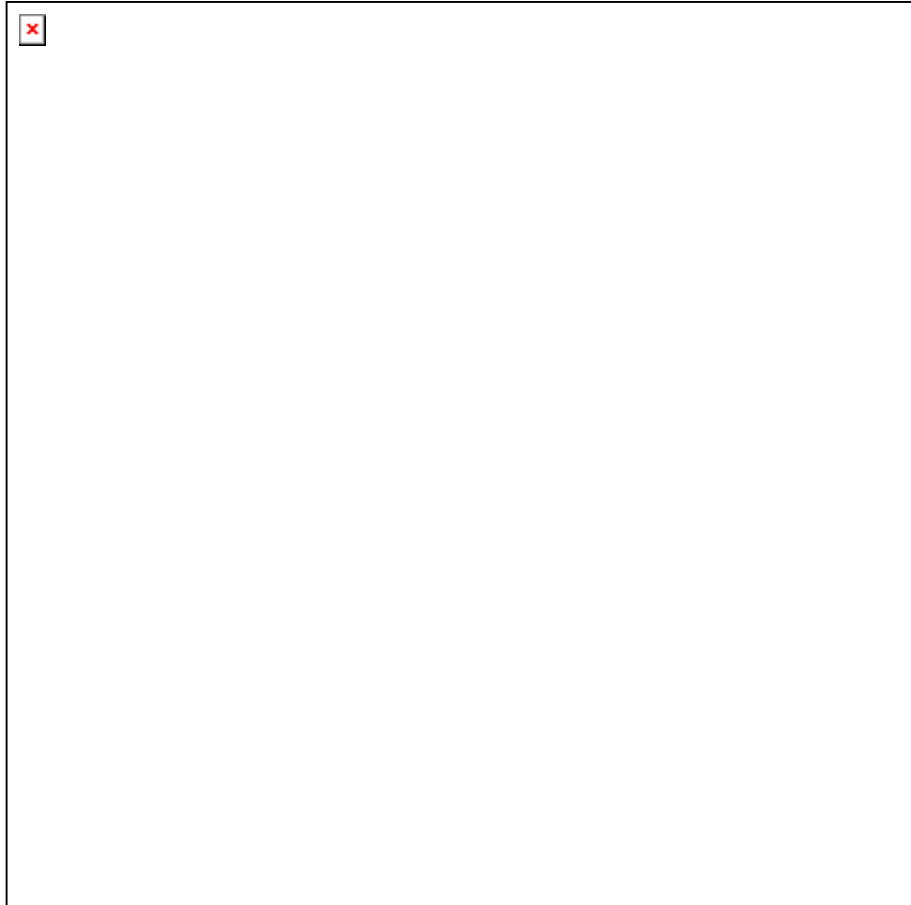
0115 – Properties of Word + DirectFax application location

Instead of entering the application in the command line as is usually the case, enter the utility **LaunchAppWithDirfax.exe** with the following parameters:

Parameter 1: Full path to the application (for example Word)
Parameter 2: Full path to NTPPSRV.exe (DirectFax print processor server)

In this example, required spaces are indicated with the □ symbol. Spaces are not allowed at any other position, The full command line is as follows:

C:\programme\toolmaker\directfax\LaunchAppWithDirfax.exe□
"c:\Programme\Microsoft□Office\Office\WINWORD.EXE"□
"C:\programme\toolmaker\directfax\NTPPSRV.exe"

The standard settings may be entered to the other windows.

21.8   DirectFax/PC troubleshooting

The most common errors returned are *TCP connection refused* and *Server not found*. These usually mean that TCPSERVER on the iSeries has not been started.

Start it with **DIRECTFAXF/STRSRV**.

Another cause might be an incorrect IP address or port number in the Administrator.

In environments where users must regularly change their iSeries passwords, the error *TCP connection aborted* or *Login failed* occurs if the password is not also changed in the Administrator.

The same error may occur if the iSeries user profile has been disabled or contains errors (for example deleted print or outqueues).

When these errors occur, it is a good idea to check the messages in the QSYSOPR message queue (command DSPMSG QSYSOPR). You may be able to pinpoint the cause of the error in the extended message text.

Collect as much information as possible and then call us at our Hotline.

21.9   Faxing from PC applications

DirectFax/PC ships a printer driver, *DirectFax32 for iSeries*, which is installed on the PC. When an application uses this driver to print a file, DirectFax places the print into the fax queue on the iSeries.
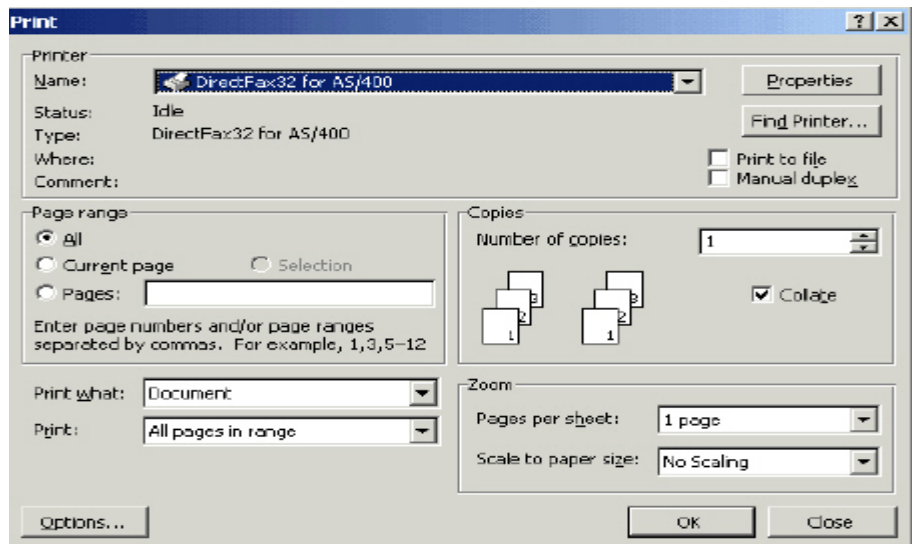
0116 - Select DirectFax printer driver

To send a Windows PC file as a fax, select the driver *DirectFax for iSeries* from the application's Print dialog.

This icon is displayed in the Taskbar while the process is active:

Depending on the settings in Administrator, you may be prompted for a user name and password.

21.9.1 #The send parameters dialog
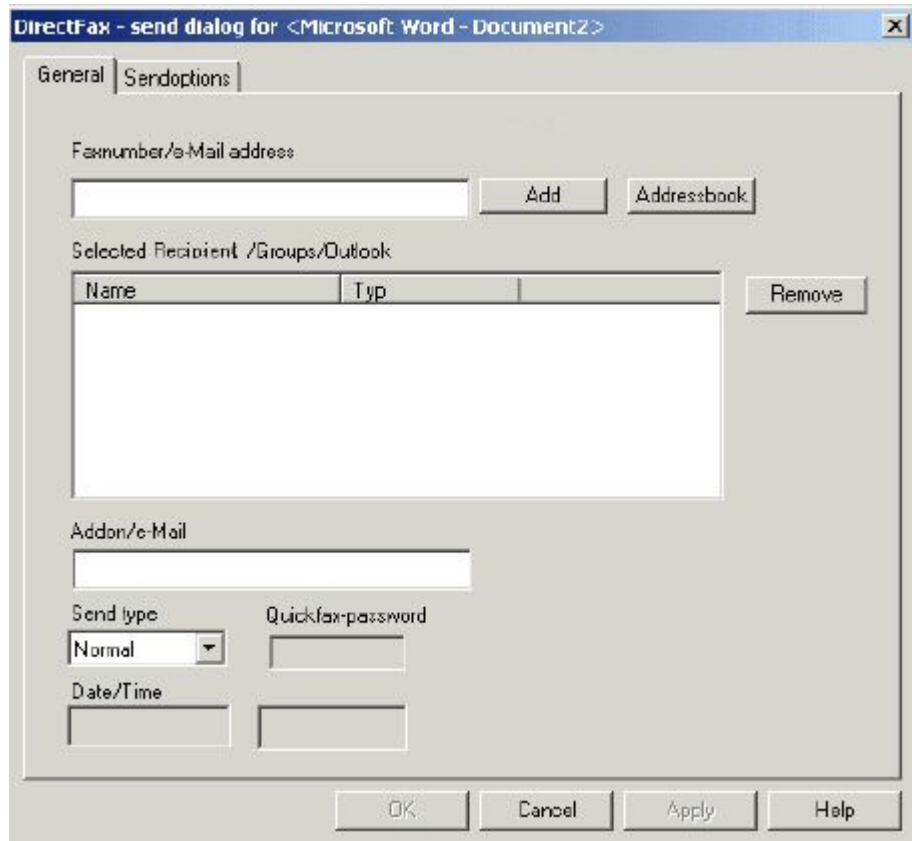
0117 - Enter send parameters

Fax number/e-mail address
Allows you to enter one or more fax numbers or e-mail addresses. Click "Add" to add each entry to the list.

21.9.1.1   Address book

Click this button and then select the location from which you want to add recipients.

- The DirectFax address book

- DirectFax recipient groups

- Your Outlook address book

.

0118 - Address book

HIDD_DFLINK_DESTINATIONPAGE1

DirectFax recipients/groups
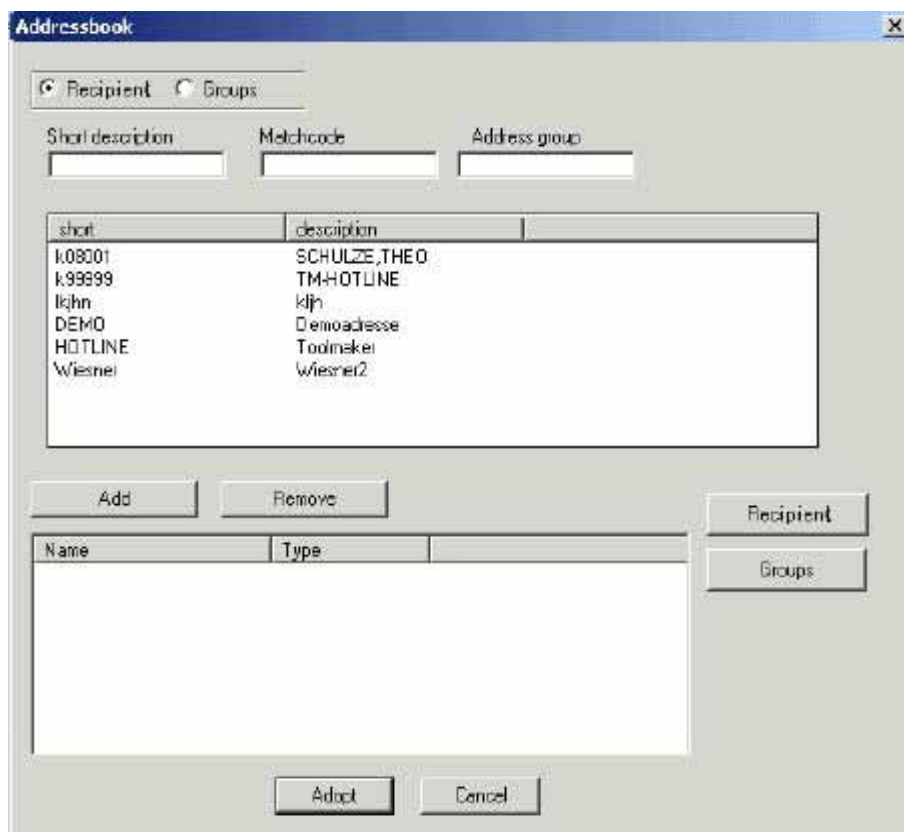
0119 – Recipient/Groups

Select the fax recipients from Recipients or Groups. You can use "Add", and "Remove" to add or remove recipients from the list.

You can also click the "Recipients" and "Groups" buttons to maintain the lists.

Outlook contacts
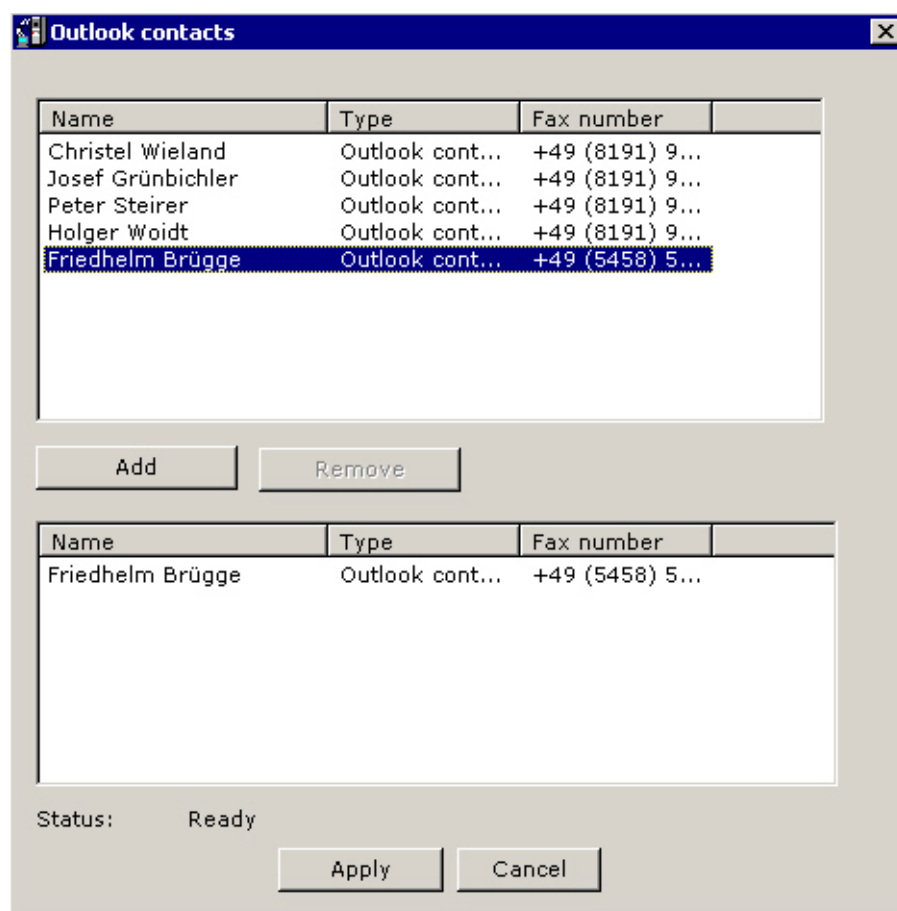
0120 – Outlook contacts

Allows you to select contacts with fax numbers from your Outlook address book. You can also use "Add", and "Remove" here to add or remove recipients from the list.

21.9.1.2 Other send parameters

Selected recipient
Click "Remove" to remove selected recipients from the list.

Fax/e-mail subject
Enter a subject for the faxes or e/mails being sent.

Send type
DirectFax supports the following fax priorities:

- Normal (the new fax is sent after the faxes currently queued)

- Night rate 1-5 (can be changed in the menu FAXCNFG)

- Fast (the fax is placed at the top of the queue). Requires a password.

- Time (the fax is sent at the time specified in Date/Time)

21.9.1.3 Send settings

Entering s#end settings

The *Send settings* tab allows you to enter additional parameters for the fax dispatch.
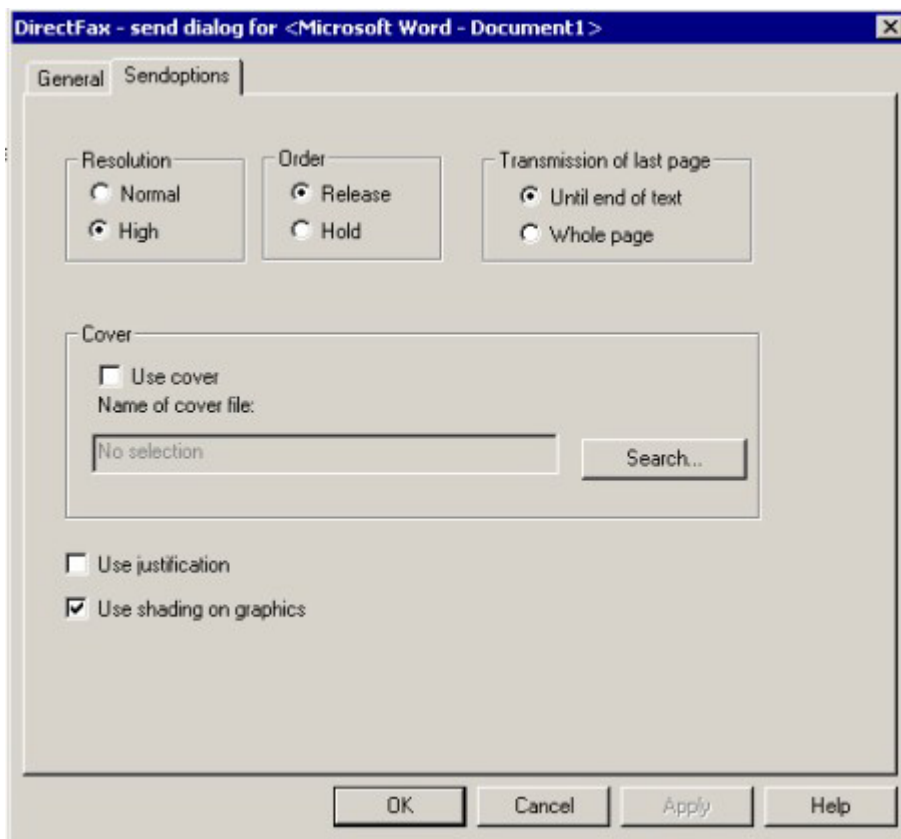
0121 - Send settings tab for fax dispatch

21.9.2 Sending with the ^FAX control line (serial faxes)

For serial faxes, you can add a **^FAX control line** to the first line of the document to send automatically without displaying a dialog. This works in more or less the same way as the ^FAX control line on the iSeries. The ^T end line is not supported on the PC. When another ^FAX control line is read, the previous fax is closed and a new one is started.

Many of the ^ codes listed in the chapter on programming automatic fax dispatch can also be used in the ^FAX control line on the PC:

- ^AKEYA( ) and ^AKEYB( )
- ^NACHT( )
- ^HALT

HIDD_DFLINK_DESTINATIONPAGE2

- ^BLITZ( )
- ^SDATE( ) and ^STIME( )
- ^USER( )
- ^PA( )
- ^RNAME( )

Warning:

Not all ^ codes are supported for faxing from the PC. For example, it makes no sense to support font changes, graphics or landscape printing with ^ codes on the PC. PC applications obviously handle such functionality better.

You can generate serial faxes from the Microsoft form letters function. To do this, add a data field with the fax number after the ^FAX constant.

^gGRAPHIK, **^sign(NAME)** and **^free(NAME)** in the document text are supported (Caution: Upper and lower case as indicated). Documents with signature releases ('sign' and 'free') can be released on the PC.

Colour bitmap graphics in PC documents are converted to monochrome graphics automatically. The conversion can take some time. If you frequently fax a colour graphic, it's a good idea to convert it yourself with a graphic-editing program.

Serial faxes with **^FAX control line** can be combined with an **address group** (mailing list). Example: ^FAX(#KWG) Breakdown of the group (#KWG in this example) into separate faxes takes place in the interface program on the iSeries and is not seen by the PC user.

A new function allows you to use a ^FAX control line to specify an **additional mail address** to which a **copy of the fax** is sent. You might use this for example for sales reps or other branches. Example:
`^FAX0405591908 ^MAIL(info@customer.de) ^PA(vtrma@tms.de)`
The ^PA() code is normally used for additional fax information, but is used here for the second mail address.

Note: When you create **mass faxes** using the form letter or another function, print spooling creates **temporary files** in the Temp folder on your **C:** drive. An EMF file with the extension TMP is created for each page. 100 pages can easily take up 200 MB or more of the disk. The error *Cannot create temporary file* will be displayed if you run out of disk space.

21.10 Send status and history for outgoing faxes

To work with outgoing faxes, point to Start – Programs – DirectFax, and then select *Outgoing Faxes*.
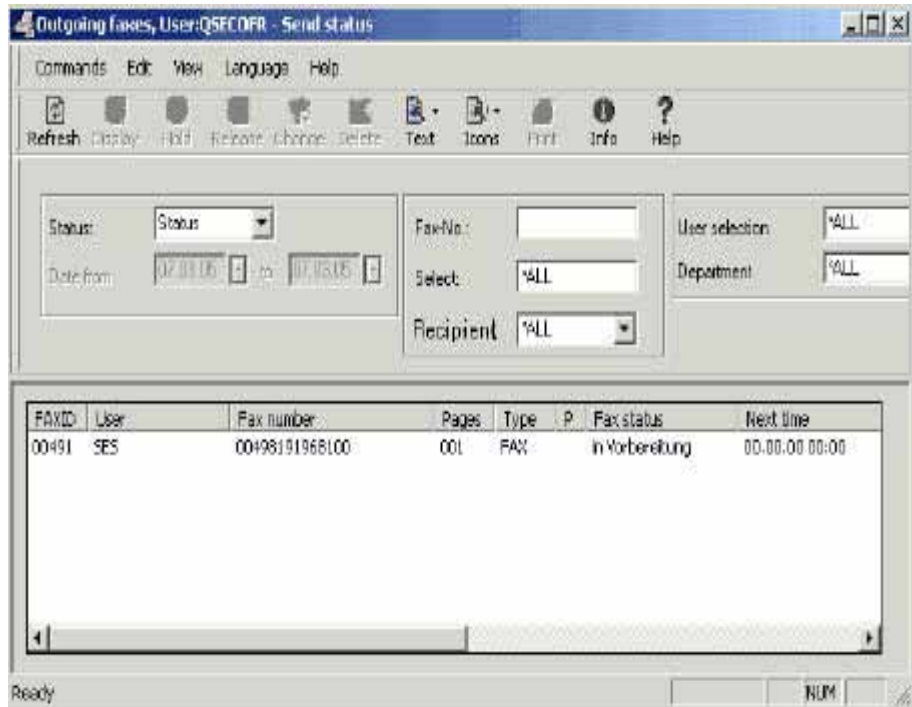
0122 - Work with outgoing faxes

This dialog allows you to select one or multiple faxes and then apply a function from the *Commands* menu to them.

The most frequently used functions are also available as Toolbar buttons. Tooltips for each button are displayed if you hover with the mouse pointer.

Commands menu options

0123 - Commands

Refresh
Refreshes the display with data from the iSeries. This function is available even if no entry is selected.

Display

Displays the content of the selected fax. This function is only available if an entry is selected.

Hold
Sets all selected faxes to Hold. This function is only available if an entry is selected.

Release
Releases all selected faxes that are on hold. This function is only available if an entry is selected.

Change
Allows you to change the send options for the selected faxes. This function is only available if an entry is selected.

Fax box
Allows you to check the status of the iSeries interface. A message box indicates whether or not the interface is active.

Print
Prints the selected faxes. This function is only available if an entry is selected.

Delete
Deletes the selected faxes. You will be prompted to confirm each fax delete. This function is only available if an entry is selected.

Properties
Allows you to determine how the iSeries and PC exchange fax data. This function is available even if no entry is selected.

21.10.1.1 Display filter

Default display filters can be set in the DirectFax Administrator, described elsewhere in this document. Further filter options are available here. Filter criteria are applied when you choose another criteria or click "Refresh".

Access
"Status" displays all faxes which have not yet been sent. "History" displays sent and deleted faxes. You can limit the period for which faxes are kept in "History".

Fax sequence number
Allows you to select the sequence number at which the list begins. If this field is left empty, the list begins with the first available fax.

Fax number
Allows you to select by fax number from the list. *ALL displays faxes to all numbers.

Recipient
Filters the entries by the "Personal addressing" field. *ALL displays faxes for all recipients.

User

Filters the display to show only faxes created by a specific user.

Department
Filters by the department to which a user is assigned. *ALL displays faxes for all departments.

21.10.1.2 Display a fax

To display a fax, simply double-click it. Alternatively, right-click it and choose "Display", or choose "Display" from the "Commands" menu. The display programs View T4 and Imageviewer are described in detail elsewhere in this chapter.

21.11 Display incoming faxes

To work with incoming faxes, point to Start – Programs – DirectFax, and then select *Incoming Faxes*.
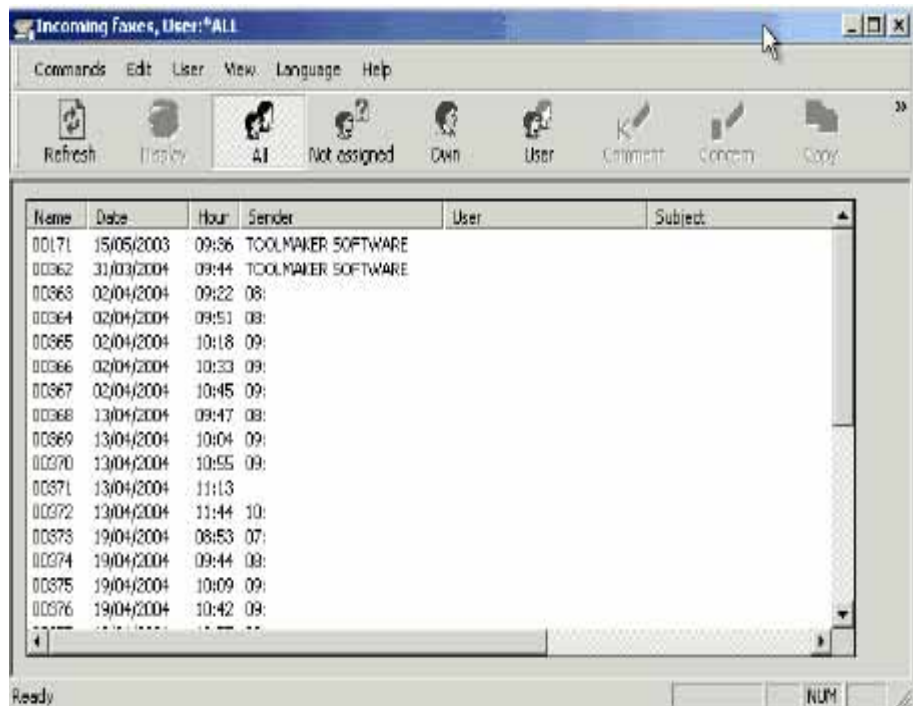
0124 - PC display for incoming faxes

When started, the program displays the users' own incoming faxes. The active user is displayed in the title bar. If the list is empty, there are no incoming faxes for that user.

You can change the display filter to show more faxes with the "User" menu or the corresponding button. If the parameter WRKINCFAX is set to *OWN on the iSeries, the PC user can only view his own faxes.

This dialog allows you to select one or multiple faxes and then apply a function from the *Commands* menu to them.

The most frequently used functions are also available as Toolbar buttons. Tooltips for each button are displayed if you hover with the mouse pointer.

21.11.1 The Commands menu

Commands | Edit
Refresh
Display
Comments
Subject
Copy
Assign
Print
Delete
Properties

Select all
Deselect all

Exit

0125 - Commands

Refresh
Refreshes the display with data from the iSeries. This function is available even if no entry is selected.

Display
Displays the content of the selected fax. This function is only available if an entry is selected.

Comments
Opens a window for the selected fax in which you can enter your comments. Comments are saved on the iSeries and can be viewed online. For users of Twinax terminals, option 12=Note is also available in the *Work with incoming faxes* screen. This function is only available if an entry is selected.
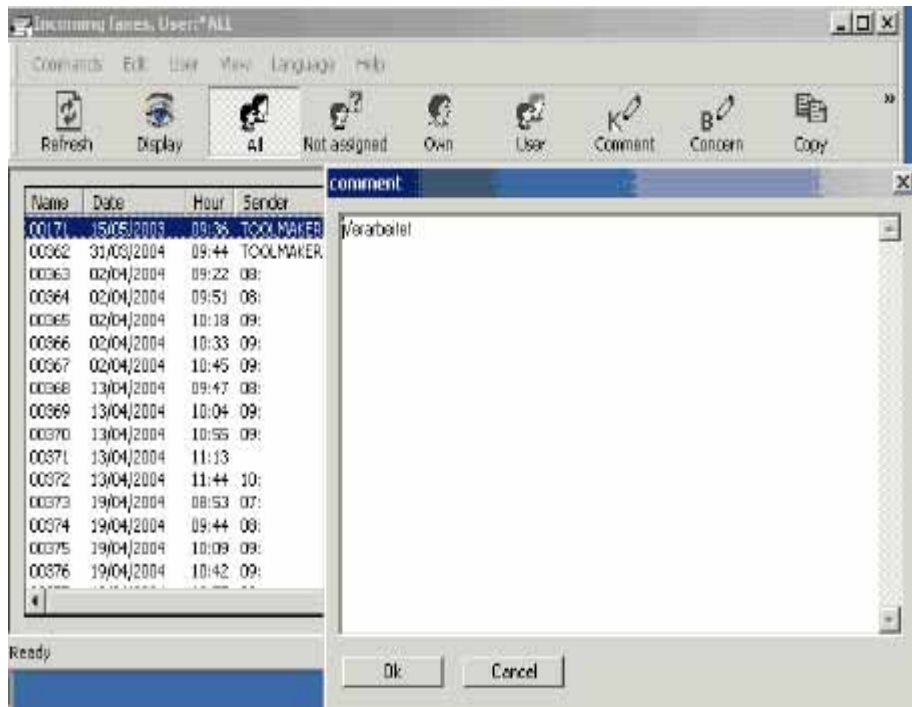
0126 - The Comments window for an incoming fax

Subject

Allows you to edit the "Subject" column for a fax. This function is only available if an entry is selected.
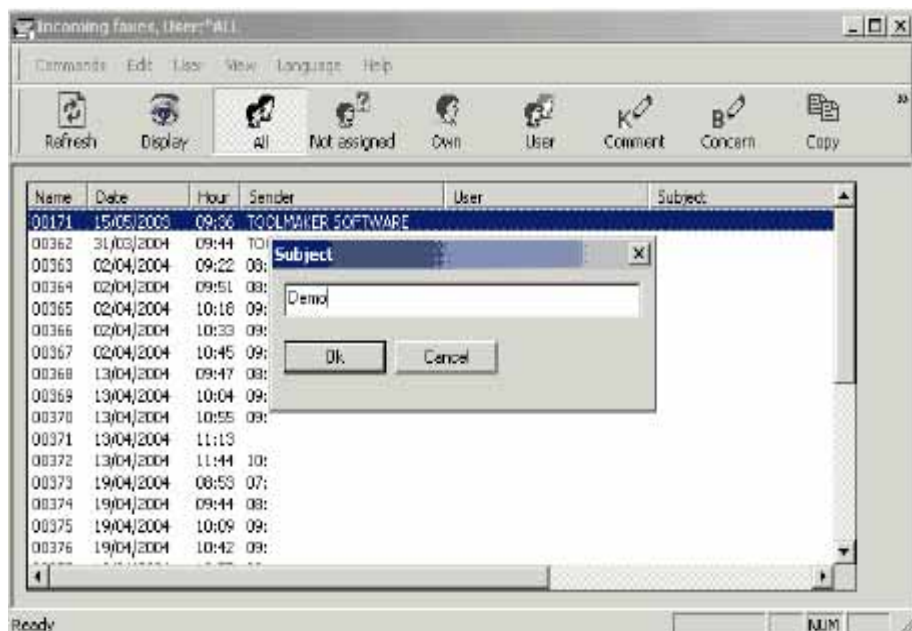
0127 - The Subject window for an incoming fax

Copy

Makes a copy of the fax. This function is only available if an entry is selected.
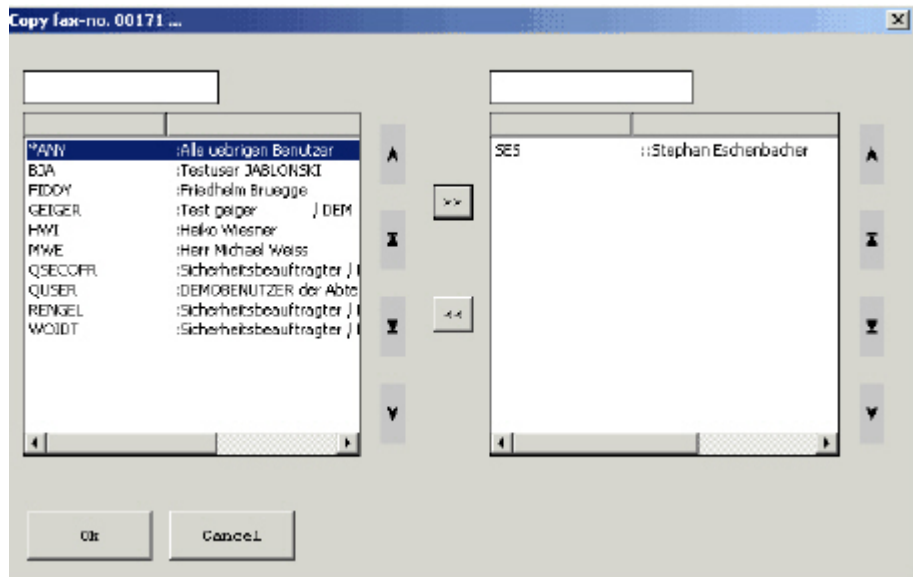
0128 - Copy

Assign

Assigns owner status for the incoming fax to one or multiple users. If more than one user is specified, the fax appears separately for each user in the display. Users are identified in the *User* column. Each copy also receives its own sequence number. Notes are not copied if any. This function is only available if an entry is selected.

0129 - Assign

Print

Prints the selected faxes. This function is only available if an entry is selected.

Delete

Deletes the selected faxes. You will be prompted to confirm each fax delete. This function is only available if an entry is selected.

Properties

Allows you to determine how the iSeries and PC exchange fax data. This function is available even if no entry is selected.
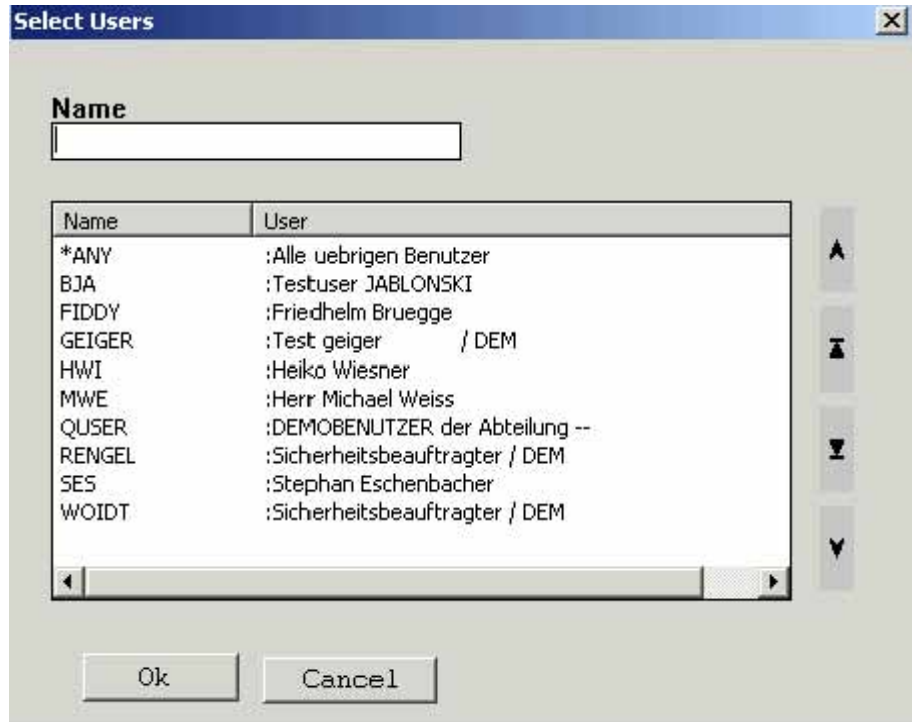
0130 - Properties

21.11.2 The Edit menu

You can use the functions in this menu to navigate through faxes as an alternative to scrolling. It is however generally easier to simply scroll with the mouse.

21.11.3 The User menu

All

Depending on rights, displays all incoming faxes whether or not they have been assigned (corresponds to the "All" button).

Anonymous

Displays all faxes that have not yet been assigned to a user (corresponds to the "Not assigned" button).

Private

Displays only faxes for the user specified in the DirectFax Administrator or the user logged on (corresponds to the "Own" button).

User

Allows you to display another users' faxes if authorised.
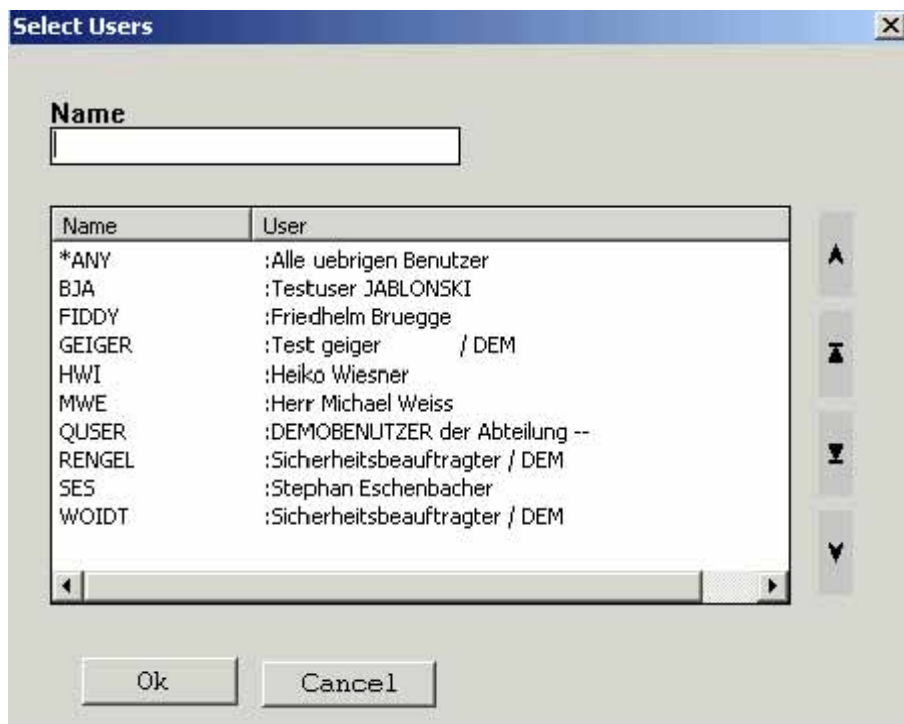
0131 – Select user

21.11.4 The View menu

Allows you to change the appearance of the Toolbar and the Status bar. The Status bar is displayed at the bottom of the window. The Toolbar appears below the Menu bar.

0132 - Customize

Customize
You can add and remove buttons on the Toolbar to suit your needs.
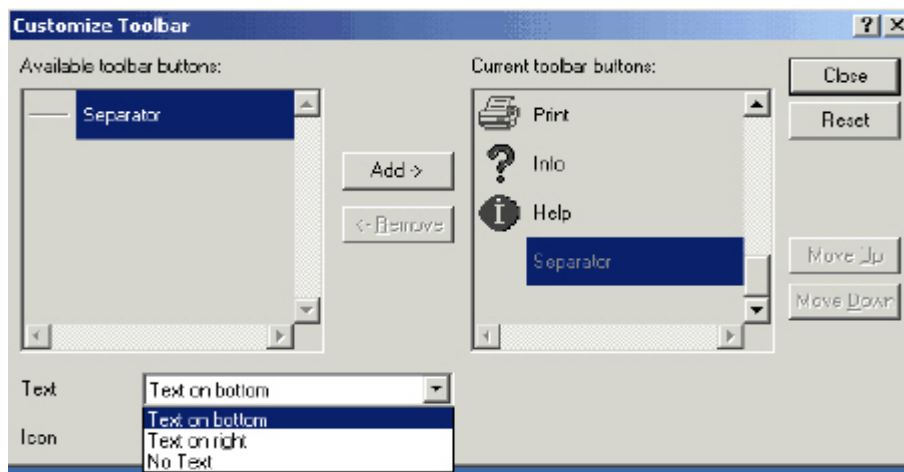
0133 – Cusotmize toolbar

Use "Add" and "Remove" to choose the buttons you want to appear on the Toolbar and the order in which they appear. The "Text" field defines if and where text appears on the buttons. The "Icon" field determines the size of the buttons.

21.11.5 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

0134 - Language

21.12 The display program View T4

The default program for viewing faxes is set in the DirectFax Administrator. If View T4 is the default program, or if you right-click an incoming fax and select "Display" – "View T4", the fax is displayed with View T4. Unlike Imageviewer, View T4 can export faxes in TIFF format.

0135 – T4 Viewer

21.12.1 The File menu

Change/Edit
This option runs Directplot.exe, a graphic editing program. DirectPlot is described later in this document.

Print
Prints the displayed fax.

Export
Allows you to export the displayed fax in TIFF format. A range of TIFF formats (G3, G4, Huffman, Packed) are available.

Next/previous fax
This option (and the corresponding buttons) allows you to scroll forwards and backwards through faxes.

21.12.2 The Edit menu

Set default
The zoom factor and section displayed are the same for most faxes. This function sets the current zoom factor and scrollbar position as default so that the next fax is displayed with the same settings.

Standard
Restores the last view set. This command corresponds to the "Default" button.

Comments
Opens a window for the selected fax in which you can enter your comments. Comments are saved on the iSeries and can be viewed online. For users of Twinax terminals, option 12=Note is also available in the *Work with incoming faxes* screen. This function is only available if an entry is selected.

Subject
Allows you to edit the "Subject" column for a fax. This function is only available if an entry is selected.

Copy
Makes a copy of the fax. This function is only available if an entry is selected.

Assign
Assigns owner status for the incoming fax to one or multiple users. If more than one user is specified, the fax appears separately for each user in the display. Users are identified in the *User* column. Each copy also receives its own sequence number. Notes are not copied if any. This function is only available if an entry is selected.

Print
Prints the selected faxes. This function is only available if an entry is selected.

Delete
Deletes the selected faxes. You will be prompted to confirm each fax delete. This function is only available if an entry is selected.

Send by e-mail
Allows you to convert the displayed fax to TIFF format and send it with your default mail client.
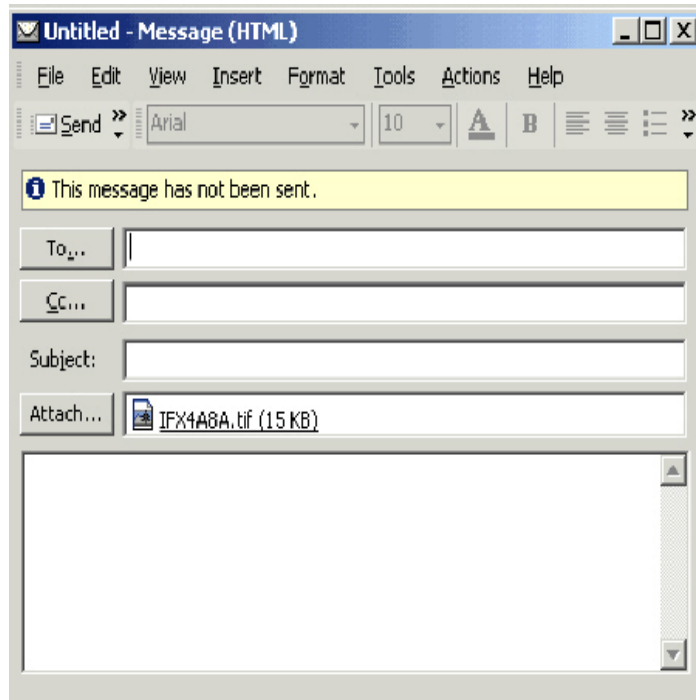
0136 – E-mail

21.12.3 The Rotate menu

Rotate right
Rotates the fax 90 degrees clockwise (corresponds to the "90 degrees right" button on the Toolbar).

Rotate left
Rotates the fax 90 degrees anticlockwise (corresponds to the "90 degrees left" button on the Toolbar).

21.12.4 The View menu

Allows you to change the appearance of the Toolbar and the Status bar. The Status bar is displayed at the bottom of the window. The Toolbar appears below the Menu bar.

0132 - Customize

Customize
You can add and remove buttons on the Toolbar to suit your needs.
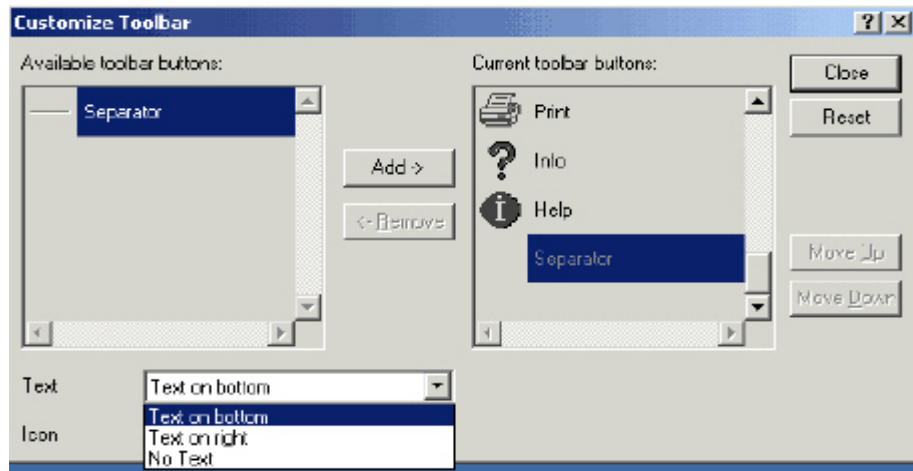
0133 – Cusotmize toolbar

Use "Add" and "Remove" to choose the buttons you want to appear on the Toolbar and the order in which they appear. The "Text" field defines if and where text appears on the buttons. The "Icon" field determines the size of the buttons.

21.12.5 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

0134 - Language

21.12.6 The Zoom menu

Enlarge
Allows you to increase the zoom factor with a single click (corresponds to the "Enlarge" button).

Reduce
Allows you to decrease the zoom factor with a single click (corresponds to the "Reduce" button).

% Display
Allows you to set the zoom factor with a single click.

21.12.7 Toolbar

Provides a range of easily accessible functions including zoom factor, default size, scrolling through faxes. comments, subject and so forth.

21.13 The display program Imageviewer

Imageviewer is the default program for viewing faxes.

0137 - Imageviewer

21.13.1 The File menu

Edit
This option runs Directplot.exe, a graphic editing program. DirectPlot is described later in this document.

Print
Prints the displayed fax.

Send by e-mail
Allows you to convert the displayed fax to TIFF format and send it with your default mail client.
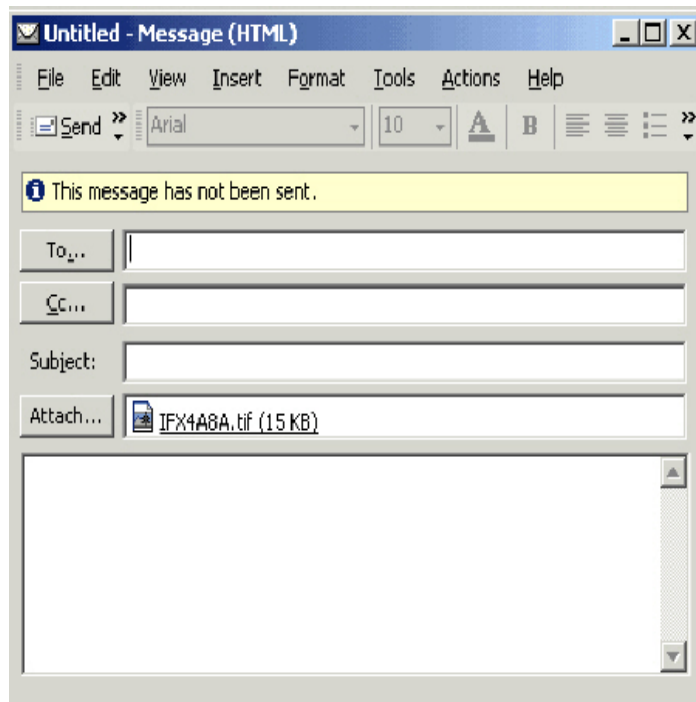
0136 – E-mail

21.13.2 The Edit menu

Enlarge
Allows you to increase the zoom factor with a single click (corresponds to the "Enlarge" button).

Reduce
Allows you to decrease the zoom factor with a single click (corresponds to the "Reduce" button).

Standard
Restores the last view set. This command corresponds to the "Default" button.

Rotate right
Rotates the fax 90 degrees clockwise (corresponds to the "90 degrees right" button on the Toolbar).

Rotate left
Rotates the fax 90 degrees anticlockwise (corresponds to the "90 degrees left" button on the Toolbar).

Rotate 180 degrees
Rotates the fax 180 degrees (corresponds to the "180 degrees left" button on the Toolbar).

Title bar
Shows or hides the Title bar.

Toolbar
Shows or hides the Toolbar.

Status bar

Shows or hides the Status bar.

Set default

The zoom factor and section displayed are the same for most faxes. This function sets the current zoom factor and scrollbar position as default so that the next fax is displayed with the same settings.

Fit to image

Fits the window to the image.

Fit to window

Fits the fax image to the window.

Fit both

Sizes the document to maximum width and the window to maximum height.

21.13.3 The View menu

Allows you to change the appearance of the Toolbar and the Status bar. The Status bar is displayed at the bottom of the window. The Toolbar appears below the Menu bar.

0132 - Customize

Customize

You can add and remove buttons on the Toolbar to suit your needs.
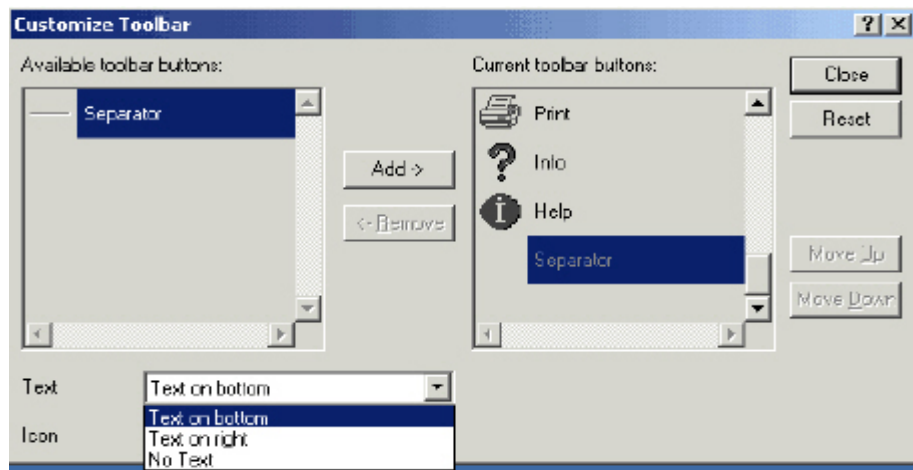
0133 – Cusotmize toolbar

Use "Add" and "Remove" to choose the buttons you want to appear on the Toolbar and the order in which they appear. The "Text" field defines if and where text appears on the buttons. The "Icon" field determines the size of the buttons.

21.13.4 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

0134 - Language

21.13.5 Toolbars

Some functions are available both as buttons on the Toolbars and as menu commands.

Comments
Opens a window for the selected fax in which you can enter your comments. Comments are saved on the iSeries and can be viewed online. For users of Twinax terminals, option 12=Note is also available in the *Work with incoming faxes* screen. This function is only available if an entry is selected.

Subject
Allows you to edit the "Subject" column for a fax. This function is only available if an entry is selected.

Copy
Makes a copy of the fax. This function is only available if an entry is selected.

Assign
Assigns owner status for the incoming fax to one or multiple users. If more than one user is specified, the fax appears separately for each user in the display. Users are identified in the *User* column. Each copy also receives its own sequence number. Notes are not copied if any. This function is only available if an entry is selected.

Delete
Deletes the selected faxes. You will be prompted to confirm each fax delete. This function is only available if an entry is selected.

21.14 Edit incoming faxes

You can use the *Display/Edit* function to display and edit incoming faxes.

0138 - Edit an incoming fax

The *File* menu provides a range of editing functions. The most frequently used functions are also available as Toolbar buttons. Tooltips for each button are displayed if you hover with the mouse pointer.

21.14.1 The File menu

Save
Saves the document as a .BMP file.

Print
Prints the fax.

Printer
Allows you to set the printer you want to use.

Return fax
Allows you to return or forward an edited fax, for example if you have added notes. Please note the comments on sending faxes earlier in this document.

21.14.2 The View menu

Drawing elements
Shows or hides the drawing elements Toolbar.

Formatting
Shows or hides the font formatting Toolbar.

Zoombar
Shows or hides the zoom Toolbar.

Status bar

Shows or hides the Status bar.

21.14.3 The Picture menu

Contains a range of zoom and display options corresponding to the commands on the zoom Toolbar.

21.14.4 The Drawing elements menu

Corresponds to the commands on the drawing elements Toolbar.

21.14.5 The Settings menu

Colour

Sets the colour of font and drawing elements.

Stamps

You can add recurring notes or remarks to faxes as "stamps". This function allows you to maintain stamps (text or graphics), create new stamps and delete existing ones.
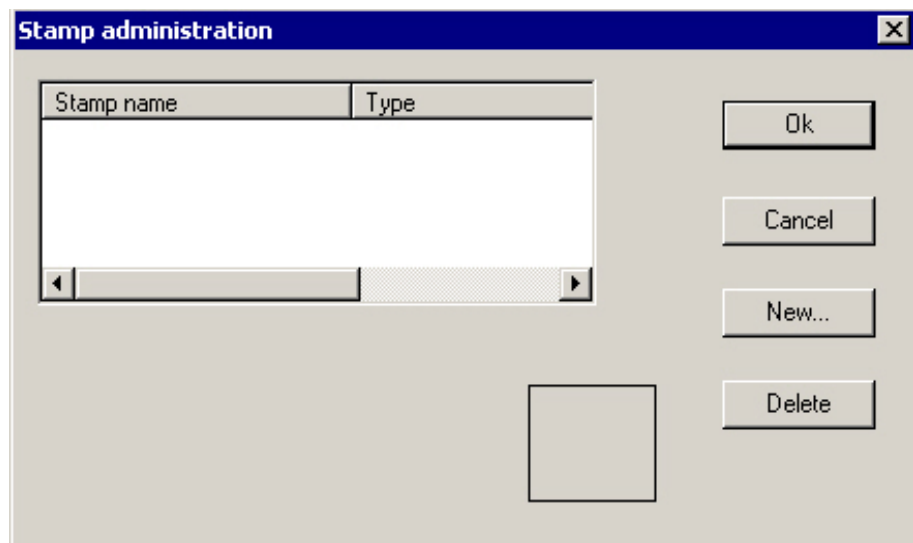
0139 – Stamp administration

21.14.6 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

0140 - Language

21.15 Recipients

To work with addresses, point to Start – Programs – DirectFax, and then select *Recipients*.
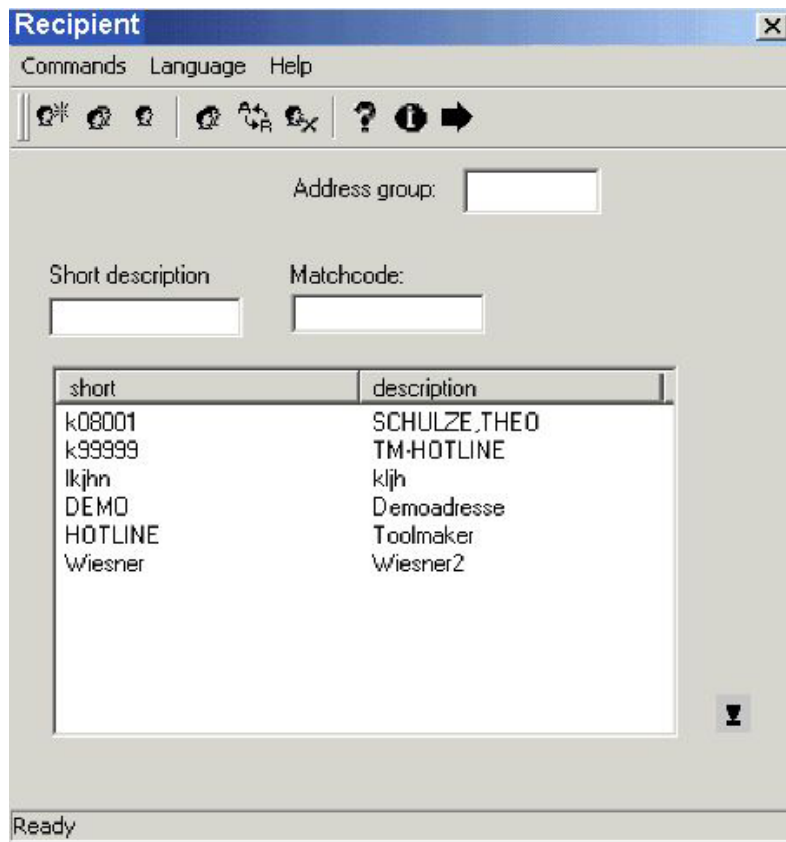
0141 - Working with addresses on the PC - overview

The addresses here are the same as the addresses displayed with WRKFAXKA. The program writes data directly to the iSeries database FAXKA. From here, you can add new addresses and delete or edit existing entries.

21.15.1 The Commands menu

New
Allows you to create new recipients and add them to the list.

0142 – New recipient

Most of the fields are self-explanatory. Some fields do however require explanation:

Address code
This is a unique code, for example the recipient's customer or supplier number.

Address group
If the recipient has been added by importing an address group, this field displays the name of the address group preceded by the "#" character. Do not use this character for groups created manually.

Private
This entry determines who can view and use the recipient.

P – Only the user who created the address.

P – The group to which the user who created the address belongs.

Empty - All

E-mail priority
Select this option if you usually use e-mail rather than fax for this recipient.

Change
Allows you to change an existing entry.

Display
Displays a recipient.

Copy
Allows you to copy the recipient to a new number.

0143 - Copy

Rename
Allows you to change the number of an existing recipient.

Delete
Deletes a recipient.

Properties
Allows you to set options for communication between the PC and the iSeries.

0130 - Properties

21.15.2 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

21.16 Groups

To work with address groups, point to Start – Programs – DirectFax, and then select *Groups.*
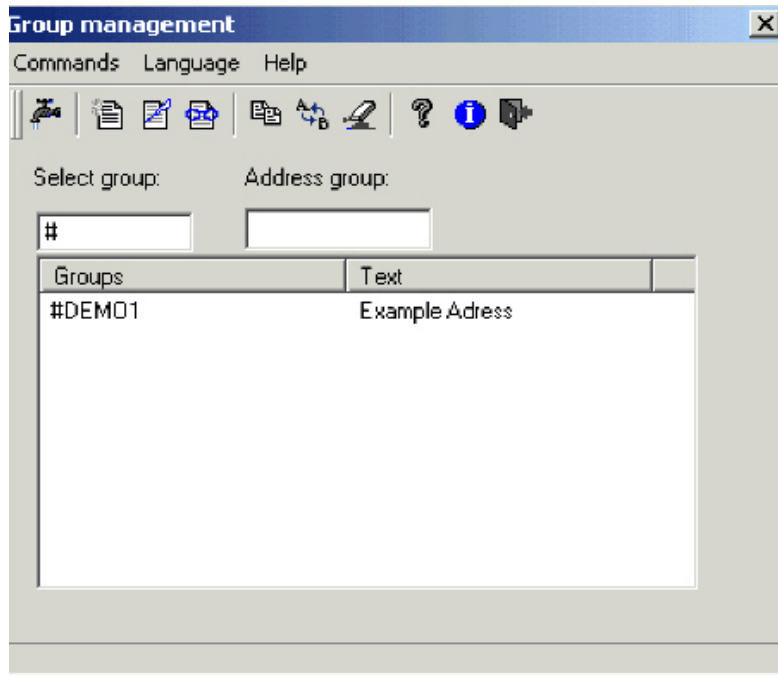
0144 - Work with PC address groups

The address groups displayed here are the same as those maintained with WRKFAXGRP. The program writes data directly to the iSeries database FAXKWG. From here, you can add new address groups and delete or edit existing entries.

21.16.1 The Commands menu

New
Allows you to create new groups and assign recipients to them.

0145 – Create group
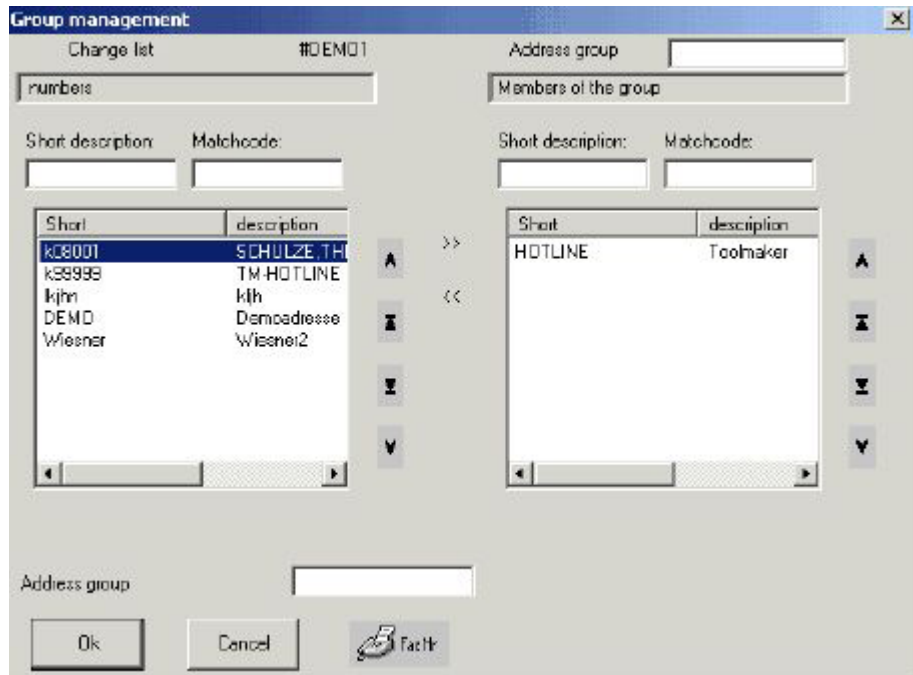
0146 – Group administration

To add a recipient, select an entry in the left field, then click the arrows to add it to the group. To remove a recipient from a group, select the recipient in the left field, then click the arrows pointing left.

Click "FaxNo" to add non-recipient fax numbers to a group.
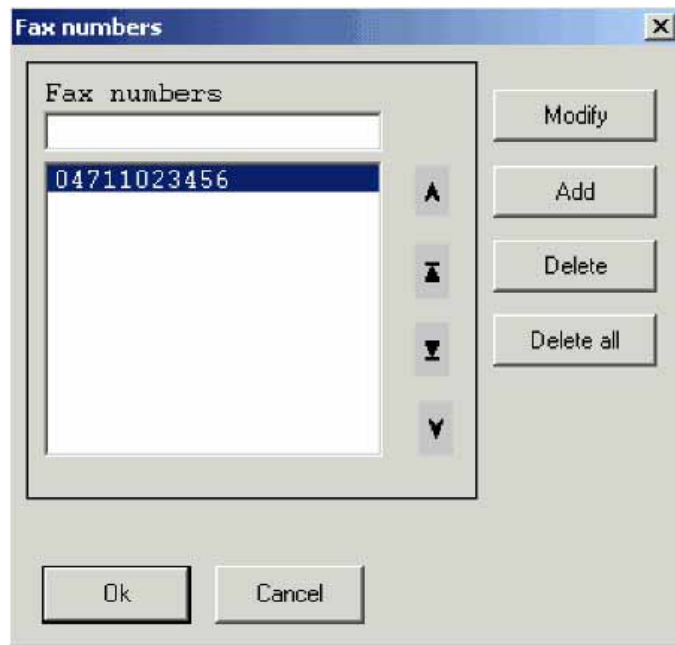
0147 – Fax numbers

Change
Allows you to change an existing entry.

Display
Displays a group.

Copy

Allows you to copy a group, which can then be changed.

Rename group

Renames a group.

Delete

Deletes a recipient.

Properties

Allows you to set options for communication between the PC and the iSeries.

21.16.2 The Language menu

You can display DirectFax in a number of languages. The default language is set in the DirectFax Administrator, but you can change the language at runtime.

0134 - Language

22.0 DirectFax Connector for Lotus Notes

DirectFax is a very widely-used product within the iSeries world. Many DirectFax customers have implemented Notes, given its strength and position in the market, but at the same time do not want to lose their tried and trusted fax solution. TOOLMAKER's response to this situation is "DirectFax Connector for Notes", a program that integrates the two products.

22.1   Goals and benefits

The approach to this couldn't be simpler: You create a message for recipient xxx@fax and send it as a standard Notes document. The message is saved to the database Dirfaxout.nsf on the server and the DirectFax Domino agent adds the recipient address.

A fax router program on the workstation checks at defined intervals, if there are new faxes to be sent in the database Dirfaxout.nsf. The "Faxrouter program", prints the message using the Windows print function on the DirectFax printer driver; the messages are transferred to the iSeries and faxed.

Beside DirectFax the DirectFax Connector for Notes requires the Domino server and a Notes client.

The current version enables to fax directly files attached to the Notes message. The files are printed via the Windows printer function of the corresponding application.

If this function of the DirectFax Connector shall be used, the so-called "Attachment print", this application must be also installed on the same PC where the DirectFax Notes Router program is installed.

The attachment print supports the following applications.

- Acrobat Reader

- Microsoft Office 2000 and higher

Communication and conversion as described above run either on the Notes user's local PC in conjunction with the Domino server and Notes client, or on a dedicated PC. No additional hardware is required.

DirectFax Connector for Notes fully integrates DirectFax and Lotus Notes. For the user, this means that faxes are effectively sent directly from the Notes client using Notes resources such as the Notes address book.

22.2   DirectFax Connector – databases

DirectFax Connector works with the following databases:

The database dirfaxout.nsf - Outbound box

The database for outgoing faxes. The faxes are sent from the user's e-mail account to the database and processed by an agent. The fax router accesses this database and prints the messages via Windows.

The database directadr.nsf – The DirectFax address book

The are two options for the fax number: you can either enter the number directly, or enter the name of the recipient. If you enter the name of the recipient, the number is taken from the DirectFax address book.

The database directconfig.nsf – The DirectFax configuration database

DirectFax Notes users are held in the configuration database. The database also holds the other information needed to route the fax, for example the iSeries user name to be used for the Notes fax sender, and distributor information, i.e. the mail accounts served by each exchange.

The database directfaxin.nsf - Inbound box

Incoming faxes – faxes forwarded from the iSeries to Notes – are held in the inbound box.

From there, they are forwarded to the user's or user group's mail account, assuming that forwarding information is available.

Note A copy of each fax is maintained in the inbound box, regardless of whether or not it has been forwarded. For this reason, it should be checked regularly by the Notes administrator.

Database directfaxlog.nsf – Database log

You can log the actions executed by the agents wrkfax (agent for fax dispatch in the database dirfaxout.nsf) and wrkfaxVerteilung (agent for fax forwarding in the database dirfaxin.nsf)

A log document is created in the log database directfaxlog.nsf each time the agent is run.

22.3   Installation

The following is limited to a description of DirectFax installation and configuration. Because you are installing DirectFax Connector for Notes, we assume that Notes is already installed. We make no assumptions about your Notes configuration.

22.3.1 Install the DirectFax Connector for Lotus Notes

Because this process installs or exchanges databases on the Domino Server and the Notes client, you must shut down both before proceeding.

Start the installation of DirectFax Connector for Lotus Notes from the DirectFax installation CD with the file InstDf.exe and the select "Customised". Before the DirectFax Connector for Lotus Notes can be installed, the DirectFax PC client must be installed. For this reason, select both the DirectFax and Lotus Notes components for installation. Please refer to the chapter covering the DirectFax PC client for more information on installing and configuring it. The installer for the Notes components will guide you through the installation process.

0148 - Select language

Boot the Lotus DominoServer

Set DirectFax32 as the default printer

22.3.2 Sign the databases

DirectFax Connector for Lotus Notes works with server agents that run independently on the Lotus Domino Server. Before the agent can run on your Domino Server, the DirectFax databases must first be signed.

Sign with the Domino System Administrator's ID

To do this, proceed as follows:

Log on to Lotus Notes with the Domino Administrator's ID.

Start the Lotus Domino Administrator and enter your password.
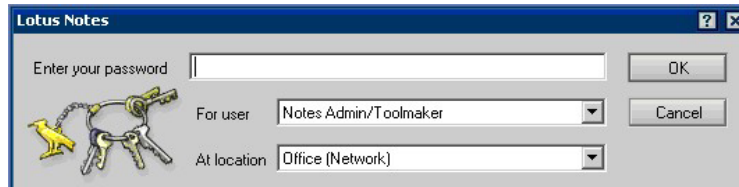
0152 - Password

Click the "**Files**" tab and then all databases / templates in the DirectFax folder. Now right click and select "**Sign**".

Note To display databases and templates in the "Files" tab, select the option "All database types" under "Display" at the top right of the Administrator dialog.

Now sign the database by clicking "**OK"**.

--- > Option: Active user's ID
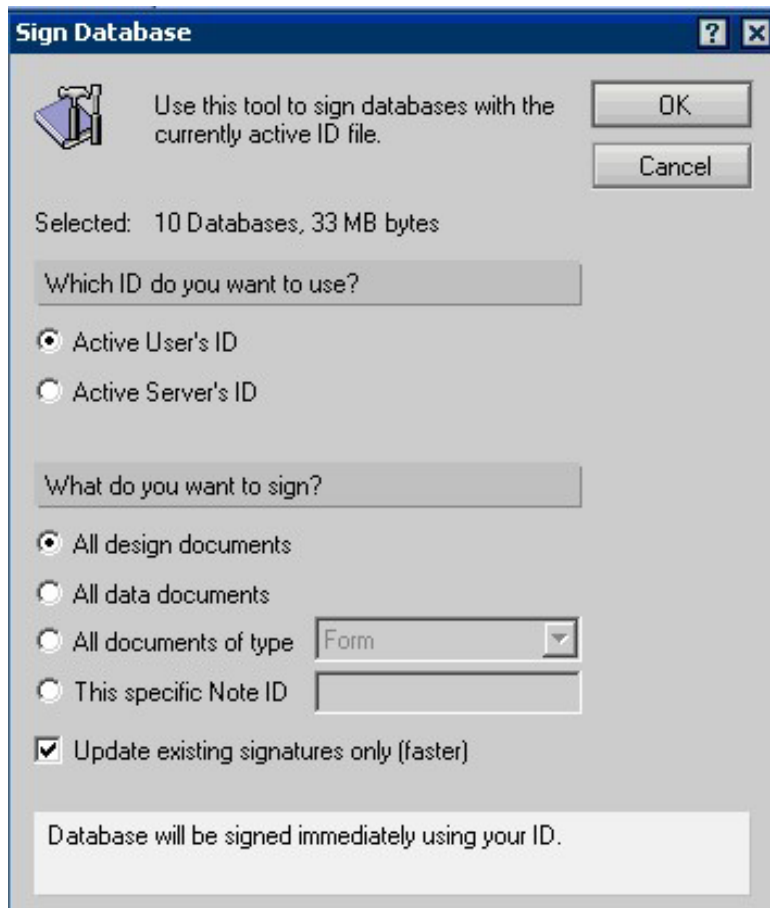
0153 – Sign database

Sign with the Domino Server's ID

To do this, proceed as follows:

Log on to Lotus Notes with the Domino Administrator's ID.

Start the Lotus Domino Administrator and enter your password.
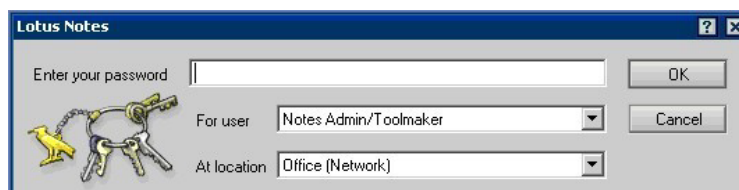
0154 - Password

Click the "**Files**" tab and then all databases / templates in the DirectFax folder. Now right click and select "**Sign**".

Note To display databases and templates in the "Files" tab, select the option "All database types" under "Display" at the top right of the Administrator dialog.

Now sign the database by clicking "**OK**".

--- > Option: Active server's ID
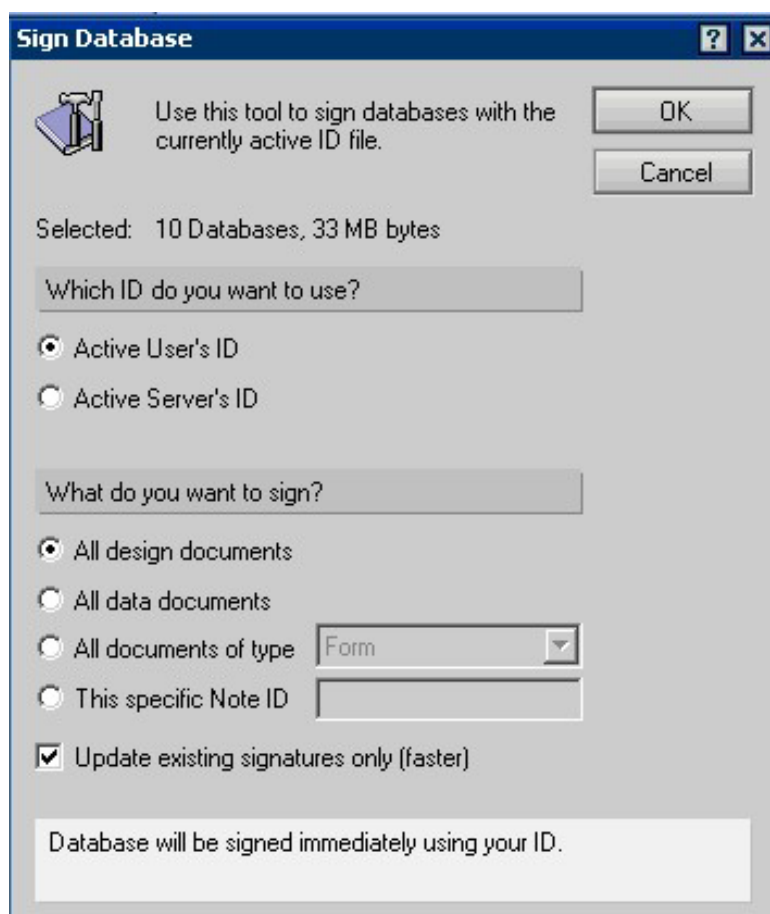
0155 - Sign

You can also sign each database separately.

In older versions of Lotus Domino, databases can be signed only with the ID that is currently active. If this applies here, use the Domino Administrator's ID. The ID must have the right to execute restricted and unrestricted LotusScript agents.

22.3.3 Enter the administration server

The administration server is responsible for making changes to database ACLs.

Enter the server on which the databases and templates have been installed as the administration server.

To do this, proceed as follows:

Log on to Lotus Notes with the Domino Administrator's ID.

Start the Lotus Domino Administrator and enter your password.
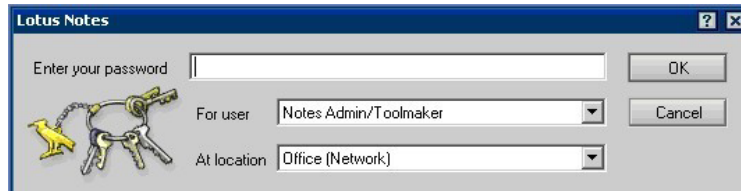
0154 - Password

Click the "**Files**" tab and then all databases / templates in the DirectFax folder.

Now right click and select "**Access – Manage**".

Select Advanced in the ACL Management dialog, then enter the administration server in the "Modify Administration Server setting" field.
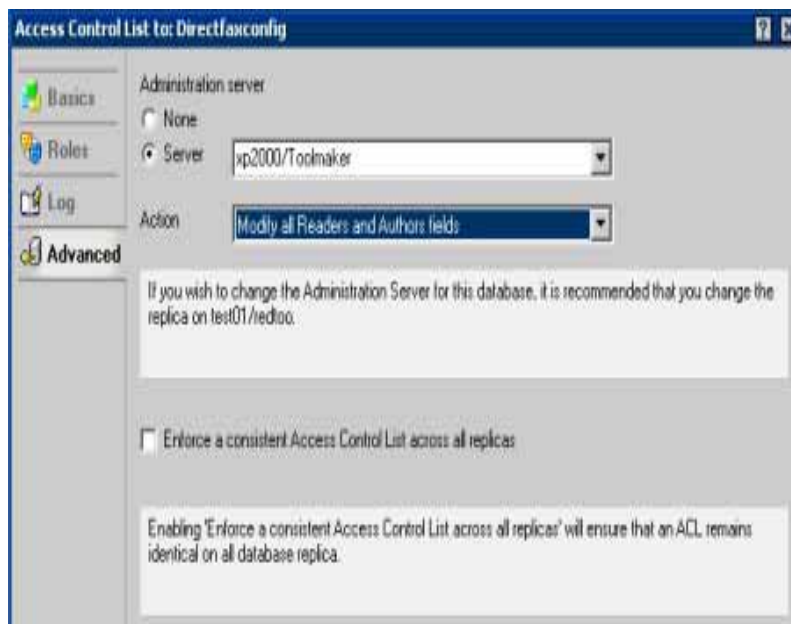
0156 - ACL management

Note To display databases and templates in the "Files" tab, select the option "All database types" under "Display" at the top right of the Administrator dialog.

Now modify the ACL by clicking ""**OK**.

22.3.4 Customise Notes.ini

So that you can check that DirectFax agent is working correctly, we recommend that you enable extended logging for the Domino Server Agent Manager. This requires a couple of entries in the notes.ini file.

Open "**Notes.ini**" in the folder ...\Lotus\Domino and add the following lines before the "**ServerTasks=...**" entry:

Debug_AMgr=v

Log_AgentManager=2

0157 – Notes.ini

The DirectFax agent can find the fax number for a given addressee. Addresses and the associated fax numbers are held in the address book "**DirectAdr.nsf**".

The following entry adds this address book to your default address books.

Add the entry NAMES= and the address book "**~\Directfax\DirectAdr.nsf**". (~ = path to the Domino data folder).

0158 – Notes.ini

Close and save "**Notes.ini**".

Restart the Lotus Domino Server to activate the new configuration.

22.3.5 Configure Lotus Domino

Before you can fax using DirectFax Connector for Lotus Notes, you must first do some configuration.

22.3.5.1 Create the fax domain   *Fax* – Outgoing faxes

This fax domain is used by Domino to send faxes.

The addressing convention is faxnumber@fax or Faxrecipient@fax.

Create a document of the type **Foreign domains** for the fax domain.

Proceed as follows:

Start the Lotus Domino Administrator and enter your password.

0154 - Password

On the "**Configuration**" tab, click "**Messages**" in the navigation panel and then select "**Domains**".

0160 – Toolmaker domains

Click "**Add domain**" and specify the following:
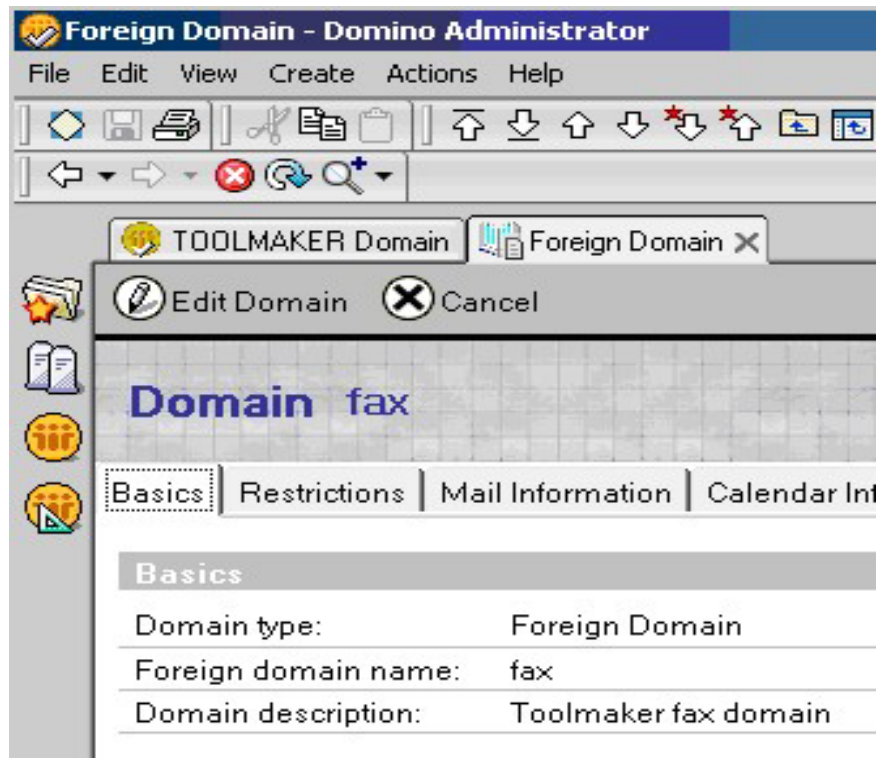
0161 – Other domains

Click the "**Mail information**" tab and specify the following:
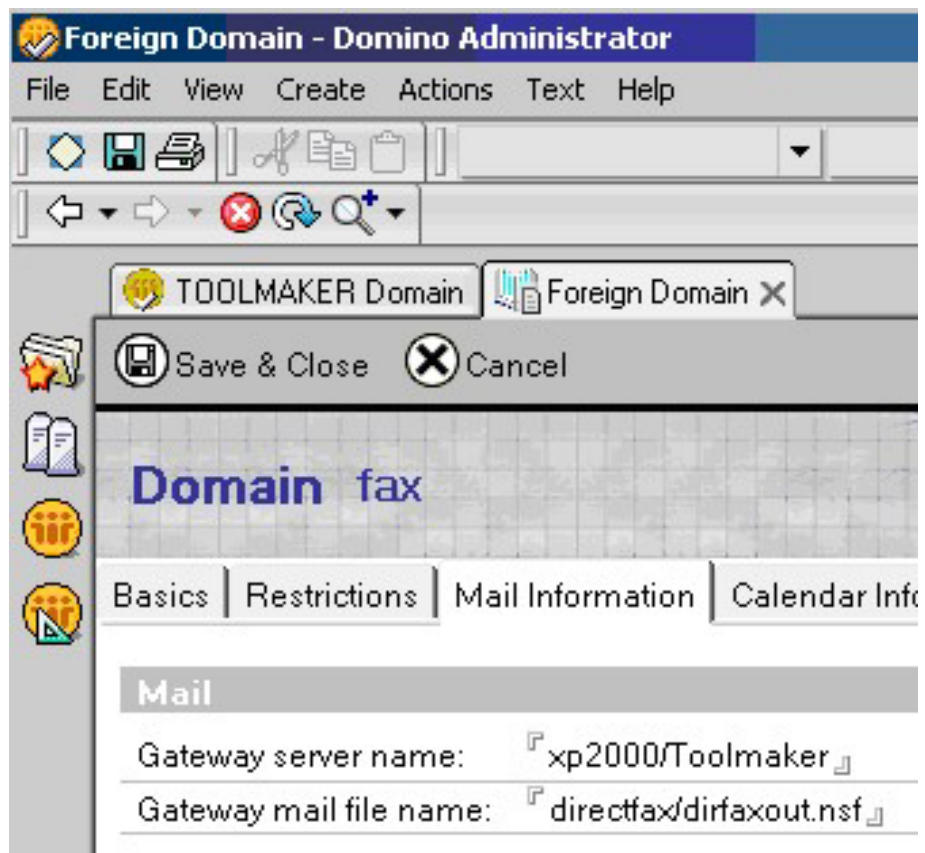
0162 – Other domains

Warning:
The entry for "**Name of Gateway Server**" server must be your Domino Server.

The entry for "**Gateway mail file name**" must be the name of the DirectFax database relative to the Domino Server's data folder (directfax\dirfaxout.nsf).

Click "**Save and close**".

22.3.5.2 Create the mail-in database *Faxin* – Incoming faxes

Faxes passed from the iSeries to the Domino Server are held in the mail-in database and forwarded from there as configured.

Proceed as follows:

Start the Lotus Domino Administrator and enter your password.
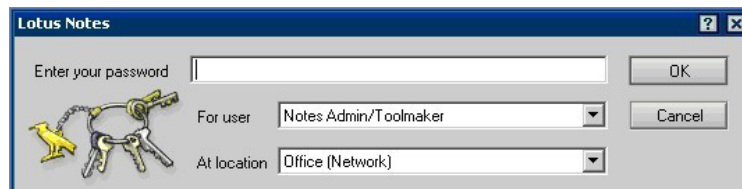
0154 - Password

On the "**People and Groups**" tab, click "**Address book from**" in the navigation panel and then select "**Mail-in databases**".

Click "**Add mail-in database**" and specify the following:

The General tab:
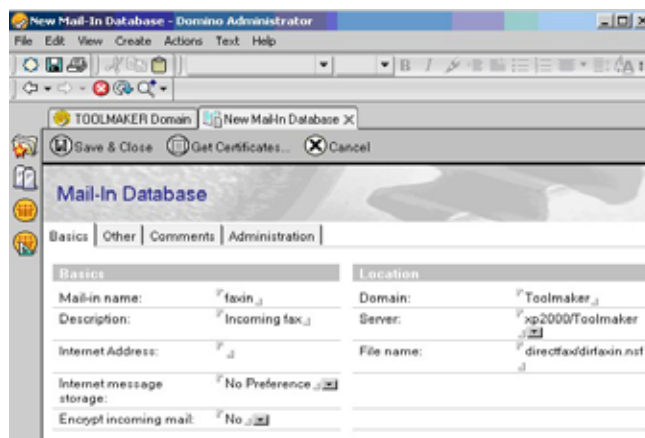
0163 - Faxin

The Database information tab:
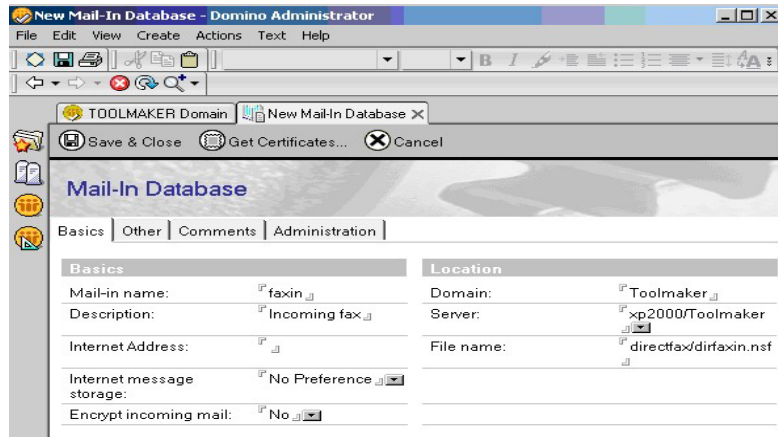
0150 – Database information tab

Click "**Save and close**".

22.3.5.3   Create fax domains
Dirfaxin – Incoming faxes

This fax domain is used by receive faxes from the iSeries.

The addressing convention is faxin@dirfaxin or Faxrecipient@dirfaxin.

Create a document of the type **Foreign domains** for the fax domain.

Proceed as follows:

Start the Lotus Domino Administrator and enter your password.
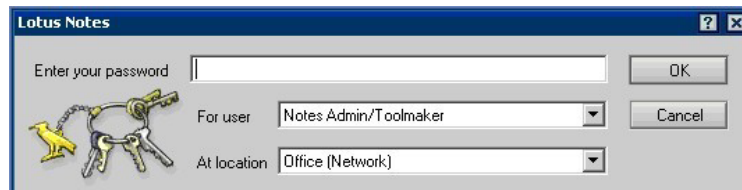
0154 - Password

On the "**Configuration**" tab, click "**Messages**" in the navigation panel and then select "**Domains**".
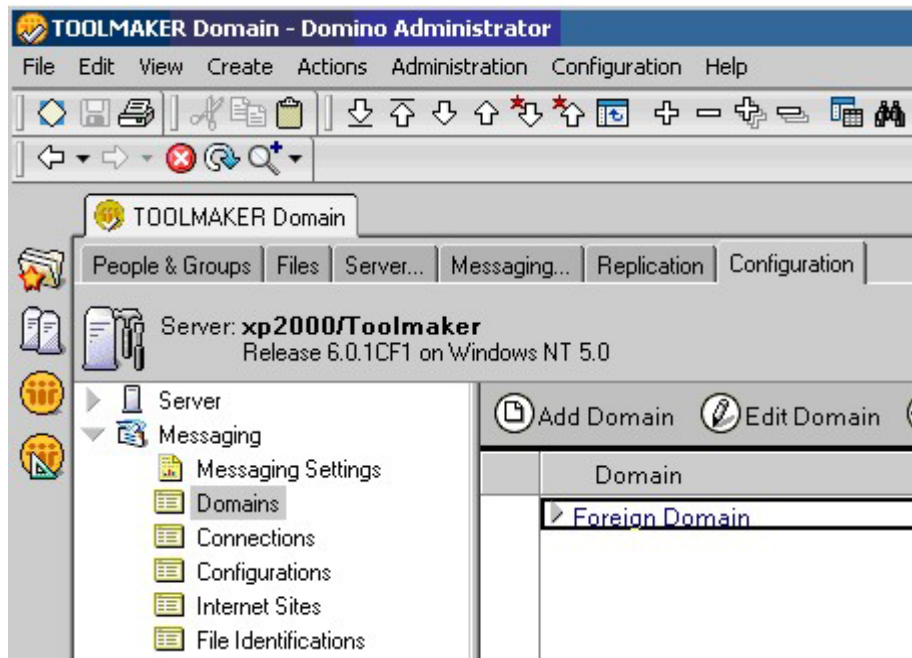
0164 - Domains

Click "**Add domain**" and specify the following:
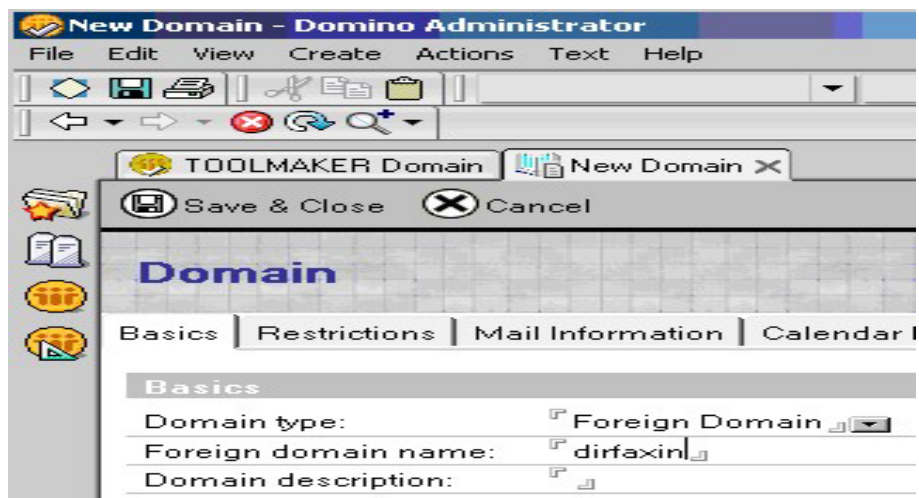
0165 – Other domains

Click the "**Mail information**" tab and specify the following:
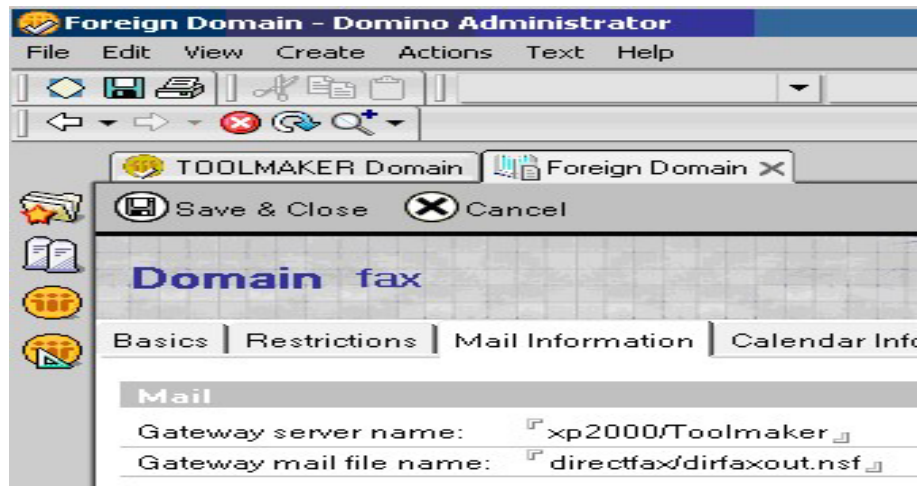
0166 – Mail information

Click "**Save and close**".

22.3.6 Configuration of the Lotus Notes Connector

22.3.6.1 Multilingualism of the Lotus Notes Connector

The DirectFax Lotus Notes Connector is multi lingual. User interface, navigation, views and masks are available in German, English and French.

All required elements for presenting the different languages are contained in a database or template. Language specific templates are not used. For this reason configuration effort for the user specific language is reduced to a minimum.

The language is set individually per database using a configuration document. This document is the default for all users of the database. Additionally the user has the option to individually adjust the language using a so-called profile document. The user's profile document is automatically created when the database is opened and can be edited and changed afterwards.

The proposed language for the profile document is derived from the configuration document, as mentioned above.

When configuring the language, please take in mind that a language change comes into effect only after the database was closed and opened again.

If a user switches in his user profile the language from English to German the German user interface, especially the German navigation, is only available after the database was closed and opened again.

22.3.6.2 The databases user profile

The language information for the corresponding database is stored in the profile document.

If a user opens the Lotus Connector database for the first time, his user profile is displayed automatically.
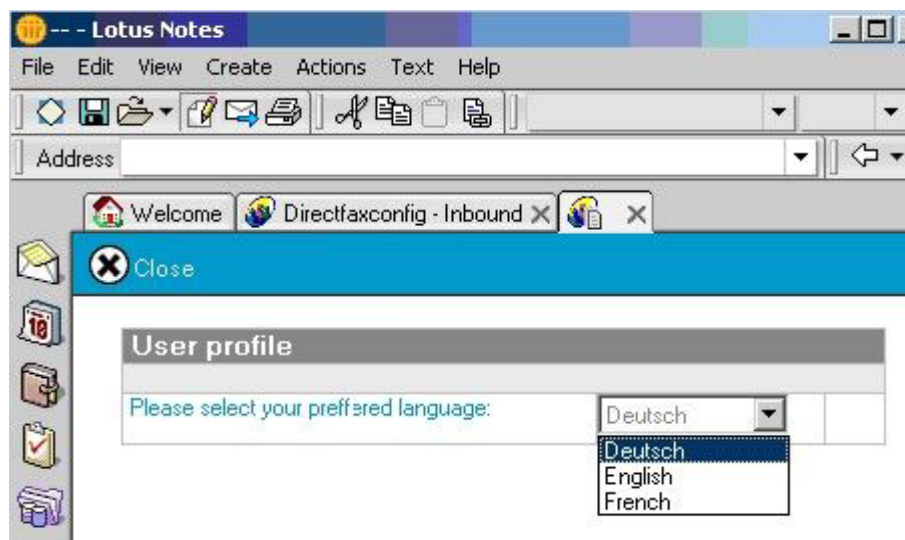
0167 – User profile

He selects the language and closes the document.

The user is prompted to close and to reopen the database in order to get the presentation in the selected language.
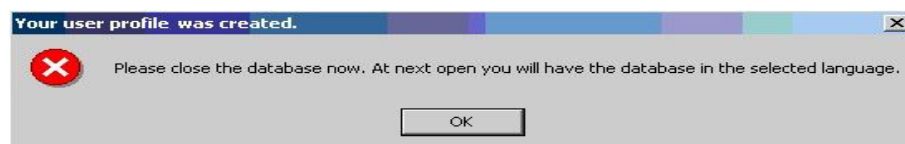
0168 – User profile

22.3.6.3   Language Configuration

Configuring the language or changing the configuration document of the database and user profile is for all databases identical.

The user selects in navigation the option Configuration and gets via the menu option Actions access to the corresponding actions.

0169 – Edit user profile

The following actions are displayed using option Configuration.

Query version

Using the action Query version the version number of the Lotus Notes Connector currently installed can be investigated.

Edit default language

Using the action Edit default language the configuration document of the database is displayed.
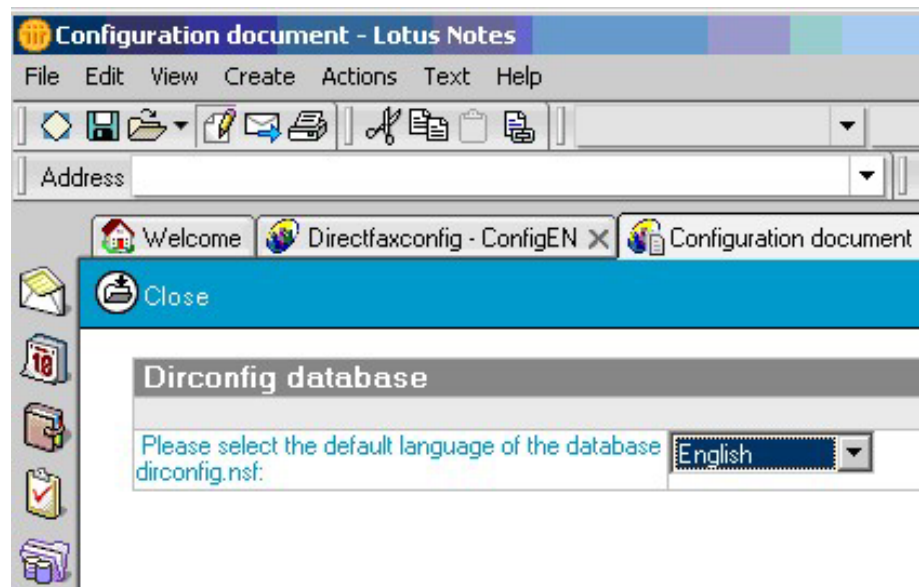
0170 - Configuration

At this place the default language of the database is defined. This is the default language for the creation of the user profiles.

Edit user profile

The action Edit user profile enables the user to access his specific user profile document. There he can define the language for the database.

0171 - User profile

22.3.6.4   DirectFax – Create the outbound configuration iSeries user name

Because all faxes sent with DirectFax Connector for Lotus Notes to the iSeries pass through the PC on which the router is installed, the Notes user ID and the iSeries user ID must be matched.

 This takes place in the DirectFax configuration database dirconfig.nsf.

Start the Lotus Domino Administrator and enter your password.
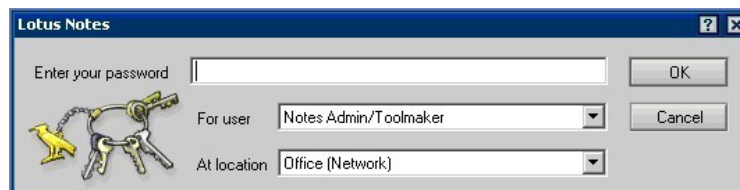
0154 - Password

With "**File**", "**Open database**", open the file Dirfaxconfig on the Domino Server.
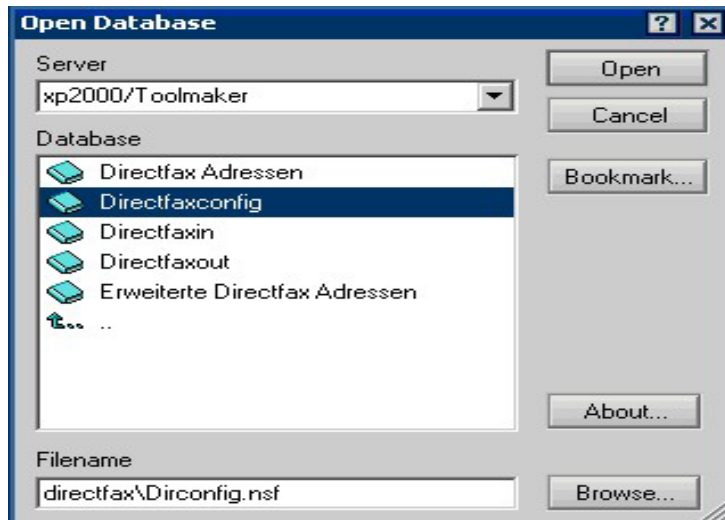
0172 – Open database

Select "**Outbound**" and the click "**New outbound config**".
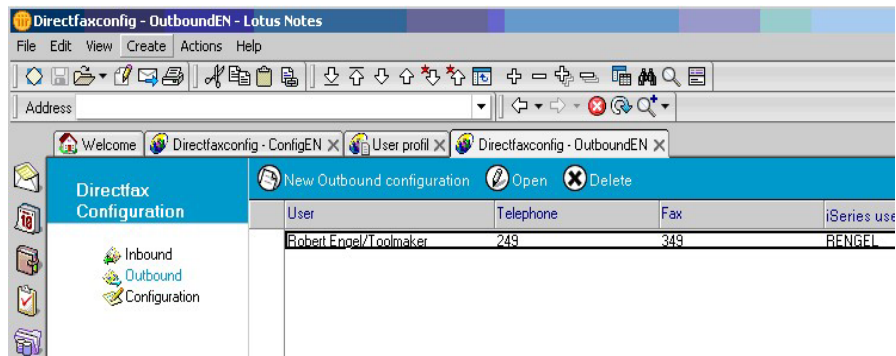
0173 - Dirfaxconfig

The outbound configuration form is displayed.

Make the following entries:
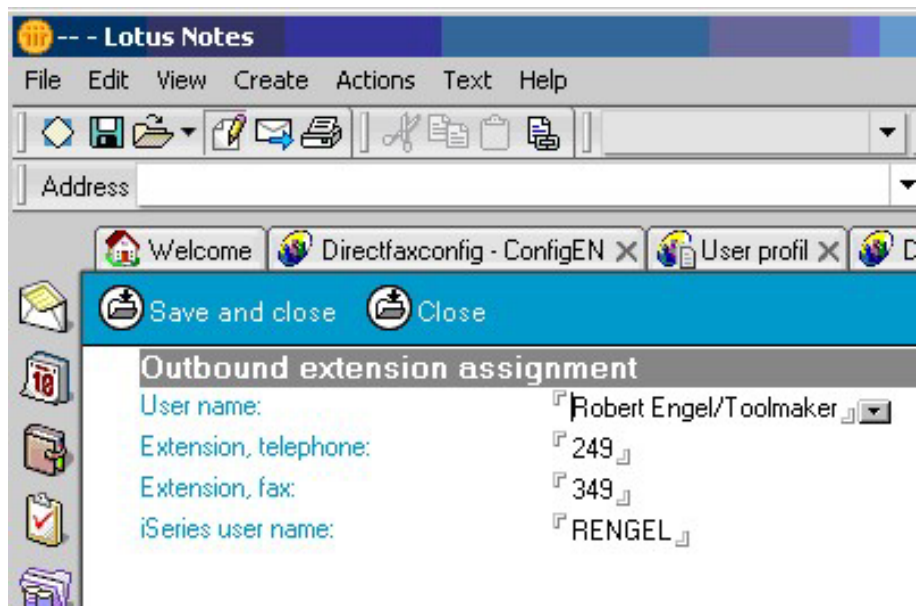
0174 - Exchange matching

Click "**Close**". When prompted to save the new document, choose "**Yes**".

22.3.6.5 DirectFax – Inbound configuration Exchange matching

Incoming faxes are passed from the iSeries to the Domino Server. There, the recipient's exchange is matched to the Lotus Notes user. The fax is then sent by e-mail to the user.

Matching of exchanges to Lotus Notes users or user groups takes place in the DirectFax configuration database dirconfig.nsf

Start the Lotus Domino Administrator and enter your password.
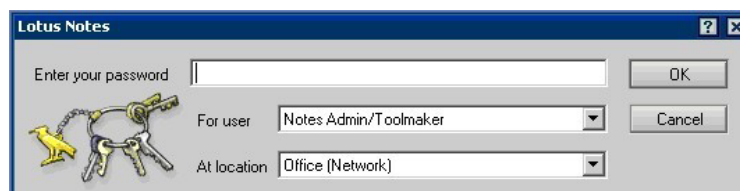
0154 - Password

With "**File**", "**Open database**", open the file Dirfaxconfig on the Domino Server.
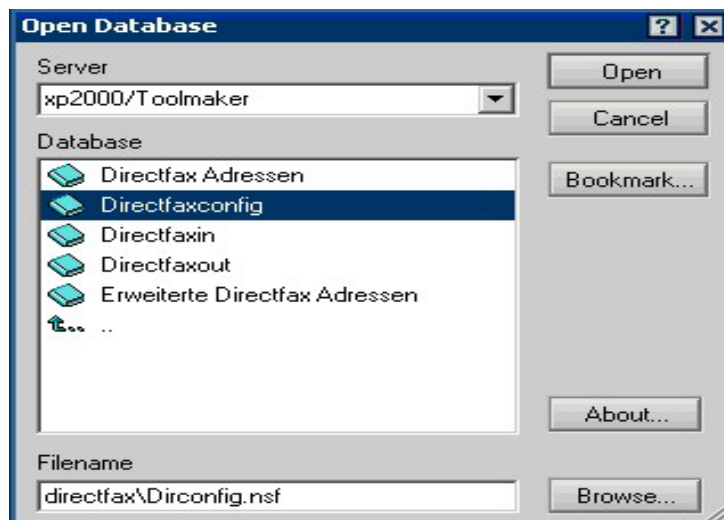
0175 – Open database

Select "**Inbound**" and the click "**New inbound config**".
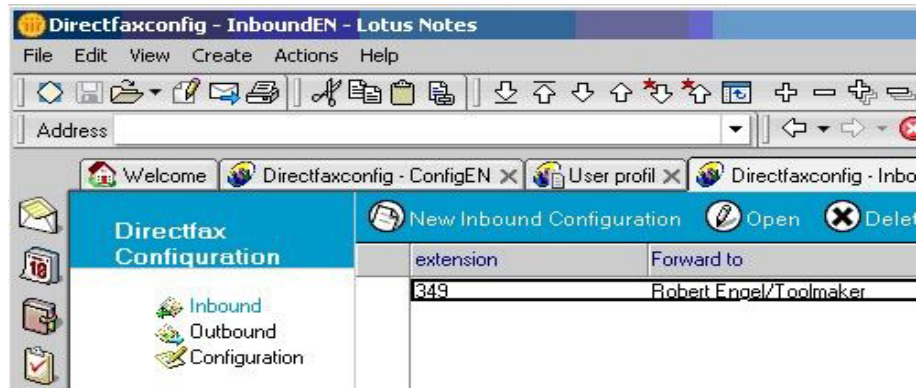
0176 - Directfaxconfig

The inbound configuration form is displayed.

Make the following entries:
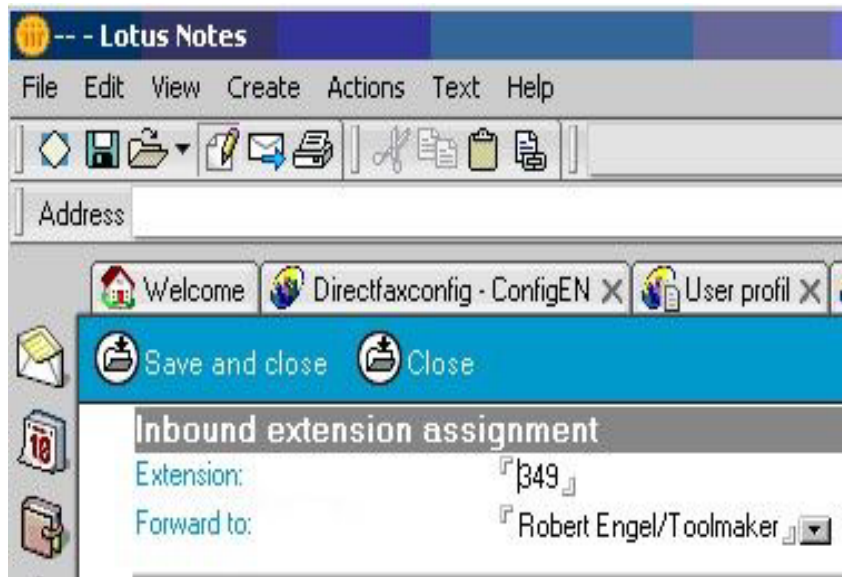
0177 - Exchange matching

Click "**Close**". When prompted to save the new document, choose "**Yes**".

22.3.7 Lotus Notes Imageviewer

If you have not installed the DirectFax PC client, you will need to install Imageviewer in the Lotus Notes directory before you can view faxes. The installation CD contains a separate installation routine for Notes which you can find in the folder "Lotus Notes Imageviewer". To make it easier to install to the client PCs, you can copy this folder to a network computer and install from there. Start the installation with the file Setup.exe.
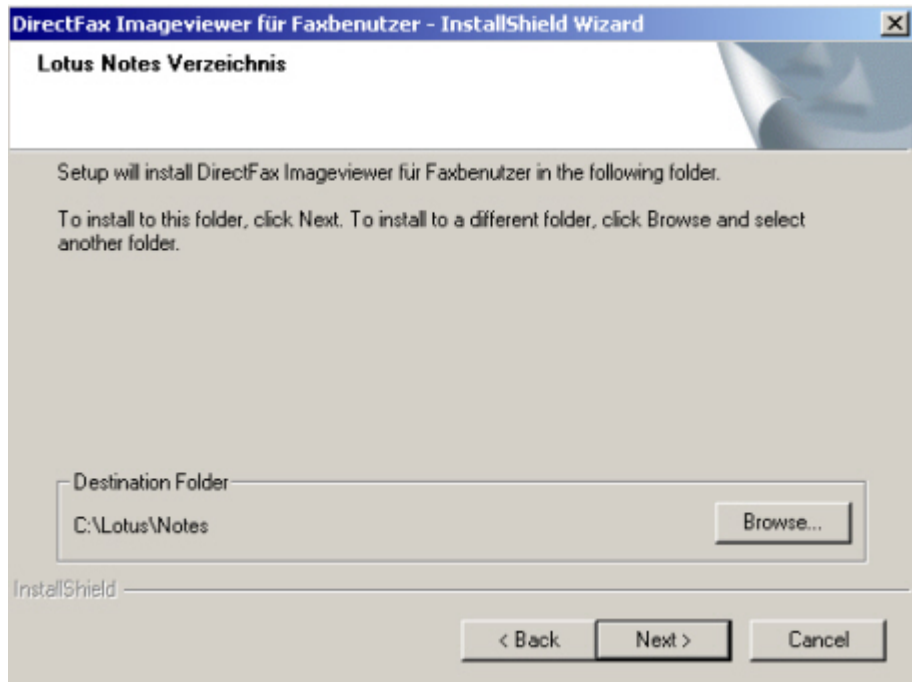
0178 - Installation wizard

In this dialog, select a location on the local Notes client. The default location, as shown, is C:\Lotus\Notes.
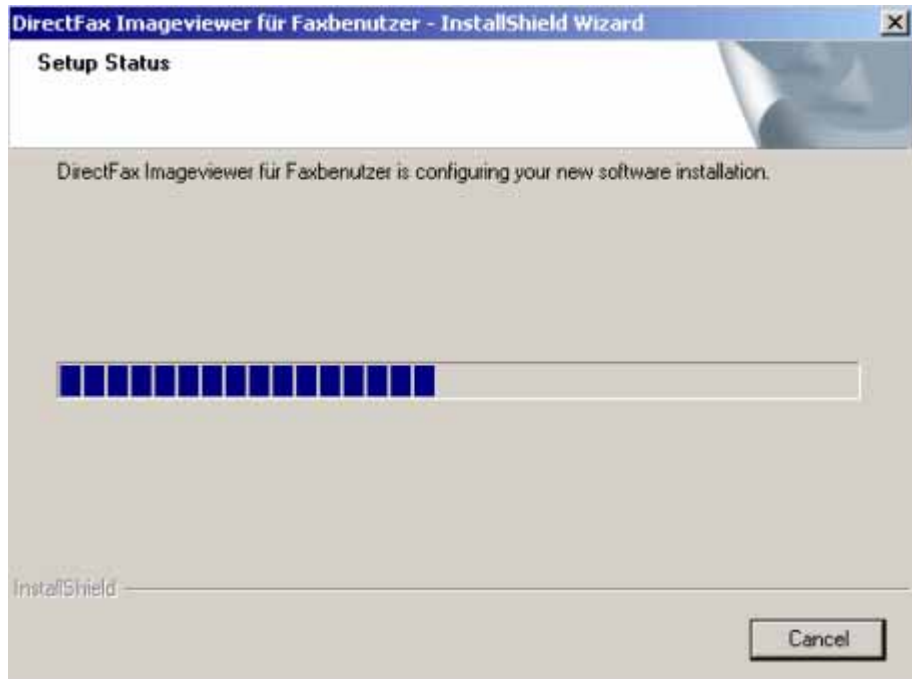
0179 - Installation progress indicator

22.3.8 Start and configure the PC router

Point to "**Start**" – "**Settings**" – "**Printers**" and set "**DirectFax32 for iSeries**" as the default printer.

Start the router program by selecting "**DirectFax Notes Router**" from the DirectFax Start menu.

The DirectFax Notes-Router applies the Notes-Client installation of the PC where it was installed.

For this reason you must authenticate yourself with user id and password when the DirectFax Notes-Router is started. For this use the user id the Notes-client was started with.

Enter the password
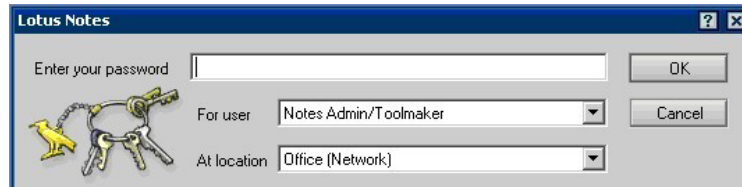
0154 - Password

The DirectFax Notes-Router is started.
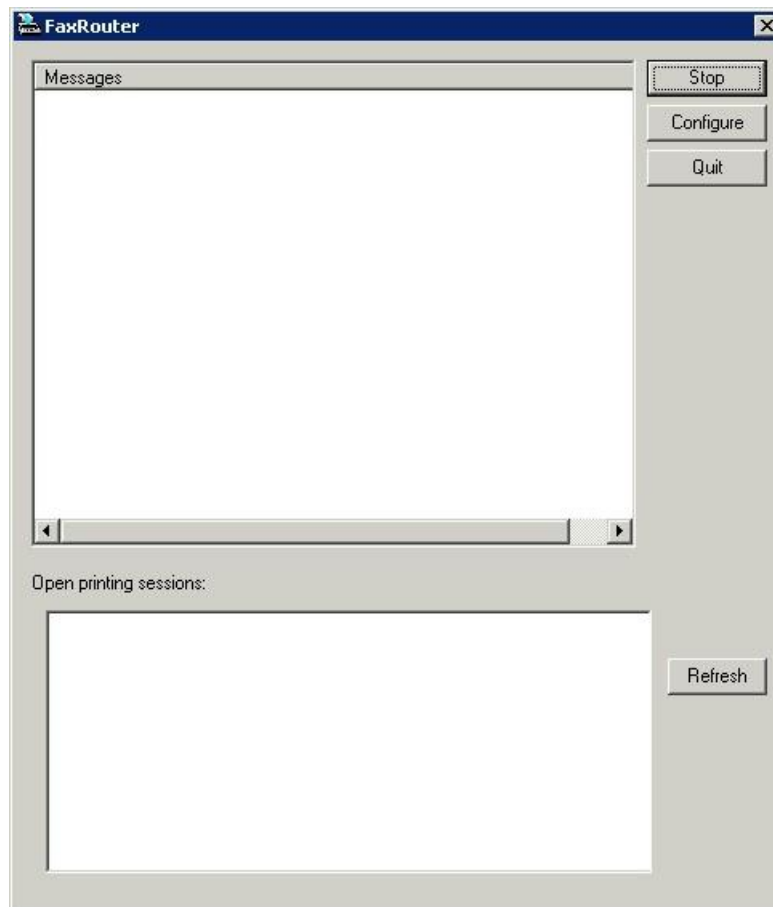
0180 – Fax router

To start configuring the router, click "**Configuration**"
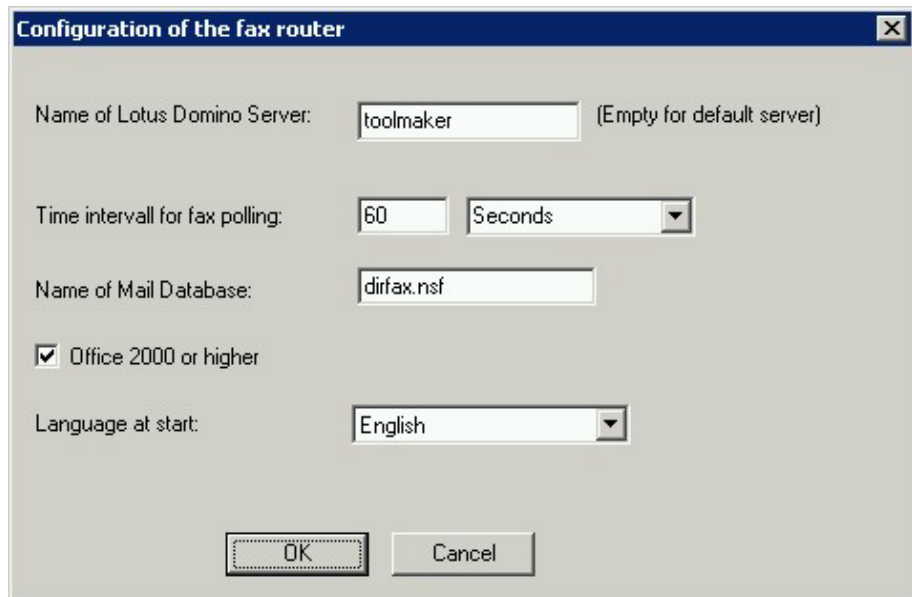
0181 - FaxRouter

Name of the Lotus Notes server
Enter the name of your Domino Server.

Interval for fax polling
Defines how often the router checks whether the DirectFax agent has forwarded new faxes for sending.

The DirectFax agent processes documents in the database Dirfaxout.nsf every 5 minutes. If you also set an interval of 5 minutes for query, it is possible, in case of unfavourable constellation, that 10 minutes will elapse before the fax is actually sent. We recommend that you set this interval to between 1 and 2 minutes.

Name of the mail database

Enter the name of the database for outgoing faxes. The database name must be relative to the Domino data folder of the Domino server (directfax\dirfaxout.nsf).

Checkbox - Office 2000 and higher

Check the **checkbox Office 2000 or higher**, if you want to use the „Attachment print" function of the FaxRouter and the installed Microsoft Office version is **Office 2000** or higher.

Click "**OK**" to apply the new configuration and the click "Start" in the fax router dialog to start routing.

22.4   Test functionality

There are three components involved in sending Notes messages by DirectFax: the Notes client, the DirectFax agent and the DirectFax router program. You can test the installation and configuration of these components as now described.

22.4.1 Create and send a message

Open your Lotus Notes client, log on and create a new message.
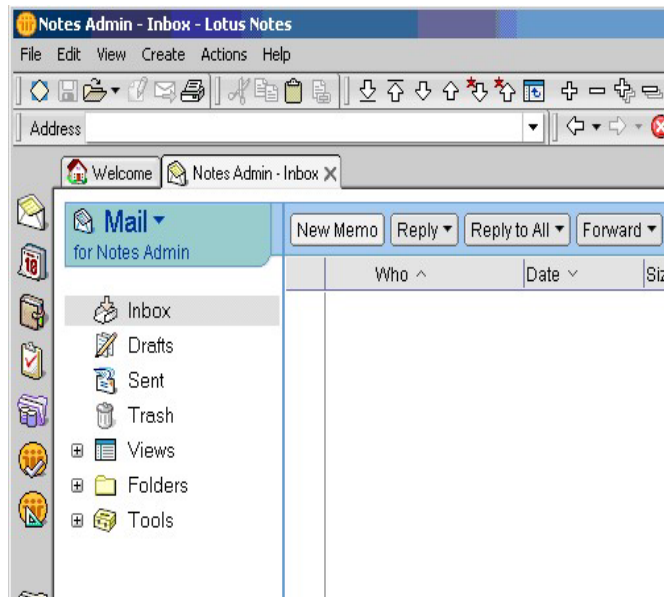
0182 – Create message

In the "**Select addresses**" dialog, select an address from "**DirectFax Addresses**" for which you know a fax number has been saved, the click "**To**" to add the entry to the recipient list.
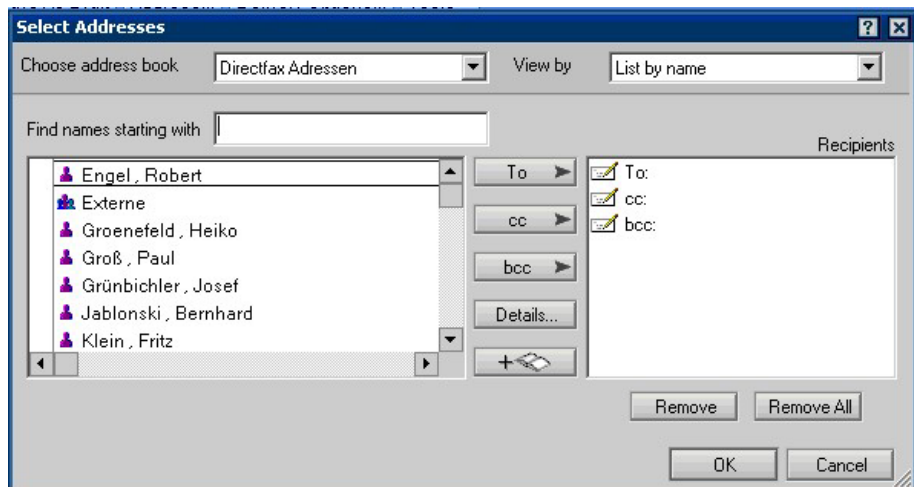
0183 – Select recipient

Click "**OK**" to return to the message.

Now decide how you want to send the message. If you make no further entries, the message will be sent as Notes mail. If you type @fax at the end of the recipient name, the message will be sent via DirectFax.

Enter a subject and a short message.
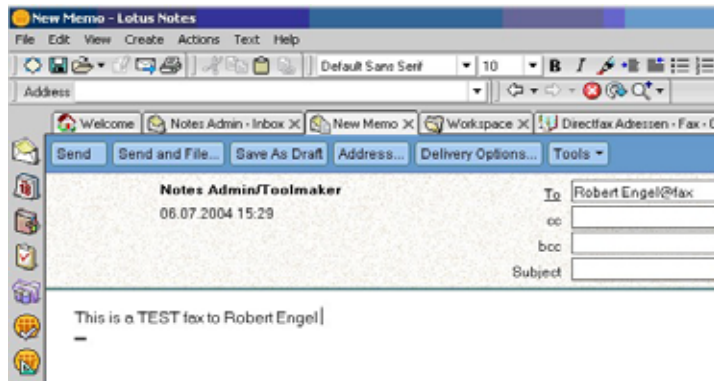
0184 – New message

Now click "**Send**" to send the message.

After about 5 minutes, the message should appear as an outgoing fax on the iSeries, from where it is sent. You can check this from your PC if you have the DirectFax client installed by starting "**Outgoing faxes**", or from a 5250 session with the command "**WRKFAXSTS**".

You can also check each step in the send process.

22.4.2 Check Dirfaxout.nsf

Messages sent with @fax appended are passed to the database Dirfaxout.nsf where they are processed by the agent.

Open "**Dirfaxout.nsf**" on the Domino Server with "**File**", "**Database**", "**Open**" and then click "**Fax - incoming**".
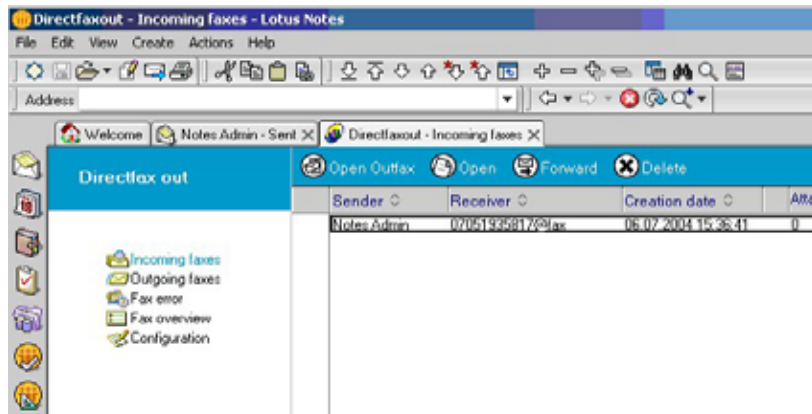
0185 – Incoming fax

The message is displayed. You can display more information by clicking "**Fax - overview**".
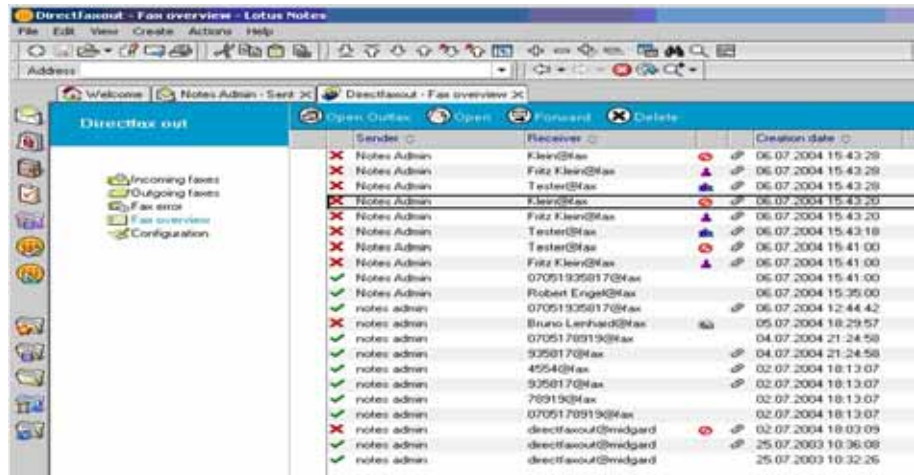
0186 – Fax overview

This displays all faxes processed to date. The symbols displayed under "**Code**" indicate the following:

Hourglass   Message is waiting to be processed by the agent

Green hook   Message has been successfully processed

Red X   An error occured when the message was processed

Warning sign   Recipient does not exist in DirectAdr.nsf address book

Fax symbol   The is no fax number stored in DirectAdr,nsf address book with the recipient specified.

People symbol   Recipient person exists more than once in address book

Group symbol   Recipient group exists more than once in address book

The first message in the list should be the one you've just created.

Check whether the FaxRouter – Agent is activated via the configuration document. As default the agent is active.

Open the configuration view.
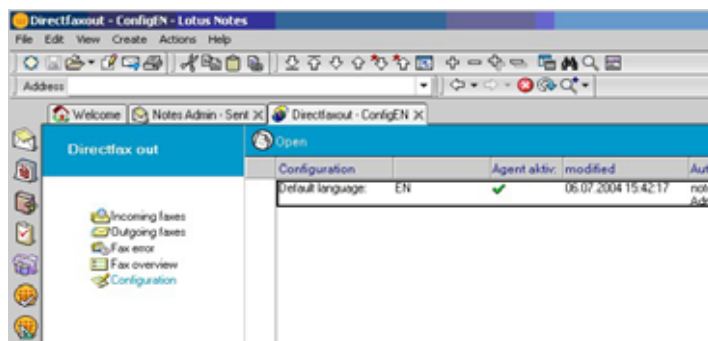
0187 – Language configuration

Open the configuration document.
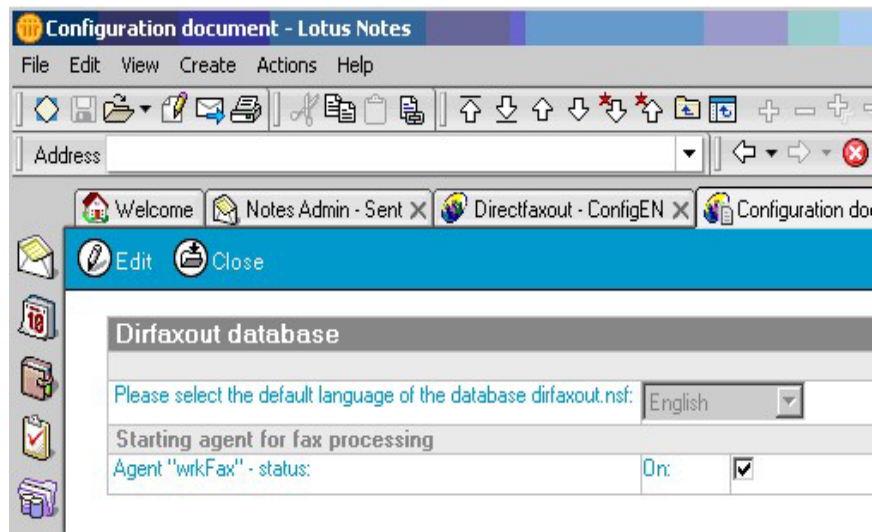
0188 – Configuration document

The „wrkFax" agent must be in active status.

If the agent is active the message will be processed after a maximum interval of five minutes.

You can also view the message in "**Fax – outgoing**" in "**Dirfaxout.nsf**".

22.4.3 Check the fax router

The Faxrouter processes each fax sent to the Dirfaxout.nsf database in cyclic intervals. Messages processed by the router cannot be displayed, but you can view the entries in the router activity list. You can use this dialog to check that messages have been processed.

0189 – Fax router

22.4.4 Check iSeries outgoing faxes

Finally, after all of the above processes have been successfully completed, the outgoing fax is sent to the DirectFax queue on the iSeries. From a 5250 session, you can check when it was sent with the command "**WRKFAXSTS**". If you are using a graphical user interface, you can do so by selecting "**Outgoing faxes**" from the "**DirectFax**" program group.

22.4.5 Check incoming faxes

Incoming faxes are passed from the iSeries to Lotus Domino.

For this to happen, the DirectFax fax distributor (WRKFAXDTR) must be configured on the iSeries.

Command WRKFAXDTR

Menu ENTER DESTINATION INFORMATION and CHANGE

Entries:

Destination information: CSI for forwarding active

Additional function:*DOM

Function parameter: faxin@dirfaxin

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0190 - Example of forwarding a fax to Lotus Domino

Important:

The Domino Server must be entered as the SMPT server that forwards faxes as mail.

Configure as follows:

iSeries command CFGTCP

Option 20

Option 12

Entry: Post router – Enter the Domino SMTP server if required

Test incoming fax distribution from Notes

Create a new memo

Enter the following text in the subject line:

FAXINC%CSI%EX%Seq.No%RecDate%Pages%ASUser%

Where:

%CSI
Sender code

%EX
Recipient exchange

%Seq.No
Sequence number of incoming fax

%RecDate
Receipt date and time in format
DD.MM.YYHH.MM

%Pages
Number of pages received

%ASUser
iSeries user name (see DirectFax – Inbound configuration exchange assignment)

The subject line might now look like this:

FAXINC%935816%150%123%02.05.0212:34%6%HGR%

Enter faxin (the mailin database) as the mail recipient

0191 – New message

- o Send
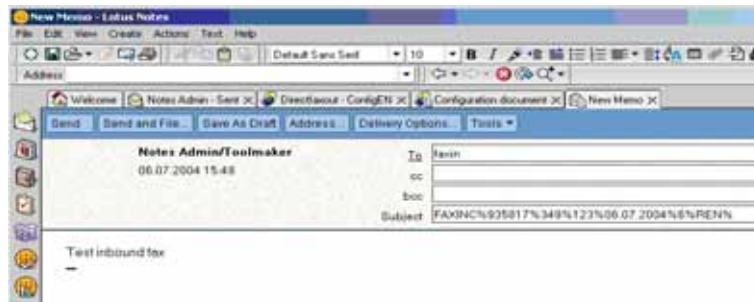
- o The mail is sent to the dirfaxin.nsf database and displayed as a mail routing event

- o Open dirfaxin.nsf
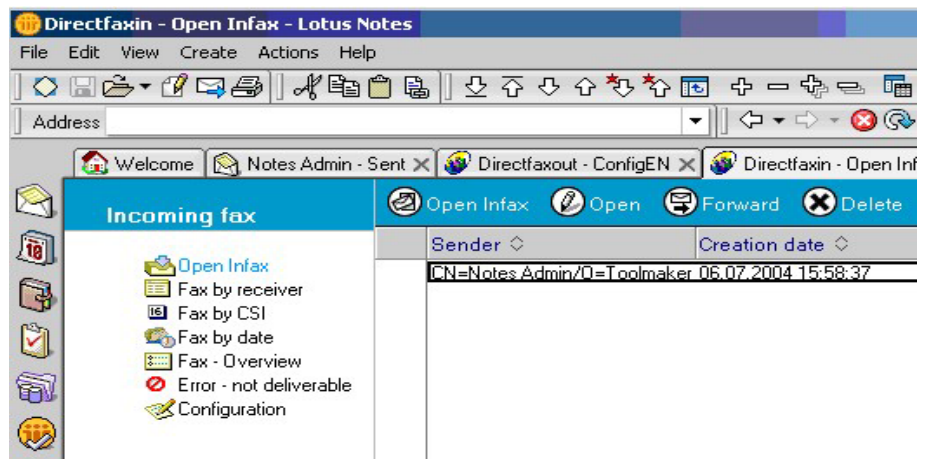
0192 – Incoming fax

- o The new mail/fax is displayed in the **Fax / incoming** view

- o Kurze Zeit (max. 5 min) nach Eingang der Mail startet in der dirfaxin – DB automatische der Agent Weiterleitung (vgl. Log-File Amgr: "Forwarding" agent started

---

o   The mail is removed from the "Not processed" view and
    displayed under CSI, date etc.
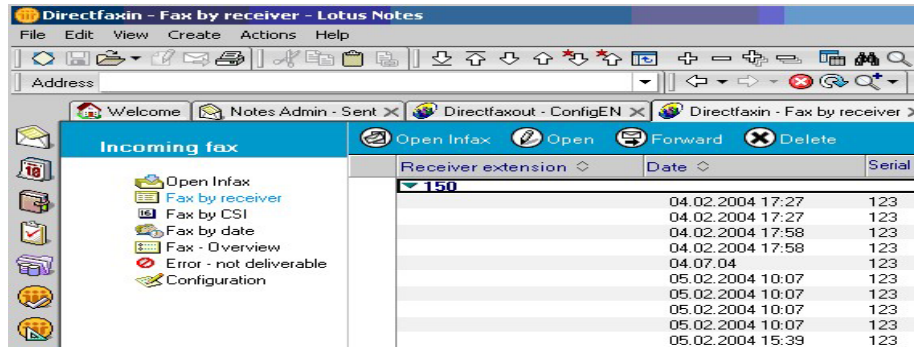
0193 – Fax – By recipient

22.5   Extended functions

Beside the standard functions for sending and receiving faxes described in
chapter 22.4, the Lotus Notes Connector provides extended functions for
faxing file attachments and re-dispatching a fax in case of an error occurred.

22.5.1 "Attachment – print"

Open your Lotus Notes client, log on and create a new message.

Insert the file that you want to dispatch into the Body field of the message.
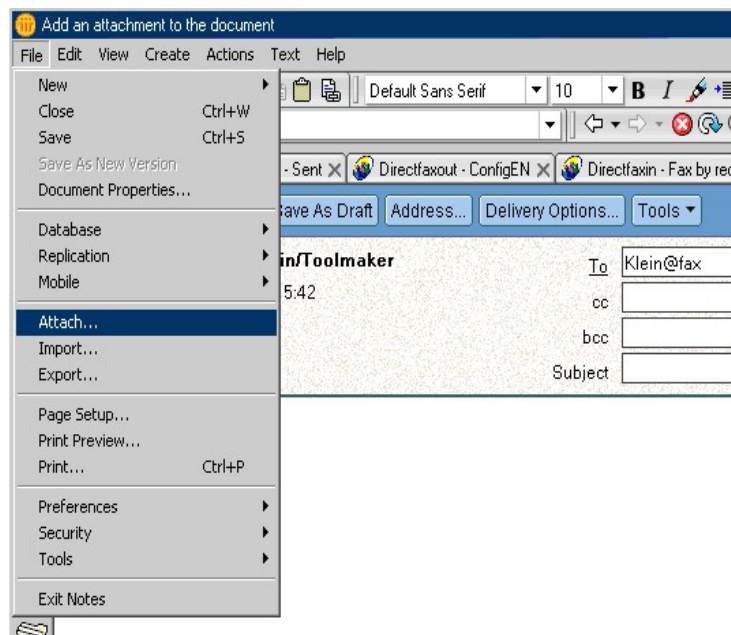
0194 - Attachment

Dispatch the message as usual using the function *Send*.
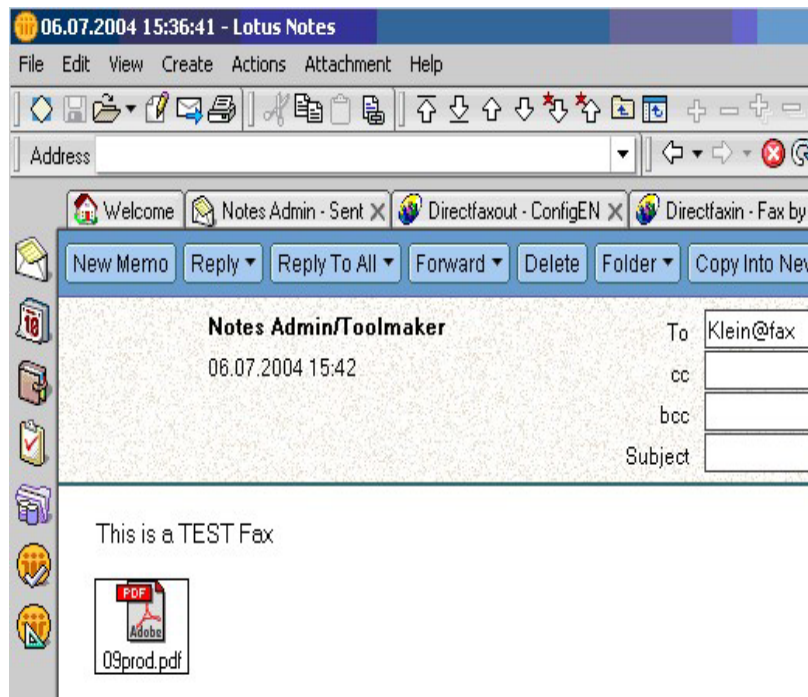
0195 – New message

The recipient receives a fax with the message text on the first page and the text of the attached file on the following pages (e.g. Quote Toolmaker 181103.doc).

22.5.2 Procedure in case of dispatch errors with Lotus agent

The procedure described below refers to a dispatch error that might occur when processing faxes in the Dirfaxout database using the Lotus agent.

It concerns addressing errors only that might occur when determining the recipient's fax number.

The Lotus agent tries to determine the recipient's fax number based on the recipient's address.

If the fax number is entered into the recipient's address, e.g.. *07051935817@fax* the agent determines the fax number directly and dispatches the fax.

If the recipient's name is entered into the address, e.g. *Peter Miller@fax* the agent tries to determine the recipient's fax number via the DirectFax address book.

With this the following errors may occur:

- There is no fax number stored with the recipient in question.

- The recipient in question is not unique

Important:

The agent does not check the fax number itself. The agent cannot determine whether the entered number is a correct and existing fax number.

The sender of the fax receives a corresponding message, in case of an error when determining the recipient's fax number.
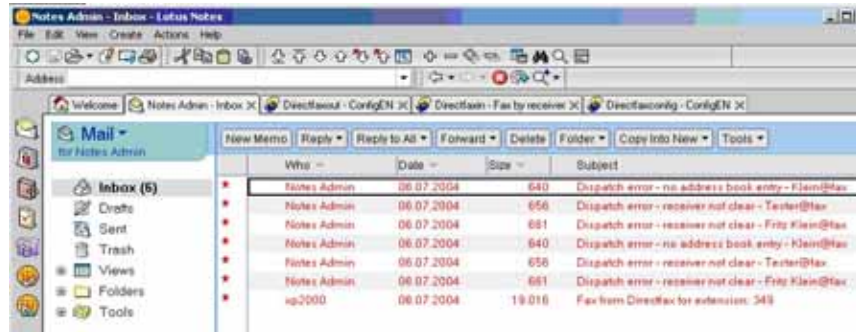
0196 - Incoming faxes

If the sender opens the message he receives the following text e.g.:
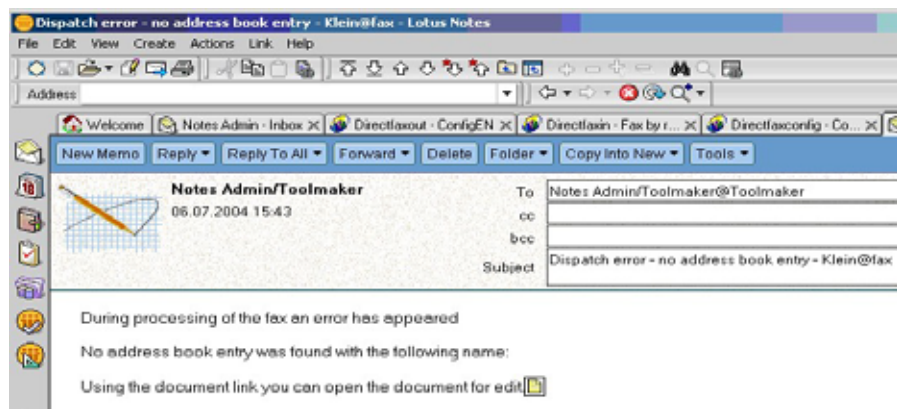
0197 – Recipient not unique

To open the processed fax, click now the doc link in the message.
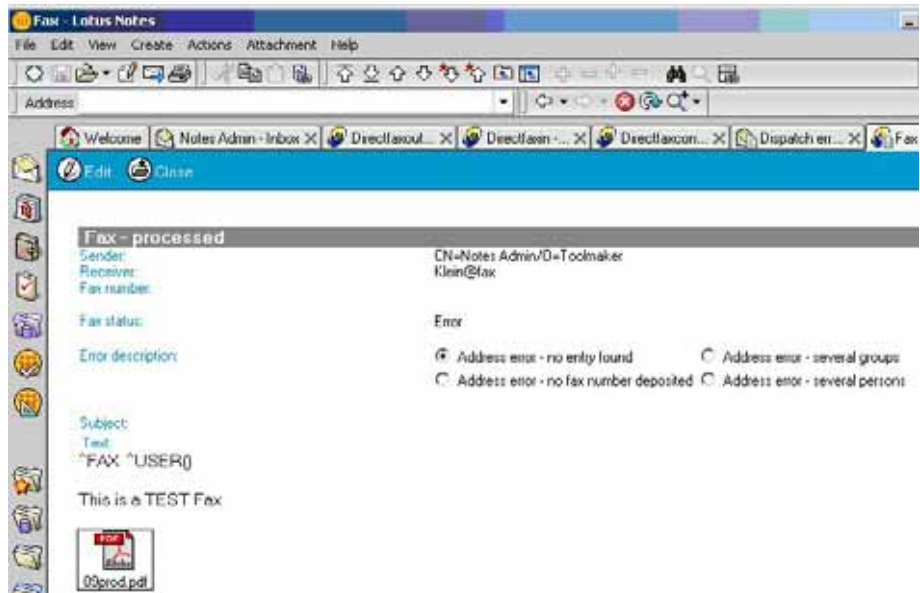
0198 - Fax

Open the document using the function *Edit* in the edit mode.
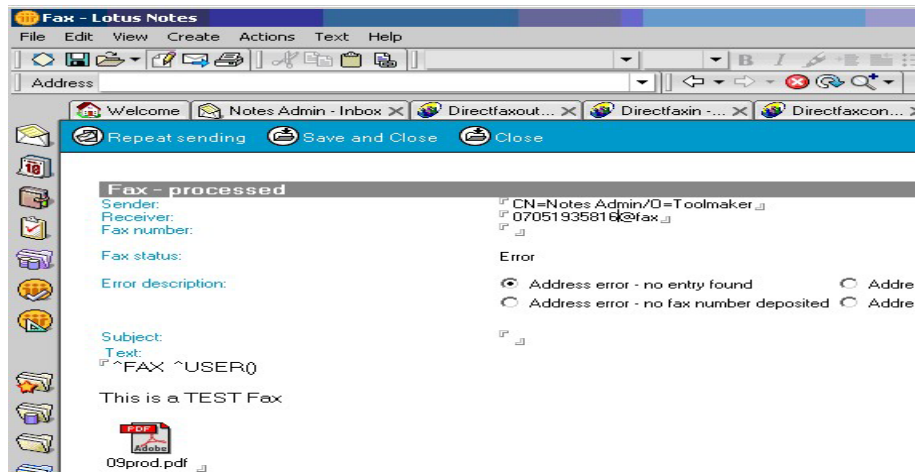
0199 - Fax

Modify the recipient's address in the recipient field and dispatch the fax again using the function *Send again.*

Enter Yes in the dialogue window.
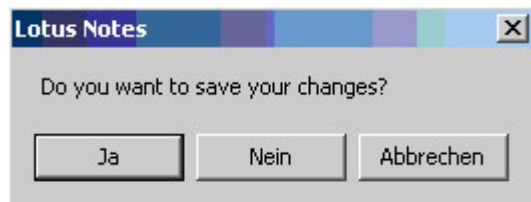
0200 - Save

The corrected document is now placed again in incoming mail of the database Dirfaxout.nsf and will be processed again through the agent.
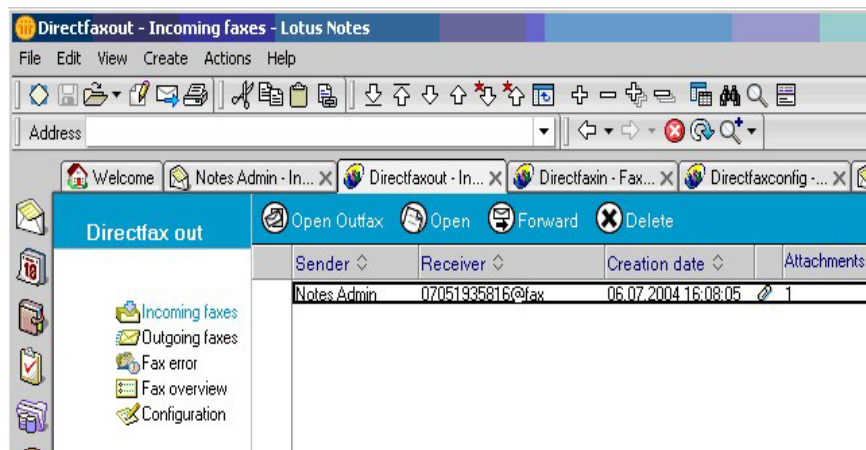
0201 – Incoming fax

22.6   Important notes

The following conditions must apply so that the fax is sent correctly:

The DirectFax PC client must be installed.

DirectFax Connector for Lotus Notes must be installed.

DirectFax32 must be set as the default printer.

22.7   Logging

Fax dispatch and preparation of Lotus Notes documents for dispatch is undertaken by the agent wrkFax in the database Dirfaxout.nsf.

Incoming faxes are distributed by the agent wrkfaxVerteilung in the database Dirfaxin.nsf.

In case problems arise, you can keep a record of the actions executed by the agents in a log file for future reference. A log document is created in the database Directfaxlog.nsf each time the agent is run.

Any errors that occur while the agent is running are also logged. Agent logging must be activated in the database containing the agent.

22.7.1 Activate logging for the agent wrkfax

To activate logging for the agent wrkfax, proceed as follows:

Choose File -> Database -> Open to open Dirfaxout.nsf.
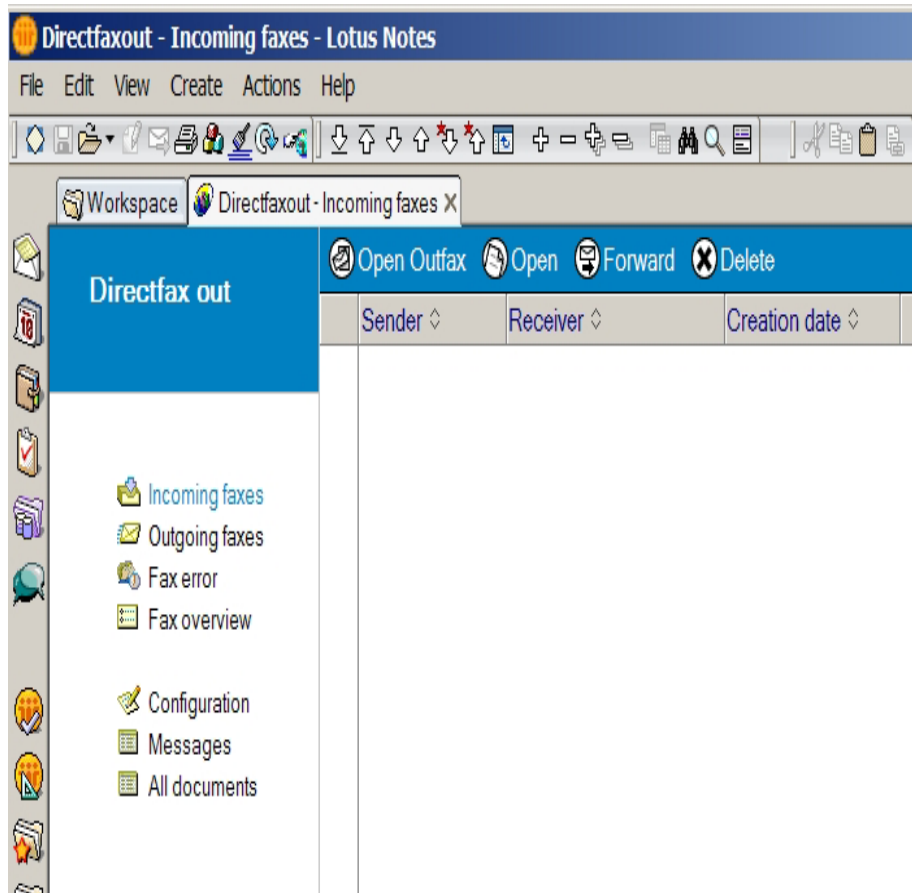
0282 – Open Dirfaxout.nsf

Select the configuration view.
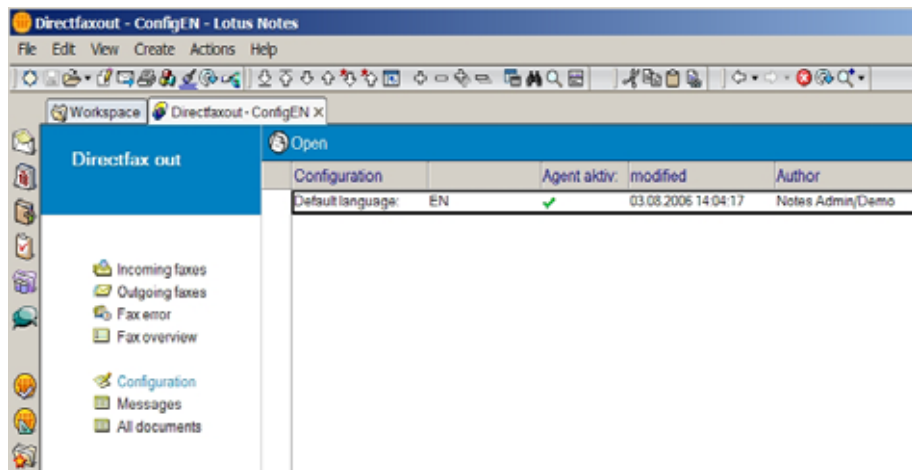
0283 - Configuration

And open the configuration document with a double-click

0284 – Configuration document

Activate logging by setting the **Agent Logging Status** flag to **active**.

You can use the **Agent Logging Level** setting to specify the level of detail in the log.

      Level 1   =   Simple logging

      Level 3   =   Full logging

In the **Agent Logging Server** field, enter the name of the Domino server on which the log database is located.

In the **Agent Logging Database**, enter the name of the log database, including the path.

Use the **Agent Infomail on Error option** to specify whether an Infomail is sent automatically when an error occurs.

Specify the Infomail recipient in the **Agent Infomail Addressee** field.

During agent logging, the messages output by the agent are automatically written to a document in the log database.

Messages are not output to the system administrator while the agent is running. To check that the agent has executed properly, the log must be consulted.

However, you will sometimes need to see agent messages during run time, particularly when analysing errors.

The trace function is provided for this purpose.

Trace allows you to output agent log messages to the status line (option: Print) or to a message box (option: Messagebox), so that the administrator can run the agent interactively.

Activate the trace function by selecting either the **Print** or **Messagebox** option.

You can use the **Agent Logging Level** setting to specify the level of detail in the log.

Level 1   =   Simple logging

Level 3   =   Full logging

Note:
The trace function should be used for system analysis only, and not in a live environment.

22.7.2 Activate logging for the agent wrkfaxVerteilung

To activate logging for the agent wrkfaxVerteilung, proceed as follows:

Choose File -> Database -> Open to open Dirfaxin.nsf.
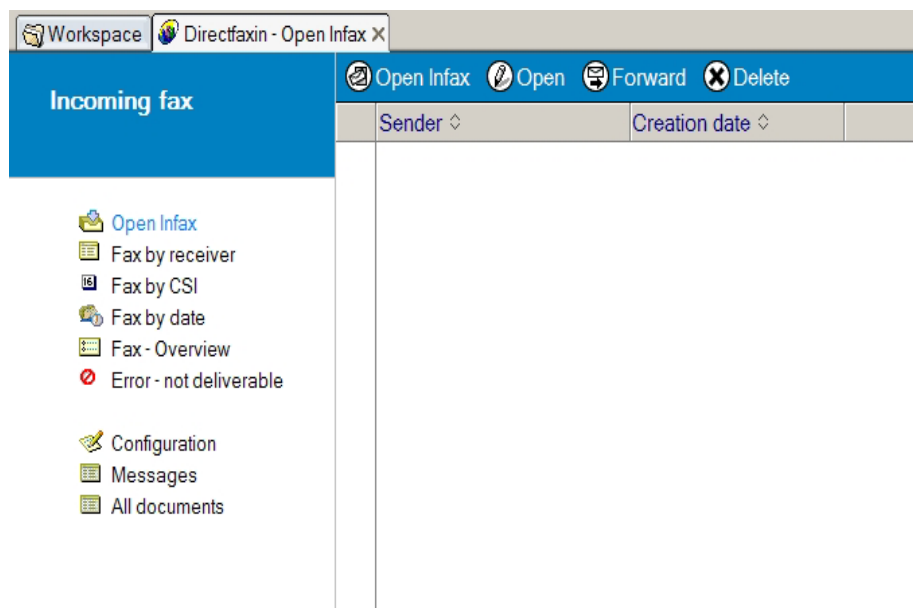
0285 – Dirfaxin.nsf

Select the configuration view.
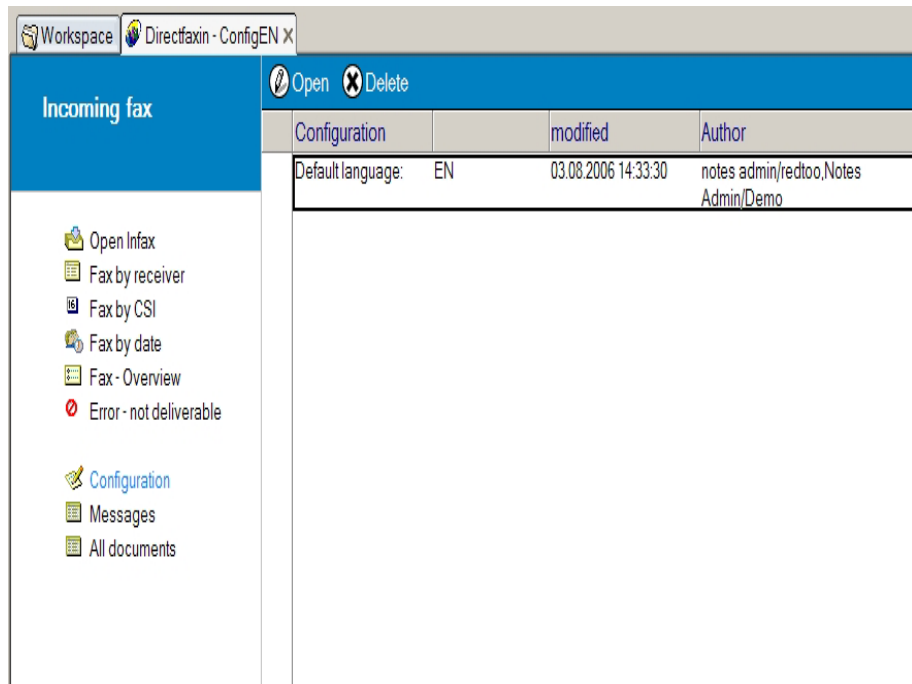
0286 - Configuration

And open the configuration document with a double-click

0287 – Configuration document

Activate logging by setting the **Agent Logging Status** flag to **active**.

You can use the **Agent Logging Level** setting to specify the level of detail in the log.

Level 1 = Simple logging

Level 3 = Full logging

In the **Agent Logging Server** field, enter the name of the Domino server on which the log database is located.

In the **Agent Logging Database**, enter the name of the log database, including the path.

Use the **Agent Infomail on Error option** to specify whether an Infomail is sent automatically when an error occurs.

Specify the Infomail recipient in the **Agent Infomail Addressee** field.

During agent logging, the messages output by the agent are automatically written to a document in the log database.

Messages are not output to the system administrator while the agent is running. To check that the agent has executed properly, the log must be consulted.

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Trace allows you to output agent log messages to the status line (option: Print) or to a message box (option: Messagebox), so that the administrator can run the agent interactively.

Activate the trace function by selecting either the **Print** or **Messagebox** option.

You can use the **Agent Logging Level** setting to specify the level of detail in the log.

Level 1   =   Simple logging

Level 3   =   Full logging

Note:
The trace function should be used for system analysis only, and not in a live environment.

22.8   The log database DirectfaxLog

When logging is active, a log document is saved in the database DirectfaxLog each time the agent is run.

To view the log, proceed as follows:

Choose **File -> Database -> Open** to open DirectfaxLog.nsf.
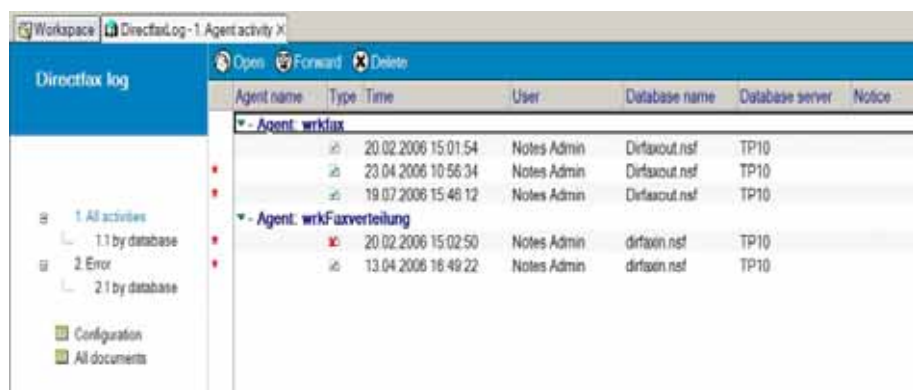
0288 – Directfaxlog.nsf

View 1, **All activities**, displays an overview of all logs categorised by agent name. View **1.1** is sorted **by database** name.

The green check mark symbol indicates that the agent has completed successfully.

The red x symbol indicates that an error has occurred during agent execution.

Definition „Error":

An error occurs if an undefined status is encountered while the agent is running and an error handler is activated.

For example, if no addressee is found for a fax, the agent wrkFax still executes successfully, but the fax cannot be sent.

While a send error occurs and the fax is displayed accordingly, there is no error in agent execution as such.

View 2 displays the logs recording **errors** in agent execution. This view is categorised by agent name. View **2.1** is sorted **by database** name.

Double-click a list entry to open the corresponding document.

Example - log: Agent – wrkFax

0289 - wrkFax

Example - log: Agent – wrkFaxVerteilung

0290 – wrkFaxVerteilung

22.9   Faxing Notes documents

The procedure for sending a fax via Lotus Notes is as follows:

The fax sender creates a mail document and sends it to the fax domain @fax.

The document arrives in the mailin database Dirfaxout.nsf, where it is processed by the agent wrkFax and passed to the iSeries by Lotus Notes Connector.

The document is then sent as a fax by the Directfax program on the iSeries.

The mail text is used as the fax text.

Lotus Notes Connector also allows you to send other Notes document types by fax.

For example, if you create and maintain your customer correspondence with a Lotus Notes CRM system, documents such as letters, quotes etc. can be faxed with Lotus Notes Connector.

22.9.1 Setup for faxing additional Notes document types

A Lotus Notes Designer Client is required to set up fax dispatch for additional Notes document types.

Because custom functions may be required, configuration should be done by a Lotus Notes developer.

Mail document in Lotus Notes have the format (template) Memo.

To fax a Notes document with a format other than Memo with Lotus Notes Connector, configure it as follows:

Implement an action to transfer the document you want to fax from the database in which it was created to the DirectFax database Directfaxout.

For example, you could send the document by mail, or copy it with an action in the database Dirfaxout.nsf.

To be viewed in the Fax – incoming display and processed by the wrkFax agent, the document must contain the following fields:

Field name	Field content
Form	Name of Notes format / template
SendTo	Recipient name or fax number (If SendTo is a name, it must be entered in the Directfax address database)
From	Sender (Notes name / User ID of sender)

Open the database containing the document, and the database Dirfaxout.nsf with Lotus Notes Designer.

Copy the document template (Form) from the database to Dirfaxout.nsf.

You can now fax the document with Lotus Notes Connector.

The following example takes you through the process step-by-step:

We want to fax a document with the format "Letter" from our "Customers.nsf" database.

We begin by creating the action "Send by fax" in the "Customers.nsf" database. This action copies a document with the "Letter" format to the database Dirfaxout.nsf.

The "Letter" template, which we used to create the document in the "Customers.nsf" database, contains the fields Form, SendTo and From, as well as the formatted text we want to send.

We also copy the "Letter" template from the "Customers.nsf" database and paste it into "Dirfaxout.nsf".

We now create the document "Letter" in the "Customers.nsf" database.

The action "Send by fax" copies the document to the database Dirfaxout.nsf.

The document is displayed in the "Fax – incoming" view.

The agent wrkFax processes the document.

It first checks whether the document is a mail with the format "Memo". If the document is in a different format/template, the agent looks for that template in the Dirfaxout.nsf database.

If the template is found in the database, the agent copies the document to a graphic which is then faxed.

23.0 The DirectFax PCL converter

Warning:
This option is <u>not</u> available to DirectFax Lite customers (product code DF450LT).

The PCL converter is a DirectFax interface that allows you to send iSeries **PCL spool files** using AutoFax, or manually with WRKSPLFAX. These spool files have the attribute ***USERASCII** and can be created on the iSeries by Infostore/400, SAP applications and other tools such as LSDForms.

23.1   Native PCL converter

DirectFax Version 5.10 includes the first version of the native PCL converter. The entire conversion process is on the iSeries. The native PCL converted is a licensed program. Ask for a quote and a test license with the product code **DF450PL**.

Configuration
You can find the switch for the new converter with the command **CHGFAXVAL** F4. Set the parameter *PCL converter version (PCLCVT)* to ***AS400**. The previous parameter *Activate AFP/PCL interface (AFPPCL)* must be set to ***YES**. Close and restart DirectFax after changing the parameters or license code (see parameter *Restart fax RESTART *YES* at the beginning of CHGFAXVAL).

Updates at website
This interface is in development. Watch for updates and additional information in the DirectFax Support section of the Toolmaker website. Search for PCL Converter.

Functionality
The most complex aspect of PCL is determining the correct DirectFax fonts for PC fonts. The following attributes are used to describe fonts in the PCL data stream.

Orientation Converted by DirectFax.

Location   Ignored, not supported.

Typeface   Courier, Arial etc. Supported.

Stroke width   Bold etc. Supported.

Style 0=Upright, 1=Italic.

Height   Height of the character in 7200 DPI.

Pitch Characters per 100 inches.

Spacing   0=Fixed, 1=Proportional.

Symbol Set Ignored by DirectFax.

Corresponding keys have been assigned for all DirectFax fonts. This table is stored in the PCL parser:

Fax Font	Typeface	Stroke weight	Style	Height	Pitch	Spacing
0003 OCR B 10 CPI 12 points	110	0	0	1322	1020	0
0011 Courier 10 CPI (standard font)	3	0	0	1175	1000	0
0019 OCR A 10 CPI 12 points	104	0	0	1542	1020	0
0040 Letter Gothic 10 CPI Bold	6	3	0	1322	1020	0
0046 Courier Bold 10 CPI 12 points	3	3	0	1432	1020	0
0085 Courier 12 CPI	3	0	0	1175	1275	0
0087 Letter Gothic 12 CPI Bold	6	3	0	1322	1200	0
0111 Courier Bold 12 CPI 10 points	3	3	0	1212	1200	0
0223 Courier 15 CPI	3	0	0	1175	1569	0
0230 Letter Gothic 15 CPI BOLD (9P)	6	3	0	1138	1569	0
0254 Courier 17.1 CPI 8,5 points	3	0	0	1212	1700	0
0256 Courier 17 CPI	3	0	0	1175	1854	0
0280 Courier 20 CPI	3	0	0	1175	2266	0
0751 Times Roman 8,5 points	5	0	0	1065	0	1
0760 Times Roman 6 points	5	0	0	771	0	1
0761 Times Roman 12 points bold	5	3	0	1579	0	1
0762 Times Roman 14 points bold	5	3	0	1836	0	1
0763 Time Roman Italic 12 points	5	0	1	1616	0	1
0764 Times Roman 10 points bold Italic	5	3	1	1395	0	1
0765 Times Roman 12 points bold Italic	5	3	1	1616	0	1
1051 Times Roman 10 points	5	0	0	1469	0	1
1053 Times Roman 10 points bold	5	3	0	1395	0	1
1056 Times Roman Italic 10 points	5	0	1	1432	0	1
1351 Times Roman 12 points	5	0	0	1432	0	1
1803 Times Roman 18 points bold	5	3	0	2314	0	1
2103 Bookman 24 points bold	402	3	0	2791	0	1
2104 Helvetica 24 points	4	0	0	2681	0	1
2105 Helvetica 10 points	4	0	0	1175	0	1
2106 Helvetica 16 points	4	0	0	1836	0	1
2107 Bookman 10 points bold	402	3	0	1285	0	1
2108 Bookman 16 points bold	402	3	0	1800	0	1
2109 Helvetica 24 points bold	4	3	0	2791	0	1
2110 Helvetica 10 points bold	4	3	0	1212	0	1
2111 Helvetica 16 points bold	4	3	0	1800	0	1
2112 Helvetica 6 points bold	4	3	0	771	0	1
2113 Helvetica 12 points bold	4	3	0	1469	0	1
2114 Helvetica 12 points	4	0	0	1432	0	1
2115 Helvetica 6 points	4	0	0	734	0	1
2116 Helvetica 8P (Fact.2)	4	0	0	1138	0	1
2117 Helvetica 9P (Fact.2)	4	0	0	1248	0	1
2200 Symbol 10 points	2730	0	0	1322	0	1
2201 Symbol 16 points	2730	0	0	2718	0	1
4011 Letter Gothic 10 CPI Bold Latin 2	6	3	0	1322	1020	0
4085 Letter Gothic 12 CPI Bold Latin 2	6	3	0	1322	1200	0
9103 Times Roman 24 points bold	5	3	0	3012	0	1
9500 Cyrillic Bodoni 10 CPI Bold	53	3	0	1175	0	1

An algorithm is used to determine the best fax font for the PCL font. Toolmaker may make changes to this table as required.

The FAXMIX job log contains information on the fonts used:

```
Substituted  Font:  TF=4102  SW=0  S=1  H=850  P=2230  Fixed  with  '0280'
Substituted  Font:  TF=4102  SW=0  S=1  H=900  P=1667  Fixed  with  '0254'

(TF=Typeface, SW=Strokeweight, S=Style, H=Height, P=Pitch)TF=4102 SW=0
S=1        H=850        P=2230        Fixed        with        '0280'
Substituted  Font:
```

If you are not satisfied with the font used by DirectFax, you can use the table **WRKFAXALI** to assign another one. To do this, enter the PCL attributes listed above in the Alias table:

Command WRKFAXALI

F6=Create

```
Object type:   *FONT
```

```
Data stream:   *PCL
```

```
Description:
```

Enter the following:

```
Typeface Family  . .   4102
```

```
Stroke Weight  . . .    0
```

```
Style  . . . . . . .     1
```

```
Height (Points)  . .   850
```

```
Pitch (CPI)  . . . .  2230
```

```
Spacing  . . . . . .  F     F=Fix, P=Prop.
```

```
DirectFax Font ID  :   11
```

```
Blank adaptation :    2-
```

This entry replaces PCL font 4102 with the attributes specified with DirectFax font 11. The font can be fine adjusted through blank adaptation. "2-" means that all blanks are narrowed by 2 pixels.

Restrictions
Scalable soft fonts are not supported. Only bitmap/pixel barcodes are supported. If you have any special requirements, contact the Hotline at +49 040/5591962).

Warning
PCL often uses fine lines and fonts. Always work with high resolution.

24.0 Fax hardware configuration

DirectFax has been considerably enhanced to support a range of fax devices. The following section describes configuration of these devices.

24.1   Internal AS/400 modem 2771/2793

Newer iSeries models are shipped by IBM with the internal modem 2771 (or more recently 2793). This replaces the previous ECS modem.

The 2771/2793 modem is a module by Multitech attached to a standard double V24 card. The result is a card with a telephone connection and a V24 connection.

The modem supports CLASS2 faxes. It is asynchronous only.

Important notes
In **CHGNETA** F4 (Change network attributes), the *Country ID for modem* (MDMCNTRYID) must be set. If it is empty, errors occur when the line is attached. The problem seems to be with the hardware.

Similar problems occur if special characters like ÄÖÜßäöü are entered in **Identifier/CSI**.

Before beginning DirectFax configuration, find out the modem resource name. You can do this with WRKHDWRSC *CMN. The modem appears in the list as follows:

```
Resource      Typ   Status                Text
LIN02         2771  Ready        DFV-Adapter
  CMN03       2771  Ready        DFV-port
  CMN04        2771  Ready                V.24-Port
LIN01         2745  Ready        DFV-Adapter
  CMN01        2745  Ready                V.24-Port
  CMN02        2745  Ready                V.24-Port
```

The modem is using resource CMN03 in this example. You can recognise this from the type 2771 and the text "DFV Port. CMN04 is the card's V24 port in this example.

In DirectFax, use WRKFAXLIN to configure as follows:

```
Connection type . . . .   *V24
Modem . . . . . . . . .   *INT2771
Modem driver . . . .   *INT2771
```

All other parameters are the same as with modem configuration, for example for Telejet or Blatzheim See chapter 12 for a description of the command WRKFAXLIN.

24.2   Configure a Bintec router

If a Bintec-router shall be used for faxing the hardware must be configured once. The procedure and the required settings are described below.

24.2.1 Hardware requirements

Only Bintec routers with an analog modem component can be used. These include Brick XS Office, Bingo Professional, Brick XM with analog modem etc. Although the Fax/CAPI option is mentioned in the documentation for nearly all Bintec devices, it is only possible with RVS Com software on the PC without the modem component. RVS Com emulated the software.

24.2.2 Assign the IP address

To assign the router an IP address, first connect it to a serial port on the PC. Use the cable shipped with the router.

If possible, connect the router to the Ethernet and ISDN ports.

Use Hyper Terminal to establish a connection to the router. To do this, select the COM port on the PC and the following settings:

Baud rate:	9600
Data bits:	8
Parity:	none
Stop bits:	1
SW handshake:	XON/XOFF
HW handshake:	none
Terminal:	VT100

The router login screen should be displayed. For the first login, specify as user: **admin** Password: **bintec**.


```
Welcome to BIANCA/BRICK-XS version V.5.1 Rev. 1 (Patch 7) from 1999/12/02
00:000
systemname is office, location Germany


Login: admin
Password:
```

0202 - Bintec router login

After login, use the command SETUP to display the main menu:


```
BIANCA/BRICK-XS Setup Tool                         BinTec Communications AG
                                                                    office
_____


Licenses              System

LAN Interface:     CM-BNC/TP, Ethernet

WAN Interface:     CM-1BRI, ISDN S0

Feature Module:    FM-MOD

WAN Partner
IP  IPX  PPP  MODEM  ISDN  CAPI

Configuration Management
Monitoring and Debugging
Exit


_____
Press <Ctrl-n>, <Ctrl-p> to scroll through menu items, <Return> to enter
```

0203 - Bintec setup

With older devices, you will now need to enter the license code. Select the menu option "Licenses". Please refer to the Bintec documentation for more information on licensing.

You can register the device with Bintec. Bintec extends the warranty period for some devices if you register.

In the menu option "LAN Interface", enter the router's IP address.

```
BIANCA/BRICK-XS Setup Tool                          BinTec Communications AG
[LAN]: Configure LAN Interface                                       office
_____



            IP-Configuration
                 local IP-Number      192.168.1.2
                 local Netmask        255.255.255.0
                 Encapsulation        Ethernet II

            IPX-Configuration
                 local IPX-NetNumber  0
                 Encapsulation        none

            Bridging                  disabled

            Advanced Settings >

                      SAVE                         CANCEL
_____
Enter IP address (a.b.c.d or resolvable hostname)
```

0204 - LAN-Interface

Save the changes with SAVE.

Now select "Exit" from the main menu.

Now select the option "Save as boot configuration and exit".

Use TELNET from the PC to make additional settings.

You can close the terminal connection now. If the router is already connected to the Ethernet, test the connection to the iSeries with PING.

If successful, you can now configure the router for use.

Note:
Don't turn on the device until all connections (Ethernet, ISDN) have been made. For Ethernet and ISDN, the router configures automatically the first time it is switched on. This will fail if all cables are not connected.

24.2.3 Configure the router

Start a TELNET session on the router from a PC in your network. To do this, use the DOS command: TELNET 192.168.1.2

The router login screen should be displayed. Login as "admin". With SETUP, start the router configuration program.

From the main menu, select "WAN Interface". In "Result of autoconfiguration:", check that the router has detected your ISDN connection type.

```
BIANCA/BRICK-XS Setup Tool                      BinTec Communications AG
[WAN]: WAN Interface                                             office
_____


   Result of autoconfiguration:    Euro ISDN, point to multipoint
   ISDN Switch Type                autodetect on bootup




   D-Channel                       dialup
   B-Channel 1                     dialup
   B-Channel 2                     dialup



   Incoming Call Answering >
   Advanced Settings >

                   SAVE                           CANCEL
_____

```

0205 - WAN interface

Warning:

You must assign an **MSN** to the device. To do this, select "Incoming Call Answering" from the WAN Interface menu. Use "ADD" to add a valid or "Dummy" MSN. You must add the MSN even if you don't intend to receive faxes with the router.

The entry is required so that the router creates the required CAPI messages. The actual MSN to which the router answers is part of the DirectFax configuration on the iSeries.

```
BIANCA/BRICK-XS Setup Tool                      BinTec Communications AG
[WAN][INCOMING][EDIT]: Incoming Call Answering                   office
_____




        Item                    PPP (routing)
        Number                  4711
        Mode                    right to left
        Username
        Bearer                  any




                SAVE                           CANCEL
_____
Use <Space> to select
```

0206 - MSN entry

Notes on entering the correct MSN.

If the correct MSN entry is required (e.g. 108, depending on telephone system), every call to 108 will be used for a WAN connection. The call is then not passed to DirectFax. If this is the case, select "CAPI 1.1 EAZ 0 Mapping" instead of PPP (routing). This causes the router to report the call to CAPI, and therefore to DirectFax. This applies only in cases where the

telephone system requires the correct MSN entry. You can work with dummy entries in most cases.

Close "Incoming Call Answering" with Exit.

Close the "WAN Interface" menu with SAVE.

Close the configuration program with Exit and save the settings with "Save as boot configuration and exit".

The next step is to check the fax modulation in CAPICONFIGTABLE.

To do this, type CAPICONFIGTABLE in the router command line and press Enter.

```
office:> capiconfigtable

inx  StkNumber(*ro)          FaxG3RcvSpeed(-rw)      FaxG3ECM(rw)
     FaxG3Header(rw)         VoiceCoding(rw)         SendAlerting(rw)
     V42bis(rw)              ModemDefault(rw)        FaxModulation(rw)
     Fax12000(rw)            FaxTXLevel(rw)

00   0                       maximum                 off
     logo_header             reverse                 voice_only
     off                     modem_profile_1         v17
     off                     db6

office:capiConfigTable>
```

0207 - CAPI configuration

The field "FaxModulation" should display the value "**v17**". If it does, close the session with Exit.

If it does not, change it by entering:

    faxmodulation:00=v17

The router answers with:

    00: capiConfigFaxModulation.0.1(rw):   v17

Save the changes with the command:

    Cmd=save

Close the session with Exit.

The router is now configured.

24.2.4 Configure the fax line for the router

To begin, enter the router IP address in the iSeries host table. To do this, select option 10, "Work with TCP/IP host table entries" in the menu CFGTCP.

Start the DirectFax line configuration program with WRKFAXLIN.

0208 - Work with fax lines

Use F6=Create to create a new line.

0209 – Create line

Enter a name and description for the line.

0210 – Line description

These are the most important parameters on the first page:

Active: Y/N   Deactivates a line

Connection type: *TCP Communication via TCP/IP

Modem: *BINTEC   Bintec router in use

Modem driver: *CAPI CAPI in use

External calls: 0   Prefix for external calls

CSI: xxx   Sender CSI
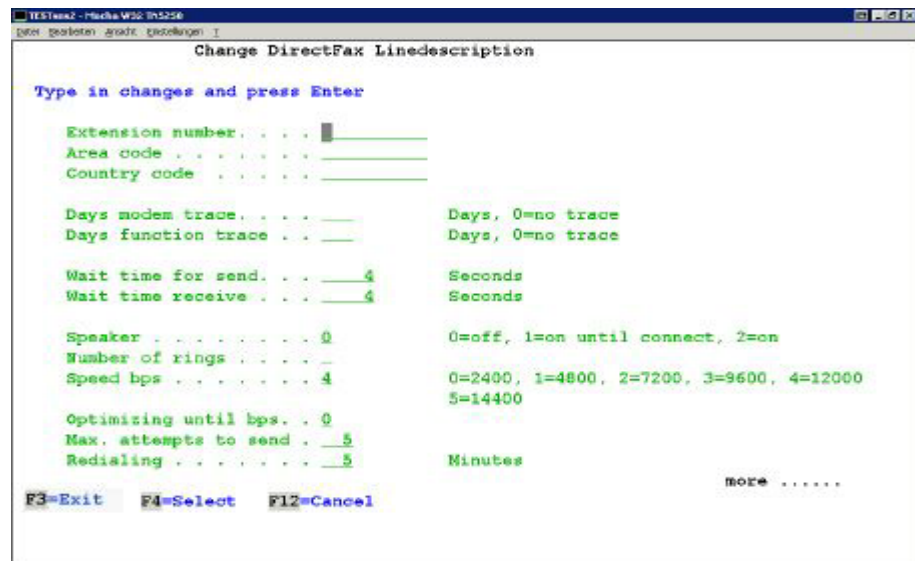
0211 – Line description

Important parameters on page 2:

Speed: 5   Maximum fax speed (14400)

Max send attempts: 5   Maximum number of send attempts

Redial: 5   Wait period before redial
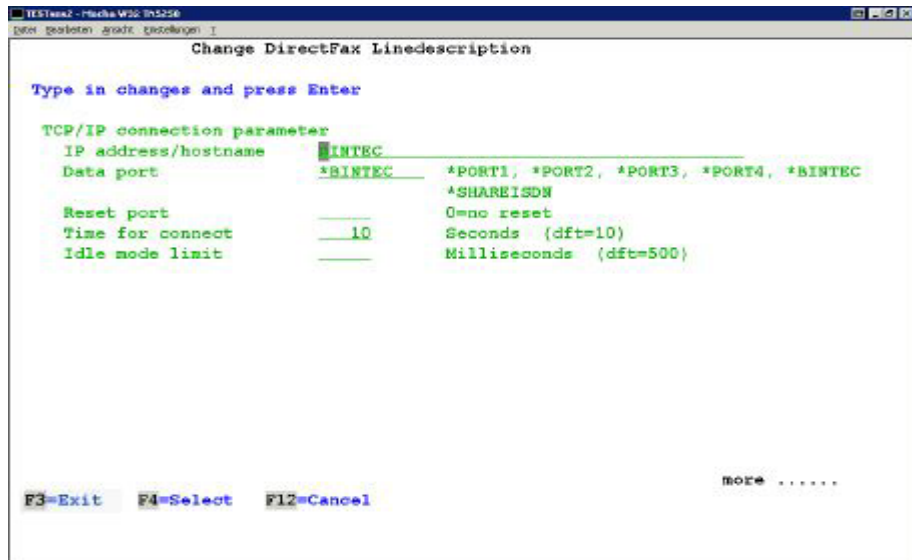
0212 – Line description

Important parameters on page 3:

IP address/host name: The router host name

Data port: *RCAPI (corresponds to 2662)
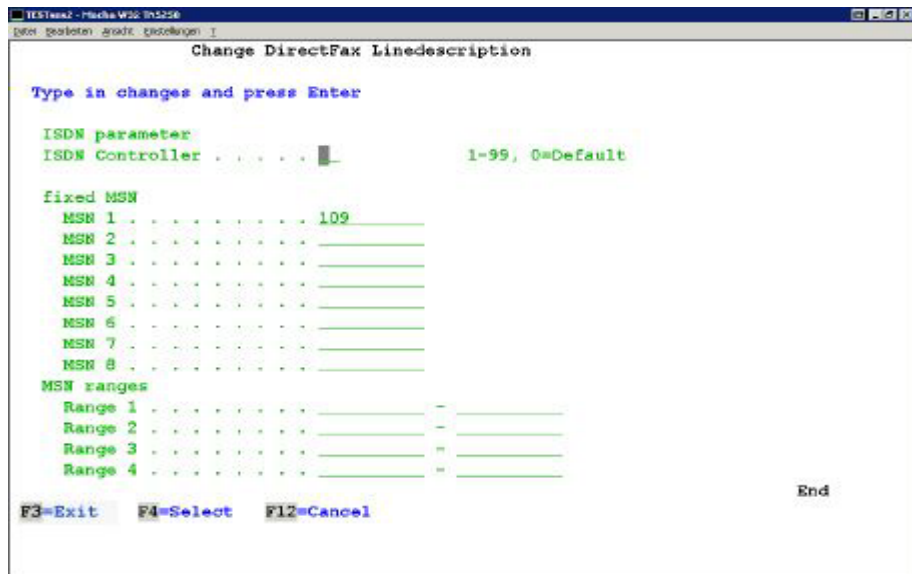
0213 – Line description

On page 4, enter the MSN to which the router answers. You can specify up to 8 fixed MSNs or 4 ranges.

If no entry is made, the router answers every call.

Save the configuration with Enter and start DirectFax with STRDIRFAX.

Note:
The **standard** DirectFax license allows 1 active fax line. Each additional line requires a separate license. If you activate more lines than you have licenses, the transmission programs started will be ended when the number

of licensed lines is exceeded. A limited license is available from Toolmaker for test purposes.

24.2.5 Modular Bintec routers

If you use a modular Bintec router with both analog and ISDN modules, you must enter the interface for remote CAPI in a table during configuration to prevent the ISDN controller reporting errors. A document describing this configuration is available from the Hotline.

24.3 Configure a Bingo/Pro router (ISDN)

The Bintec Bingo/Pro router is equipped with internal fax memory. This allows you to receive faxes even if DirectFax is not active.

The memory is sufficient for approx. 20 fax pages (1 MB).

Before starting the configuration, decide which MSN is to be used for fax receipt. In our example, it is MSN 22.

Begin by configuring a DirectFax line for *CAPI. You will find more information in the documentation on configuring Bintec routers for for DirectFax.

Important:
The MSN (here 22) must be entered in the line description MSN list for DirectFax. Any other MSNs used must also be entered.

Then open a Telnet session to the router and log as user "admin" with a valid password. Start the SETUP tool with the command "setup".

From the main menu, select the option PABX.

```
BinGO! professional Setup Tool              BinTec Communications GmbH
                                                               bingopro
_____

Licenses               System

LAN Interface:      CM-BNC/TP, Ethernet

WAN Interface:      CM-1BRI, ISDN S0

Feature Module:     CM-POTS, Phone 1
                    CM-POTS, Phone 2
WAN Partner
IP  IPX  PPP  MODEM  PABX  ISDN

Configuration Management
Monitoring and Debugging
Exit

_____
Press <Ctrl-n>, <Ctrl-p> to scroll through menu items, <Return> to enter
```

0214 - Bintec setup

From the menu "PABX Configuration", select "Extensions".

Make the following entry:

```
BinGO! professional Setup Tool                    BinTec Communications GmbH
[PABX][EXTENSION][EDIT]: Configure PABX Extensions                  bingopro
_____


        Extension              22
        Type                   all
        User
        Destination            application



        EAZ



                 SAVE                          CANCEL
_____
Use <Space> to select
```

0215 - PABX configuration

This entry causes all calls (voice and fax) for MSN 22 to be reported to CAPI/TAPI.

If using multiple MSNs for fax receipt, create an entry for each one.

Save the entry with SAVE and return to the main menu.

From there, select the option "MODEM" and then "Fax Storage" from the "Modem Configuration" menu. Now select "Extensions" and make the following entry:

```
BinGO! professional Setup Tool                    BinTec Communications GmbH
[MODEM][FAXSTORAGE][EXTENSIONS]: Configure Fax Storage              bingopro
_____



    Extension        Forward Address    Poll Mode     Delete Action
    22               #22                disable       forwarded




        ADD                DELETE             EXIT

_____
```

0216 – Modem configuration

This entry specifies that faxes to MSN 22 are saved and passed to the CAPI application (DirectFax) via the internal MSN 22 (#22) when it is started. The fax is deleted from the router memory after it is passed.

To summarise: Faxes to the MSN are stored in memory if DirectFax is not active. When DirectFax is started, the faxes are passed to it and deleted from memory.

If using multiple MSNs for fax receipt, create an entry for each one.

To save, close setup with "Exit and "Save as boot configuration and exit".

If a fax is sent to the Bingo router and DirectFax is not active, it is saved by the router. When DirectFax is started. the saved fax is passed to it.

Note:
There are no current implementations of this modem at the time of writing (03/2003).

24.4 Configure the W&T ComServer (CFGCOMSRV)

The new transmission program supports communication using TCP/IP. This allows you to operate up to 4 standard modems (e.g. Telejet) with a **W&T ComServer** if all V.24 iSeries interfaces are in use or otherwise unavailable.
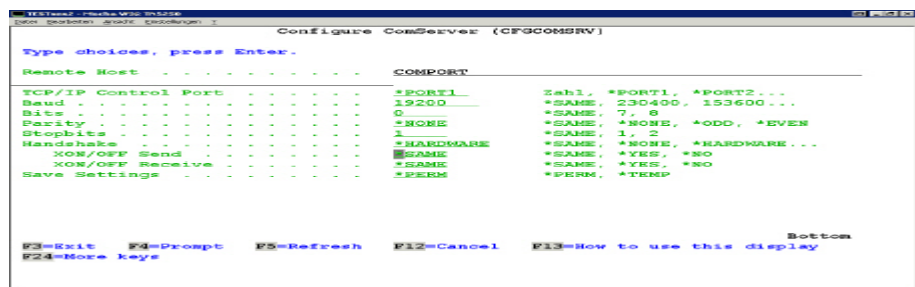
0260 - Command CFGCOMSRV – Configure ComServer

Requirements
Before implementing the W&T ComServer, you must configure an **IP address** for your network as described in the ComServer documentation.

With the command **CFGTCP**, option 10, enter the **IP address** for the ComServer and a valid **host name**.

Parameters

Remote Host (HOST)
The ComServer host name as entered in **CFGTCP** option **10**.

TCP/IP Control Port (PORT)
It is best to use the special value for each port (*PORT1...4) so that the right number for the data port is automatically used.

Baud (BAUD)
For DirectFax, the speed for the V.24 interface between ComServer and Modem is **19200** baud.

Bits (BITS)
For DirectFax, always **8** bits.

Parity (PARITY)
For DirectFax, always ***NONE**.

Stop Bits (STOPBITS)
DirectFax always works with **1** stop bit.

Handshake (HANDSHAKE)
Use the value ***HARDWARE** for DirectFax.

Save Settings (SAVE)
*PERM saves these settings in the device.

24.5 Configuration for LanCapi and ShareISDN Server (TCU and PC)

DirectFax can be configured so that an ISDN card in a PC ca be used to fax.

24.5.1 TCU (Toolmaker Communication Unit)

Because Bintec routers with hardware fax support are no longer available, Toolmaker has developed its own universal device, the **TCU** (Toolmaker Communication Unit) for Windows It contains one or multiple ISDN cards controlled by the **ShareISDN Server** software.

The TCU as shipped is configured by Toolmaker. It can be operated using Telnet from a PC. The following section describes the PC configuration for the TCU.

24.5.2 PC with ISDN card

You can use a **standard PC** as a "fax server". Please apply the following

Requirements
- PC with Windows (the software has only been tested with Windows2000 Pro to date).

- ISDN card (tested with an AVM Fritz! PCI card to date).

- CAPI drivers installed on the PC (CAPI drivers are provided by the ISDN card manufacturer).

- ShareISDN Server software (a test version is available for download at www.shareisdn.de).

Install the ShareISDN Server software
The installation is standard Windows. Under Windows2000, the ShareISDN software is a "Service" that can be run and closed like a standard service.

Configure ShareISDN Server
To configure, choose Start/Programs/ShareISDN Server/Control Panel.

Parameter settings
Port Number: TCP/IP Port (default 6000)

- All clients are accepted

- No Server Password (not yet supported)

- License Key (required after the demo expires)

0267 - ShareISDN Server

Important note

In the following registry key (open the registry with Start – Run… - Regedit)

/HKEY_LOCAL_MACHINE/SOFWARE/Active Elements/ShareISDN/Server

set the "*EchoRequestTimeout*" entry to **0** (zero). Without this entry, ShareISDN Server expects "Hello World" messages at defined intervals from the AS/400. These messages are not generated. If you don't make this entry, socket errors will occur after the first few successful faxes.

24.5.3 Configure the DirectFax line

Use **WRKFAXLIN** to configure the line adapter.

Note: You can create a fax line for each available B channel. From channel 2, additional Toolmaker line licenses are required.

Important fax line parameters

```
Connection type . . . .    *TCP
Modem . . . . . . . . .    *LANCAPI
Modem driver  . . . . .    *CAPI
```

Communication is through the Ethernet LAN and TCP/IP.

```
TCP/IP connection parameters
  IP Address/host name    TCU
  Data port               *SHAREISDN
  Reset port
  Connection time             10
  Idle mode limit            500
```

The value ***SHAREISDN** for the data port is equivalent to the value **6000**.

ISDN Controllers (1-99)

If you are working with a **TCU4** or **TCU8**, enter a controller number for the additional ISDN controllers on the Scitel card (each controller corresponds to an ISDN line with 2 B channels). Here's an example for a TCU8 with 4 ISDN controllers on a card:

Line name	Controller	B channel	Value
TCU01	1	1	empty (default)
TCU02	1	2	empty
TCU03	2	1	**2**
TCU04	2	2	**2**
TCU05	3	1	**3**
TCU06	3	2	**3**
TCU07	4	1	**4**
TCU08	4	2	**4**

```
Fixed MSN
  MSN 1 . . . . . . . . . 22 (or as required)
```

When DirectFax is started, the following values should appear with option 8=Attributes in WRKFAXLIN if you are using a TCU.

```
Manufacturer . . .  Toolmaker Software
Model . . . . . . .  LanCapi 1.0
Revision . . . . .  LanCapi 1.0
```

Trace/Debug

You can switch on ShareISDN Server **Trace** with a registry entry. Choose Start – Run… to open the registry. Under:

/HKEY_LOCAL_MACHINE/SOFWARE/Active Elements/ShareISDN/Server

set the "*LogFile*" entry to 1. The server creates a log file in:

C:\WINDOWS\ShareISDNServer.log

You can view the log file with a text editor. You can create other ISDN traces with the AVM Trace DLLs.

Known problems:

If you send from a modem to the Fritz! card, it displays an unusual ID ("È39 5458 98019" instead of "+49 5458 98019"). This appears to be an error in the Fritz software.

24.6 Configure a ZyXEL modem 2864 ID (ISDN)

The 2864 is an ISDN modem manufactured by ZyXEL with on-board memory, which means it can save faxes even if DirectFax is not running. When the system is started, executes a RING and works through the normal procedure for incoming faxes.

Connect the modem
The modem can be operated with ComServer or V24.

To connect to the ComServer, use the shipped cable and 9-pole adapter.

To connect to the AS/400 V24 interface, connect the modem directly to the V24 cable.

Configure the modem in DirectFax/400
Use WRKFAXLIN to configure the modem as follows:

Modem . . . .   *ZYXEL

Modem driver *CLASS2.0

You can also enter the MSNs to which the modem responds.

For offline receipt, the MSN must be set on the modem. This is described in the section on configuring for offline receipt.

Important: For external lines, never set "," or something similar as the wait delay. The modem will not dial if you do.

Direct modem configuration with AT commands
To send AT commands directly to the modem, proceed as follows:

Close the fax line with option 10=End in WRKFAXLIN. Select option 18=Terminal. This allows you to send AT commands to the modem.

Other settings on the modem
In some cases, the MSNs for ISDN must be set on the modem. For the following settings, it is assumed that the modem reports all incoming faxes to DirectFax and that DirectFax decides the MSN for the reply.

AT S119.3=1   (Modem default = 0)

Reports calls for all MSNs (required for accepting calls and DTR). The calls accepted are decided by DirectFax as defined in the line configuration with WRKFAXLIN. This does not apply to offline calls.

AT S78.2=1   (Modem default = 0)

Analog calls reported with RING.

AT S120.0=0

Complete AT S119.3=1 S78.2=1 S120=0

Upgrade firmware
Please follow the instructions on upgrading the firmware in the product documentation.

After the upgrade, test the hardware. You can do this with the following AT command:

    ATS38.2=1HWR

Configure offline receipt mode
Offline receipt mode is supported only by 2864 modems with integrated fax memory.

To set up fax receipt in offline mode:

AT+FCLASS=Z   Configure offline receipt

AT+FZF=3   Faxes to DRAM

AT&L1   Route analog calls to the fax modem

AT&D3   Automatically loads the offline profile for fax receipt when programs using the modem close.

AT&W0   Saves the offline profile to profile 0.

Known problems:
With offline receipt, MSN cannot be controlled by DirectFax (may require a fixed MSN)

DTR information lost with offline receipt.

24.7   Configure Multitech modem 2834

As a replacement for the Telejet modem, the analog Multitech 2834 modem is supported from Version 5.20.

Use the command WRKFAXLIN to configure as follows:

```
Connection type . . . .    *V24
Modem . . . . . . . . .     *MT2834
Modem driver . . . .    *MT2834
```

All other parameters are the same as with modem configuration, for example for Telejet or Blatzheim See chapter 12 for a description of the command WRKFAXLIN.

Troubleshooting
Follow this procedure if the modem is not working even though it is configured correctly and using the right resource name.

As shipped, the modem can only be operated in "Switched line" mode. The problem is that the modem switches to dedicated line mode when initialised by DirectFax, rendering the line inaccessible on restart.

However, the modem can be configured to remain permanently in dedicated line mode. To do this, enter these values for the shipped modem in WRKFAXLIN:

```
Connection type . . . .    *V24
Modem . . . . . . . . .    *MT2834CFG
Modem driver  . . . . .    *MT2834
```

DirectFax now automatically creates a switched line to the modem.

When DirectFax is started, the modem can be configured for permanent dedicated line mode with AT commands. When done, the DirectFax modem program closes. The message "Device on line x successfully configured" should appear in the QSYSOPR queue.

The modem now works exclusively in dedicated line mode. The line description in DirectFax therefore needs to be changed as follows:

```
Connection type . . . .    *V24
Modem . . . . . . . . .    *MT2834
Modem driver  . . . . .    *MT2834
```

The modem should work properly when you restart the line with option 9 in WRKFAXLIN.

This should be necessary only once when the modem is implemented. The configuration is saved in the modem's permanent memory.

25.0 Using the DirectFax font generator

The DirectFax font generator is a licensed program you can use to create new fonts to supplement the standard fonts shipped in the library DIRECTFAX. The new fonts can be used in mix faxes on the AS/400. The command WRKFAXFNT is used to display and maintain available fonts.

The font generator allows you to create both fixed and proportional fonts.

The following section walks you through the process of creating a new DirectFax font.

25.1 Requirements

Before you can use the DirectFax font generator, the following requirements must be fulfilled:

DirectFax is installed on the AS/400 and the font generator **license code** (product code DF450FG) has been entered.

The DirectFax **PC client** is installed and configured correctly on a Windows PC (Win95, 98, NT, 2000). A **license code** for the PC client is available for at least one user (product code DF450PC).

Microsoft Word from 6.0 and the DirectFax Word document **FAXFONT.DOC** are available. The Hotline can send you FAXFONT.DOC by e-mail.

The **additional fonts** for DirectFax are available on the PC.

In the **fax user profile**, the header and footer logo parameter for the PC (LOGOPC) is set to *NO.

25.2 Overview

The font generation process involves a special Word document faxed from the PC by the DirectFax PC client. The fax can then be used by the font generator on the AS/400 to create new font objects. Two user spaces (*USRSPC) are used to store the new fonts in landscape and portrait formats.

The DirectFax Word document FAXFONT.DOC contains all printable characters from hex code X'40' to X'FF' as well as the Euro symbol (assigned hex code X'3F').

Each character is framed on a separate line. This document structure allows the font generator on the AS/400 to find and extract characters.

Faxing the Word documents using the DirectFax printer driver *Directfax for AS/400* creates an outgoing fax in T4 code. T4 is a packed graphic code with a resolution of 200 x 200 dpi.

The font generator first unpacks the graphic. The frame is then used to identify each character and extract it. The character images are then saved to a user space in pixel format. They are then rotated 90° and saved in landscape format in another user space.

Each DirectFax font is identified by a unique 4-charcter font ID. Fonts can be included in mix faxes with the ^Fxxxx control code, where 'xxxx' is the font ID. Font objects created by a DirectFax user are stored in the library DIRECTFAXF with the name FAXFNTxxxx and ROTFNTxxxx as object type *USRSPC.

25.3 Quality considerations

It is important to consider a number of quality aspects before starting with font generation. This can reduce the effort required to create and test the finished font.

Whereas printers work with 300 dpi (dots per inch) or more, faxes are limited to a resolution of 200, reducing the quality of small fonts and details. Legibility is an issue.

The problem is compounded by the fact that not all faxes are sent with a high resolution (200 x 200 dpi). Low resolution (200 x 100 dpi) can also be used. This increases speed, but further reduces the quality, particularly of fine fonts and lines.

Explanation:
When you send a "coarse" resolution fax, every second line is skipped. Instead the previous pixel line is repeated. This distorts the image. Very fine horizontal lines may even be lost if they are only one pixel thick.

For all of these reasons, it is probably a good idea to use bold characters in the Word document. It may also be a good idea to use Word to stretch or extend the characters to increase legibility for the fax recipient. The digits 0-9, and particularly 0 and 8, are important in this respect. If the middle line of the 8 is too thin, the consequences on a low resolution fax are evident. You will no doubt want to check this in the finished font.

25.4 Prepare FAXFONT.DOC

The Word document FAXFONT.DOC is shipped by Toolmaker. Do not add or remove any lines or characters. You can change the font and font size, and also attributes such as bold and italic.

Please copy FAXFONT.DOC to a folder of your choice and work only with the copy. If you delete a character unintentionally, it is better to recopy the original than to try to restore the character yourself.

Select the entire document with Ctrl+A or with "Select All" from the "Edit" menu. Then select a font (e.g. Arial) and a font size (e.g. 12 points).

It's up to you whether or not you use bold or any of the other font options available in the "Font" dialog in the "Format" menu. Note the comments on formatting in the introduction to this section. The entire document must be selected so that all characters have the same attributes.

Remove the selection and examine the font attributes.

When you are satisfied, save the document.

25.5 Fax FAXFONT.DOC

Now fax FAXFONT.DOC by printing it to the DirectFax printer driver.

To do this, select *Print* from the *File* menu. In the Print dialog, select the printer *DirectFax for AS/400* and click OK.

After a short delay, the DirectFax dialog for recipient selection is displayed:
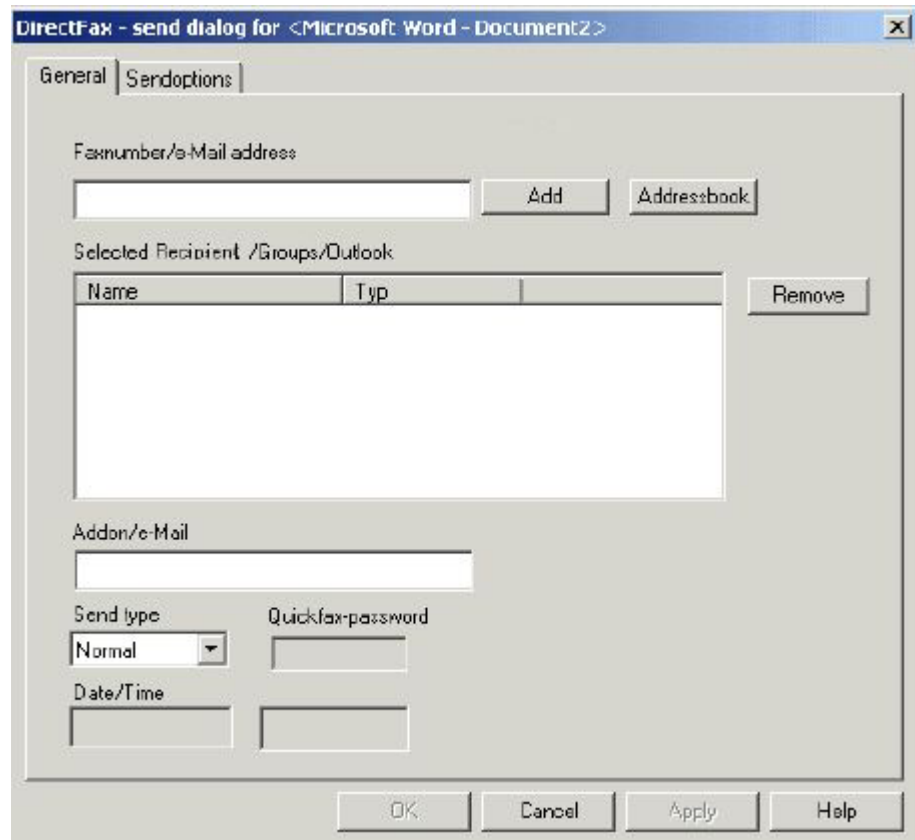
0117 - Select DirectFax recipient

As we are using the document to generate fonts and not actually sending it, you can use the *Fax number* field to enter a description.

The entry must begin with a digit or it will not be accepted. You might then enter the font used. For example "5Courier10PBold" for font Courier, size 10 points, bold.

This description is displayed in the right column in the WRKFAXSTS dialog, making it easy to locate the fax.

Before clicking OK, display the second tab, *Send settings*. This contains some important parameters. The following screen is displayed:
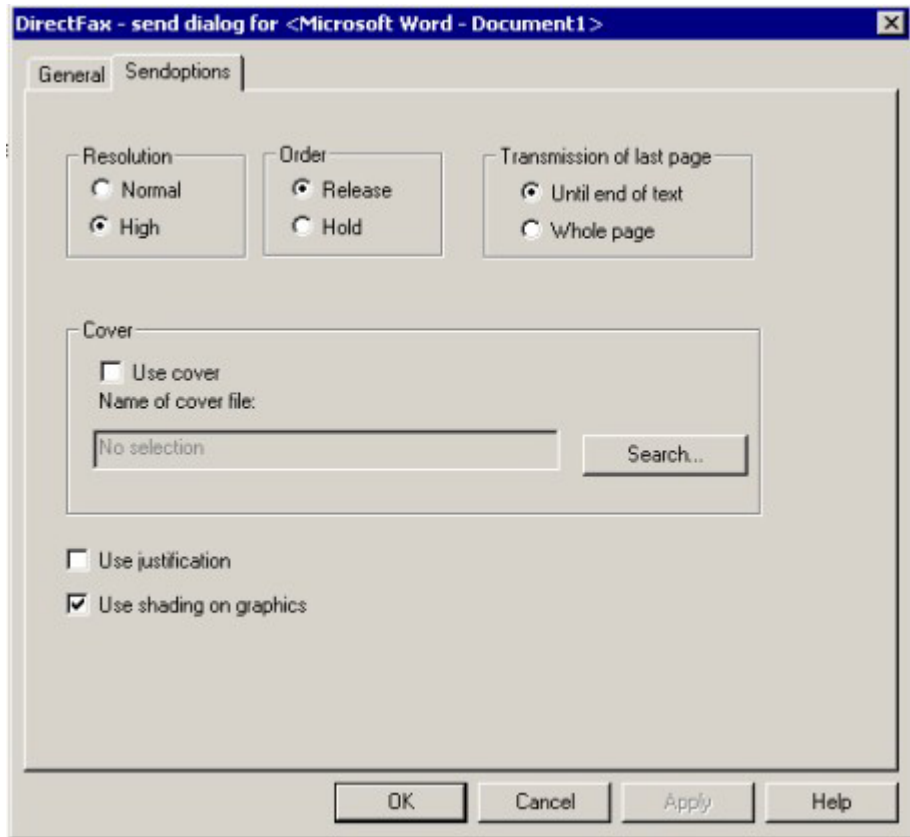
0121 - DirectFax send settings

The settings required are as shown above:

Resolution **Fine**

Send status **Hold**

Length of last page **To text end**

Use justification **off, not checked**

Use shading **off, not checked**

You can now click OK to send the fax. The Word document is converted to a fax and saved on the AS/400/ The DirectFax subsystem must be active.

The next steps are on the AS/400.

Open the outgoing fax queue with the command WRKFAXSTS. Locate the fax and note the fax sequence number in the left column.

25.6   Work with DirectFax fonts (WRKFAXFNT)

On the AS/400, the command WRKFAXFNT gathers information on all fonts in the libraries DIRECTFAXF and DIRECTFAX and displays it in this screen:

0218 - Work with DirectFax fonts

Each font is displayed on a separate line with the 4-digit font number, a description and other attributes.

You can use options 3-8 to edit. We strongly recommend that you do not change or delete fonts shipped by Toolmaker (user=DIRECTFAX).

Use page up/down to scroll through the list. Look for a free number for the new font. Note that the listed is sorted first by library name (DIRECTFAXF and DIRECTFAX) and then by font ID.

Use F6=Create to generate the new font from the fax. This runs the DirectFax command CVTTOFNT.

25.7   The font generator (CVTTOFNT)

The font generator creates a DirectFax font from a PC fax and saves it to 2 user spaces in the library DIRECTFAXF.

The command CVTTOFNT or F6 displays this screen:

0261 - CVTTOFNT – Convert PC fax to font

Parameters

Fax seq. no. in WRKFAXSTS (FAXNBR)

The sequence number assigned when FAXFONT.DOC was faxed from Word (see right column in WRKFAXFNT).

Font ID (FONTID)

A 4-digit number of your choice.

Description (TEXT)

A detailed description of the font. This can be very useful if you need to recreate a font for any reason in the future. It should contain the following:
- PC font (e.g. Arial)
– PC font size (e.g. 10P)
- PC font attributes (e.g. bold, italic)
– CPI AS400 or proportional (e.g. 12 CPI)
– Other features

Fixed spacing (FIXED)

*NO No fixed spacing (e.g. Arial, proportional font)
*YES Fixed spacing (e.g. 10 CPI Courier)

Character per inch (CPI)

The CPI for the new DirectFax font. This parameter is only displayed if FIXED(*YES) has been specified.

Update single character (UPDCHAR)

This parameter is defaulted to ***YES**. It is only used occasionally, for example to replace a single character in an existing font. You can use the special value *EURO to change the € character, or specify the character to be changed.

Character sizing (SIZING)

If the generated font is not wide enough despite suitable settings in FAXFONT, you can use a value greater than 1 to stretch it. This parameter is also used only occasionally.

After entering all parameters, generate the font by pressing Enter. A progress indicator is displayed.

25.8 Test the finished font

When the new font is finished, test it thoroughly. To begin, select the font in WRKFAXFNT with option 6=Test. This sends a test fax containing all characters in the font.

You can also fax a page of normal text formatted with <u>underline</u>, **bold** and reverse. To switch to the new font, use the ^Fxxxx control in the document. xxxx is the font number.

Make sure to check the legibility of numbers in a **coarse** resolution fax. Ensure that 0 and 8 can be clearly distinguished.

Make sure that characters do not run into each other vertically or horizontally when formatted bold or underlined.

Test the new font in **landscape** format (^Q).

Remember also that many laser printers often compress long pages by 10-20% to fit to A4 format. This should also remain legible.

25.9   Notes and tips

If the font generator produces an interrupt error, some parameters are probably incorrect. This could be for example trying to squeeze a 24 points into a 10 CPI font. Character images in the PC fax that are too large for the specified fixed font can cause the program to crash.

If the rules and conventions covered in this section are not carefully observed, the generator may not be able to find characters, or they may be distorted in the finished font. For example, coarse resolution in the PC fax will probably produce squashed characters.

Standard fonts such as Courier 10 and 12 CPI are usually generated with a single PC fax. The fax contains both pitches. The actual characters are the same for both pitches, but there is less space between them with 12 CPI. The same applies to 17 and 20 CPI.

The original DirectFax standard fonts (10, 12, 17, 20 CPI) were derived from DCE fax box fonts. These fonts are optimised for faxes and remain legible even if the resolution is low.

They are also suitable for faxing for another reason: Font width is less than the CPI would seem to indicate. The 10 CPI font actually produces 11 characters per inch. 12 CPI produces 13, 17 produces 18 and 20 produces 21.

These fonts were retained through the move from the DCE box to the mix fax. The same rule was applied to the 15 CPI font, although it wasn't a component of the DCE box.

This means that when you create a regular 10 CPI font with the generator, character width does not exactly match the existing standard DirectFax fonts. To correct this, select the CPI value plus 1.

Having created and tested a new **standard font**, you can use option **7=Rename** to assign the ID for the standard font. For example, you have created the font Courier 10 CPI with the working number 5011. Rename font 5011 to 0011 using option 7. From that point on, DirectFax will use the new font for mix faxes with 10 CPI. Note that the original font 0011 is retained in the library DIRECTFAX. The new font has priority only because of the library search sequence (DIRECTFAXF followed by DIRECTFAX). We ask you never to delete or overwrite the fonts shipped by Toolmaker in DIRECTFAX.

To copy a font generated on your AS/400 to another AS/400, you will need to copy 2 objects for each font:

FAXFNTxxxx   *USRSPC and

ROTFNTxxxx   *USRSPC, both in DIRECTFAXF,

where xxxx is the font ID (e.g. FAXFNT0011 and ROTFNT0011)

26.0 Digital fax signatures

DirectFax creates in all cases a net data (text) signature and attaches it to the fax as a compressed two-dimensional barcode PDF417.

DirectFax supports digital fax signatures with a range of components:

- A module for maintaining digital signatures (electronic or advanced electronic signatures) and qualified electronic signatures (in accordance with SigG)

- A module for sending faxes with integrated barcodes containing the signature and text information from the fax.

- Integrated routines for generating PDF417 barcodes

- A free, downloadable fax viewer with integrated signature validation.

26.1 Signing in accordance with German signature law

Under German signature law, documents such as invoices cannot be sent by fax unless they meet very stringent technical requirements.

A function has been added to the new version of DirectFax that allows you to read the certificate directly from the signature card's memory (SmartCard) for signing.

The card terminals currently in use are devices manufactured by Kobil (Kaan Professional). These are currently integrated into the Ethernet network with W&T ComServer. The devices and cables are purchased from Toolmaker.

Communication is via the DirectCard software, which must be separately installed and run in its own subsystem. DirectCard has full central control of both terminal and card. Control of the terminal from applications (DirectFax in this case) is through a service program (DFDIRCRD).

Signature cards with SigG certification are available from T-Systems. To apply for one, the signature card holder must appear personally at a post office with the following documentation:

- a completed and signed PKS application in a sealed envelope,

- ID card or passport

Online applications can be made on the Internet here: https://pks.telesec.de/registration/pks_auftrag/pks_auftrag.htm

26.2 Signing in accordance with EU directives

European Parliament and Council directive 1999/93/EG of 13 December 1999 imposing a harmonised legal framework on electronic signatures establishes the use of advanced electronic certificates for signatures. This directive covers the sending of electronic documents in countries outside Germany where no other legal framework has been established.

Lets begin with digital signature maintenance. According to the above directive, signed documents must be sent as a fax or e-mail with an advanced electronic signature. To do this, you must first apply for a certificate for an advanced electronic signature.

26.2.1 Applying for a certificate

You can apply for multiple certificates from certification service providers on the Internet. Note that you will need a "soft certificate", a certificate that can be exported with public and private keys. Non- exportable certificates bound to card readers cannot be used with DirectFax.

The following describes the procedure for applying for a certificate with the company Trustcenter.

To start the application process, go to this address:

http://www.trustcenter.de/produkte/my_certificate.htm

0296 Purchasing a certificate

Click the "Buy certificate" link. If you only wish to do a technical test on the electronic signature, you do not need a certificate for advanced electronic signatures at this point. Instead, click "Demo certificate" to obtain a test certificate (for electronic signatures) that expires after 60 days.

Click "Purchase certificates" and the following site is displayed. As the certificate provider is German, some pages are in German only while some are mixed German and English. However, English help is available for most functions, even on the German pages.

0297 - Applying for the certificate

For a class 3 certificate, you will need to identify yourself using the Postident procedure. For a class 2 certificate, submitted documentation is sufficient. Follow the instructions on the website. After completing and sending the form, you will receive a confirmation e-mail (immediately for test certificates, after submitting the documents required for class 2 and 3 certificates) with which you can install the certificate from your browser.

26.3   Receiving the certificate

Once your application has been verified and approved, you will receive an e-mail containing instructions on installing the certificate. To install the certificate, click the link in the e-mail.

If you are prompted to execute ActiveX control elements and plugins, click "Yes".
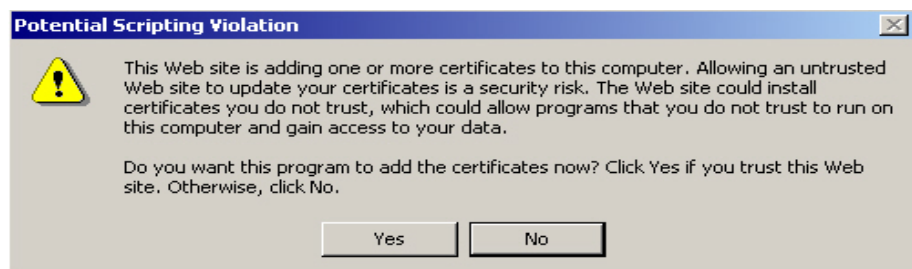
0231 – Install certificate

When prompted to install the certificate, confirm with "Yes".

After successful installation your certificate is now installed on your local PC.

26.3.1 Export certificate from Windows

Before you can use the certificate with DirectFax, you must first export it as a private key from Windows to a file.

To do this, click "Tools" – "Internet Options" – "Content" in Internet Explorer.
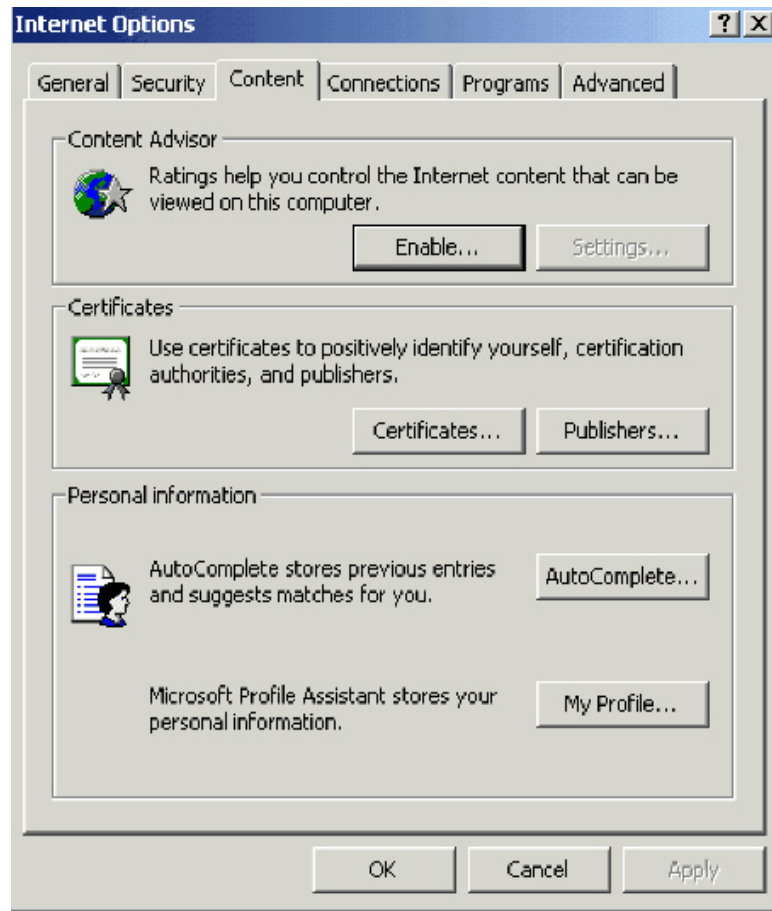
0233 – Internet options

Click the "Certificates…" button in the middle of the dialog to display installed certificates.
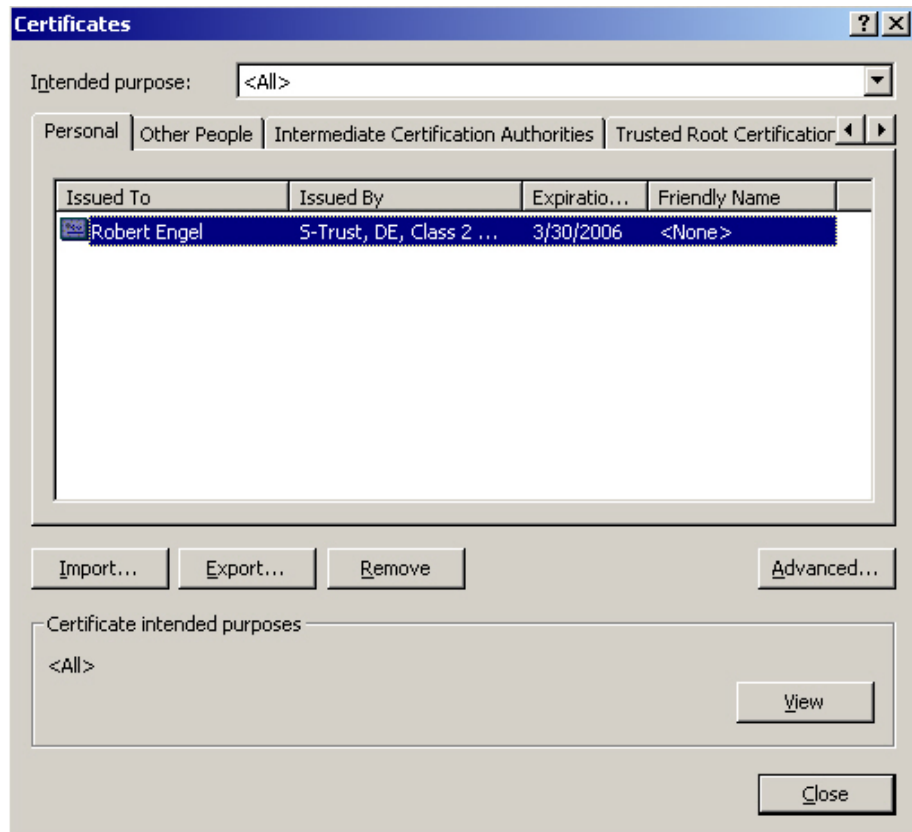
0234 – Certificates

Select the certificate for export and then click "Export…".

0235 – Certificate export wizard

In the wizard, click "Next >".
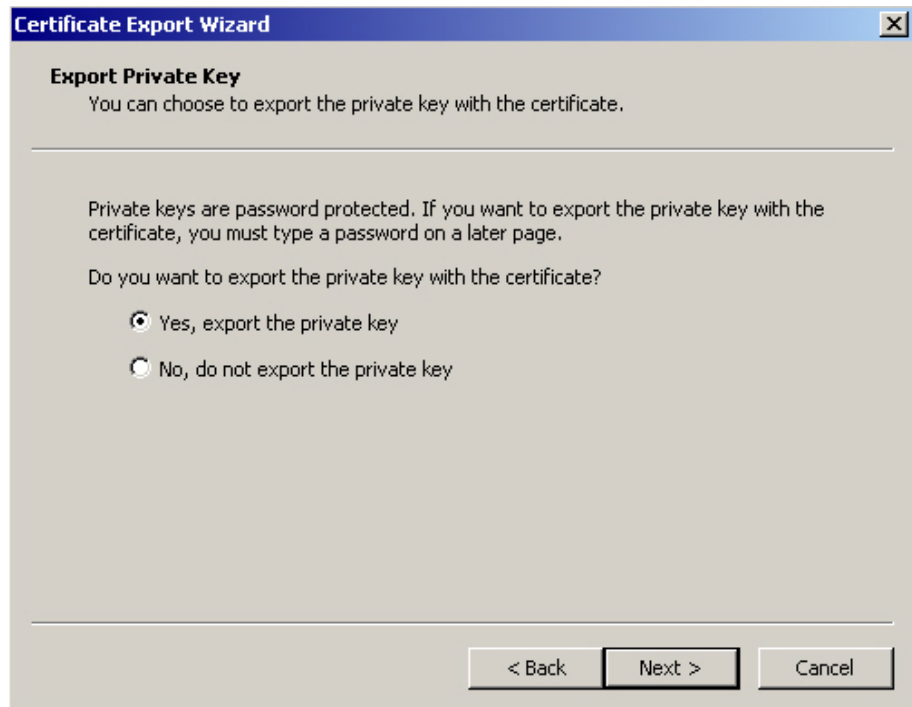
0236 – Export keys

In the next step, select "Yes, export private key" and then click "Next >".
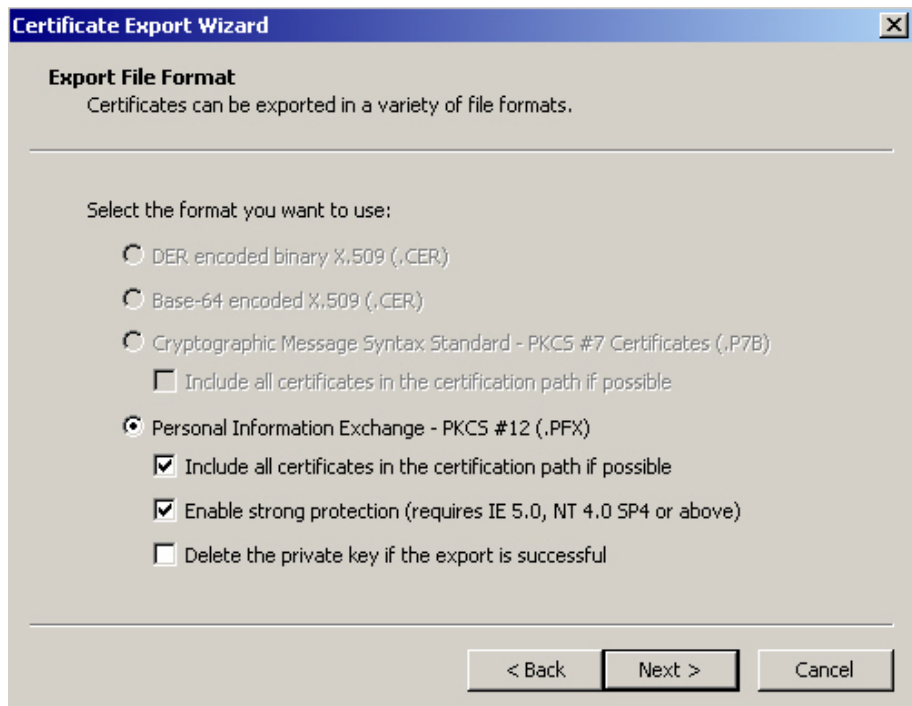
0237 – Export file format

Select the option "Include all certificates in the certification path if possible" and then click "Next >".
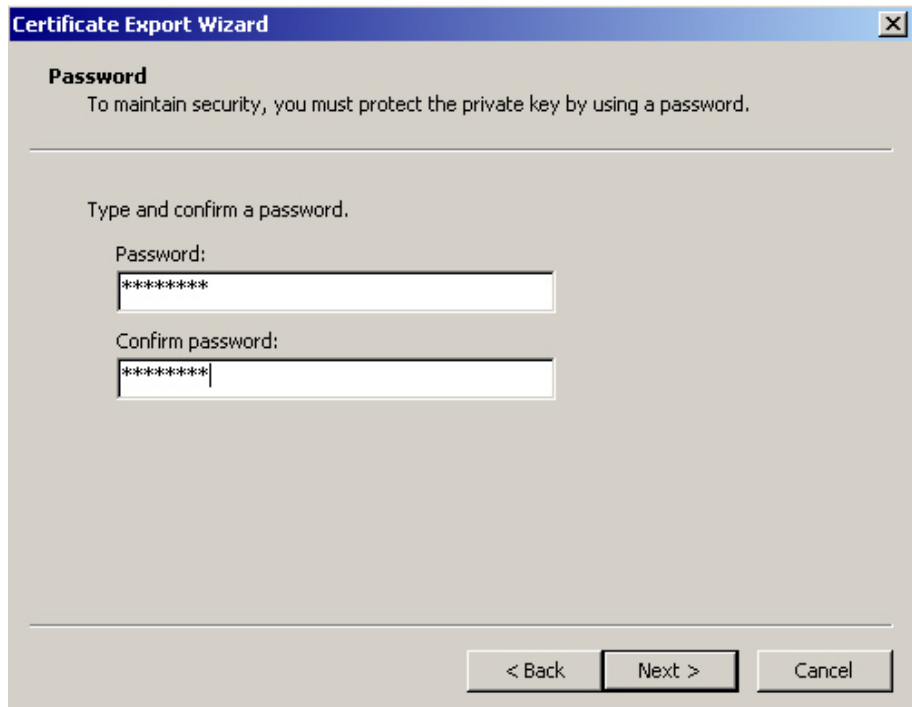
0238 – Password

To protect the exported certificate, enter and confirm a password, then click "Next >".
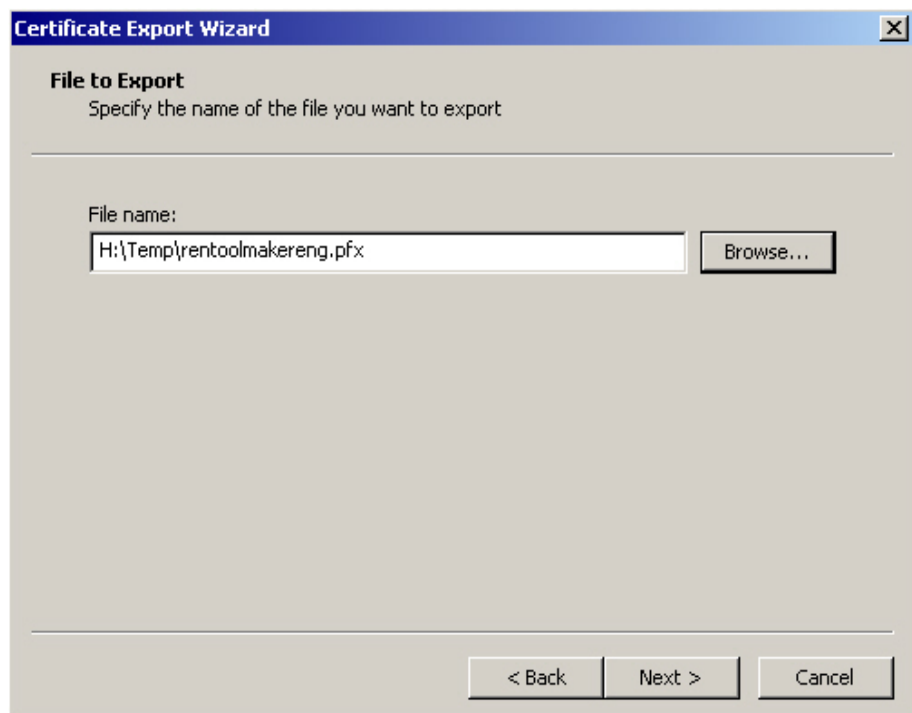
0239 – Export file

Specify a path and filename for the exported certificate and then click "Next >".

0240 – Finish

Now click "Finish" to export the certificate.
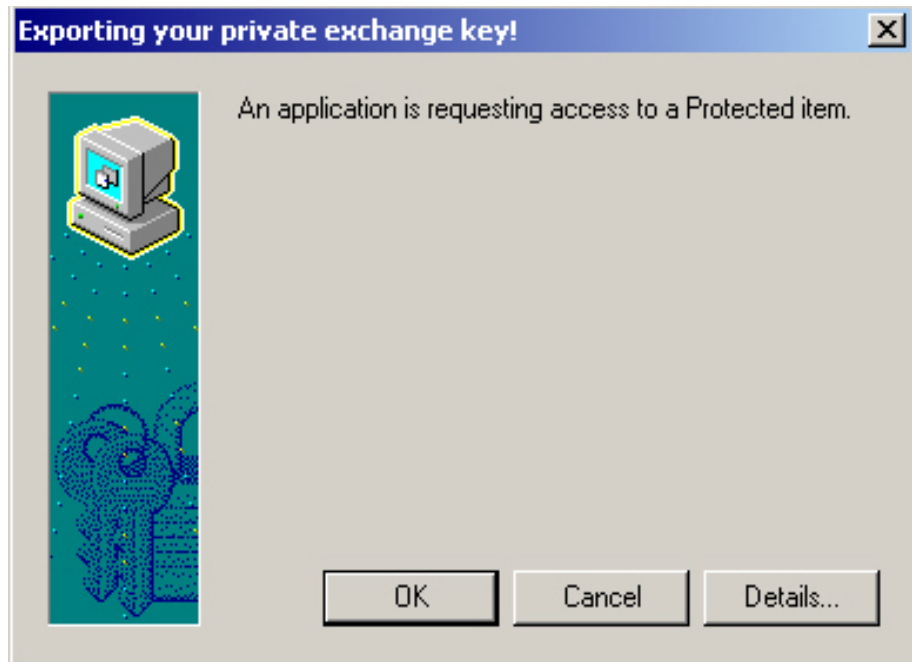
0231 – Export confirmation

Confirm that you want to export the certificate by clicking "OK".

0242 – Export completed

This message confirms that the certificate has been successfully exported.

26.3.2 Import certificate into DirectFax

Before you can use the certificate with DirectFax, you must first copy it with Windows Explorer or the iSeries Navigator to the iSeries IFS. From Version 5.40, the destination path "\Toolmaker\DirectFax400\certs" is created automatically when DirectFax is installed.

26.3.3 Export the public key

In order to validate the signature, the recipient requires the certificate's public key. You will therefore need to export it from your PC certificate cache and make it available to recipients. We recommend that you make public keys available for recipients to download from your website. You can save public key URLs in signature configuration (command WRKSGNCFG).

Click "Tools" – "Internet Options" – "Content" in Internet Explorer.
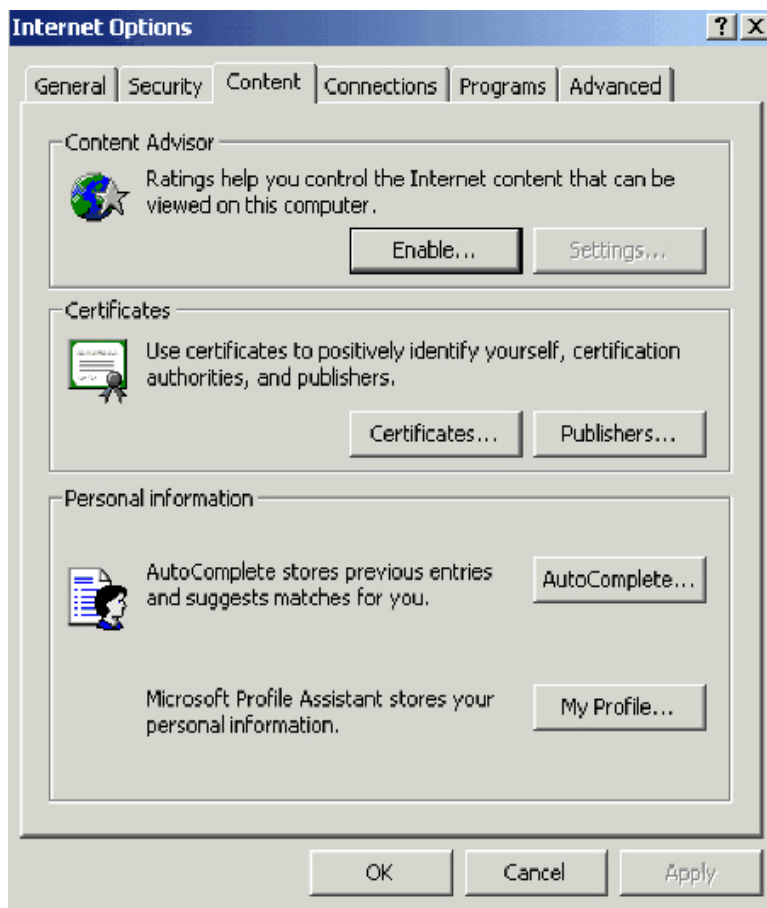
0233 – Internet options

Click the "Certificates" button in the middle of the dialog to display installed certificates.
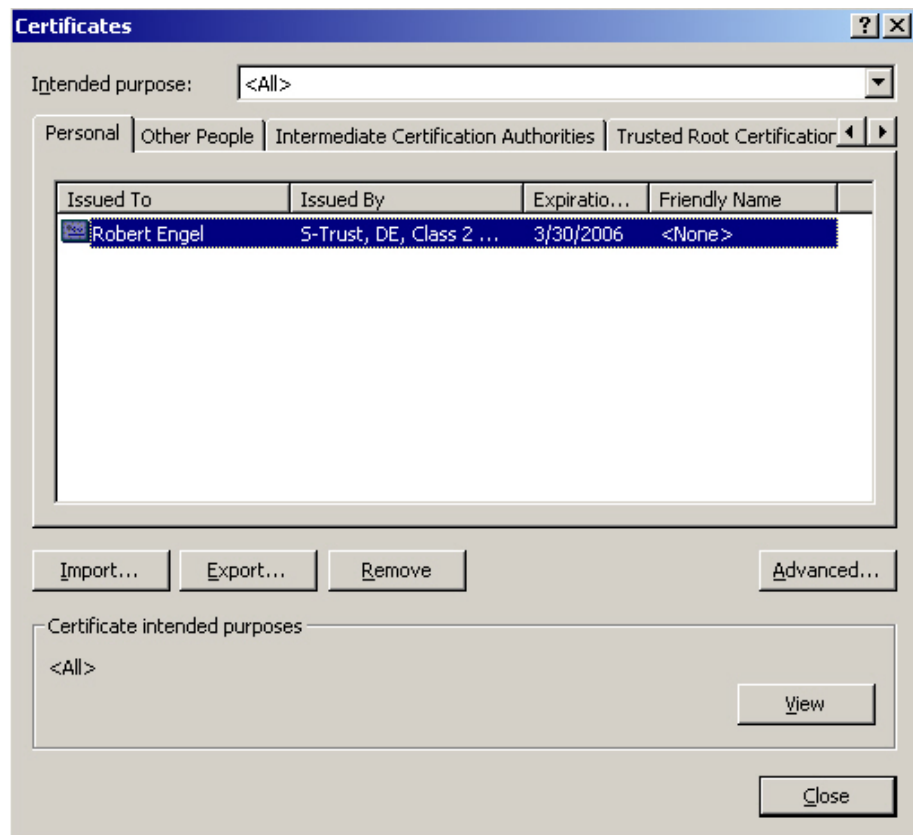
0234 – Certificates

Select the certificate for export and then click "Export".

0235 – Certificate export wizard

In the wizard, click "Next >".
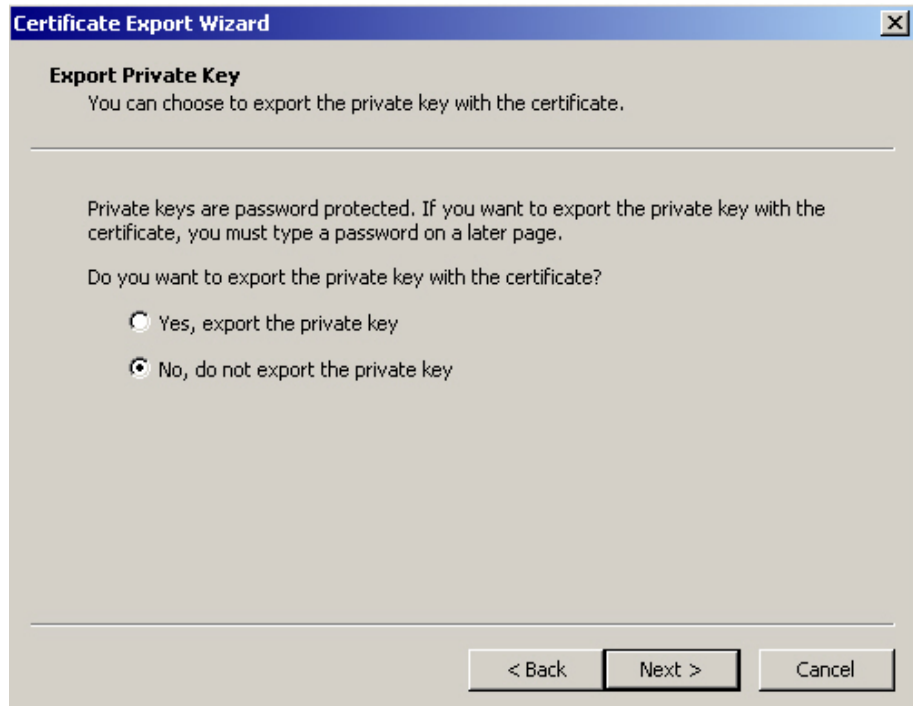
0262 – Do not export private key

Select "No, do not export private key", and then click "Next >".
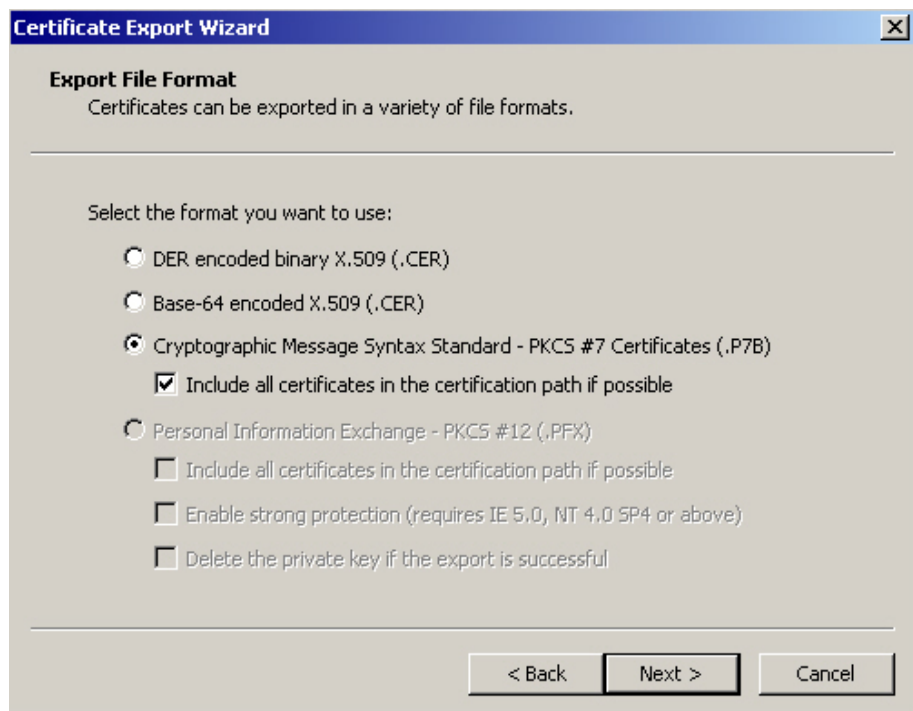
0263 – Export file format

To include all certification paths in the export file, please select "Syntax Standard… (.p7b)" and "Include all certificates in the certification path if possible". This ensures that all certification locations are included and later imported by the recipient. If you do not include all certificates, the certification locations may not be saved in the recipient's certificate cache and the certificate may be considered untrustworthy.

To continue, click "Next >".
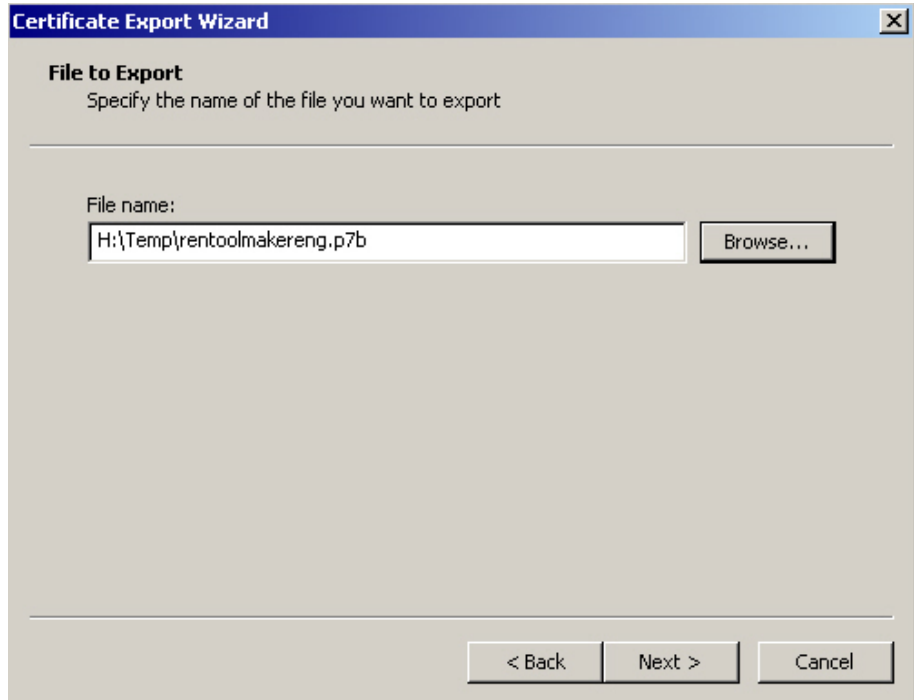
0264 – Export file

Select a path and name for the export file and then click "Next >".

0265 – Finish

Now click "Finish" to complete the export.

26.4   DirectFax configuration

To configure digital signatures in DirectFax, you need only two passwords, both provided by our sales and distribution support team.

- One password for the option in DirectFax.

- One password for the Cryptlib module.

26.5   Password for the fax signatures option

You need a password for DirectFax to use the fax signatures option. To enter the password, enter the following command from a command line:

ADDLIBLE DIRECTFAX

INSPSW

In the dialog displayed, enter the data in the password document.

The message "Password assigned" indicates that the password has been entered correctly and accepted by DirectFax.

26.6   Fax signature activation and password for the Cryptlib module

Encryption in DirectFax is with a Cryptlib module from XPS Software. To activate signatures and enter the password to process digital signatures, enter the following command on an iSeries command line:

ADDLIBLE DIRECTFAX

CHGFAXVAL + F4

Scroll to the third page, where you will see the field used to hold the license key.

```
                    Change DirectFax system values (CHGFAXVAL)

Type choices, press Enter.

AFP Converter version  . . . . .    *DIRECTFAX     *DIRECTFAX, *HPT, *SAME
PCL converter version  . . . . .    *AS400         *PC, *AS400, *SAME
TCP/IP-Adr. PCL converter PC . .    _____
PCL X value text conversion  . .    *DFT____       Zahl, *DFT, *SAME
PCL Y value text conversion  . .    *DFT____       Zahl, *DFT, *SAME
Sign faxes . . . . . . . . . . .    *NO_____       *NO, *YES, *REQUEST
CryptLib license key . . . . . .    *NONE_____
```

Sign faxes

This parameter specifies whether or not faxes are signed.

The values allowed are:

*YES All faxes are digitally signed (not required by the tax authorities – only documents containing VAT amounts, such as invoices, must be digitally signed).

*NO No faxes are digitally signed This setting is required if you have not purchased a digital signature module.

*REQUEST This should be the default setting. Only faxes containing a control code ^DS(Configuration name) in the first line of the spool file are signed. The code can be added by a program or by Autofax.

Cryptlib license key

Enter the license key included with the password document. If you do not have a license, the value *NONE is required. You will not be able to sign faxes.

26.7 Work with fax signature configurations

In DirectFax, a range of configuration options allow you to integrate digital signatures flexibly. To start configuration, enter the following command:

ADDLIBLE DIRECTFAX

WRKSGNCFG

The command requires authorisation. Only authorised employees can execute this function.

Using the following command

```
EDTOBJAUT OBJ(DIRECTFAX/WRKSGNCFG)
    OBJTYPE(*CMD)
```

you can set the access rights for the command to work with signature configurations. Ensure that only authorised persons have access to the command. In particular, access for *PUBLIC **MUST** be set to *EXCLUDE.

```
RENGEL          Mit Signaturkonfigurationen arbeiten      29.05.06 09:55:31

   Listenanfang bei . . . . ▓————————

 Auswahl eingeben und Eingabetaste drücken.
     2=Ändern   3=Kopieren   4=Löschen   7=Umbenennen   8=Berechtigungen

Op Definition Beschreibung                    Position   Zertifikat
__ SIGNGSS    Toolmaker Rechnung              *POSITION  TMS01(*ANY)
__ SIGNGSS1   Toolmaker Rechnung              *POSITION  jgrtoolmaker
```

0291 – Signature configuration

If you are configuring for the first time, the dialog displayed is blank. First use F6 to enter a signature configuration.

```
              Change signature configuration (CHGSGNCFG)

Type choices, press Enter.

Signature configuration  . . . .  █_____    Name, *DEFAULT
System . . . . . . . . . . . . .  _____     *SMARTCARD, *DIRECTFAX
```

0279 – Signature name and system

Signature configuration
Specify a name for the signature configuration. In DirectFax, you can create as many configurations as required, for example for divisions, departments or employees.

The values allowed are:

*DEFAULT Default configuration

Name   Custom configuration name

System
There are two types of signature systems in DirectFax. The following options are available.

*DIRECTFAX
maintains certificates for signing with electronic or advanced electronic signatures. The certificates are saved on the iSeries system. Signing is also done on the iSeries. This variant does not meet the legal requirements for signatures.

If ***DIRECTFAX** is selected as the system, the following two parameters are displayed:

```
              Change signature configuration (CHGSGNCFG)

Type choices, press Enter.

Signature configuration  . . . . > *DEFAULT___   Name, *DEFAULT
System . . . . . . . . . . . . . > *DIRECTFAX    *SMARTCARD, *DIRECTFAX
Certificate  . . . . . . . . . .   'HWOIDT'_____

____

Password . . . . . . . . . . . .   _____
```

0281 - *DIRECTFAX signature

Certificate
Enter the name of the certificate file (without the .pfx extension) located in "\Toolmaker\DirectFax400\certs".

Password

To enable the certificate, enter the password defined when it was exported. Case-sensitive. The entry must be identical to the entry on the PC. To prevent OS/400 converting lower case to upper case, enclose the entry in quotes. The value *SAME specifies that the password remains unchanged when the configuration is changed.

*SMARTCARD
maintains SmartCards for qualified electronic signatures (in accordance with SigG). They hold the certificate in a memory chip. To use this system, you will need a SmartCard terminal connected to the iSeries with ComServer and the DirectCard software from Toolmaker.

If ***SMARTCARD** is selected as the system, the following two parameters are displayed:

```
                    Change signature configuration (CHGSGNCFG)

Type choices, press Enter.

Signature configuration  . . . . > *DEFAULT      Name, *DEFAULT
System . . . . . . . . . . . . . > *SMARTCARD    *SMARTCARD, *DIRECTFAX
Card terminal  . . . . . . . . .   KOBIL          Zeichenwert
Card number  . . . . . . . . . .   *ANY
```

0280 - Signature card terminal

Card terminal
Enter the name of the SmartCard terminal previously created with the command WRKCRDTRM in DirectCard.

Card number
The number of the signature card or the special value *ANY are allowed.

The values allowed are:

Card number   If you enter a card number, only that card is accepted for signing with this configuration. All other cards are rejected.

*ANY With *ANY, the number is not validated and all cards are accepted.

Other parameters
All other parameters displayed after pressing Enter are identical for both signature variants.

```
                    Create signature configuration (ADDSGNCFG)

 Type choices, press Enter.

 Signature configuration . . . . > RENENG        Name, *DEFAULT
 Certificate . . . . . . . . . . > RENTOOLMAKERENG
 _____
 Password . . . . . . . . . . . > '*********'
 _____
 Position . . . . . . . . . . . > *POSITION     *BOTTOM, *TOP, *LEFT...
 X coordinate . . . . . . . . . .  210           mm, *LEFT, *RIGHT, *CENTER
 Y coordinate . . . . . . . . . .  120           mm, *TOP, *BOTTOM, *CENTER
 Rotate . . . . . . . . . . . . .  *yes          *NO, *YES, 0, 90
 Signature text . . . . . . . . .  This is a digital Fax-Signature. You can ret
 rieve more informations and a program to verify are available under www.toolmake
 r.net.
 Signature font . . . . . . . . .  602           Zahl, *STD
 Line ranges . . . . . . . . . .   *ALL


                                                                        More...
 F3=Exit    F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display       F24=More keys
```

0245 – Signature page 1

Position

This parameter specifies where the signature barcode is printed on the fax. This may be affected by the spool data you intend to fax. Depending on the value entered, the parameters for X/Y coordinates, rotation, scaling and proportional scaling may be displayed.

> The values allowed are:

> ***POSITION** Position is determined by the X/Y coordinates. Any data at the barcode position will be deleted.

> ***BOTTOM** Barcode is printed at the end of the page

> ***TOP** Barcode is printed at the start of the page

> ***LEFT** Barcode is printed at the left margin of the page

> ***RIGHT** Barcode is printed at the right margin of the page

X coordinate

This parameter specifies the X coordinate for the barcode.

> The values allowed are:

> **mm** mm (top left corner) from the left margin

> ***LEFT** The barcode is at the left margin

> ***RIGHT** The barcode is at the right margin

> ***CENTER** The barcode is centred

Y coordinate

This parameter specifies the Y coordinate for the barcode.

> The values allowed are:

> **mm** mm (top left corner) from the top margin

*TOP	The barcode is at the top margin
*BOTTOM	The barcode is at the bottom margin
*CENTER	The barcode is centred

Rotate

Allows you to specify if and how much the PDF barcode is rotated when it is printed on the fax.

The values allowed are:

*NO/0	The barcode is not rotated
*YES/90	The barcode is rotated 90 degrees

Scaling

Determines what happens to the page content when the barcode is printed. If you can keep the area on which the barcode is printed free of content, you may not need to use scaling. If not, a number of scaling options are provided.

The values allowed are:

*OPT	Optimised – DirectFax decides the extent to which scaling is required. If the space for the barcode is free, no scaling takes place.
*YES	The page is compressed to create space for the barcode.
*NO	No scaling, content remains unchanged and the signature is added below to the text. Note that this may cause page overflow when the fax is sent. This option is not available for the position *RIGHT/*LEFT.
*OVERLAY	The signature overlays the defined area of the fax and the background in this area is deleted. Use this option only if you know that the area contains no text or graphics.

Proportional scaling

If you have specified the value *YES in the scaling parameter, you can use this parameter to define whether scaling is proportional (both length and width) or applied only to the length or width of the fax.

The values allowed are:

*YES	Scaling is proportional - the length and width of the fax are reduced proportionally.
*NO	Scaling is not proportional – if the barcode is printed at the top or bottom of the fax, only the length is scaled. If it is printed at either side, only the width is scaled.

Signature text

The digital signature is a barcode containing the signature and part of the fax text in encrypted form. This may seem somewhat cryptic to the recipient at first sight. We therefore provide the option to include information for the recipient, for example a reference to a web address containing additional information. On the website, you may also want to link to the free

downloadable Faxviewer, the integrated signature validation feature and the your downloadable public keys.

Signature font
Specifies the DirectFax font for SIGNTEXT. The default value is 740.

Line range
As only a limited amount of text can be included in the digital signature due to the size restrictions inherent in the barcode, this option allows you to specify the range and sequence of lines to be included. No further lines are included in the signature once the maximum is reached.

> The values allowed are:

> ***ALL** An attempt is made to include all text on the page in the signature. If there is insufficient space in the signature, the last text lines are not included.

> **Lines** Use this setting to specify lines or line ranges, for example 1,2,3 or 10-12,15-17,60-64,13-16,18-59. An attempt is made to include the lines in the signature in the sequence specified here. In the example above, the line ranges 10 to 12, 15 to 17 and 60 to 64 fit into the signature, and an attempt is made to add the last range 18 to 59. If there is sufficient space, all lines are added to the signature. If not, the last lines are not included.

```
              Change signature configuration (CHGSGNCFG)

  Indiquez vos choix, puis appuyez sur ENTREE.

  Text sender/signer . . . . . . . .   NONE

  Certificate URL  . . . . . . . . .   *NONE

  Save signature . . . . . . . . . .   *YES          *YES, *NO
  Description  . . . . . . . . . . .

                         Autres paramètres

  Max. length of signature data .    1024        Zahl
  Barcode type . . . . . . . . . . .  PDF417      PDF417
  Barcode P parameter  . . . . . . .  5           Zahl
  Barcode H parameter  . . . . . . .  0           Zahl
  Barcode V parameter  . . . . . . .  0
                                                        A suivre...
  F3=Exit   F4=Invite   F5=Réafficher   F12=Annuler   F13=Mode d'emploi invite
  F24=Autres touches
```

0292 – Signature page 2

Sender/signatory text
Allows you to enter additional text which is displayed to the fax recipient during signature validation.

Certificate URL
Allows you to specify the download address for the public key. This URL is displayed as a link during signature validation with the Toolmaker Faxviewer, allowing the recipient to download the public key from your website.

Save signature

This parameter allows you to save digital signature data to the file DFSNGDTA.

Text 'Description'

Here, you can enter a description displayed in the overview of fax signatures.

Please consult the Toolmaker Hotline before making changes to the additional parameters displayed with F10.

26.8 Authorities for signature use

An authorisation system is in place to restrict the use of fax signatures to authorised users. Only users maintained in this system can use signatures.

```
29.05.06  10:58:08          Signatur Berechtigungen editieren          RENGEL

Signatur Konfiguration .  SIGNGSS1   Toolmaker Rechnung

Aktuelle Berechtigung eingeben und Eingabetaste drücken

Benutzer     Verwenden
WOIDT            X
```

0293 – Authority control

You can use **F6** to add new authorised users. Existing users can be removed by deleting the user name and confirming with Enter.

26.9 Include the fax signature in a control line

One of the options for digitally signing outgoing faxes is to include the control code "DS(Configuration name)" in the fax control line. This option is only available if you have access to your application program source files or the support of your software provider.

For more information on the use and integration of control lines, please refer to the section titled "**The ^FAX control line in a spool entry**" of the DirectFax user manual.

26.10 Using fax signature in Autofax

One of the most popular options for sending spool data with DirectFax is the Autofax module. This module allows you to filter spool data, determine recipients and send the processed spools without the need for any programming.

To incorporate digital signatures into Autofax, all you need to do is to integrate the control code "^DS (Configuration name)" into the Autofax definition.

Open your Autofax definition using GO FAXCNFG2, menu option 3 and then select the definition with option 2.

Use F10 and option 5 to display the fax parameters. At the bottom of page 2, you will find the additional ^CODES:

```
: Fax send parameters        Page  2/2            RENGEL            :
:                                                                   :
:   Enter selection and confirm                                     :
:                                                                   :
:       Differing user  . . . . : *OWNER      Name, *OWNER, *USRDTA :
:       Cost center . . . . . . : *NONE       Name, *NONE           :
:       Sender CSI  . . . . . . : _____ Name, *DFT    :
:       Group sending  . . . . :  _           Y=Yes N=No            :
:          Wait  . . . . . . . :  ___         Minutes, 0=Default    :
:       Optimize  . . . . . . . : _____   Name, *NONE           :
:       Header logo . . . . . . : _____   Name, *NONE, *DFT     :
:       Header text . . . . . . : _____   Name, *NONE, *DFT     :
:       Footer logo . . . . . . : _____   Name, *NONE, *DFT     :
:       Footer text . . . . . . : _____   Name, *NONE, *DFT     :
:       Protect fax  (exclude)  : _           Y=Yes N=No            :
:       Use APF functions . . . : Y           Y=Yes N=No            :
:       EMail Priority . . . . : _            M=Mail, F=Fax, ' '=Default :
:       Special ^CODES. . . . . :                                   :
:       ^ARCNAM(MA) ^DS(RENENG)                                     :
:                                                         End       :
:                                                                   :
:   F3=Exit  F4=Select  F12=Cancel                     Scroll       :
:                                                                   :
```

0247 – Fax dispatch parameters

Special ^CODES
Here, simply enter your ^DS(Configuration name) control code. The code is read and executed when the fax is sent.

A signature configuration can only be used if the user has been entered as an authorised user for signatures.

26.11 Signature validation for received faxes

You obviously send faxes to recipients using a wide range of fax systems. This will include recipients using DirectFax, PC fax systems such as Tobit, FritzFax, Winfax and so on, and users of simple paper fax devices.

To validate incoming fax signatures and to verify that the text in the signature is identical to the text in the fax, use Toolmaker Faxviewer. The Faxviewer can be downloaded free from the Toolmaker website.

If the recipient is using a fax program, incoming faxes must be exported from the fax program as .TIF files. Recipients using paper fax devices must scan and save incoming faxes, also as .TIF files. The quality of fax transmission, and particularly the quality of the fax device, are decisive in determining whether the barcode signature is legible.

For barcodes rendered illegible by poor-quality fax devices, we recommend that you include a web address in the fax. At that address, you can request the recipient to ask for an e-mail copy of the fax on the basis of the unique sequence number generated by DirectFax in the fax header. The e-mail copy also contains the digital signature, but already converted to .TIF format.

To validate the signature, the recipient can then simply open it with the Toolmaker Faxviewer.

Warning
Note that, to use this option, you will need the DirectFax mail option, which allows you to send e-mail as an alternative to faxing. The graphic format for sending must be set to TIFF.

26.11.1 Installation of the Toolmaker Faxviewer

You and your recipients can download Toolmaker Faxviewer from the Toolmaker website. Start the installation by double clicking the file "setup.exe".

Note that Faxviewer requires some Microsoft .NET Framework components. .NET is automatically installed with some Microsoft packages such as Office 2003. If the install program determines that the required version of the .NET components is not installed on your PC, it will attempt to download and install them from the Microsoft website. Faxviewer will not work without the required version of .NET Framework. You will need to inform your fax recipients of this requirement.

The Faxviewer installation also installs a barcode recognition component. Click "I Agree" and "Next" to allow the installation.

26.11.2 Signature validation with Faxviewer

Once successfully installed, you can start the program with "Start – Programs – Toolmaker – Faxviewer".

0248 – Faxviewer

Select the file you want to validate and click "Open".
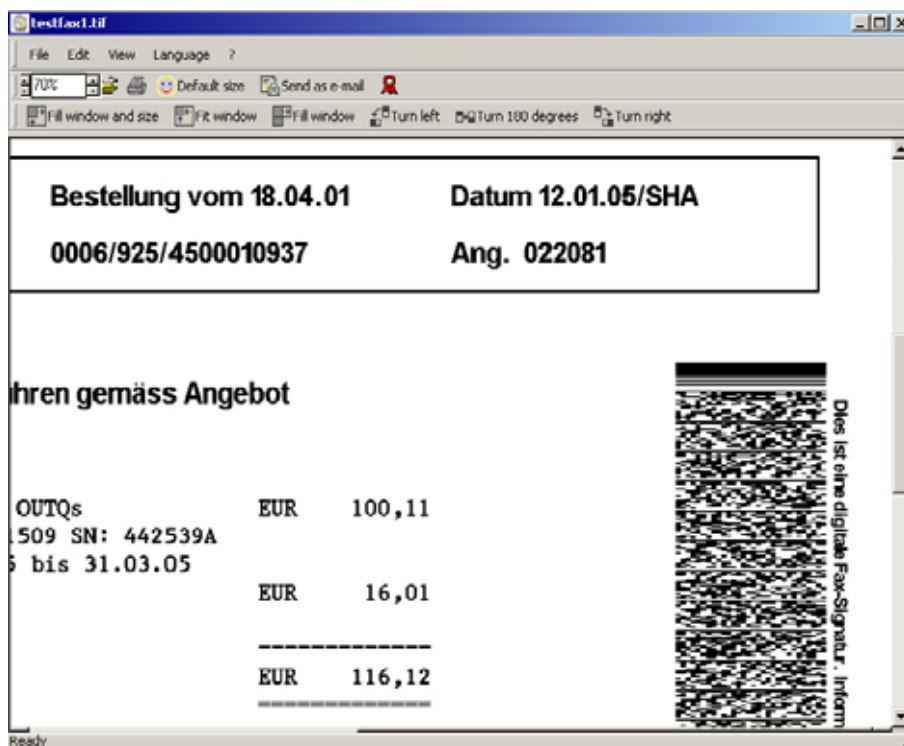
0249 – Display fax

Start the validation process by clicking the "Check signature" button (ribbon symbol).
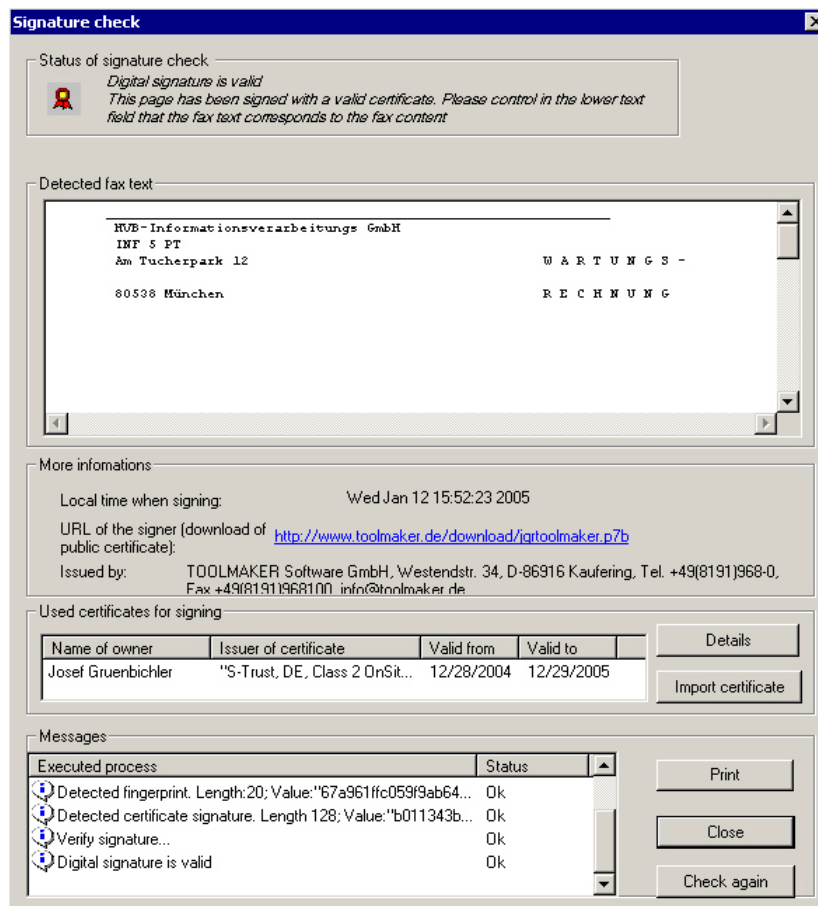
0250 – Signature check

Certificates published by T-Systems can be downloaded via LDAP and installed to the local PC's certificate memory. If no certificate is found for a document, the following error message appears:

0251 – Certificate not found

You can use the "Signatory's URL" link to download the certificate to your PC, then the "Import certificate" button to load it to the PC certificate cache.
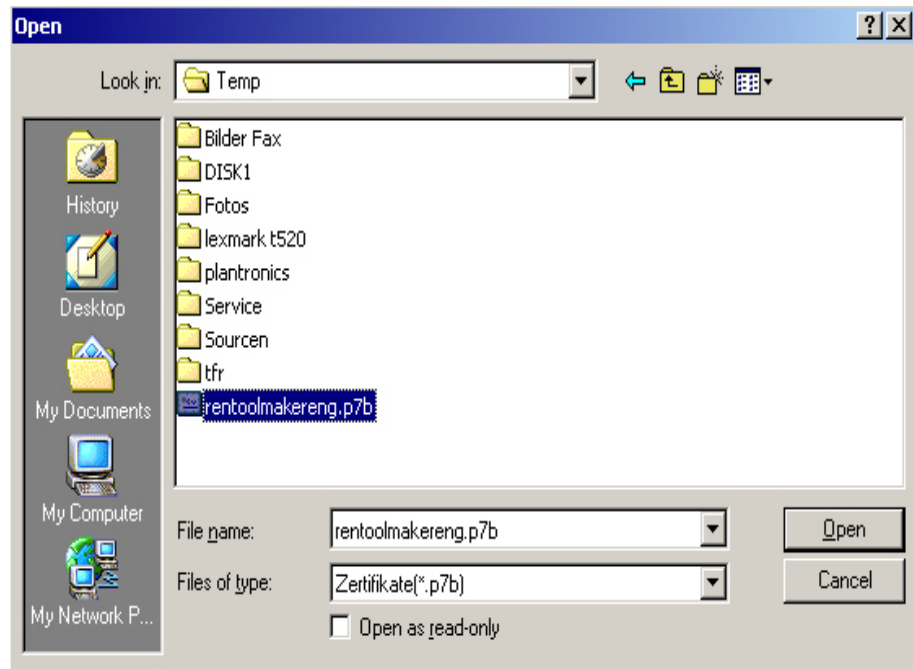
0252 – Import certificate

Certificates with the extension .cer contain no information on any certification paths required in the import and may lead to certificates being classified as untrustworthy by the recipient. Always use the suitable certificate file (extension .p7b), then click the button "Open".

Signature validation status
Displays the result of signature validation:
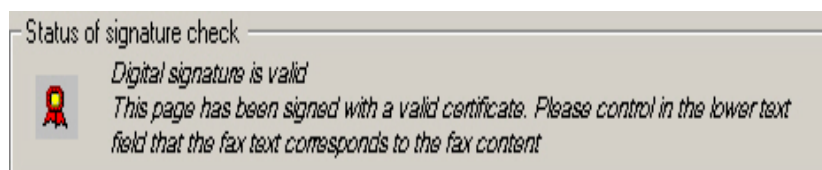
0253 – Signature validation

In addition to the status, a short description is also displayed.
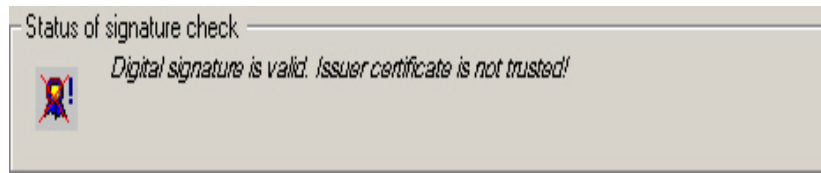
0254 – Signature validation

This is the result of a signature validation in which only a non-trustworthy certificate is found.

Detected fax text
This window (with both vertical and horizontal scrollbars) displays text lines from the original fax in the sequence in which they occur in the text. Lines are extracted as defined in the configuration and the "Line range" parameter described above.
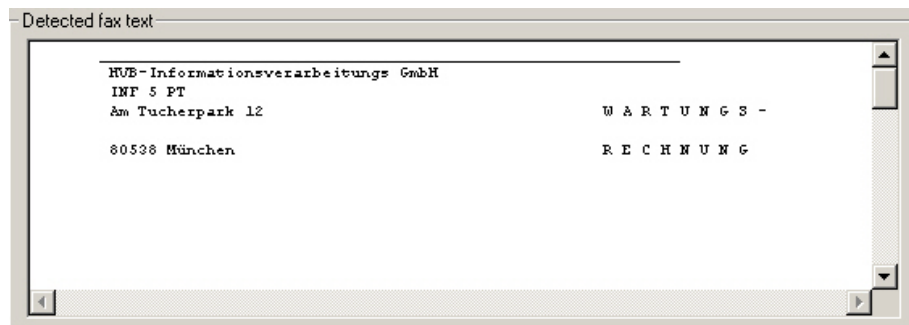
0255 – Detected fax text

Whereas the signature confirms that the fax originates from the sender identified, the fax text here confirms that the content of the fax displayed matches the content at the time of sending. Any differences between the graphic fax and the text displayed here may indicate that the fax is has been falsified.

More information
Here, more information on the on the fax signature is displayed:
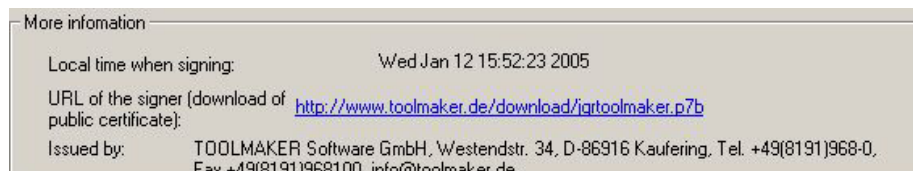
0256 – More information

Local system time at the time of signing indicates the time at which the sender signed the fax.

The signatory's URL can be used to download the public key. You should be able to download the key by clicking the link.

Publisher provides more information on the sender.

Certificates used for signing

Displays the certificate owner, certificate issuer and the period for which the certificate is valid.

0257 – Signature information

Click the "Details" button to display certificate details in a Windows-like dialog. This certificate is not in accordance with SigG:
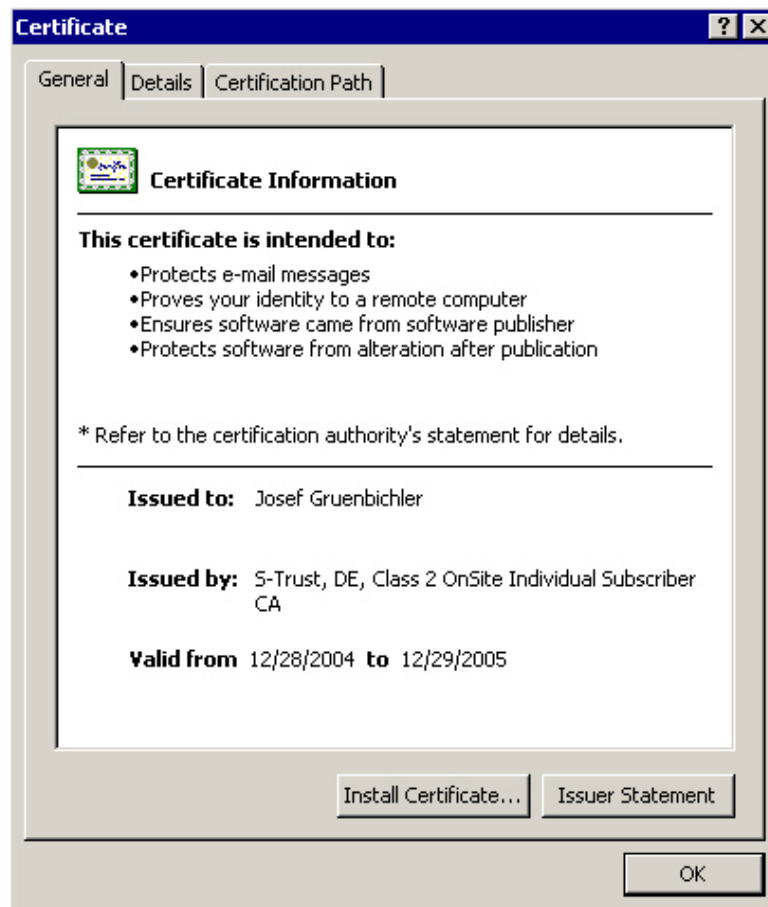
0258 – Certificate information

This certificate is in accordance with SigG. Because of the different models (Windows - shell model, in accordance with signature law - chain model) Windows cannot identify the root certificate.
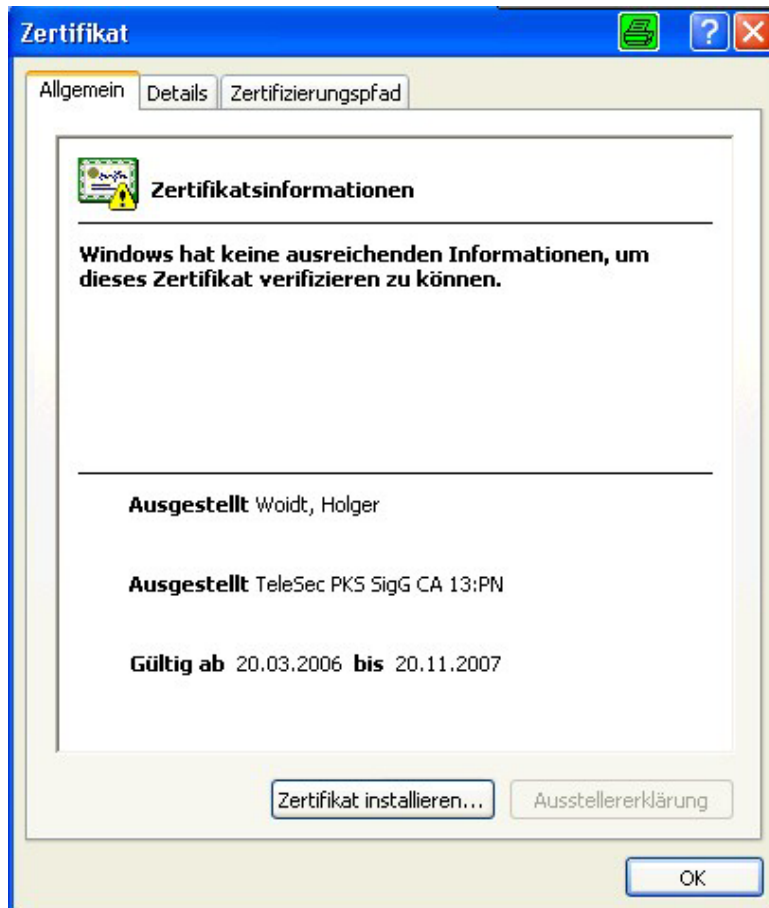
0294 – Certificate information

Messages
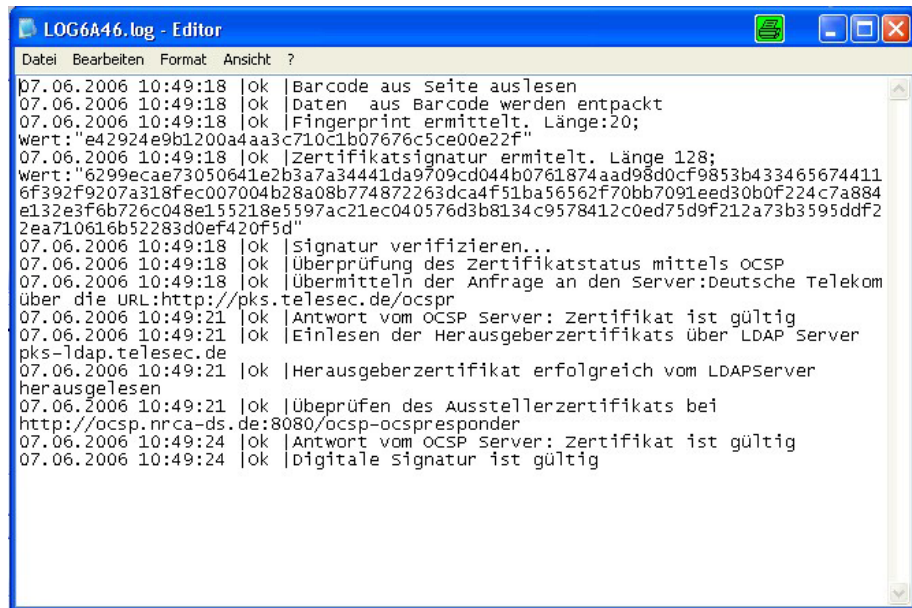
This window displays the status messages output during the validation process.
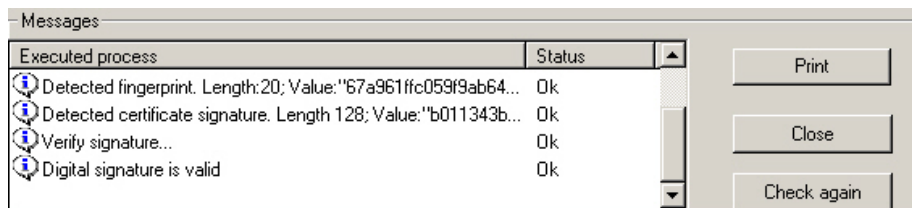
0259 – Messages

Displays the completion status for each process. Errors are flagged with a red symbol.

You can click the "Log file" button to display details on signature conformity using LDAP and OCSP validation.

```
LOG6A46.log - Editor
Datei  Bearbeiten  Format  Ansicht  ?

07.06.2006 10:49:18  |Ok  |Barcode aus Seite auslesen
07.06.2006 10:49:18  |Ok  |Daten  aus Barcode werden entpackt
07.06.2006 10:49:18  |Ok  |Fingerprint ermittelt. Länge:20;
Wert:"e42924e9b1200a4aa3c710c1b07676c5ce00e22f"
07.06.2006 10:49:18  |Ok  |Zertifikatsignatur ermitelt. Länge 128;
Wert:"6299ecae73050641e2b3a7a34441da9709cd044b0761874aad98d0cf9853b433465674411
6f392f9207a318fec007004b28a08b774872263dca4f51ba56562f70bb7091eed30b0f224c7a884
e132e3f6b726c048e155218e5597ac21ec040576d3b8134c9578412c0ed75d9f212a73b3595ddf2
2ea710616b52283d0ef420f5d"
07.06.2006 10:49:18  |Ok  |Signatur verifizieren...
07.06.2006 10:49:18  |Ok  |Überprüfung des Zertifikatstatus mittels OCSP
07.06.2006 10:49:18  |Ok  |Übermitteln der Anfrage an den Server:Deutsche Telekom
über die URL:http://pks.telesec.de/ocspr
07.06.2006 10:49:21  |Ok  |Antwort vom OCSP Server: Zertifikat ist gültig
07.06.2006 10:49:21  |Ok  |Einlesen der Herausgeberzertifikats über LDAP Server
pks-ldap.telesec.de
07.06.2006 10:49:21  |Ok  |Herausgeberzertifikat erfolgreich vom LDAPServer
herausgelesen
07.06.2006 10:49:21  |Ok  |Übeprüfen des Ausstellerzertifikats bei
http://ocsp.nrca-ds.de:8080/ocsp-ocspresponder
07.06.2006 10:49:24  |Ok  |Antwort vom OCSP Server: Zertifikat ist gültig
07.06.2006 10:49:24  |Ok  |Digitale Signatur ist gültig
```

0264 – Log file

27.0 Least Cost Routing with DirectLCR

DirectFax now also supports the new **DirectLCR** tool from Toolmaker. DirectLCR allows you to fax using the cheapest provider at any given time. With a large volume of faxes, this can produce considerable savings.

Conditions

To use the tool, the library DIRLCR with **DirectLCR** must be installed on the same system as DirectFax and licensed. You can check for the license with CHKLCR.

Configuration and function

To activate Low Cost Routing at line level, choose **WRKFAXLIN**, and then set the Use LCR parameter to Y=Yes on page 2 of fax line configuration. The **area and country code** fields must be entered correctly to match the **location of the modem**. Before faxing, the DirectFax transmission program then requests the prefix that is currently cheapest for the fax number from DirectLCR, which returns the entire number as a string.

The function can be activated at user level by setting the *Special phone/fax service: SRVPRV* parameter to ***LCR** in the **fax user profiles**. A fixed provider prefix in the profile has priority over DirectLCR.

28.0 Enhancements

The following is a list of all enhancements in the last release.

28.1   Version 5.35 – V4R2

This document gives an overview of the changes and improvements to DirectFax Version **5.35**, which have been added <u>after</u> 4.01 (22.07.02).

Warning: The new DirectFax version will be available for RISC machines **from V4R2**. The last release for V3R7 was DirectFax 5.15c as of 10.07.03 (created 11.09.03).

Installation

There is an **Installation guide** for each new DirectFax version on CD and, if required, also on the Toolmaker website. Please read this document carefully before installing the latest version or changing to a different iSeries or AS/400. The installation instructions in old manuals are no longer valid.

The DirectFax installation program now carries out a test of the profile **QUSER** at the start (just after LODRUN). If the **maximum permitted memory** for QUSER is **limited** and there is less than 10 MB space free, installation will be interrupted. The reason for this is several hotline cases with other products where the memory limitation in QUSER has led to serious system problems. If objects are loaded into the system with owner QUSER and the memory is used, the RSTOBJ command aborts and the product is not fully loaded and cannot function. If an IPL is subsequently run, many system errors occur and users on C/A sessions can no longer register themselves on the iSeries. The reason is that certain IBM jobs want to start under the profile QUSER and are immediately terminated when there is insufficient memory space.

Warning: <u>New</u> licence codes are required when transferring to DirectFax Version 5!
The product code with Softkey is now **DF450**xx. Some previously free-to-use interfaces (email and archive) require a licence code to be entered when changing to a new iSeries. Customers who had a licence for DirectFax 4.01 can continue to use the interfaces for free. Entry of new passwords is carried out after installation of the new version.

Enhancements

DirectFax InfoStore API (Solitas interface)

By selecting 7=Fax, a spooled file found in the InfoStore archive of Solitas can be transferred to the DirectFax command FAXSPLF and faxed or mailed.

DirectFax Mail with SMTP authentication

The DirectFax Mail interface has been expanded with the function SMTPA authentication. This function increases security when sending mail since, as with POP3, a **registration** with name/password now takes place **on mail**

server. The registration processes **PLAIN** and **LOGIN** as well as a variant of PLAIN for 1&1 (Schlund & Partner) will be supported.

The command **CFGFAXMAIL** has been expanded and now has the following **new parameters**:

Registration process (SMTPAUTH)
*NONE	do not use SMTP AUTH
*AUTO	automatic determination of the process
*PLAIN	PLAIN registration process
*LOGIN	LOGIN registration process
*SCHLUND	specially for Schlund & Partner (1&1)

User for SMTP AUTH (SMTPUSR)
This is where the name of the user or the account is indicated. 80 characters are available.

Password for SMTP AUTH (SMTPPWD)
This parameter contains the password for the authentication. If registration is unsuccessful, the error message of the SMTP server will be indicated on QSYSOPR.

TCP/IP port number (SMTPPORT)
The standard value *SMTP indicates that the usual port 25 is being used. You may need to specify a different port in some situations.

DirectFax TCPSERVER with port restriction

The TCPSERVER for the DirectFax PC client has been expanded with the option to restrict the range of free ports. Usually, communication between the server jobs on the AS/400 and the client programs on the PC runs over the entire number range of the ports from 1000 up. But if clients from a branch gain access via the firewall only a few ports are opened for security reasons. Use the following parameters in FAXDTAARA2 in the library DIRECTFAXF to activate port limitation:

275-275=1	Activation of port restriction
276-280=05000	First port number (e.g. 05000)
281-284=0050	Number of ports available to DirectFax/PC (e.g. 50)

Socket errors could occur if the range is too low. To disable port limitation, set 275-284 to blank:

Signature release of AS/400 faxes in WRKFAXSTS

The function ***SIGN** has been added to the command **WRKFAXSTS** to facilitate the release process for AS/400 faxes with the status **HLD release expected*.

*SIGN instead *ALL in the User field displays only faxes for which a release is required from the current user.

The user can start the release process with option **66**. The fax content is displayed as with option 5. F12 or Enter displays the next screen. The fax can be released in this screen as with option 6.

Signature release for iSeries faxes on the PC client

iSeries faxes with the status *HLD release expected* generally do not contain graphics because the graphic to be added depends on the release signatory. These faxes are difficult to read on the PC, making life difficult for the reviewer.

DirectFax's new PREMIX process is designed to rectify this problem by rendering such faxes legible. When the fax is released and the signature graphic assigned, the mix process is repeated before the fax is sent.

To use the premix function, set "Premix for all faxes" to ***REQ** or ***ALL** with the command **CHGFAXVAL** and F4. *NO suppresses the premix function.

Warning: The PREMIX process has a <u>low priority</u>. It is executed only if no other FAXMIX job takes priority over it. It is a good idea to plan some time for PREMIX into your work schedule.

Send fax messages to the user by email

DirectFax FAXMAIL has been expanded by a function which enables you to have fax dispatch messages and error messages sent to the user **by email**. This is particularly useful for PC users who send faxes from the PC but do not have a 5250 session. The special value ***MAIL** in a user field of a message in the program **WRKFAXMSG** starts the mail dispatch. The prerequisite for this is the existence of an **email address** in the fax user profile (parameter EMAIL).

FAXMBR1 - interface to IBM Fax Support (SNDDST)

A DirectFax interface has been created which can replace IBM Fax Support via SNDDST without requiring notable changes to the application programs. This service from IBM involved source members (texts) being sent via an OfficeVision function with the command SNDDST to a remote IBM-Server and sent from there by fax. Since OV/400 will no longer be supported on the new iSeries systems, here is a replacement solution.

To enable it, simply replace this command:
```
 SNDDST   TYPE(*DOC) TOUSRID((FAX IBMMAIL)) +
       DSTD(&MEMBER) CFMDEL(*YES) USRID(FAXUSER +
       DERKASF3) DOC(&MEMBER) FLR(SNDFAX)
```

through these lines:
```
 ADDLIBLE DIRECTFAX POSITION(*LAST)
 MONMSG CPF2103
 CALL PGM(FAXMBR1) PARM('*LIBL' FAXELOG
&MEMBER '010')
```

Further details on this interface can be found in source file QRPGSRC in library DIRECTFAX, member FAXMBR#, type INFO. The program is called FAXMBR1.

Fax display from application (WRKFAXSTS)

The command WRKFAXSTS has been expanded so that an application program which has read the required fax ID (sequence number) by accessing the file FAXSTA14 (application key) can now display the status directly to the operator via WRKFAXSTS.

The command *WRKFAXSTS USER(FX#0034567)* starts the status display and positions at fax sequence number 34567. An IBM 3489 terminal is required to display PC faxes with WRKFAXSTS. Both sent and unsent faxes are displayed.

LanCAPI and TCU support

The new fax transmission program has been expanded by one LanCAPI interface. In connection with ShareISDN, this is able to send faxes via the TCU (Toolmaker Communication Unit) (instead of the Bintec router).

Native PCL converter is integrated

Faxing *USERASCII spool files with **PCL stream** via DirectFax was previously only possible with the assistance of a PCL converter on a server PC. A native PCL converter has now been integrated (requires licence). It is possible to switch over via the parameter **PCLCVT** in command **CHGFAXVAL** F4 with ***AS400**. The parameter AFPPCL must be set to *YES.

The most complex aspect of PCL is determining the correct DirectFax fonts for PC fonts. Corresponding keys have been assigned for all DirectFax fonts. This table is stored in the PCL parser: An algorithm is used to determine the best fax font for the PCL font. If you are not satisfied with the font used by DirectFax, you can use the table WRKFAXALI to assign another one. For this, the attributes of the PCL fonts in the Alias table must be entered. PCL often uses fine lines and fonts. Always work with high resolution.

Since these new PCL converters are constantly being developed, please look out for more recent versions of the server program DFPCLLIB in the Support Area on the Toolmaker website (search term: PCL converter)

Multilingualism for menus and commands
From Version 5.21, DirectFax includes the language library DIRFAXLENG, which allows users to choose the language displayed at menu and command levels. The command **CRTLNGLIB** can be used to create a DirectFax **language library**. This means that it is possible, via the parameter CRTCMD *YES, to cause commands on the current machine to be transformed into the prepared foreign language library environment (precondition: Lib. SAVPRODFAX is available). With **DLTLNGOBJ**, the one-off deletion of all language objects (menus and commands) in Lib. DIRECTFAX is possible. The dialog language can also be controlled with DirectFax user profiles (WRKFAXPRF, parameter LANGID in CHGFAXPRF).

Support of the Multitech 2834 analog modem
As a replacement for the Telejet modem, the analog Multitech 2834 modem is supported. In the configuration of the line, *MT2834 is to be entered as modem and modem driver.

Corrections and minor enhancements

- Since the parameters for the file key are restricted internally to 20 characters length per key with Autofax, there were very occasionally irritations in the analysis of errors where no fax number could be determined. The message FAXC00E has been changed so that only the key values actually used are displayed when accessing the user database.

- The entry field *Personal addressing* in the Recipient selection screen on the PC client can now be used to transfer a reference text of a maximum of 48 characters in length. This text will be used when **sending mail** as the **reference line** and replaces the line which is otherwise generated automatically.

- Errors on 3489 terminals can be avoided in WRKINCFAX, WRKFAXSTS and WRKFAXGRF by disabling options 5 and 7 *Image display* for 3489 terminals. If you experience problems on other terminals, image display can be disabled for all terminals with the following command:

  CRTDTAARA DTAARA(DIRECTFAXF/IMAGENO) TYPE(*CHAR) LEN(1) TEXT('Disable image display)

- **Operating instructions** are now available for the DirectFax **font generator**. Using the DirectFax font generator you can create new fonts to supplement the standard fonts shipped in the library DIRECTFAX. The new fonts can be used in mix faxes on the AS/400. The command WRKFAXFNT is used to display and maintain available fonts. The font generator is a component of DirectFax requiring a licence.

- In the send log print file SNDSTS and in the cost centre evaluation print file PRTFAXK, the spool attributes have been changed to 132 characters in width and 72 lines with OVL at 66.

- In the transmission program for the Bintec router (CAPI driver), a routine which recognises and circumvents connection problems due to ISDN service identification has been built in. This means that even older fax receiving machines can now be reached and errors due to incorrectly configured telephone systems avoided. If required, it is also possible to switch off the entire service identification test.

- The transmission program for the Blatzheim modem has been corrected. If problems arise with modem communication after a correct fax dispatch procedure, the fax will now be flagged as having been dealt with.

- **PCL5 log printing** can now be suppressed for **serial PC faxes**. If you enter a night rate (1..5) in the data area FAXDTAARA at position 193, PC faxes set to that rate will not produce a log print.

- An exotic index error in the FAXMAIL program has been corrected. It occurred due to an overly long underline and caused a buffer overflow.

- An index error in WRKFAXSTS which was triggered by a missing compartment option in the profile has been corrected.

- While incoming faxes were being printed, the fax was no longer placed into the status OPN, but remained on NEW. This has been corrected. You can use option 91 in the program WRKINCFAX to set a fax manually to OPN and option 92, if required, to reset to NEW in order to correct an incorrect status.

- In program WRKINCFAX with option 90=*Repeat distribution* allows you to repeat automatic distribution for an incoming fax. Useful for example if you have made changes to the distributor list. In addition, the program WRKINCFAX has been expanded to display the name of the printer after option 8=*Attribute* with DTR target type if the automatic incoming fax distribution has triggered a PCL print.

- When displaying fax contents on the PC client, the image was found to compress if a fax did not have a unique identifier for resolution (fine/coarse). This is now circumvented in the AS2PC server program, with a missing identifier being replaced by C (coarse).

- The trace list on the CAPI transmission program (Bintec) is now structured and is therefore more easily readable (ASCII text file).

- A switch has been added to **FAXMAIL** that deletes the **fax banner** (fax header lines) before the mail is created, so that the TIF or PDF attachment contains no reference to DirectFax. To enable it, set position **461** in the data area **FAXDTAARA2** in the library **DIRECTFAXF** to **R**.

- If there was an error when sending mail via the interface *DIRECTMAIL (e.g. incorrectly formatted email address), the document became stuck in the WRKFAXSTS display in the status *Mail preparation* and no further mail was sent. This error is now recognised. The document is set to the status **HLD MAIL error* and the user responsible receives a message. Special characters ÄÖÜßäöü are not permitted in mail addresses!

- In the **^FAX control line**, the parameter ^REF() has been added for the **reference line in emails**. The file FAXPAR had to be expanded for this purpose. The **^UN** code for the fax sequence number is supported in subject line text. If no ^REF() text is specified, the subject line is generated automatically as before.

- **WRKSPLFAX** has been corrected to support the code **^FORM** and the form information from the fax user profile. The latter is, however, only effective if an 'F' is in data storage area FAXDTAARA position 148.

- The parameter **CMX** *Expanded comment* has been added to command **FAXSPLF**. This can be up to 256 characters long and is automatically broken in the **cover sheet**. ^&CMX060 in the cover text sets the start position and width of the text, 60 characters in this example. The width value must be between 40 and 80. The default is 60 characters.

- On the **PC**, the code **^HLGO()** for the **header logo** in the control line has been expanded so that it can also include the header logo on the next page. Examples: ^HLGO(LGO1:LGO2) ^HLGO(LGO1:*NONE) limitation: The number of characters between the brackets may be a maximum of 10 incl. the colon.

- The DirectFax **server program** DIRFAXSRV has been optimised to hold a sufficient number of faxes in preparation at any time. This ensures that all transmission programs can send faxes without interruption. The preparation of faxes for mixing has also been adapted.

- A new switch has been added that suppresses preprint for faxes waiting for a ^SIGN(Name) release. Set position 88=A in FAXDTAARA to suppress the preprint even if a printer has been specified.

- An error in the release of the assigned primary memory in the routine DFT410 has been corrected.

- An index error in the program PRTFAXKST Cost centre list has been corrected

- The **group fax test** in the DirectFax server program DIRFAXSRV has been corrected so that only the first fax in the group is now time tested. This is designed to increase the efficiency of the function so that more faxes can be put together to the same recipient.

- The command **FAXSPLF** has been changed to return the fax sequence number in the final message to confirm fax generation. The following line in a CL program returns the message FAX1146 immediately after the command FAXSPLF:

```
RCVMSG  MSGTYPE(*LAST) RMV(*NO) MSGDTA(&MSGDTA) +
        MSGID(&MSGID)
```

  The variable &MSGDTA thereafter contains the **fax sequence number** from position **31**, length **7**. With this number, an application can determine the send status from the file FAXSTAT in DIRECTFAXF. It is a good idea to do the same for MSGID FAX1146 to check for errors.

- Now you can **optimise memory use** on the iSeries for identical serial faxes created on the PC. Assuming approximately 100 KB per fax page, a serial fax containing 10,000 pages would require 1 GB on the iSeries for several days. COPYFAX can reduce that requirement to less than 10%. To use this function, serial faxes must be **identical**. Faxes are not identical if each contains a different salutation. The memory usage cannot be reduced with COPYFAX at this point.

  The function can be activated by entering "**C**" at position **87** in FAXDTAARA and then restarting DirectFax. If you then create a serial fax with a **call distributor group** on the PC in which all faxes are **identical**, a full fax is generated on the iSeries for the first fax only. For all other faxes, DirectFax generates only header records of

approx. 1 KB per fax in the file FAXSTAT.

When you send serial faxes, DirectFax temporarily duplicates the first fax for the fax currently being processed and deletes it once it has been successfully sent. Faxes not successfully sent must be deleted manually. Because it is required for all others, the first, or reference, fax in the series cannot be deleted.

- The abbreviation of long mail addresses to 48 characters on the interface DIRFAXPRT (^FAX control line and Autofax) has been corrected; 80 characters are now supported.

- The **licence check** has been generally changed to the product code DF450xx. New customers now require a licence for the functions Email (product code DF450EM) and Archiving of incoming and outgoing faxes (DF450AR). Customers with a permanent licence for DirectFax 4.01 can continue to use these interfaces. In case of a system upgrade, however, a new licence code beginning with DF450xx is required. The command **CHKDIRFAX** has been adapted and displays the existing licences. **STRDIRFAX** cannot be executed if an interface is configured and activated but no licence exists for it.

- In the Autofax definition program, the fields for the **start line** of the **command** added (F8) and its **condition** have been opened or added to the screen format. This removes the need for previous actions with UPDDTA on the file ABCMDP or other tricks to circumvent problems.

- Double storage of identical user names from several ^SIGN(xxxx) codings in one document is now prevented. Also, the processing of ^SIGN(*CURRENT,xx,yy) has been corrected.

- An abortion error on the PC when displaying the fax content of a PC fax still waiting for the standard logo to be mixed in has been corrected.

- The addition of **TIF graphics** to a fax or an email using the **^ATTACH** command has been corrected. A 90° (lateral) rotation now only takes place if the graphic would not fit in the straight vertical.

  On the **log printer** in **Autofax**, the special value ***WRKSTN** is now supported. Useful in environments where the user's default printer is retrieved from the device description using *WRKSTN in the AS/400 user profile. DirectFax attempts to detect the printer from the spool file job name. If the printer entry is set to *SYSVAL in the device description, the system printer QPRTDEV is used. If the job name is not a terminal, the log printer is not used.

- In **Autofax**, the following attributes of the spool file are now supported as **constants** on the **key information**

*USRDTA	User data
*FILNAM	File name
*PGMNAM	Program name
*JOBNAM	Job name
*USRNAM	User name

Example: With a spool file, if the parameter user data contains the company number required for access to the database file to record the fax number, the special value *USRDTA can be entered instead of a constant in the key definition via *Constant value* = Yes.

- In the command **FAXSPLF**, the parameter **MARGINTOP** *Margin top mm* has been added. This allows you to increase the top margin to create space for graphics. To avoid unwanted page breaks, you may need to increase the LPI (lines per inch) if you do this. Automatic scaling is not supported.

  The left margin can be increased if required using the parameter **MARGIN** *Left margin mm*. It should be noted here that the standard margin is 15 mm wide. If 10 mm more margin is desired, the number 25 should be entered.

  In addition to 10, 12, 17 and 20 CPI, **15 CPI** and **7 LPI** (font 0223) now allow you to improve the appearance of the fax. These changes at FAXSPLF apply to mix faxes in the full version of DirectFax. There are restrictions in the light version.

- The **Alternative fax line** function is now also supported in the new transmission program. If control of the fax line on specific fax recipients is to take place via the fax number for special technical reasons, the data storage area FAXNRSARA with length 1000 in DIRECTFAXF can be added and filled with a maximum of 50 fax numbers of 20 digits each. Position 139 in the data storage area FAXDTAARA then determines the line pool that is to be used alternatively.

- The code **^ATTACH()**, used to attach TIF images (e.g. standard form contracts) to a fax, is now also supported in the ^FAX control line. The syntax is slightly different.
  Example: ^FAX012345678 ^ATTACH(PFAD/DATEI.TIF)
  A total of 48 characters are available for path and file name. This function adds a new file, FAXST01, to DIRECTFAXF. It is maintained automatically.

- In the job FAXMIX, control of the joblog has been corrected so that printing now takes place, as with the other jobs, dependent on parameter JOBLOG in the DirectFax system values. In addition, an ADDLIBLE QTEMP has been added to prevent errors in case of incorrect job environment.

- **AUTOFAX** has been expanded with an important function. One can now have **spool files processed twice**, for example to mail a copy to representatives with the second mail run. For this to happen, the form number must be included in the AutoFax filter and the spool file must contain the second recipient.

  If you change the FORMTYPE parameter in the spool file after the first run and release the file in the DIRFAXPRT OUTQ, AutoFax reopens the spool file to process it with another definition. The second definition is based on the changed form name. It retrieves a different recipient. The function is set with F=FormsChange in *Spool actions* in *Source spool file* in the *Hold* parameter. You must also enter the form type in *Place in OUTQ*.

If this function does not cover your requirements, use the EXIT-program ATFEXIT01 (source in QCLPSRC in DIRECTFAX) instead. The EXIT program allows you to make other changes to spool file attributes such as USRDTA. You can find more information in the source program.

- Now you can change the send priority for serial faxes for specified users with the command **CHGFAXPTY**. For example, a series of 1,000 faxes without a night rate will block any other faxes in the queue for an extended period. You can get around this by sending a fast fax. As administrator however, you can also use CHGFAXPTY and the user name to set the fax priority to one of the five night rates.

- Special characters in the **fax identifier** (CSI) can lead to the connection being terminated. The internal iSeries modem 2771 particularly reacts with errors if umlauts (ÄÖÜßäöü) are contained in the CSI. For this reason, a warning appears in dialog programs if the CSI contains special characters which are not permitted.

- In the new transmission program **DFMODSND**, the wait time according to FET=0 has been increased from 10 to 25 seconds in order to give the modem more time to process a page change. This prevents internal hang-ups in the modem. This primarily affects the new Blatzheim BM33k6 ISDN **Pro** modem.

- The **CCSID** of the file **FAXDATEN** in DIRECTFAXF has been changed due to errors with the umlauts (foreign language special characters) abroad from 273 (German) to 65535 (no conversion). This only has consequences after a reinstallation of DirectFax, but can also be done manually with **CHGPF** DIRECTFAXF/FAXDATEN CCSID(65535).

- With the **fax menus** FAX, FAXCNFG, FAXCNFG2, FAXM, FAXOPR and FAXSRV, the command call-ups have been changed to not qualified, i.e. the prefixed library DIRECTFAX has been removed. At the same time, the parameter PRDLIB has been changed to DIRECTFAX. This was necessary for the change-over to multiple languages on menus and commands. If the IBM fax solution for iSeries is installed but not used, crossovers with GO FAXOPR and WRKFAXPRF could result. It is recommended in this case to rename the IBM objects (menus and commands) in QSYS or to uninstall the IBM feature Facsimile Support.

- A first version of the interface **Fax from LSDForms** has been added. LSDForms is a Toolmaker product which prepares SCS spool files graphically and can print PCL spool file as *USERASCII with layout storage. Please contact the Hotline for instructions if you would like further information about this.

added after 5.15 (5.15b)

- The mail address is now identified on mails in the **transmission log**.

- A problem has been removed for faxing via the **TCU** in connection with an Alcatel TC system.

- **PCL** is now also accepted in the command **FAXSPLF** or in the API **CRTSPLFAX**.

- When editing a **fax number** mixed with special characters, brackets are now replaced by blanks to avoid syntax errors when analysing the ^FAX control line.

- When using the new transmission program, the special **CSI** (identifier) of the sender from the field XCHSND in FAXSTAT was previously only taken into account visually (in the banner). Now it is also exchanged in the dialog of the two machines as an identifier.

- Soft fonts are now also supported in the **PCL** interface.

added after 5.15b (5.15c)

- The memory release has been corrected for internal memory administration of the transmission program for CAPI. Previously, with **V5R2**, messages tended to pile up in the **joblog**.

- With **TIF** conversion, recognition of inverse (white on black) graphics has been improved.

- In the server program to support the old **DCE faxbox**, an error that occurred from Version 5.00 had to be resolved. This was indicated by incorrect status messages for faxes, which had already been sent.

added after 5.15c (5.20)

- In the fax status display (command **WRKFAXSTS**), option 4=Delete was protected to avoid internal locks due to deletion of active faxes.

- As the local calls market was opened up, some providers experienced connection problems if a local fax number contained the area code. Until the area code was removed, the fax could not be sent. In the command **WRKFAXLIN**, it is possible to enter one's own fax number, divided up into country code, city code and number at the top of the second page of the configuration. The transmission program uses the values now to filter out country codes (e.g. 0049) and area codes (e. g. 0049).

- It was previously necessary to place an 'A' in the data storage area FAXDTAARA position 153 before using the **AFP** and **PCL** interface in DirectFax. This can now be comfortably controlled in the command **CHGFAXVAL** F4 via the param. **AFPPCL *YES**.

- When converting from MIX faxes in **PDF**, the **header** (fax header) has been renewed and the control optimised. If this line is not desired, it can be suppressed by 'R' in position 461 of the data storage area FAXDTAARA2 in DIRECTFAXF.

- As part of the upgrade to **V4R2** as the minimum release, the installation procedure has been changed. The libraries SAVV3R1FAX and SAVV3R7FAX have been removed.

- A new command **INZDIRFAX** has been created to execute all routine work after an installation or a machine upgrade with one call. It is automatically called up within LODRUN OPT01. If no DirectFax installation with LODRUN is carried out after changing to a new machine or installing a new OS/400 release, INZDIRFAX can be used to deal with everything in 2 minutes.

- Licence testing in the programs AS2PCTCP has been subsequently changed from DF430PC to DF450PC.

- The first time the fax parameters on the **PC** were changed in the queue for **outgoing faxes**, the first fax in the list displayed was changed rather than the marked fax. This error has been corrected in the program AS2PCTCP.

- An incorrect **message on QSYSOPR**, which indicated an incorrect configuration of the ASCOM modem type has been corrected. The cause of this was the version information differing from the standard on newer ASCOM fax routers.

- For spool files which are processed via **Autofax**, where the **fax number** or the **mail address** is printed in the **same position** in the SPLF, an automatic solution has now been built into the program CRTDIRFAX. The file is then faxed or mailed as appropriate. A requirement for this is that only the mail address is marked for extraction in the AutoFax definition.

- In the conversion routine for **PCL** into text, a special problem affecting spool files has been resolved, whereby the first character was shown in a miniaturised or scaled font. This led to coordinate errors in the positioning of text characters in an Autofax definition and made the text unreadable due to overlays. A problem relating to an empty second page has been resolved. An error triggered by the special character @ in the PCL stream has also been resolved.

- The program GETPRFPAR, used very frequently internally to read out the profile data of a DirectFax user has been protected in order to deal with the **error CPF4128** (required objects cannot be assigned). This error previously only occurred at night during **data saving** and during reorganisation of the file, but has now been observed during the day in one case. Vision is running on the customer's machine as a replicating tool.

- An error which occurred during **conversion** of an outgoing fax into **TIF** or **PDF**, if the second page only contained one or two lines or text, has been resolved. The message, which was displayed briefly, read:
  PDFlib I/O error: TIFF file damaged
  When this message occurred in the batch, a spooled file with this text was created under the user DIRECTFAX, but no **mail** was generated and sent.

- If there were malfunctions in the telephone lines or problematic sender fax machines when receiving faxes via the **TCU**, such large delays in the handshake could result that DirectFax could not receive the fax, but the other party received a clean confirmation of receipt from the TCU. The program has been expanded with a differentiated **timeout** control and changed so that the TCU is made to terminate the connection if there is too long a delay in the handshake.

- A **hang-up** could occur in the transmission program when sending faxes via the **TCU** if the ISDN page did not provide a return code in the event of unsuccessful dialing. This led after 5 minutes to a termination and **restart of the transmission job**. The problem has now been resolved internally by a time allocation of two minutes maximum. Over time, frequent terminations resulted in the TCU collecting vast numbers of waiting tasks which led in the end to a hang-up in the TCU.

- The DirectFax server program has been optimised to increase **performance** in **multiple line installations**. If many faxes with the same dial-up are generated at the same time, this could result in tailbacks. The program now automatically searches for other fax numbers and pushes these forward. In addition, measures have been taken to make **full use of all channels** if there are more than 4 fax lines.

- The file structure FAXPAR has been changed. Previously unused fields have been removed and replaced with others. The control code **^Q** can now also be used in the ^FAX **control line**.

- When **starting** the DirectFax **subsystem**, the job queue is now cleared with **CLRJOBQ**, since some systems were collecting jobs, which were no longer active there.

- When faxing **AFP spool files with Autofax**, where several documents, which have to be distributed via the fax number are contained in one file, it was possible that some pages could be sent to the wrong recipient. The error could only be seen from the PC client. The first page of the following document was also faxed, meaning that the number of pages per fax was always 1 higher. The error only occurred if line 1 of the spooled file page contained text and also only with AFP SPLFs. This has been corrected.

added after 5.20 (5.20b)

- A codepage error has been corrected for the conversion of **TIF** attachments (^ATTACH).

- The routine for preparation of the **fax number** has been changed. Brackets and blanks are removed to prevent figures being cut off at the end.

- The **mail address** is now displayed on the **PC** client in OUTFAX32 if no fax number is present. Subsequent alteration of the mail address is still only possible in WRKFAXSTS on the iSeries.

- To **retain fax contents**, a maximum daily figure of 99 can be configured (system value). At fax profile level, RETAIN also allows other values. ***YEAR** retains the fax for 366 days. ***PERM** equals 10 years. Use these values only for important documents. Use an archiving tool in conjunction with the DirectFax archiving interface for the majority of faxes.

- In der **PCL** interface, compressed Bitmap fonts and boxes with round 'corners' are also now supported. Altogether, the compatibility to PCL spool files from Interform has been further increased.

- **Graphics** of the spooled file present in BMP format are now converted to TIF before conversion to PDF starts. This reduces the **size of the mail attachment**.

- **Blacklisted** problem defused: With priority given to new, **fast iSeries models**, problems occasionally arose when using the **Telejet** modem and calling the fax recipient if a fax had previously run in *Engaged* status and at least 30 seconds time had not elapsed since then. Internally, the error Blacklisted was indicated (*No connection* appeared as fax status). When using the old transmission program Versions 5.10 or 5.15, there were individual cases where the fax was identified as *Sent*, but arrived either incomplete or as an empty page on the recipient's machine. The new routine uses another method and ensures that at least 30 seconds elapse between two dialling procedures. The enhancement has been built into both the old and the new transmission program.

- In **Autofax**, the international dialling code, e.g. +33 is now also changed to 0033.

- In the DirectFax **SMTP client program** for mail dispatch, an option has been created to vary the SMTP timeout. In data storage area FAXDTAARA2, a 3-figure number of seconds can be entered in positions 467-469. The value '040' enabled a sporadic timeout problem in connection with a Domino server to be resolved. If blanks are present in 467-469, the standard value of 20 seconds is used.

- When converting incoming faxes to **TIF** and **PDF** as part of the mail dispatch and when archiving, corrections due to scaling and special conversion errors (strips) were made.

Changed for 5.21c 16.02.04:

- The program CRTMIXGRF has been rewritten from RPG/MI to RPGLE and conversion errors have been resolved.

- Option **30** *Resend* in the program **WRKFAXSTS** (History) was changed so that the modification screen for transmission details is offered after Enter. The following actions are available:
  - Enter: Fax is released and refaxed
  - F12: Fax remains in HLD status
  - Change of fax number or other parameter

- The hang up procedure (VRYCFG) on the fax line for the internal modem of the iSeries (*INT2771) has been changed to receive fewer error messages on QSYSOPR.

- The tariff payment function is now also supported in connection with the TCU.

- The command TMSUSRPC to display the licenced PC user has been corrected (error in Version 5.15).

- A test routine has been introduced for empty faxes from the PC. If a fax process from the PC was supposed to produce an empty page, the fax will be stopped with the error *Empty fax*.

- Empty end pages which can easily occur due to an inadvertent page break in spool files on customized faxes will now be caught and no longer faxed.

- In the job FAXSPL, corrections due to rarely occurring record blocks were made.

- A new command RMVOLDMBR has been added to clear large source files with fax texts from old members on the basis of a reorg. date.

- The history display in the command WRKFAXSTS has been revised in relation to selection date in combination with user or department. Previously, it was occasionally not possible to find any records if the date selection was very far in the past.

Changed for 5.30 08.06.04:

- On the PC client in Version 5.20.5, the transfer of long fax numbers (international dialling code) has been corrected from the Outlook address book. Previously, numbers which were too long were cut off from digit 18.

- Some screen files were corrected due to the parameter SFLENDTXT, so that the texts *Next* and *End* are displayed in the language of the country in question.

- The service programs of the PCL converter were adapted due to support of various codepages.

- For licence testing, the product code DF450PX for Lite plus PCL has been added. In the command CHKDIRFAX, an active code of this type will be represented with LT=X and PL=1. Only PCL SPLFs can be faxed with this licence. If an attempt is made to send other types of fax, error messages with the information NON-PCL block could appear.

- The internal commands STRDIRMAX and ENDDIRMAX have been removed. Now, STRDIRFAX and ENDDIRFAX only exist for starting and ending the transmission program.

- The internal commands DIRECTMAX and DIRECTFAX have been replaced with DIRECTSRV.

- The help program CRTKWGFF *Create distributor group from file* has been added. Use CALL CRTKWGFF to convert a database file (name INPUT) with a fax number at characters 1-20 into a distributor list with the name #SERIE#. You can see all further details in the member CRTKWGFF in source file QRPGSRC in Lib. DIRECTFAX.

- An incorrect display of the licence code EM (email) has been corrected in the command CHKDIRFAX. Previously, EM=1 was displayed even though only an AR (archive) licence was present.

- The **^ARCNAM()** code has been added to control the archive interface for outgoing faxes. For example, if you want to archive only reminders, you could add ^ARCNAM(REM) to the ^FAX control line. If you have selected M=Manual in CFGFAXARC *Configure archive interface* and F10 "Outgoing faxes in archive mode", only faxes which have received a name from ^ARCNAM() are archived. You can use &ARCNAM to pass the archive name in the archiving command. An 80-character input field for special ^CODES has been added to parameter page 2 in AutoFax. You could enter ^ARCNAM(REM) there. To achieve this, the file FAXST01 had to be expanded and the file FAXPAR modified internally.

Changed for 5.35 09/07/2004:

- A field length in file CHGDEFP with template spool files of the Autofax definitions had to be changed in order to avoid duplicate keys. Also program OPNSPL for display and selection a SPLF and some other Autofax programs have been modified.

- Now an error message appears when importing TIF graphics and the template is not black/white. An abortion was produced so far without the reason could be recognised.

- When printing the log of outgoing faxes in some rare cases a wrong ID was shown in the banner The program was modified in a way that now the selected fax number appears and no longer the counterpart's CSI.

- The **PLC converter** now offers the option to fine adjust the font width. Now in field **Blank adaptation** in command WRKFAXALI *Work with DirectFax aliases* a negative or positive number of pixels can be entered. E.g. the figure **2-** narrows all blanks of a line with this font by two pixels. The entry must be done using function key Minus (at the top right).

- A further interface now allows to append fax information to a spool file without printing the data as text line in the spool. From a certain OS/400 release on IBM introduced the USRDFNDTA parameter in

the spool file properties. With this parameter via OVRPRTF a command line up to 200 characters containing all necessary code can be transmitted to DirectFax.

- Now the commands SAVOBJIFS and RSTOBJIFS for backup and restore from the IFS are available in DirectFax (origin: DirectMail). This was only possible via QDLS so far.

- When editing a fax number with a leading + (+4940…) a loop in program CRTFXNBR could happen. This problem is solved now.

- The send program was corrected in order to shift faxes with status **!MAX** and with 20 unsuccessful fax attempts to the end of the queue. Furthermore now faxes that have reached their maximum of send attempts are set definitively to *HLD. Previously it could happen that for old faxes with status *HLD another send attempt was started after the redial parameter was changed (e.g. from 3 to 4).

- The program CRTMIXGRF was corrected. The program converts a DirectFax graphic into an object of *USRSPC type. For performance reasons the graphic is read from the user area for the MIX process. In rare cases T4 graphic errors occurred causing line interference during dispatch. If you suspect that line problems may be caused by graphic errors, you can delete the object with the graphic name and type *USRSPC from the library DIRECTFAXF. Then DirectFax is forced to generate the object as new using program CRTMIXGRF during the next MIX process.

- Using the special option 88 in WRKFAXSTS a fax with status ready can be reset in a way, that the MIX process starts again (status MIX requirement). This can be necessary if the graphic was changed later.

28.2   Version 5.70 – V4R5

This document gives an overview of the changes and improvements to DirectFax Version **5.70**, which have been added <u>after</u> 5.35 (09/07/2004).

Warning: The new DirectFax version requires at least IBM Release V4R5M0 or higher on the iSeries. The last DirectFax version for IBM V4R2M0 was DirectFax 5.35i as of 25.11.04.

Installation

There is an **installation guide** for each new DirectFax version on CD or as a document in the Zip file in the download. Please read this document carefully before installing the latest version or changing to a different iSeries or AS/400.

Warning: <u>New</u> licence codes are required to update DirectFax version 4 or older to version 5.
The product code in version 5 is **DF450**xx. Some previously (up to version

4.xx) free-to-use interfaces (email and archive) require a licence code to be entered when changing to a new iSeries. Customers who had a licence for DirectFax 4.01 can continue to use the interfaces for free. Entry of new passwords is carried out after installation of the new version.

Enhancements

Digital fax signatures

To be recognised for tax purposes by the German Federal Ministry of Finance, faxed business documents such as invoices must be digitally signed. DirectFax creates a net data (text) signature and attaches it to the fax as a compressed 2D barcode PDF417.

DirectFax supports digital fax signatures with a range of components:

- A module for maintaining digital signatures.

- A module for sending faxes with integrated barcodes containing the signature and text information from the fax.

- Integrated routines for generating PDF417 barcodes

- A free, downloadable fax viewer with integrated signature validation.

Under German signature law, documents such as invoices cannot be sent by fax unless they meet very stringent technical requirements.

A function has been added to the new version of DirectFax that allows you to read the certificate directly from the signature card's memory (SmartCard) for signing.

The card terminals currently in use are devices manufactured by Kobil (KanPro). These are integrated into the Ethernet network with W&T ComServer. The devices and cables are purchased from Toolmaker.

Communication is via the DirectCard software, which must be separately installed and run in its own subsystem. DirectCard has full central control of both terminal and card. Control of the terminal from third party products is through a service program (DFDIRCRD in this case).

A class 3 signature card is available from T-Systems. To apply for one, the signature card holder must appear personally at a post office with the following documentation:

- a completed and signed PKS application in a sealed envelope,

- ID card or passport

Online application: https://pks.telesec.de/registration/pks_auftrag/pks_auftrag.htm

Warning:

Signature maintenance has been changed!

Authorisation rights similar to those for logos are now also required to maintain digital signatures (option 8 in WRKSGNCFG). The certificate

password is now **encrypted**. After updating from 5.35 or 5.40 to the current version, digital certificate users must re-enter the password. This only needs to be done once. The password is case-sensitive and must be enclosed in quotes Authorised users must also be entered with option 8 in WRKSGNCFG. The value *PUBLIC with X authorises all users to use the signature.

AFP via Host Print Transform (HPT)

A new interface for faxing **AFP Spool files** using Host Print Transform has been integrated. This is done by automatically converting the AFP SPLF to a TIF file and then to a mail or fax. The fonts and graphics used are from the iSeries and not the DirectFax environment. This considerably reduces the preparation time previously required for faxing AFP documents. The interface is limited to the operating system options provided by IBM for **AFP Host Print Transform**.

Option 8 "AFP SSP compatibility fonts" must be installed.

The OUTQ DIRFAXTMP has been added to the library DIRECTFAX for this interface. In the command CHGFAXVAL, the parameter **AFPCVT** *AFP Converter Version* has been added, where you can use activate the new interface with the value ***HPT**. The parameter *Activate AFP/PCL interface* (**AFPPCL**) must be set to ***YES**. To ensure that all fonts available on the local system are found, all QFNTxxxx libraries are added automatically to the current library list for the job FAXMIX.

From 5.51, **automatic rotation and scaling** for all faxes can be specified if automatic mode produces results of insufficient quality. The flags in positions **493** and **494** in data area **FAXDTAARA2** control conversion as follows:

Warning: these flags are changed in version 5.52!

Position 493 (Scaling)
```
' ' = Automatic (scale as required)
'N' = No scaling (reduction)
'L' = Scale to length (height)
'W' = Scale to width
'P' = Scale to page
'R' = Scale to resolution)
```

Position 494 (Rotation)
```
' ' and '1' = Automatic (rotate as required)
'0' = No rotation
'2' = Rotate 90°
```

```
Example:
CHGDTAARA DTAARA(DIRECTFAXF/FAXDTAARA2 (493 2)) VALUE('L0')
```

Fax banner redesigned

The fax header, or banner, has been redesigned. The sequence number is now 7 characters and Courier has been replaced by a proportional font. This means more data can be displayed in each section. The graphic template for the banner is a TIF file in the IFS in the following folder:

/Toolmaker/Directfax400/system

3 files are used for faxing:

fax_hdr_lgo.tif   **Active banner**

fax_hdr_dfx.tif   Original banner as a backup (do not modify!)
fax_hdr_nodfx.tif   Alternative banner without the reference to DirectFax

Any file copied to the folder and renamed **fax_hdr_lgo.tif** will be used as the active banner. The file *fax_hdr_dfx.tif* exists only as a backup of the original banner shipped by Toolmaker. The program FAXHDR has been converted from RPG/MI to RPGLE.

The **header** for DirectFax PCL protocols has also been adjusted. The files are:

pcl_hdr_mix.tif   Outgoing   fax
pcl_hdr_inc.tif   Incoming   fax
pcl_hdr_grf.tif   Graphic test

Autofax e-mail subject line

Autofax now provides an option to add a subject line with data from the spool file. Example:

Definition: ^REF(Invoice   &A2   of   &D4   Cust.no.   &A1)
Subject: ^REF(Invoice 78343 of 11.03.05 Cust. no. 008001)

&A1+2 are application keys (e. g. customer and invoice no.)
&D1-9 are CSIs (any spool information)

IDs were previously limited to 1-3. There are now 9. However, only IDs 1-3 are output as additional information to the Personal addressing field, WRKFAXSTS and the send log.

The finished subject line can hold a maximum of 50 characters. Longer strings are truncated without warning. If no subject line is specified in Autofax, the mail program uses the constant REF line from the default mail text (file ##COVER).

To add a subject line, specify **^REF(...)** in the Autofax definition in *^Codes* at the bottom of page 2 of the fax parameters.

The subject line can also be generated by an EXIT program. This is required for example if the subject text is variable and cannot be taken from the spool text. Example:

Definition: ^REF(*PGM*BIBLA/PGM1)
Subject: ^REF(Invoice 78343 of 11.03.05 – Ms Arp)

PGM   Code for EXIT program

BIBLA/PGM1   Qualified program name (lib/program)

The following 3 parameters are passed to the EXIT program
P1=Name of the Autofax definition (10A)
P2=Empty subject line (50A)
P3=Data structure (2000A)
   001-0550 = 11 x 50 characters (array)
      Elements 1-9 = IDs 1-9
      Elements 10-11= application keys 1+2
   551-2000 Reserved/not currently used

Using the Autofax definition name, the spool data in the array and in some cases by accessing a database file, the program can then concatenate the

subject text with the variables and pass it to the subject line parameter. Autofax then passes the subject as a ^REF(Text) instruction for downstream processing.

This enhancement required changes to the Autofax file ACKEYP, field ACNR. It is converted automatically during installation.

Autofax e-mail sender

The e-mail sender's address can be defined for all users in the configuration program CFGFAXMAIL, or at user level in the fax profile program WRKFAXPRF. Autofax has now been enhanced to allow retrieval of the sender's address from the spool file.

The e-mail sender's address can only be retrieved from the spool file if the e-mail address is also taken from it.

After defining the source of the e-mail address by positioning the cursor in **Autofax**, the new menu option *E-mail sender* is available in the *Fax number* and *Data fields* menu. The sender's address is also defined by positioning the cursor at the beginning and end. You can also define a condition.

In the Display menu, you can select *Display FAX key* to check the definition ***EMSND***. It can be deleted with option 4.

If the spool file does not contain a sender's address at the position specified, the default sender's address from the fax profile or configuration program is used. The same applies if the condition for retrieval of the sender set in Autofax is not met. No message is displayed.

Sender's address in ^FAX control line: ^MAILSND()
As part of the Autofax enhancement for the sender's address, the code ^MAILDSND() has been added to the ^FAX control line. Example:

^FAX ^MAIL(woi@toolmaker.de) ^MAILSND(order@bauergmbh.com)

Autofax e-mails with variable mail body

In most cases, a standard text and a constant subject line are passed as the mail body for fax documents sent as e-mail attachments. The text comes from the source file ##COVER member ##EMAILTIF or a source file with the name of the user.

DirectFax has now been enhanced to allow a variable mail body to be added in Autofax. This assumes a cover file containing variables in the text that are filled with data from the spool file. The function is similar to the cover function in the command FAXSPLF.

The default cover file is ##COVER member ##COVER. The parameter ^MAILCVR() can be used to specify a different file. Example: ^MAILCVR(##COVEREML)

Create a new source file with CRTSRCPF in the library DIRECTFAXF (please do not copy an existing source file!) Example: CRTSRCPF FILE(DIRECTFAXF/##COVEREML) RCDLEN(92)

After creating the new source file, you can copy a member from another file. The member ##COVER (the name is fixed) can be edited with SEU.

In ##COVER, the following replacement parameters (variables) are allowed:

^&A1 application keys (e. g. customer and invoice number)
^&A2
^&D1 IDs (any spool information)
^&D2 to ^&D9

IDs were previously limited to 1-3. There are now 9. However, only IDs 1-3 are output as additional information to the Personal addressing field, WRKFAXSTS and the send log. It can therefore make sense to use only IDs 4-9 for the mail body.

The replacement parameters ^&FAXNAx, ^FAXTIT, ^FAXSNx, ^FAXCOM and ^CMXxxx are supported by the command FAXSPLF but <u>not</u> by Autofax.

A cover template text might look like this:

```
REF:          Order          confirmation          ^&A2
Dear                                              customer,
please    find    the    order    confirmation    attached    ^&A2
If    you    have    any    queries,    please    contact    ^&D4
or         send         an         e-mail         to         ^&D5
Your customer number is: ^&A1
```

The data from the spool file (application keys and IDs) are added to the text by Autofax for the replacement parameters. Any text following in the same line is overwritten. The replacement parameters must be at the end of the line, as shown in the example.

Lines in the member beginning with **REF:** can contain a subject text for the mail (incl. 1 replacement parameter). REF: However, it is only used if no ^REF() code has been specified in Autofax.

Parameter values from the application keys are limited to 10 characters. Values for the IDs are limited to 78 characters in practise, although 99 are theoretically possible. An e-mail subject line can contain a maximum of 50 characters.

Warning:

The last step is to specify the code **^CVREML** in the *Special ^Codes* section at the bottom of page 2 of the fax parameters in Autofax definition. This code must be set to execute the cover as mail body function.

Monitor alternative OUTQs

Previous versions of DirectFax could monitor only the **OUTQ DIRFAXPRT**. A new function has now been added that allows you to monitor all other OUTQs and send the spool files with DirectFax.

This was provided in response to an application that produced multiple spool files with the same name and attributes. Only printer or OUTQ could be varied. Because all SPLFs had the same attributes, Autofax could not have been used without the new function.

Process
The table of contents for the monitored OUTQ is checked once per minute. When the OUTQ status is RLS, the **form type** or user data parameters are **changed** for **all** spool files found and the spool files are **transferred to** the **OUTQ DIRFAXPRT**. The changed form type allows Autofax to distinguish between otherwise identical SPLFs.

Requirements

The alternative OUTQs must be created with **CRTDEVPRT** in the library **QUSRSYS** and cannot be associated with an active print program. **All** spool files are processed, including those on hold. There is no selection. The OUTQ must have the status **RLS**.

Setup
An OUTQ to be monitored by DirectFax can be created as follows:

```
CRTDEVPRT DEVD(Name) DEVCLS(*VRT) TYPE(3812)
          MODEL(1) ONLINE(*NO) FONT(11)
```

For *Name*, specify a unique **unit name**. This name is also used as the name of the OUTQ.

Warning:

The monitoring function does not work with OUTQs created with the command CRTOUTQ.

The names of the OUTQs and the **form type** and **user data** parameters are specified in the new **file FAXOUTQ** in DIRECTFAXF. The command for maintaining this file is **WRKFAXOUTQ**. Example of an entry in the file FAXOUTQ:

```
OUTQ   Name      .   .   .   .   .          DIRFAXPRT2

To   Formtype    .   .   .   .              DFP2_____
To USRDTA  .  .  .  .  .    _____
```

This example monitors the OUTQ DIRFAXPRT2. All SPLFs are changed to DFP2 with the parameter FORMTYPE and moved to the OUTQ DIRFAXPRT. There they are processed by Autofax.

Before you can process a spool file from this type of OUTQ, you must first manually change the form type for a **template spool file** to the new type. This is a one-off job. Then create the **Autofax definition** and import the template file. After doing this, the form type is then automatically changed in a live environment.

DirectFax must be restarted with **ENDDIRFAX RESTART(*YES)** after setting up this function.

Low Cost Routing with DirectLCR

DirectFax now also supports the new **DirectLCR** tool from Toolmaker. DirectLCR allows you to fax using the cheapest provider at any given time. With a large volume of faxes, this can produce considerable savings.

Conditions
To use the tool, the library DIRLCR with **DirectLCR** must be installed on the same system as DirectFax and licensed. You can check for the license with CHKLCR.

Configuration   and   function
To activate Low Cost Routing at line level, choose **WRKFAXLIN**, and then set the Use LCR parameter to Y=Yes on page 2 of fax line configuration. The **area and country code** fields must be entered correctly to match the **location of the modem**. Before faxing, the DirectFax transmission program then requests the prefix that is currently cheapest for the fax number from DirectLCR, which returns the entire number as a string.

The function can be activated at user level by setting the *Special phone/fax service: SRVPRV* parameter to ***LCR** in the **fax user profiles**. A fixed provider prefix in the profile has priority over DirectLCR.

Retarus interface for faxing over the Internet

An interface that allows faxing over the Internet has been added in version 5.70e. You might use this, for example, to send a monthly mass fax without blocking up the modem. The Internet fax service can send thousands of faxes in a matter of hours.

To use this function, the iSeries must have access to the Internet and the iSeries FTP service must be available. The licenses required are an access code for the XML FTP Fax System and a DirectFax license code for the Retarus interface (product code DF450RT). Both are available on request from Toolmaker.

The faxes are also generated as normal. Fax sending is controlled by a phantom line description with modem type *RETARUS. Pooling is also an option here.

The transmission program coverts the faxes to TIF files and transfers them via FTP to the Retarus fax server. If the transfer is successful, the fax is sent to History with the status *Send/display allowed*. But to indicate that fax receipt has not been confirmed by the addressee, **RET* (Retarus) is displayed at the right margin.

After sending, the transmission program updates the status from the server at a user-defined interval and removes the **RET* status when fax receipt has been confirmed by the recipient. If an error occurs during fax transmission, the fax is sent back to the queue and the error is displayed. In both cases, the fax user is notified, either by SNDMSG or by mail (depending on message configuration).

For more information on the cost of this service and the licenses required, contact Toolmaker Sales.

In WRKFAXLIN, a Retarus fax line configuration looks like this:

Page 1

```
Connection type . . . .    *TCP
Modem . . . . . . . . .    *RETARUS
Modem driver  . . . . .    *CLASS2
Mode . . . . . . . . .     *BOTH      (obligatory!)
Process incoming faxes .   *NONE

Dial type. . . . . . . .   T
Exchange system. . . . . .
Allow internal calls .   N
Length internal dial no..  .
```

Page 3

```
TCP/IP connection parameters
  IP Address/Hostname    fax4win1.faxolution.net

  User                   uuuuuuuu
  Password               pppppppp
```

Restrictions:

Group dispatch (multiple faxes to the same recipient) must be switched off in CHGFAXVAL F4.

To date (beginning of July 2006), we have no experience of mass fax actions with Retarus.

Corrections and minor enhancements

PTF 5.35a 12.07.04

- For the archiving interface for **outgoing faxes**, the following placeholder for parameter values has been added:

  &CRTDAT   Fax created on
  &CRTTIM   Fax creation time

- For the DirectFax PC client, support for **long iSeries passwords** (exceeding 10 characters) has been added.

PTF 5.35b 10.08.04

- The CAPI transmission program used to control the TCU has been changed to allow a job restart in the event of unexpected or unknown errors.

- In the interface programs for archiving, the current library (*CURLIB) DIRECTFAX has been restored on return from the EXIT program.

- When printing pages without a fax number in Autofax, the value "U" at position 145 in FAXDTAARA outputs the owner name of the original spool file as a parameter in the field USRDTA. For technical reasons, spool files created by Autofax containing pages with no fax number have the name DIRECTFAX as owner.

PTF 5.35c 17.08.04

- In automatic incoming fax distribution, the special function *BOX, to control recipient on the basis of fax line used, has been added. Previously, line numbers 1 to 8 were required, e.g. ***BOX**1. The syntax ***BOX:**<u>Line name</u> is now supported (for line name, see WRKFAXLIN).

PTF 5.35d 31.08.04

- The service program for the PCL converter (DFTXTLIB) has been corrected to avoid the interrupt error MCH3601 sometimes produced by a blank page in the spool.

- In Autofax, you can now specify different header and footer logos for page 2 and following pages. To do this, simply use the default header and footer text parameters on page 2 of the fax parameters in Autofax definition.

PTF 5.35e 02.09.04

- When installing DirectFax, the file XDIRFAXD in library DIRECTFAX is deleted in order to avoid errors if the library list (*LIBL) contains both DirectFax libraries in the wrong order (the correct order is:
  1. DIRECTFAXF
  2. DIRECTFAX

PTF 5.35f 24.09.04

- An installation program for cumulative PTFs has been added. This will make it extremely easy to install the updates for the current DirectFax version available on the internet. Simply download the save file, unzip it and copy it to the **/Toolmaker** folder in the IFS. At the next STRDIRFAX or after the automatic midnight subsystem restart, the update is installed under user profile DIRECTFAX. If required, you can review the process with DSPMSG INSTALLFAX.

- Transmission of your CSI has now been activated for the TCU. Previously, the TCU transmitted an empty CSI, which sometimes led to problems with recipients using automatic fax forwarding.

- In the interface program PGTELEX06 for the GFC fax solution, the minimum value LGOSKP for the first line after the logo has been changed to 002.

- Code conversion control (special characters) for foreign language systems (the value "D" at position 90 of the data area FAXDTAARA) has been corrected because the table entries in DFTTBL sometimes had no effect.

- For ^ATTACH, used to attach TIF graphics to a fax, an interrupt error in the MIX program that occurred if path and filename were not found has been corrected.

PTF 5.35g 01/11/2004

- The DirectFax mail program has been changed with regard to BASE64 coding for mail attachments because some mail servers and security programs rejected mail as a result of minor deviation from standard code.

- The DirectFax header in **PDF attachments** can now be controlled with values in data area FAXDTAARA2 position 461 as follows:
  R   Remove header line for outgoing faxes
  I   No header line for incoming fax forwarding
  A   Do not add header line for incoming and outgoing faxes

- A string error in the transmission program for the TCU has been corrected.

- In some situations, the file FAXLGO remained open after exiting the program, causing problems with data backup and installation. 2 programs have been corrected.

- Detection and reporting of errors in mail addresses has been improved in the program DIRFAXSRV.

- In addition to B=Fast, I=Immed is now also allowed for fast faxes (depending on language settings).

- When sending faxes to groups, the program has been changed so that all faxes to the group show the same transmission time.

PTF 5.35i 25.11.04

- A variety of changes to the install routines for DirectFax PTFs were required.

- In the interface program DFIREAD, HOLD(*NO) has been added to OVRPRTF to avoid prevention of fax transmission caused by differing default values in the IBM PRTF.

- The Control Data Structure for special fax parameters in line configuration (WRKFAXLIN) can now be edited with option 19. Previously, this was an awkward task with UPDDTA. Changes should only be made in consultation with the Hotline. The following flags are currently accepted at position
  01   internal ID for fax line (cannot be changed)
  02-03   ISDN controller number (internal use)
  04   reserved (nospeak)
  05-06   "**04**" = use ISDN bearer capability **Audio**
  07   reserved (line error)
  08-11   Time lock for fax line (from-to hour)

- Fax lines can now be locked for use for defined periods of the day or night. This was required in a particular situation because one of the 2 ISDN B channels needed to remain open in the daytime for another device. Use option 19 in WRKFAXLIN to change the Control Data Structure at positions 8-11. Example:
  0618   Line is locked from **06** hours to **18** hours (in WRKACTJOB, the job shows DLY-15). Do not change the other values in the display. Save with Enter. Job or subsystem restart not required. Time ranges, e.g. 2208 (22 to 08 hours also supported).

PTF 5.40b 12.01.05

- Support for AS Faxmanager ^Codes added to SPLFAX400.

- Special CCSID default for the job FAXMIX at position 487-491 in FAXDTAARA2 in DIRECTFAXF.

- AUTOFAX enhanced to process ^FAX control line in USRDFNDTA.

- Option 12 WRKSGNCFG added to menu FAXCNFG2.

- Barcode interface added (^BCD).

PTF 5.50 28.02.05

- Corr. AUTOFAX because USRDFNDTA in case of batch processing

- The program CRTMIXPC for mixing the default logo in PC faxes has been converted from RPG/MI to RPGLE. This required changes to CRTMIXFAX. (new parameter)

- STRDIRFAX enhanced. Subsystem job delays in the start phase reduced to a minimum.

- The DIRECTFAX subsystem has been substantially changed. The separate pool for the send program is no longer used. It now runs in system pool 2. If required, you can use CALL CHGSBSFAX ADD to restore the old status. You can remove old pool assignments with the RMV parameter. The subsystem is newly created when the current version is installed. This was necessary because of several occurrences of persistent job delays on new i5 V5R3 machines. The send job was not removed from the system despite immediate end and a reasonable delay. It ended only if the DirectFax pools was increased to 10-20 MB.

- The option AFP (Host Print Transform) has been added to the IBM-compatible DirectFax command **SBMFAX** (Facsimile Support).

- The program **WRKFAXSTS** was corrected. An error using option 4 in view 3 led to the first fax in the subfile rather than the selected fax being deleted. Option 16=Display and release has also been added. Internally, option 66 for the same function is still supported. The function involved is signature release in which content is first displayed for review.

- The **^FAX line** for **serial faxes** in the DirectFax PC client has been enhanced. You can now use ^FAX(#ABC) to specify a **distributor group** (here #ABC) as recipient. Breakdown of the group into separate faxes takes place in the interface program PCFTOMIX on the iSeries and is not seen by the PC user.

- The parameter DSNAME Digital signature has been added to the command **FAXSPLF**. To use the default signature configuration entry, specify the value *DEFAULT.

- Digital signatures can now also be specified in the Enter recipient screen for manual faxes from spool files with **WRKSPLFAX**.

- The file FAXPAR2 has been added to allow additional codes in the ^FAX control line on the iSeries. This involved changes to a number of interfaces and data structures. File FAXST01 enhanced.

- When sending a fax, the recipient ID is now cleared of hex values before it is saved in the file FAXSTAT (field XCHTSI).

- Conversion of tabs (^t1...^t9) to text format has been corrected. Previously, text directly following ^t1 and beginning with a bracket "("

was clipped and displaced. The MIX program now better determine whether to set a tab, for example ^t1(20) or execute a tab jump.

- In the DirectFax editor (DFE), the ***Start of data*** and ***End of data*** lines have been included for foreign languages from the profile.

- Sample fax and mail text for France have been added to ##COVERFRA and the source file QSECOFR.

- The text document for online help (F1) is installed only on German-language machines and in Italy when DirectFax is installed. Online help in English and French is in preparation.

- In the command WRKFAXLIN, default values have been added for several fields when configuring a new line. These are the Modem trace and 2 Timeout fields.

- On non-German systems, the German object description is changed to the constant "DirectFax" after installation.

- Some new ^Codes have not been fully installed on non-German systems. This has been corrected.

- The file FAXPAR2 has been added to allow additional codes in the ^FAX control line on the iSeries. This involved changes to a number of interfaces and data structures. File FAXST01 enhanced.

- The following codes have been added for the ^FAX control line:
  ^MAILSND()   Mail sender's address
  The EXIT program DIREXIT002 is now called if the mail sender's address is invalid.
  ^MAILCVR()   The default source file for the mail body text, for example for other languages. The file must be located in DIRECTFAXF.
  ^MAILATT()   The mail attachment file type (T=TIF, P=PDF, X=Text).

  Example:
  ^FAX ^MAIL(woi@toolmaker.de) ^MAILSND(info@meier.at)
    ^MAILCVR(#GERMAN) ^MAILATT(T)

- The PCL converter has been adjusted (DFPCLLIB/*SRVPGM). SPLFs with embedded HPGL sequences caused errors in processing the subsequent files. Note: Graphic commands embedded in PCL (HPGL) are only partially supported and should be avoided where possible.

- **WARNING**: **Authorisation rights** similar to those for logos are now also required to maintain **digital signatures** (option 8 in WRKSGNCFG). The certificate password is now encrypted. After updating from 5.35 or 5.40 to the 5.50, digital certificate users must re-enter the certificate password with option 2 in WRKSGNCFG. This only needs to be done once. The password is case-sensitive and must be enclosed in quotes. Authorised users must also be

entered with option 8 in WRKSGNCFG. The value *PUBLIC with X authorises all users to use the signature. If you do not do this, the signature will not be added to the fax.

- Transfer data structure **FAXPAR2** has been added to the API **CRTSPLFAX** as the thirteenth parameter. The parameter is optional. Existing applications containing CALL CRTSPLFAX do not need to be changed. The associated sample programs CRTSPLFAXR and the data structures FAXPAR and FAXPAR2 in QAPISRC entry FAXPARDS in the library DIRECTFAX have been updated.

Version 5.51 23/06/05

- The **Send status** column for waiting and sent faxes in WRKFAXSTS on the iSeries and OUTFAX32 on the PC has been changed. The exact fax status is now determined by the program FAXSTSTXT for both the iSeries and the PC. This required changes to the parameter structure for all programs affected.

- In the command **FAXSPLF**, the behaviour of ***YES** in the **COVER** parameter *Cover or AFP* has been changed. In earlier versions, AFP-SPLF with a cover was not supported. You can now set the cover parameter to *YES to **fax an AFP SPLF with a cover**. The cover function is not yet supported for PCL SPLFs. It will be available soon.

- The new version of the **PDFLIB routine library** (6.0 previously 3.0) for converting faxes to PDF files (for mail and archive interfaces) has been integrated into DirectFax. This enables processing of very large spool files.

- Print files (PRTF) for lists and logs in DirectFax have been translated into French and English.

- The **Autofax definition program** CHGDEFP has been adjusted. Incorrect data was saved, and in some cases **key definitions** (fax no., mail-ID or application key from spool) were lost when searching for the correct cursor position when defining keys with **conditions**. This error has now been corrected.

- When sending faxes to groups, the program has been changed so that all faxes to the group show the same transmission time. A previous fix, in 5.35g was ineffective.

- A new setting has been added to the **AFP via Host Print Transform (HPT)** interface that allows you to set a default for rotation and scaling of fax pages. For more details, please refer to the Enhancements section above.

- The DirectFax control program **DIRFAXSRV** for fax dispatch has been changed. File FAXSTAT3 no longer used. Error MCH3601 occurred on a number of occasions when using the DCE Faxbox, probably because of the wrong OS400 PTF level.

- The **Autofax** execute program has been enhanced to allow processing of the parameter DRAWER(*FORMDF) in the SPLF.

- WRKFAXSTS has been adjusted because F17 in combination with a user name could cause positioning errors in the list of displayed faxes.

- The command **CHGFAXVAL** has been adjusted for the parameters **SIGNFAX** and **CRYPTLIC**. Previously, set values could be lost if the command was executed without **F4**. Fax signatures then no longer worked. The default value *SAME has been added.

- Distortion occurred when faxing **TIF files** with the **^ATTACH** command because the resolution 200x100 dpi was not recognised. The TIF files were sent compressed to half height. The program TIFTOT4 has been changed to recognise the reduced resolution. The TIF were incoming faxes from a PC fax system.

Version 5.51a 08/07/05

- The program CFGTCPFAX for setting up the TCPSERVER on the iSeries has been adjusted to prevent an internal loop during multiple calls.

- The **SBMFAX** command was changed. The ID, DST and ENTRY parameters have been extended from 10 to 32 characters. The contents of the **DEST**, **ID** and **TEXT** (description) parameters are now included in the fax unless DEST and ID are set to *NONE. The information is passed to the *Personal addressing* field XCHPA in the file FAXSTAT with the format DEST:ID:TEXT. If no e-mail address is found, the first 19 characters of this text field is displayed in WRKFAXSTS in the right column. You can enter characters in the *Recipient: ___ (Name)* field to search and filter the fax list.

- The fax status and **history** command **WRKFAXSTS** has been enhanced to allow **send options** to be displayed with option **8** in the History display. Fields such as *Subject, Personal addressing* and *Info* are displayed at full length.

- Modified DirectFax commands are now shipped as source files in the library SAVCORRFAX, created in accordance with the set primary language during installation of the DirectFax PTF, and copied to QUSRSYS or QGPL if required. Modified commands are included in any subsequent change of primary language.

Version 5.51b 13/07/05

- The native PCL converted has been enhanced. Embedded HPGL sequences are now supported. Polygons, with and without borders, and shading are now incorporated into the fax. Significant restructuring of the service program was required. Changes to the previous display after conversion cannot be ruled out. In particular, some elements previously suppressed because HPGL was only partially supported may now appear.

Version 5.51c 19/07/05

- The error handling routine for catching short-term network failures when using a TCU has been improved. Faxes with less than 5 failed attempts are automatically re-released for sending after communications are cut. Other faxes are set to Hold. The send job is ended and immediately restarted if unexpected errors in communication with the TCU occur.

Version 5.52 30/09/05

- Fax **scaling and rotation** control for **AFP** via **Host Print Transform** has been changed. It is important that you read the information on positions 493 and 494 in data area FAXDTAARA2 on page 2 of this document if you have used flag 493 in a previous version!

- The addition of digital signatures has been adjusted because they sometimes were not added to page 2.

- If an error occurs when adding a digital signature, the fax is set to *HLD Signature error* and the following message is sent to the user: *Error in fax signature.*

- Hex code filtering for the CSI received with incoming faxes has been added because display errors in dialog programs and fax forwarding by mail sometimes occurred.

- An error in the @ character sometimes occurs on some non-German systems if the mail address is entered on a PC client. If the § is displayed, it is replaced with @.

- Retrieval of the status text for outgoing faxes has been changed so that the text in AS400 dialogs and on the PC client is the same.

- The program automatically checks for an active DirectMedia server on the PC when editing DirectFax graphics with WRKFAXGRF option 2. If found, the graphic is converted to TIF, transferred to the PC and opened for editing in Paint. The edited graphic is automatically returned from the PC when saved.
To use another PC graphic editor, specify the name in positions 496-515 in data area FAXDTAARA2. If nothing is specified (default), Windows Paint is opened.

- The native DirectFax PCL for faxing *USERASCII spool files with PCL data stream has been enhanced and restructured. Complex embedded co-ordinate systems with different resolutions are now supported.

- The DirectFax PC client now includes a function that allows you to use a ^FAX control line to specify an additional mail address to which a copy of the fax is sent. You might use this for example for sales reps or other branches. Example:
`^FAX0405591908 ^MAIL(info@customer.de) ^PA(vtrma@tms.de)`
The ^PA() code is normally used for additional fax information, but is used here for the second mail address.

- Use of Autofax is supported only with the full version of DirectFax. If no license, or only a license for the Lite version is found, a warning is output to QSYSOPR when DirectFax is started (STRDIRFAX). This makes it easier to locate the cause of the *^FAX Error.*

- A special DirectFax license is available for certain countries (Product code DF450PX). It is limited to faxing PCL spool files with Autofax (DirectFax Lite plus PCL converter). A number of programs that did not previously work with Autofax have been changed.

Version 5.52a 19/10/2005

- Miscellaneous program corrections:
CRTFAXFRM missing parameters added
FAXHDR newly created because of ID
DFPIXLIB changed because of fax banner

Version 5.52b 21/10/05

- In the program AUTOFAX, line memory for the page has been increased from 400 to max 600 lines. An index error occurred with very complex PCL SPLFs.

Version 5.60 14/11/05

- A new DirectFax language library has been added for French-speaking Switzerland. Some characters in the French language version were displayed incorrectly because code page 500 is used in Switzerland. The language code in DirectFax is **FRS** (France/Swiss).

- A code page problem in France caused by different hex coding for the **#** character in Germany and France has been resolved in the program AS2PCTCP. # is used as an identifying character for address groups but displayed as **£** in France. But £ entered on the PC produced the wrong hex code in the files FAXKWGH and FAXKWG00. Both files could be cleared with **CALL CLRERRKWG**. The installation routine automatically executes CLRERRKWG.

- The PC client function **Allow long passwords** is based on the iSeries system value **QPWDLVL Password level**. If the value is set to level **2** or higher, the iSeries allows passwords of up to 128 characters at signon. Passwords are also case-sensitive. But this is supported beginning with **Version 5**. Because DirectFax is based on V4R5, it could only process passwords with max 10 characters. A savefile has now been added that is installed automatically if V5R1 or higher is active on the iSeries. The SAVF contains program objects and ICF files that support passwords >10 characters.

- A problem specific to **AFP** SPLFs with 2 attached page segments has been resolved. The problem was that only the first segment was sent with the fax as a graphic attachment (e.g. General Terms and Conditions) and the other attachments were ignored.

- A problem specific to faxing **AFP** SPLFs containing only graphics and no text lines has been resolved. The fix involved restructuring and enhancing the program CRTDIRFAX. The error was displayed as *HLD Empty fax* in WRKFAXSTS and affected the FAXSPLF interface. Faxes from WRKSPLFAX were not affected.

Version 5.60 b 17/11/05

- Corrections involving language FRS in command CHGFAXVAL and data area INSTDIRLNG.

Version 5.61 31/01/2006

- Monitoring of alternative OUTQs by Autofax added (see above under Enhancements).

- Interface to DirectLCR Low Cost Routing added (see above under Enhancements).

- The program MIXGRF has been adjusted so that graphic names such as *NONE or *BLANK no longer produce an error message.

- With the DirectFax PCL converter, there was a problem converting various spool files from Infostore to the text graphic. This produced index errors in Autofax. It was resolved by recompiling the service program DFTXTLIB.

- In the command CHGFAXPTY for changing fax priority in WRKFAXSTS, 2 new priorities are allowed. 0=Normal fax, 9=Fast fax.

- In one case, data records in the temporary workspace for Autofax definitions blocked Autofax to the extent that changes to the original definition had no effect. You can use this sequence of commands to clean up temporary records:
ADDLIBLE DIRECTFAX
ADDLIBLE DIRECTFAXF
CALL CLRATFFIL
- The program object DFADDSGN for adding digital signatures has been newly created, because it couldn't be executed due to a different ID in DFPIXLIB.

- The command WRKFAXLIN has been converted to support other languages.

- 2 adjustments have been made in the **archiving interface** for outgoing faxes:
1. The variable **&REF Subject line** is now filled from the field XCHREF in the file FAXSTAT (XCHBTR was used previously).
2. The flag 461=R in data area FAXDTAARA2, used to suppress the **banner** when mailing, is now recognised by the program ARCOUTFAX, so that the PC file transferred during the archiving process (PDF or TIF) looks exactly like the mail attachment (without the banner).

- 2 sample programs, including the source code, have been created and added for the archiving interface for outgoing faxes. They show how to create user-defined programs to move the PDF or TIF files to the right folder and assign them descriptive file names. This allows you to find faxes in the iSeries IFS without an archiving system. There are 2 full descriptions which will be added to the manual at a later date.

- The API **GETQPRTI**, which can determine all 5 spool identification parameters when only file name and user or user and spool file number are known, has been created for sending spool files from the job **QPRTJOB**. The Hotline in Hamburg has the details.

- The program AS2PCTCP, used by the DirectFax PC client, has been adjusted. Overlong commentary text for an incoming fax produced a string error. A record lock problem in the commentary file FAXCOMP has also been resolved.

- The program **DIRFAXSRV** has been enhanced to restrict transmission **program restarts** after crashes. DirectFax send jobs are interrupted and restarted by the monitor if they have not responded within 5 minutes. This automatically prevents jamming due to temporary modem problems. But if an error of the type "File is full" occurs at night, for example, the transmission program restarts every 5 minutes with no chance of resolving the problem. The program now prevents further restarts if no faxes are sent over the line affected between restarts. Restart is now only once per hour after a series of failed attempts.
  ENDDIRFAX RESTART(*YES) removes the restart lock.

- **FAXSPLF** and **CRTSPLFAX** have been enhanced to allow processing of spool files from the **QPRTJOB** environment. In most cases with these SPLFs, only the name, user and file number are known. The job number is usually unknown. If the job number parameter for FAXSPLF is left empty and the job name is QPRTJOB, DirectFax automatically determines the right job number. Number and *LAST are the values allowed for the spool file number parameter.
  Warning: If the spool file number parameter is specified, the file with that number is processed even if the file name does not match. The job log records the SPL parameters passed and used.

- The closing message FAX1146 for the command **FAXSPLF** has been changed to display the **mail address**, if specified, if the fax number is empty. The first 30 characters of the mail address are displayed. The parameter structure and message text have not been changed.

- The DirectMedia service program DFFSTLIB has been adjusted to resolve problems with high port numbers.

- The program **DSPSNDSTS** for printing the send log and deleting old outgoing faxes has been enhanced with a new function.
  Upon entry of
  ```
  FROMDATE 010190
  TODATE   010190
  USER     *ALL
  ```

```
DELAFTER *YES
```
all faxes without send date within the history are deleted.

Version 5.70 12/04/2006

- The transmission program DFMODSND for sending by modem has been recompiled because line and program crashes caused by a buffer error occurred when using the internal iSeries modem on some machines. Also, the interval for fax receipt on a slow device on the other side can now be changed externally. With a value >10 in FAXDTAARA2 position 464, the tolerance can now be set to, for example, '30' seconds. As reported to the Hotline, error FHNG 73 occurred.

- In the program WRKFAXSTS, the search limit (maximum number of faxes searched) has been increased to 5000 and a new setting added to data area FAXDTAARA 124/2. The value '10' in 124 increases the number of records to 10000. Blank resets to the default 5000.

- A new service program DFDIRCRD, to support class 3 certificates for fax signatures, has been added. All commands, programs and files including *SGN* in the name have been adjusted. It is now possible to read the signature from a SmartCard, fulfilling all legal obligations with regard to signing invoices over the fax server. For more details, see the Enhancements section above.

  Warning:
  Customers already using signatures with class 2 certificates must re-enter the certificate password after installing this DirectFax version.

- The Autofax program has been adjusted because a fax with ?????? was generated if you specified a fixed mail address in combination with a printer and the parameter *Print pages without a fax number*.

- Autofax separated documents incorrectly when processing AFP spool files while using HPT (HostPrintTransform). The text displayed in WRKFAXSTS was OK, but all pages in the SPLF were included in the first fax during the mix process. The program CRTMIXGRF was corrected.

- When using ^REF (Subject text &A1) in Autofax, the e-mail subject line output for all documents in the SPLF was identical although the &A1 parameter was variable. This error has been resolved with a change to the AUTOFAX program.

- For some layouts, the fax content was somewhat compressed during conversion to PDF, with a wide margin at the lower margin. The effect is particularly noticeable when compared with the mail attachment in TIF format. The setting for the print driver for the PC program directly affects the printout for both attachments. The TIF and PDF files look almost identical if automatic scaling is activated. If the problem with the wide lower margin occurs, you can reduce it by entering '0' (zero) at position 154 in data area FAXDTAARA. 0 sets the internal parameter *Left margin* to zero, increasing the height and width of the fax content. The difference is about 12 mm.

Version 5.70 a 02/05/2006

- The program CLRFAXDTA has been enhanced to remove old data records from the file DFSGNDTA.

- A warning is now issued if there is a page difference between spool file and fax data after text and graphics are mixed.

- Because of the new CRYPTLIB function library for **encryption**, the internal license code for fax signatures has been extended from 16 to 32 characters. This involved changes to the command CHGFAXVAL and all programs associated with the signature function.

  Note 1: As a result of the change, customers already working with fax signatures require a new 32-character license code. The code can be entered with the command CHGFAXVAL in the CRYPTLIC parameter after installing this DirectFax version.

  Note 2: Customers using **DirectMail** with **encryption** in addition to DirectFax need to upgrade DirectMail because the function library is used in both products but there is only one location for the license code. Version 3.40 or higher is required.

Version 5.70 d 30/05/06

- Autofax has been enhanced to exclude the possibility of internal overflow of the ^FAX control line. Additional lines are generated if too many parameters are set in the Autofax definition. Excess parameters were truncated and ignored in the previous version. The program SPLFAX03R is affected by the change.

- A small bug in the program Edit signature rights has been fixed. The previous version removed the wrong entries when deleting user names.

- The native PCL converter has been enhanced to detect and convert prescribe commands. The SCS SPLF with the prescribe sequences must be "printed" with Host Print Transform and sent as a *USERASCII SPLF (PCL) to the OUTQ DIRFAXPRT before they are processed by Autofax. For more details, contact the Hotline.

Version 5.70 e 30/06/06
- Automatic use of MSPAINT.exe as the **pixel editor** when **DirectMedia** is installed on the PC can be suppressed with *NONE at position 496 length 20 of data area FAXDTAARA2 in the library DIRECTFAXF. This also resolves a problem in version 5.52. Graphics edited with the DirectFax pixel editor were sometimes not saved.

- A flag for suppressing the banner (461=I/A) has been added to the **incoming fax archiving** function. In previous versions, the banner was always added to the TIF/PDF file.

- There were problems with Tera Space Bit on some old systems running OS400 V4R5 or lower. The programs FAXHDR, DFLIBTIF and DFPIXLIB have been recompiled.

- A new interface for faxing with the **Retarus** Internet fax service has been added (for a full description, see Enhancements above).

- The print program for incoming faxes on the iSeries has been optimised to print considerably faster. In the previous version, it could take up to 20 seconds per page. The improvement was made possible by a compress algorithm in the PCL data stream.

Version 5.70 f 07/07/2006

- A number of clear routines have been extended to clear the status records in the Retarus interface.

- The program for displaying fax status text now includes the code *RET for Retarus.

- Control of the group fax function in the programs CHGFAXVAL, DIRFAXSRV, DFGETGRP and EDTSNDFAX has been adjusted. When using address groups in the previous version, the setting GRPSND *NO was sometimes ignored.

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