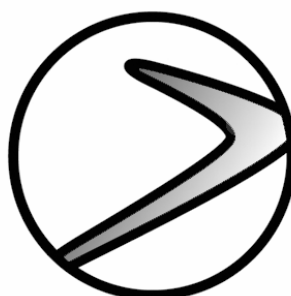


Programmer's reference manual



eXpress'it

BlueSeries commands

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This manual describes the BlueSeries control language (CL) commands. The commands are listed by command name. The description includes parameters for each command, rules for using the commands and examples.

You will also find a description of how to integrate BlueSeries to 3rd party programs as well as a description of the API interface.

Change Coverpage Font (CHGCPGFNT)

This command enables you to change the font in a coverpage or banner text program.

CL var for STATUS (3 0) (STATUS)

Specifies the name of the CL variable that receives any Error status. The variable must be a 3-digit decimal variable.

Font Name (FONT)

Enter the name of the font you want to use. Standard font names are as follows:

COURIERBD	Courier Bold
COURIERIT	Courier Italic
COURIERBDI	Courier Bold Italic
COURIER	Courier
ARIALBD	Arial Bold
ARIALIT	Arial Italic
ARIALBDIT	Arial Bold Italic
ARIAL	Arial
CGTIMESBD	CG Times Bold
CGTIMESIT	CG Times Italic
CGTIMESBDI	CG Times Bold Italic
CGTIMES	CG Times
UNIVERSBD	Univers Bold
UNIVERSMDI	Univers Medium Italic
UNIVERSBDI	Univers Bold Italic
UNIVERSMD	Univers Medium

More fonts can be downloaded via the Font Tool available on your master CD.

Copy Fax item (CPYFAXITM)

This command is typically used for multiple fax transmissions. The command can be used to copy a fax if the same fax is to be sent to multiple recipients.

If you already have a fax placed in the BlueSeries queue (either inbound or outbound) this fax will have a Fax ID. When a fax is copied with this command, only the record stating the recipient is copied, the image itself, is NOT copied. This means that BlueSeries can send multiple faxes while the system only stores the image once.

Fax image ID: (IMAGEID)

The ID for the fax transmission. The ID can be found using the command WRKFAXQ.

Fax number (FAXNO)

Enter Fax number for the recipient.

Queue Priority (PRTY)

Specifies the priority of this fax transmission. The highest priority is 1, and the lowest is 9.

***SAME**

Specifies that the priority is inherited from the Fax ID it is copied from.

1-9

Specify the priority of this fax transmission. The highest priority is 1, and the lowest is 9.

Create Fax Configuration (CRTFAXCFG)

Use this command to create a new communication line.

Dump Spool File DMPXSPLF

The command is used to create a dump of a spool file. The command is normally only used in relation to a *SCS data stream file.

If a problem occurs, you can create a dump of a Spool File, which can be sent to your support division.

If Agent Data ApS or the BlueSeries support team is to take a "closer look" on a Spool File problem, it is possible to turn a "dump" of a Spool File into an object. This object can be sent to Agent Data or the support tea, on a diskette or as an e-mail.

The procedure for use of DMPXSPLF is as follows.:

1. Create a dummy library
2. Dump the Spool File (DMPXSPLF) with a userspace name and Library.
3. Use command SAVLIB2FLR to save the dummy library to a folder
4. Zip the PC file you just created in point 3.
5. E-Mail the zipped file to your distributor or to support@agentdata.com

DMPXSPLF parameters:

Spooled file (FILE)

Specifies the name of the spooled file. The file name is the name of the device file that was used by the program to produce the spooled output file.

Job name (JOB)

Specifies the name of the job that created the spooled output file to be dumped.

*

The job that issued this command is the job that created the spooled file.

qualified-job-name

Specify the qualified name of the job that created the spooled file. If no job qualifier is given, all jobs currently in the system are searched for the simple job name.

Spooled file number (SPLNBR)

Specifies the number of the spooled output file from the job to be dumped.

***ONLY**

There is only one output file in the job, with that filename. It is not necessary to set a file number..

***LAST**

The Output file with the highest number and the specified filename are used.

spooled-file-number

Specify the number of the spooled file having the specified file name to be dumped.

Userspace (SpaceName)

Enter the user space name which must contain the dump of the Spool File.

Save Library To Folder (SAVLIB2FLR)

This command enables you to "save" a library direct as a PC file in a folder. This feature makes it possible to exchange AS/400 data using PC media - between AS/400's which have Agent Data 's software installed.(See command RSTLIBFLR to restore a PC file).

Library (LIB)

Specify the name of the library to be saved.

To folder (TOFLR)

Indicates the name of the folder, where the PC file must be copied.

The name must be a valid pathname like:

folder_1/folder_2/folder_3/.../folder_n

The pathname can be up to 63 characters in length. All folders in the path must exist in advance.

PC File name (PCFILE)

Indicates the name on the PC-document in the folder, in which the copied library must be copied to. The PC file will be created automatically. The file extension will be .400.

***LIB**

The name on the PC-document is the same as the 8 first digits of the library e.g. MYLIB.400.

PC file name

Use a valid PC file name on 1 to 8 digits. The file type must ALWAYS be 400 (e.g. MYPCFILE.400)

Target Release (TGTRLS)

Indicates the release level, for which the objects will be processed.

The Release Level are written in the format VxRxMx, where Vx = version, Rx = release and Mx = modification level. Release V3R1M0 equals Version 3, Release 1, Modification level 0.

End the BlueSeries subsystem (ENDXSBS)

The command is used to end the BlueSeries subsystem. The command **MUST** be used. The subsystem will start automatically after the next IPL.

Import Fax Font (IMPXFNT)

This command is used when importing new typefaces. If you need a new typeface for BlueSeries, you can use the font tool available on your BlueSeries master CD.

Font library (LIB)

Select a Library for the new objects.

***BLUESERIES**

If the new fonts are to be placed in the BlueSeries Library (normally FAX). Can only be used in connection with the command IMPXFNT.

Document (DOC)

The field indicates which document is to be imported for this job.

***ALL**

Are used to import ALL fonts in the selected folder. Only files with extension .SFP are handled.

Name

Indicate the exact name of the file to be handled in the folder.

From folder (FRMFLR)

Indicates the name of the folder, which contains the PC-document(s), to be imported. This parameter can also indicate the path to the folder as follows:

Folder_1/folder_2/folder_3/.../folder_n

The name of the path may not exceed 63 digits. This parameter must be entered.

Add or Replace font (OPT) Special options for the command.

***ADD**

The new font will be added, if the font already exists.

***REPLACE**

If the font already exists, the old font will be deleted before the import.

Import Image (IMPXIMG)

The command is used to import images to BlueSeries. An image, such as a signature, can be placed anywhere in a document. See chapter 5 in the manual for the easy way to import signatures into BlueSeries.

Fax Image name (image)

Enter the name of the new object.

Description (Text)

The object description is keyed in this field.

Replace or merge Image (REPLACE)

Indicate whether an existing object should be replaced or merged.

***REPLACE**

The object will be replaced if it already exists.

***MERGE**

The new object will be merged with an existing object.

TIFF image information (FromFile)

Indicate the source from the image (e.g. /QDLS/BLUESERIES/MYSIGN.TIF).

Page number (PAGENO)

If the image has multiple pages, you can use this parameter to decide which page you will work with.

Import as (OPTION)

When an image is to be imported, you must determine the top left and the bottom right corner to set the position of the frame of the image.

***SIGNATURE**

A fixed frame is already made in order to make it easy to import signatures. You can find the frame in the BlueSeries manual. You simply place a white sheet of paper on top of the page with the frame from the manual. Write your signature within the frame and fax the page with the signature to BlueSeries.

***IMAGE**

Is set if you know the "start" and "end" coordinates for the image which is to be imported.

Strip for blanks (STRIP)

You can use this parameter to indicate if you want to strip blanks from the image you are importing (from the top and the left side).

***NO**

The image is NOT stripped for blanks.

***YES**

The image is stripped for blanks.

Import Coordinates (POSITION)

This parameter contains four fields used to indicate Start Horizontal position, Start Vertical position, End Horizontal Position and End Vertical position for the image to be imported.

Authority (AUT)

Specifies the object authority granted to users who do not have specific authority to the object, who are not on the authorization list, or whose group has no specific authority to the object.

***LIBCRTAUT**

The public authority for the object is taken from the CRTAUT keyword of the target library (the library that contains the created object). This value is determined when the object is created. When the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

*LIBCRTAUT is the default.

***CHANGE**

Provides all data authority and the authority to perform all operations on the object except those limited to the owner or controlled by object authority and object management authority. The object can be changed and basic functions can be performed on it.

***ALL**

Authority for all operations on the object except those limited to the owner or controlled by authorization list management authority. Any user can control the object's existence, specify the security for it, change it, and perform basic functions on it, but cannot transfer its ownership.

***USE**

Provides object operational authority; read authority; and authority for basic operations on the object. Users without specific authority are prevented from changing the object.

***EXCLUDE**

Users without special authority cannot access the object.

authorization-list-name

Enter the name of an authorization list of users and authorities. The program is secured by this authorization list, and the public authority for the object is set to *AUTL. The authorization list must exist on the system when this command is issued.

Import Fax Overlay (IMPFAOVL)

The command is used to import an overlay to BlueSeries. An overlay has a fixed placing just like a "sheet of paper" which is laid on top of the data written in the document.

Fax Overlay name (OVERLAY)

This parameter gives the name of the new object which is to be created. The object for the type *USRSPC is placed in the selected library.

Description (Text)

The object description is keyed in this field.

Replace or merge Image (IMGOPT)

Special options for the command.

***REPLACE**

If the object already exists, it will be deleted before the import is started and replaced with the new image.

***MERGE**

If the object already exists, it will be merged to the "old" object. The overlay will then have data from both.

TIFF image information (IMAGE)

The parameter is divided into four sections as follows:

Image file path and name.

Indicate the position of the image in the fax document.
e.g. /QDLS/BLUESERIES/MYLOGO.TIF

Degree of image rotation.

When a fax in Landscape is built - it is first created as portrait and it is only when the image is finished that the WHOLE page is rotated. This means that ALL overlays MUST be imported as portrait. You must in this parameter indicate the rotation for the picture to be imported, the result in BlueSeries is an overlay in portrait.

Height in pixels.

The field is used to indicate the height of the picture to be imported. There are 196 dots (pixels) per inch.

Width in pixels

The field is used to indicate the width of the picture to be imported. There are 204 dots (pixels) per inch.

Page number (PAGENO)

If the image has multiple pages, you can use this parameter to decide which page you will work with.

Overlay Link information (OVLLNK)

An overlay which is to be imported can be given characteristics for when it is added to a fax. This Keyword enables you to create links such as an overlay used automatically when the file in use is a certain printer file, form or a source drawer.

NOTE: There can only be indicated ONE link at the time of import (printer file, form type or source drawer). If more than one link is used for the overlay, the command "Work with Fax Overlay Link" (WRKFAXOVLL) must be used. It is possible to overwrite the Spool Parameters Rotation or Page length.

Printer File

If you want to create an overlay link to a printer file, the name of the printer file must be keyed in the parameter.

Form Type

If you want to create an overlay link to a Form type, the name of the form type must be entered in this parameter.

Source Drawer

If you want to create an overlay link to a source drawer the number of the source drawer must be keyed in this parameter.

1-255

If there is output to the source drawer indicated in this parameter - the command will cause this overlay to be added automatically on the fax.

Rotation

This parameter allows you to determine the rotation for the fax.

***SPLF**

The rotation for the pages is inherited from the Spool File Attribute "Degree of page Rotation"

***PORTRAIT**

Rotation for the page will always be portrait.

***LANDSCAPE**

The rotation for the page will always be Landscape.

Page length in print lines

This parameter enables you to set the page length on the page to be sent. The parameter will typically be used if you want to use a letter with bottom text on the letter. For instance the company address.

Example - If the Spool File to be sent is 51 lines and the letter is 70 lines (in 1/6") You will normally set 70 in this parameter.

***SPLF**

The length of the page is set by the Spool File Attribute "Page size: - lines per page".

1-255

The keyed value sets the length of the page.

Link Report Archive (LNKRPTARC)

This command is normally used to create a link between BlueSeries and MultiArchive/400. BlueSeries is normally integrated direct with MultiArchive/400, but customers using Multi-Archive versions installed in 994 and never updated since must use this command.

Note: The command creates a library named IBMFAX400 which only contains the command SNDIFAX. For more information regarding integration - see Multiarchive/400's manual.

Print Object (PRTXOBJ)

This command can print a TIFF file (CCITT group3) on a PCL-printer or save the file as a stream file in the hierarchical file system.

```

                                Print Object (PRTXOBJ)
                                Type choices, press Enter
From object . . . . . > '/QDLS/FAX/PUBLIC/FX000000.TIF'

From format . . . . . *TIFF          *TIFF
To format . . . . . *PCL5          *PCL5
Output . . . . . *OUTQ            *OUTQ, *STMF
To object . . . . .
Output queue . . . . . > HP5Name
    Library . . . . . *LIBL        Name, *LIBL
From page . . . . . 1             Number
To page . . . . . *LAST           1-99999, *LAST
Source drawer . . . . . 1         1-99
Overlay program . . . . . Overlay Name, *DFT, *NONE
    Library . . . . . *LIBL        Name, *LIBL
User key . . . . .
User Data . . . . .
    
```

From object

The path of the TIFF file. Note - it is the full path to a stream file in the hierarchical file system.

From format

Input format. TIFF (class F or CCITT-Group 3) only

To format

Output format. PCL5 only.

Output

Select *OUTQ or *STMF. *OUTQ is the out queue name.
*STMF is a valid path and stream file name in to object:

To object

E.g.: '/QDLS/FAX/PUBLIC/OUTFILE.PCL' can only be used if OUTPUT is set tot *STMF.

Output queue

Can only be used If "Output" is set to *OUTQ

From page

Start to print from page x.

To page

End page on *LAST or chose from 1-99999,

Source drawer

Paper drawer – Please note the special succession of the drawers.

- 1=first drawer
- 2=Manuel feed
- 3=Envelope feed
- 4=Second Drawer
- 5=Third
- 6= Fourth

Overlay program

Select Name, *DFT, *NONE

The Overlay program can "paste" additional information on each page of the output print, The program is e.g. a small CL-program that can use the following CL-commands enclosed in BlueSeries:

RTVCPGA – retrieves specific data e.g. TOTALPAGES.
RTVFAXA - retrieves system system/file specific data
e.g.. FAXUSRDTA and FAXUSRKEY
WRTCFGTXT Writes a text string.
WRTCPGBOX Draw a box.

See also the program example "OVERLAY" in the source file
QSAMPLE

User key

User Data

Optional data that can be retrieved by the overlay program, using the command
RTVFAXA.

Retrieve Fax Coverpage Attr. (RTVCPGA)

This command is only used when programming coverpage(s). The command is used to fetch the actual values for the fax the coverpage is built for.

CL var for RCPID (10) (RcpId)

Specifies the name of a variable used to return the Recipient ID from the sending fax. In control language (CL) programs, this should be a character variable of length (10).

CL var for RCPFAXNO (20) (RCPFaxNo)

Specifies the name of a variable used to return the Recipient Fax number from the sending fax. In control language (CL) programs, this should be a character variable of length (20).

CL var for RCPNAME (30) (RCPNAME)

Specifies the name of a variable used to return the Recipient Name from the sending fax. In control language (CL) programs, this should be a character variable of length (30).

CL var for RCPATTN (30) (RCPATTN)

Specifies the name of a variable used to return the Recipient Attention Name from the sending fax. In control language (CL) programs, this should be a character variable of length (10).

CL var for USER (10) (USER)

Specifies the name of a variable used to return the Senders User Profile from the sending fax. In control language (CL) programs, this should be a character variable of length (10).

CL var for QPRTY (1 0) (QPRTY)

Specifies the name of a variable used to return the Queue Priority from the sending fax. In control language (CL) programs, this should be a numeric variable of length (1 0).

CL var for CURDATE (15) (CURDATE)**CL var for CURTIME (5) (CURTIME)****CL var for CURPAG (5 0) (CurPag)****CL var for CURPAGA (5) (CurPAGA)****CL var for TOTSPLPAG (5 0) (TotSpIfPag)****CL var for TOTPAGA (5) (TotPAGA)****CL var for FRMNAME (30) (FRMNAME)****CL var for FRMADR1 (30) (FRMADR1)****CL var for FRMADR2 (30) (FRMADR2)****CL var for FRMADR3 (30) (FRMADR3)****CL var for FRMADR4 (30) (FRMADR4)****CL var for FRMADR5 (30) (FRMADR5)****CL var for FRMFAX (20) (FRMFAX)****CL var for FRMPHONE (20) (FRMPHONE)****CL var for FRMEMAIL (50) (FRMEMAIL)****CL var for MARGIN (5 0) (MARGIN)**

Specifies the name of a variable used to return the Left Margin from the BlueSeries Values (WRKFAXVAL). In control language (CL) programs, this should be a numeric variable of length (5 0).

CL var for USRKEY (20) (USRKEY)

CL var for USRDTA	(256) (USRDTA)
CL var for RETRANS	(1) (RETRANS)

Retrieve Fax Coveragepage Text (RTVCPGTX)

This command is only used when programming of coveragepage(s). The command is used to fetch the text lines used for the main text into the coveragepage program.

NOTE: See also the command WRTCPGTX when the text is placed in the coveragepage.

Retrieve Fax Coveragepage Text (REF)
Retrieve Fax Coveragepage Text (RTNREFNBR)
Retrieve Fax Coveragepage Text (TEXT)

Retrieve Fax User (RTVFAXUSR)

This command is only used while programming coveragepage(s). The command is used to retrieve the sender's user information.

User profile (UsrPrf)

CL var for USERID	(8) (UserId)
CL var for USERADR	(8) (UserAdr)
CL var for NAME	(50) (Name)
CL var for NAME2	(30) (NAME2)
CL var for NAME3	(30) (NAME3)
CL var for NAME4	(30) (NAME4)
CL var for PHONE	(20) (Phone)
CL var for FAXNO	(20) (FAXNO)
CL var for EMAIL	(50) (EMAIL)

Retrieve Fax System values (RTVFAXVAL)

This command is only used when programming coveragepage(s). The command is used to retrieve information found in BlueSeries's system values.

NOTE - For more information about entering BlueSeries system values, see the command WRKXVAL.

CL var for TEXT (30) (Text)
 Specifies the name of a variable used to return the address from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (30).

CL var for ADRESS1	(30) (Adress1)
CL var for ADRESS2	(30) (Adress2)
CL var for ADRESS3	(30) (Adress3)
CL var for ADRESS4	(30) (Adress4)
CL var for ADRESS5	(30) (Adress5)

Specifies the name of a variable used to return the address from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (30).

CL var for FAXNO (20) (FAXNO)

Specifies the name of a variable used to return the Faxnumber from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (20).

CL var for PHONENO (20) (PHONENO)

Specifies the name of a variable used to return the Phone number from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (20).

CL var for EMAILADR (50) (EMAILADR)

Specifies the name of a variable used to return the E-Mail address from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (20).

CL var for CFGPREFIX (10) (CFGPREFIX)

Specifies the name of a variable used to return the Config Communication Prefix from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (30).

CL var for OUTMSGQ (10) (OutMsgQ)

Specifies the name of a variable used to return the Message Queue from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (10).

CL var for OUTMSGQLIB (10) (OutMsgQLib)

Specifies the name of a variable used to return the Message Queue libray from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a character variable of length (10).

CL var for OUTMSGQDLV (1 0) (OutMsgQDlv)

Specifies the name of a variable used to return the "Message Queue delivery form" from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a numeric variable of length (1 0).

CL var for RESOLUTION (1 0) (Resolution)

Specifies the name of a variable used to return the Resolution default from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a numeric variable of length (1 0).

CL var for MARGIN (5 0) (MARGIN)

Specifies the name of a variable used to return the Left Margin from the BlueSeries Values (WRKXVAL). In control language (CL) programs, this should be a numeric variable of length (5 0).

Send a Note (SNDXNTE)

This command is used when faxing short notes and/or messages via BlueSeries.

Address (RCP)

This parameter contains five fields - Fax number, e-mail address, Recipient ID, Recipient name and Recipients attention name

***SELECT**

Displays the screen where the recipient(s) are listed (F4 list), it is possible to select cover page with cover page information, overlay etc.

Fax number

Enter the fax number, name and attention for the recipient. You can enter more values to this parameter. If you are in a screen with input fields and you need more input fields to enter the values for a parameter, you must key a plus (+) in the field by " + for more" and press Enter.

Queue Priority (QPRTY)

Specifies the priority on this shipment. The highest priority is 1, and the lowest is 9.

1-9

State the priority of this fax shipment. The highest priority is 1, and the lowest is 9.

***USER**

States that the priority is inherited from senders user profile. NOTE - For Command RTVCPGA this keyword means:

Specifies the name of a variable used to return the Queue Priority from the sending fax. In control language (CL) programs, this should be a numeric variable of length (1 0).

Senders user profile (SNDUSRPRF)

The field enables you to send a spool file under a different User Profile. If you are running a batch job as one joint job with data from multiple users, you can use this parameter to change the owner of the fax.

Name

Enter the exact user profile for the sender for this fax transmission.

***CURRENT**

Indicates that the user profile for this job also is the sender for the transmission.

Deferred delivery (DEFER)

If the transmission is to be sent at a later time - it can be specified in this field. The field is divided into two fields Date and Time:

Date:

***ASAP**

Indicates that the fax is to be sent as soon as possible

Date

Enter the exact date for the fax transmission.

***CURRENT**

If the fax is to be sent today - but at a later time.

Time:

Enter the exact hour for the fax transmission.

Cover page program (CPGPAG)

Specify cover page ID in this field.

Note (CPGTX)

Write a short message to be used as the main text for the chosen cover page. You can enter from 1 to 50 text lines by placing a + as the first character in field number two.

User key (FAXUSRKEY)

The field can contain up to 20 bytes that follows this transmission.

User Data (FAXUSRDTA)

The field can contain up to 256 bytes that follows this transmission. The first 55 bytes are reserved to the command WRKFAXQ where it is possible to display this user data. You can build a header to the command WRKFAXQ by using the OS/400 command CRTDTAARA and name the data area USRDTAHDR on a length of 55 bytes.

Send Spool Files (SNDXSPLF)

The programmer normally uses this command when integrating software solutions to BlueSeries. A typical situation where the command could be used is for order confirmations. Imagine that you, as a programmer, want to let your users send an order confirmation directly to the customer, as soon the order is ready. If a sub-program is called which writes the confirmation with its own Spool File per order - you only need to insert SNDXSPLF just after the print program.

Example:

```
/* Write the confirmation and close Spool File */
CALL MYPGM
/* Sends the confirmation to fax number in field &FAXNO */
SNDFAXSPLF FILE(ORDER) SPLNBR(*LAST) RCP((&FAXNO))
```

Spooled file (FILE)

Specifies the name of the spooled file that is sent as a fax or email. The file name is the name of the device file that was used by the program to produce the spooled output file.

Job name (JOB)

Specifies the name of the job that created the spooled output file whose data is to be sent as a Fax or Email.

*

The job that issued this command is the job that created the spooled file.

Qualified-job-name

Specify the qualified name of the job that created the spooled file. If no job qualifier is given, all jobs currently in the system are searched for the simple job name.

BlueSeries may find duplicate job names - and if so:

For an interactive job, BlueSeries displays the duplicate names in qualified form. You can then specify a fully qualified job name on the command.

For a batch job BlueSeries cannot process the command and writes an error on the job.

The format of a qualified job name is "job-number/user-name-job/job-name"

Spooled file number (SPLNBR)

Specifies the number of the spooled output file from the job whose data is to be sent as a fax or e-mail.

***ONLY**

There is only one output file with this file name in the job. It is thus not necessary to write a file number.

***LAST**

The Output file with the highest number and the given file name is used.

Spooled-file-number

Specify the number of the spooled file having the specified filename whose data is to be sent as Fax or e-mail

Recipient (RCP)

This parameter contains five fields - Fax number, E-mail address, Recipient ID, Recipient name and Recipients attention name

***SELECT**

Displays the screen where the recipient(s) are listed (F4 list), it is possible to select coverage with coverage information, overlay etc.

Faxnumber, E-mail address, Recipient Id, Recipient name and Recipient attention

Enter the email or fax number, name and attention for the recipient. You can enter more values to this parameter. If you are in a screen with input fields and you need more input fields to enter the values for a parameter, you must key a plus (+) in the field by " + for more" and press Enter.

Queue Priority (QPRTY)

Specifies the priority on this shipment. The highest priority is 1, and the lowest is 9.

***SPLF**

States that the priority is inherited from the selected spool file. (Applies ONLY for the command SNDXSPLF)

1-9

State the priority of this fax shipment. The highest priority is 1, and the lowest is 9.

***USER**

States that the priority is inherited from sender's user profile.

Sender's user profile (SNDUSRPRF)

The field enables you to send a spool file under a different User Profile. If you are running a batch job as one joint job with data from multiple users - you can use this parameter to change the owner of the fax.

name

Enter the exact user profile for the sender for this transmission.

***CURRENT**

Indicates that the user profile for this job also is the sender for the transmission.

***SPLFUSR**

Take the user from the spool file as sender of this transmission.

Note: If a fax image is used in the transmission, the user profile of the job must hold authorization *USE for the object.

Deferred delivery (DEFER)

If the transmission is to be sent at a later time - it can be specified in this field. The field is divided into two fields "Date" and "Time":

Date:

Enter the exact date for the transmission

***ASAP**

Indicates that the job is to be sent as soon as possible

***CURRENT**

If the job is to be sent today - but at a later time.

Time:

Enter the exact hour for the fax transmission.

Keep Spool File (KEEPSPLF)

Specifies the Spool File sent OK handling.

***SPLFA**

If the Spool File Attributes has *YES in the keyword SAVE, the Spool File will remain on the system when the transmission ends normally. Otherwise the Spool File will be deleted from the system.

For more information about the SAVE keyword, see the OS/400 command OVRPRTF, CRTPRTF or other related commands.

***NO**

The Spool File will be deleted from the system when the transmission ends normally.

***YES**

The Spool File will remain on the system even when the transmission ends normally.

Coverpage (CPGPAG)

Specify coverpage ID in this field.

Overlay (OVERLAY)

If an overlay is to be pasted to ALL the pages of this transmission, you can write the overlay name in this parameter.

NOTE: See also the command WRKFAXOVLL (Work Fax Overlay Link).

User key (FAXUSRKEY)

The field can contain up to 20 bytes, which follows this transmission.

User Data (FAXUSRDTA)

The field can contain up to 256 bytes that follows this transmission. The first 55 bytes are reserved to the command WRKFAXQ where it is possible to display this user data. You can build a header to the command WRKFAXQ by using the OS/400 command CRTDTAARA and name the data area USRDTAHDR on a length of 55 bytes.

Print TIFF objects PRTXOBJ

PRTXOBJ is used when printing TIFF (Class f or CCITT) files. Use the command to call an "Overlay Program", and attach User Key and User Data. You can use the same set of commands in both the "Overlay Program" and the "Cover page Program". This enables you to write direct in the Image that is to be printed (e.g. a Banner Text with variable information's).

You can use the following keywords in the command:

- FROMOBJ
- FROMFMT
- TOFMT
- OUTPUT
- TOOBJ
- OUTQ
- FROMPAGE
- TOPAGE
- DRAWER
- FITTOPAGE
- OVLPGM
- USRKEY
- USRDTA

Merge objects MRGXOBJ

MRGXOBJ is use to merge different TIFF (Class f or CCITT) - max 50 - files to one single file. You can even add extra overlay on all the pages. It is also possible to call an Overlays Program just like using **PRTXOBJ**.

You can use the following keywords in the command:

- FROMOBJ (max 50)
- FROMFMT
- TOOBJ
- TOFMT
- RPLCTOOBJ
- OVLPGM
- USRKEY
- USRDTA

Note

MRGXOBJ is only using QDLS because it is BlueFax "old" API's that are used. This mean that you only can merge files to and from QDLS and that the object Keyword must contain the correct "case" (Upper and Lower Case) surrounded by apostrophes (').

Send objects *SNDXOBJ*

SNDXOBJ is used to send objects from AS/400.

The attached files will be sent in the "as is" format if the recipient is an e-mail recipient,

The object must be a TIFF (Class f or CCITT) object if the recipient is an fax recipient.

You can use the following keywords in the command:

- RCP (max 128 modtagere)
 - Address (e-mail or fax number)
 - Recipient ID
 - Recipient name
 - Recipient attention
 - Send as
 - *EMAIL
 - *FAX
 - *RCP (Only if the Recipient ID is indicated)
 - SUBJECT
 - TEXT (max 300 lines)
 - ATTACHMENT (max 50)
 - Object
 - Alias file name
 - QPRTY
 - SNDUSRPRF
 - DEFER
 - FAXUSRKEY
-

Integration to InterForm

InterForm is a box-free electronic forms solution for IBM AS/400 that provides design and central control of individual forms for all departments in an organization, with an unlimited number of printers.

BlueSeries is integrated to InterForm/400 and the idea is, that forms or copies of forms can be faxed direct without redesigning the layout. The principle is basically that BlueSeries - from InterForm/400's point of view - simulates a drawer on a Laserprinter.

Note - You can not use any of the features mentioned below unless InterForm/400 is installed on your system.

Use F10= Additional parameters to get access to the InterForm/400 parameter "Use InterForm Builder PGM"

Use InterForm Builder PGM (USEINTRFRM)

This parameter will only be prompted if the InterForm is installed on your system.

***NO**

The InterForm program will not be used.

***YES**

The InterForm program will be used.

The following parameter is valid only if you select *YES in the field USEINTRFRM.

The parameter is divided into four fields: File Set, Cliche, Cliche Selector and Type.

File Set.

Defines the name of the file Set, in which you have defined the InterForm Cliche (InterForm/400 overlay). The spooled file will be merged into the selected File Set and sent as a Fax by use of BlueSeries. The files in which the Cliche definitions are kept, are subdivided into members. The idea is to enable individual users, or user groups, to maintain their own File Sets. It is not possible to operate on more than one File Set at a time. Example: All Cliches in a Cliche Selector must be saved in the same File Set. Since the File Sets are individual file members, they must meet the requirements set for naming of members in the OS/400.

Cliche (InterForm overlay).

Defines the Cliche to be merged with the spooled file. The Cliche must be defined in the previous selected File Set. If there are more than one Cliche involved, you will have to specify a Cliche Selector.

Cliche Selector

This Cliche Selector allows you to use conditioned Cliche selections on certain character combinations. E.g. an individual Cliche per page.

Type

In InterForm it is possible to define Primary or Secondary copy of the Cliche. To use this feature you have to use the "Copy Management" facility in InterForm/400. This field can be either *PRI (Default) or *SEC. You must decide if it is the Primary or the Secondary set of copies that are to be process

Simulate IBM Fax/400 (SNDIFAX)

Job name (Job)

Specifies the name of the job that created the spooled output file whose data is to be sent as a Fax.

*.

The job that issued this command, is the job that created the spooled file.

qualified-job-name

Specify the qualified name of the job that created the spooled file. If no job qualifier is given, all jobs currently in the system are searched for the simple job name.

Spooled file number (SPLNBR)

Specifies the number of the spooled output file from the job whose data is to be sent as a fax.

***ONLY**

There is only one output file with this file name in the job. It is thus not necessary to write a file number.

***LAST**

The Output file with the highest number and the given filename is used.

Spooled-file-number

Specify the number of the spooled file having the specified file name whose data is to be sent as Fax.

Start Fax subsystem (STRXSBS)

The command is used to activate the BlueSeries subsystem.

NOTE - If the system is activated via this command - it will cause the subsystem to start automatically after IPL. See the command ENDXSBS for stopping the BlueSeries subsystem.

Work with Jobs (WRKXJOB)

The command is used when working with the BlueSeries log.

Work with Communication description (WRKXCMND)

The number of communication lines and which communication recourses they are using - is defined by this command. Furthermore, it is possible to see what kind of operation the actual line is doing. Remember to use F5=Refresh to retrieve the most current status of the communication lines.

Work with Fax communication (WRKXCFGSTS)

The command is used to display the actual status for Line, Controller and device for all active BlueSeries lines.

Work with Cover Page Formats (WRKXCPG)

This command is used to maintain references to cover pages used in BlueSeries.

Work with Fonts (WRKXFNT)

The command is used to display the fonts, which are available in BlueSeries. See also the command IMPFAXFNT.

Work with Group profiles (WRKXGRPP)

Addresses can be attached to group profiles through distribution lists. This option is used when working with group profiles and distribution lists.

Work with Output Queue Monitor (WRKXMON)

BlueSeries will monitor each output queue you define in this list. If a spool print is placed in one of these output queues, the contents will be sent as a fax or email. The only information, which is required for the transmission, is the fax-address. It may be entered in the user data field or it may be contained in the spool data as well. To change the user data type CHGSPLFA ... USRDTA('12 34 56 78') and it will be sent to that number. If the spoolfile contains the number, the first page must contain a keyword somewhere in the following format .FAXNO('1-914-241-9140')

NOTE - Do NOT use .FAX commands if you use the SNDXSPLF

Work with FAX Overlay Links (WRKFAXOVLL)

An overlay can be given properties for when it is added to a fax. This command enables you to create links so that the overlay is automatically used if a particular printer file, form or drawer are used.

NOTE - See also the command IMPXOVL.

Work with Recipient (WRKFAXRCP)

In order to make the daily routine easier, it is an advantage to create addresses for each recipient. Through this option, you are able to work with fax and e-mail addresses. BlueSeries automatically creates fax-addresses while receiving faxes from unknown faxes. You will only have to fill in the name and fax number to add it to the phone book.

Work with Active Fax subsystem (WRKXSBS)

Work with configuration status for Line, Controller and Device used by the BlueSeries communication subsystem. The option displays by using the OS/400 command WRKCFGSTS (work with configuration status) status for Line, Controller and Device in BlueSeries. Line, Controller and Device are created the first time it is needed.

Work with Spool Files (WRKXSPLF)

The command WRKXSPLF (Work with Spooled Files) displays a list of all output records in the system or a selected group of these. You may change, hold back, delete, display or release one or more of the displayed records. *Considerations.* The amount of time the system uses to display the list with output records is directly proportional with the number of output records in the list. In a system with numerous output records it might be necessary (an advantage) to only display a special selected group of records.

NOTE: Do not use an asterix in front of a parameter unless it is a 'reserved word'. A reserved word is a parameter known by the system, and already having a specific meaning. For instance *ALL. The screen image or the help text displays the reserved words to be used.

Select files for (SELECT)

Select the group of files to be displayed. The selection can be activated by: the user who created the file, the output device which is used to print the file, the type of paper used for printing or the description entered by the user. Only files, which meet the criteria entered in the system, will be displayed. The following values can be given for 'User':

***CURRENT**

Files are only selected if the user, who sent this command, creates them.

***ALL**

Files are selected from all the users.

User name

Enter the name of a user. Files are only selected if this user creates them. The following values can be selected for 'Print device':

***ALL**

ALL Files are selected from all output queues created in relation to user or device.

***OUTQ**

All files from user created output queues are selected. A user created output queue is every output queue not automatically created by a device. A user created output will normally NOT hold the same name as a output queue for a device. But if that is the case it will NOT be found in Library QUSRSYS.

name on device

Enter the name of an output device. Only files from the output queue related to Device are selected. An output queue related device is characteristic by it use of the same name as a device and is found in library QUSRSYS. The output queue is automatically created by the system unless it is already found in the system. An output related to device cannot be deleted.

The following values can be used for 'Form type':

***ALL**

The files are selected regardless of the paper type chosen for printing.

***STD**

Only files printed on standard paper are selected.

paper type

Select the criteria for the paper type.

The following values can be used if you want to select the files based on the users information of the file:

***ALL**

Select the files, which contain a user data-tag.

Information regarding the file

Set the user data-tag from which the files are selected.

Work With User Profiles (WRKXUSR)

The command is used to maintain BlueSeries users.

NOTE - It is normally NOT necessary to maintain the users in BlueSeries. New users are created automatically the first time they send a fax or e-mail from BlueSeries

Work with system Values (WRKXVAL)

The command is used to access the BlueSeries' system values.

Write Coverpage Overlay (WRTCPGOVL)

The command is used to insert an overlay when programming cover pages.

Overlay name (ovl)

Write Cover page Text (WRTCPGTX)

The command is used while programming for cover pages. The command is used to write text on the cover page.

CL var for STATUS (3 0) (STATUS)

Specifies the name of the CL variable that receives any Error status. The variable must be a 3-digit decimal variable.

X position (1/200") (XPOS)

Specifies the horizontal position in pixels. (204 pixels = 1 inch)

Y position (1/200") (YPOS)

Specifies the vertical position in pixels (196 pixels = 1 inch).

Font point size (FONTSIZE)

Used to indicate the font size of the selected font. The size is indicated in points for proportional fonts and in pitch for fixed fonts. (See command CHGCPGFNT for font selection).

Text adjust (JUSTIFY)

How must the text be placed in relation to XPOS (the horizontal position).

***LEFT**

Specifies that the left part of the text will begin at the stated XPOS.

***CENTER**

Specifies that the center part of the text must begin at XPOS. If a text must be centered on a line XPOS must be set to 864 and the keyword must be *CENTER.

***RIGHT**

Specifies that the right part of the text will begin at XPOS.

Proportional (Propor)

Text length in chars (TEXTLEN)

Specifies how many characters found in the Keyword TEXT.

***CALC**

The length is calculated automatically from the content of keyword TEXT.

1-378

Specify a number between 1 and 378 the length for the text in keyword TEXT.

Text (Text)

The object description is keyed in this field.

NOTE: For Command WRTCPGTX this keyword means: The text which is to be written on the coverpage is filled in this parameter. The parameter can be a concatenation expression or a built-in function.

Example:

```
TEXT('To . . .' !> %SST(&NAME 1 10))
```

CL var for LINESPACE (7 2) (LINESPACE)

Specifies the name of the CL variable that receives the height in pixels of the font size selected. The variable must be a 7-digit decimal variable decimal variable.

Integration to 3rd party programs

BlueSeries requires minimum modifications to existing applications and can easily be integrated into existing systems on AS/400.

BlueSeries is integrated with products like:

InterForm
MultiArchive
Query/400

You can use Spool File Attributes like:

Form Type
Source drawer (paper tray)
User data
LPI/CPI
*SCS
Save
Priority
Page Rotation

Important! Page Rotation on spool files MUST be zero=0 if the fax pages are to be sent as portrait mode. The spool program will otherwise lay the print down if the record-length exceeds 80 positions.

OVRPRTF FILE(din File) PAGRTT(0)

Your Own programs.

It is possible for a programmer to integrate other programs with BlueSeries. For this you need different .FAX - keywords which must be written on the first page to be faxed. Put the print in the fax output queue.

.FAX - keywords - remember "period" in front of FAXNO:

.FAXNO(number) contains one or more fax numbers.

.FAXNO('42860191')

.FAXNO('42860191' '45768191' '42158087') to a maximum of 20 numbers.

.FAXNO('mail@agentdata.com')

.FAXID(faxadresse ID) contains one or more Faxadresse ID.

.FAXID(Smith)

.FAXID('Smith' 'Jensen' 'Clinton') to a maximum of 20.

.FAXOVL(library/name) Library and Name of an Overlay.

.FAXOVL(INVOICE1)

.FAXIMG(library/name) Library and Name of an Overlay.

.FAXIMG(SIGNATURE)

.FAXFNT(library/name size proportional) Library and font name size

.FAXFNT(ARIAL18 *yes)

.FAXDFR(Time Stamp)
.FAXDFR('1999-09-17-12.25.00.000000')

.FAXUSRKEY('xxxxxx') 20 bytes

.FAXUSRDTA('xxxxxx') 256 bytes

You can use both keywords on the same line - but if you use more than one keyword on the same line, you must NOT use a period (.) on the following keyword.

.FAXNO('123456') FAXUSRKEY('Hi there') FAXUSRDTA('This is a test')

You can also use multiple .FAX keywords:

.FAXNO(12345678) FAXOVL(INVOICE1)

Note ! - Period (.) is only placed before the first keyword !

Technical commands:

CPYFAXITM - Copy Fax Item

Can be used when there are multiple recipients for the same Fax Image. CPYFAXITM does not strain the system. It is only the record, which points at the Image which, are copied. The Image itself - appears only once.

Program Example

You might use this example to see how .FAXNO is used .

```

* ----- *
* Program . . . : EKS001 *
* Firma . . . . : Agent Data ApS *
* Design . . . . : Niels Liisberg *
* Funktion . . . : Just a smal sample with .FaxNO *
* * *
* Af      Dato      PTF      Description *
* NL      01.09.95      Nyt program *
* ----- *
FEKS001P O   E           50      PRINTER
* ----- *
* MAIN BODY *
* ----- *
C* Insert .FAXNO(xxxxxxx) in the data stream
C          MOVE'45768191'FAXNO
C          WRITEDIAL
C* Print the logo
C          WRITELOGO
C* and some underlined text
C          WRITEUNDERL
C* and some normal text
C          WRITENORMAL
C* that`s all for to day...
C          MOVE *ON          *INLR

```

ooo000000000000000ooo

Here is a DDS-description to an extern printer file:

```

R DIAL
          FAXNO          20          1  1'.FAXNO('
                                     +1
                                     +1')'

R LOGO
                                     2  5'?'

R UNDERL
                                     10 5'Some underlined text'
                                     UNDERLINE

R NORMAL
                                     11 5'Some normal text'

```

Fax Image API definitions

BlueSeries has a built in API interface designed to make integration to other applications easy.
This chapter will describe the API's and their calling sequences.

Every function is made with a "call/return interface" which gives the function an immediate response. Every time a function is executed - a status code is returned to the programmer.

You can always call a module and the function you chose select is always a variable function.

A fax transmission is made of "Image Pages" - "Image Pages" can be connected into "Image Groups" which also can be faxed.

An "Image Page" can be saved and reused as a Overlay for other "Image Pages".

The Functions:

NewPage
Text
Box
BitMap
SendFax
Print
SavePage

Are described in details in the following:

Here is a typical flow which sends two faxes:
(Fax #.1 contains two pages - fax #. 2 is on one (1) page, but is sent to 3 different recipients.)

Newpage
Text .. First fax first page
Text
Newpage
Text .. First fax next page
Text
SendFax .. Send first fax to ...
Newpage
Text .. Next fax first page
Text
SendFax .. Send second fax to first person...
SendFax .. Send second fax to second person...
SendFax .. Send second fax to third person...

In order to use an Overlay - you will first have to create and save a "Image".

It can then be used to e.g. :

```
Newpage  
Text  
Box  
Bitmap  
SavePage ("TESTLIB/COVERPAGE")
```

Here follows an example where the Overlay is used to a Coverpage:

```
NewPage ("TESTLIB/COVERPAGE")  
Text    .. First fax first page  
Text  
NewPage ("TESTLIB/COVEROTHER")  
Text    .. First fax next page  
Text  
SendFax .. Send first fax to ...  
NewPage ("TESTLIB/COVERPAGE")  
Text    .. Next fax first page  
Text  
SendFax .. Send second fax to ...
```

It is as you can see possible to generate a new page with the NEWPAGE function or alternate to give NEWPAGE a "Image Overlay".

The page number will always raise with 1 after NEWPAGE.

The page number is always reset to zero after SENDFAX.

As a test you can now print a page:

```
NewPage  
Text  
Print
```

The API interface in general.

The two first parameters are identical in all API calls.
STATUS contains the status code for the first operation and OPTION indicates which function is to be executed.

STATUS

This field will contain a zero(0) if a function is ended successfully.
The error code are otherwise generated by entering the value in the last part of the "Message Id" which contains "IMG0000". A program message is then sent by use of the message file USPMSG.

Example. If the status code returns "123", it means, that the Message Id will be seen as "IMG0123"

OPTION

The Option field will contain the name of the function you which to execute:

"NEWPAGE" / "LOADPAGE"

Builds a new "Image Page" and connects it to the existing "Image Group". A template can be used alternately:

"TEXT"

Prints a text -string on the existing "Image page".

"BOX"

Draws a square starting in top left corner (position X1, Y1) and ends in bottom right corner (position X2,Y2).

"BITMAP"

Formats a (unscaled) bitmap string to an "Image Page".

"SAVEPAGE"

Saves the actual "Userspace" in a library.

"PRINT"

Sends the actual page to print on a (HPIII compatible) printer which is connected to the Output queue on the AS/400.

"SENDERFAX"

Sends the actual "Image Group" to a BlueSeries send queue and adds a recipient. (Fax number, name, etc).

Function: NEWPAGE

The NEWPAGE function is used to create a new "Image page" and connect it to the actual "Image Group". The NEWPAGE function can alternately create a "Image Page" based on a existing "Image space".

```
0010.01 C* Initializing af new image page
0011.00 C          CALL 'ÆFAXIMG'
0012.00 C          PARM          STATUS 30
0013.00 C          PARM 'NEWPAGE' OPTION 8
0013.00 C          PARM 'LANDSCAP' ORIENT 8
```

The orientation of the page can either be in "LANDSCAP" or "PORTRAIT". If you want to use an Overlay - the interface will look as follows:

```
013.01 C* Initializing af new image page based on an existing image
013.02 C          CALL 'ÆFAXIMG'
013.03 C          PARM          STATUS 30
013.04 C          PARM 'LOADPAGE' OPTION 8
013.05 C          PARM          LIBRAY 10
013.06 C          PARM          NAME 10
```

When you load an "Image Page" it will inherit the page orientation from the Overlay.

When you are in "LANDSCAP" mode the "Image Page" will contain (H/W) 2288 x 1728 pixels.

The "Image Page" will contain (H/W) 1728 x 2288 pixels in "PORTRAIT" mode

Function: TEXT

Printer is a text string on the actual "Image Page"

```

022.00 C* Print the text "TEST" with font courier 10p
023.00 C          CALL 'ÆFAXIMG'
024.00 C          PARM          STATUS 30
025.00 C          PARM 'TEXT'   'OPTION 8
026.00 C          PARM 1       XPOS   50
027.00 C          PARM 100     YPOS   50
028.00 C          PARM 0       ROTATE 30
029.00 C          PARM 0       FONT   30
029.01 C          PARM 10      SIZE   30
030.00 C          PARM 4       TXTLEN 50
031.00 C          PARM 'TEST'  TXTSTR 4

```

XPOS and YPOS are relative to the orientation of the parameter on the "NEWPAGE" function.

ROTATE Rotates counter clockwise in (0, 90, 180, 270) degrees.

FONT is the font number which match with the internal font table in a HP printer.

SIZE is the point size on the typeface/font. The bigger the point size - the bigger the letters. If the size of a selected typeface/font is missing, it will automatically be scaled in proportion the nearest smaller typeface/font. SIZE can be saved for later reuse.

TXTLEN contains the number of bytes to be printed. You must make sure that the length does not exceed the length of the TXTSTR variable - you will otherwise risk unpredictable results.

Function BOX

Draws a square (box) starting in top left corner (position X1, Y1) and ends in bottom right corner (position X2,Y2).

```

014.00 C* Draw a box
015.00 C          CALL 'ÆFAXIMG'
016.00 C          PARM          STATUS 30
017.00 C          PARM 'BOX'    'OPTION 8
018.00 C          PARM 10      X1POS 50
019.00 C          PARM 10      Y1POS 50
020.00 C          PARM 50     X2POS 50
021.00 C          PARM 50     Y2POS 50
022.00 C          PARM 0      COLUR  30

```

COLOUR appears in three values: 0=Black fill, 1=White fill, 2=Invert the background.

Function : BITMAP

Formats an unscaled bitmap string to your "Image Page".

```

032.00 C* Transfer a bitmap string into image page
033.00 C          CALL 'ÆFAXIMG'
034.00 C          PARM          STATUS 30
035.00 C          PARM 'BITMAP' 'OPTION 8
036.00 C          PARM 1       XPOS   50
037.00 C          PARM 100     YPOS   50
038.00 C          PARM 0       ROTATE 30
039.00 C          PARM 10      ELEMEN 50
040.00 C          PARM 10      OFBYTS 50
041.00 C          PARM          BITMAP

```

XPOS and YPOS is relative to the orientation of the parameter on the "NEWPAGE" function.

ROTATE Rotates counter clockwise in (0, 90, 180, 270) degrees.

ELEMEN is the number of lines (Byte elements)

OFBYTS is the number of bytes in every element. (number of pixels / 8 pr. line)

The total number of bytes in the bitmap pattern are : ELEMEN x OFBYTS

BITMAP is the bitmap field. Every byte contains eight "picture elements (pixels)" is interpreted from the first significant bit. Bit "on" means black and bit "off" means white.

Example:.. x'80' is printed as :

Black white white white white white white white

Function : SAVEPAGE

Stores the actual "Image Page" - in a User space - in a library.

```
0041.01 C* Save an image page into library
0041.02 C          CALL 'ÆFAXIMG'
0041.03 C          PARM          STATUS 30
0041.04 C          PARM 'SAVEPAGE' OPTION 8
0041.05 C          PARM          LIBRAY 10
0041.06 C          PARM          NAME 10
```

The Object type is *USRSPC.

The object will be replaced if it already exist.

Function : PRINT

Sends the actual page to be printed on a HP compatible printer (which is connected to the output queue on the AS/400).

```
0042.00 C* Print image page onto outq
0043.00 C          CALL 'ÆFAXIMG'
0044.00 C          PARM          STATUS 30
0045.00 C          PARM 'PRINT' 'OPTION 8
0046.00 C          PARM          LIBRAY 10
0047.00 C          PARM          OUTQ 10
```

Function : SENDFAX

Sends the actual "Image Group" to BlueSeries' send queue and adds a recipient. (Fax number, name, etc).

```

0063.00 C* Send image group to recipient
0064.00 C          CALL 'ÆFAXIMG'
0065.00 C          PARM          STATUS 30
0066.00 C          PARM 'SENFAX 'OPTION 8
0067.00 C          PARM          FAXNO 20 Recipient Fax no.
0068.00 C          PARM          RECIPI 10 Recipient id
0069.00 C          PARM          FRMUSR 10 From user id
0070.00 C          PARM          FRMJOB 10 From job name
0071.00 C          PARM          SPNAME 10 Spool file name
0072.00 C          PARM          SPJOB 10 Job name
0073.00 C          PARM          SPUSR 10 User name
0074.00 C          PARM          SPJNUM 60 Job number
0075.00 C          PARM          SPFNUM 90 Spool file number
0076.00 C          PARM          DEFER 26 Defered until
Timestamp

```

Fill either FAXNO or RECIPI. The fax number is taken from the recipient profile- if RECIPI is filled. Otherwise is FAXNO used and the fax number is keyed direct.

The rest of the parameters are optional..

DEFER is the time for setting the transmission of the fax. It is a timestamp in DB/2 format: CCYY-MM-DD-HH.MM.SS.000000

Interface to your own name register

You can use your own name register with BlueSeries, but you will have to create a small interface program. (Called "User Exit Program" in this example).

This program will be executed automatically if a user is pressing F4=List in the recipient field in the panel "Work with spool file" or "Send Note".

The main idea is, that your User Exit Program will send a data structure, into a data queue named FAXDTAQ in library QTEMP.

You can send one or more occurrences related to one or more fax recipients. The data structure is an external data structure found in library FAXDB.

NOTE!!! You must NOT create a hardcode as future BlueSeries versions can be changed.

```
FMT PF .....A.....T.Name+++++RLen++TDpB.....Functions+++++
***** Beginning of data *****
0001.00          R DQN00R                TEXT('FAX: Dataqueue:Name list')          9
0002.00          * This entry must be zero, if Faxnumber/name/att is specified          9
0003.00          DNRCTK          9 0      COLHDG('Recipient' 'Toke')          9
0004.00          DNFXNO          20      COLHDG('Fax' 'Number')          9
0005.00          DNNAME          30      COLHDG('Recipient' 'Name' '(Company+
0006.00          )')          9
0007.00          DNATT          30      COLHDG('Attention' 'Name')          9
***** End of data *****
```

DNRCTK

The field is a recipient token from BlueSeries own database. This field must always be filled with the value 0 (zero).

DNFXNO

This is the fax number of the fax recipient. It is insensitive to blanks, slash etc.

DNNAME

The name or company name of the fax recipient.

DNATT

Name of an attention person - Only if DNNAME is filled with a company name.

Call the system API programmer QSNDDTAQ when this structure is filled. It will insert the data in the name register data queue.

Here is a small example on a user exit program. (Which you can find in the source file QSAMPLE in library FAX).

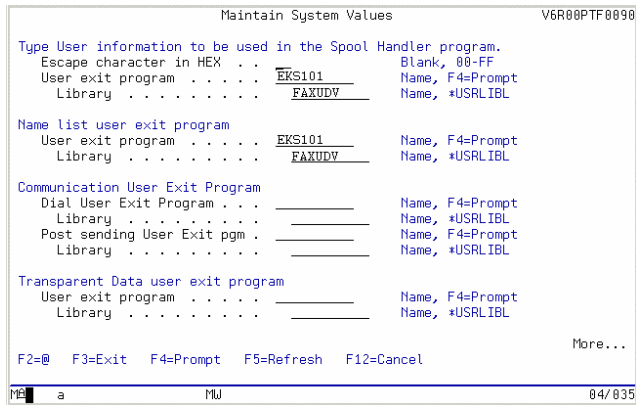
```

FMT H .....H.....1..CDYI...S.....1.F.....Pgm-
***** Beginning of data *****
0001.00 H 1
0002.00 * -----*
0003.00 * Program . . . : EKS101 *
0004.00 * Firma . . . . : Agent Data ApS *
0005.00 * Design . . . . : Niels Liisberg *
0006.00 * Funktion . . . : Example on how to use user exit program *
0007.00 * to produce an name list for fax transmission *
0008.00 * -----*
0009.00 * By Dato PTF Beskrivelse *
0010.00 * NL 10.04.97 0000000 New program *
0011.00 * -----*
0012.00 I* Use the external datastructure for entry to data queue
0013.00 IDQNS E DSDQN00
0014.00 * -----*
0015.00 C* No parameters is parsed from the caller
0016.00 C* We only have to fill in data in the data-structure
0017.00 C* and send it back to caller using a data queue.
0018.00 * -----*
0019.00 C* Just fill in som test data. This
0020.00 C* must be supplied from your own application
0021.00 C* -----*
0022.00 C Z-ADD0 DNRCTK Always zero
0023.00 C MOVEL '45768191' DNFNO Fax number
0024.00 C MOVEL 'Name' DNNAME Recipient name Compan
0025.00 C MOVEL 'Att' DNATT Recipient name Att
0026.00 C* Now put one ore more entries in the data queue
0027.00 C* -----*
0028.00 C CALL 'QSNDDTAQ'
0029.00 C PARM 'FAXDTAQ' PMDTAQ 10 Name list data queue
0030.00 C PARM 'QTEMP' PMLIB 10 Always in QTEMP
0031.00 C PARM 85 PMLEN 50 Length of DQNS
0032.00 C PARM DQNS The Name structure
0033.00 C RETRN Return to caller
***** End of data *****
    
```

When you have created your User Exit Program - you must configure BlueSeries for name and placing.

Use BlueSeries main menu point 15. "Work with BlueSeries System Values" command WRKFAXVAL.

Scroll to page 3 and you will get this panel:



You can see that the "Name list user exit program" is filled with EKS101. You must change this to the name (and library for the placing) of your own program.

You are now ready to use your own name register in BlueSeries.

Post sending User Exit pgm

You can find yourself in a situation, where you want a specific action taken after a fax/mail transmission is ended OK.

Learn more from the program example EKS510 in QSAMPLE.

The BlueSeries Spooled File Expert

The function "BlueSeries Spool File Expert " enables you to automate the transmission of Spool Files. The general idea is that you can pick up data from the print itself, convert it and - if needed - fetch recipients data from a third party database like you database. You can thus integrate your user applications without programming.

Setup

The following must be prepared before BlueSeries can interpret the spool file:

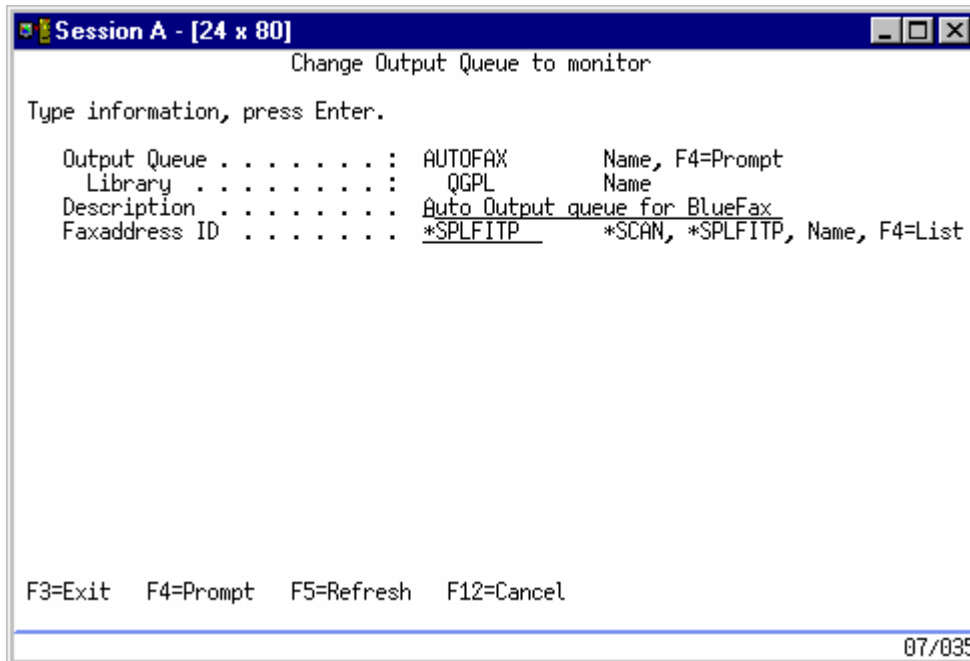
- One or more output queues must be created.
- The Output Queues must be enrolled as monitored queues (WRKXMON) in BlueSeries. The type must be *SPLFITP.
- One or more spool Spool File selections (WRKSPLFITP), must be created in order to let the Expert determine which type of print you want to work with.
- Define one ore more page formats in the Spool File Expert.

Create an enroll output queues

The command WRKXMON makes it possible to maintain output queues that are monitored by BlueSeries. The function is open for different types of monitoring:

- * SPLFITP
- * SCAN
- Fixed recipient

***SPLFITP:** "Spool File Interpretation". This function is used to automate the fax /e-mail transmission of Spool files.



***SCAN** and **Fax recipient** are described elsewhere in this manual.

The Output queue is created automatically if it does not already exist. If the monitoring of an output queue are to be ended it is done by deleting the queue manually from the list. The

4=delete function will only disable the actual monitoring activity - the output queue itself is not deleted.

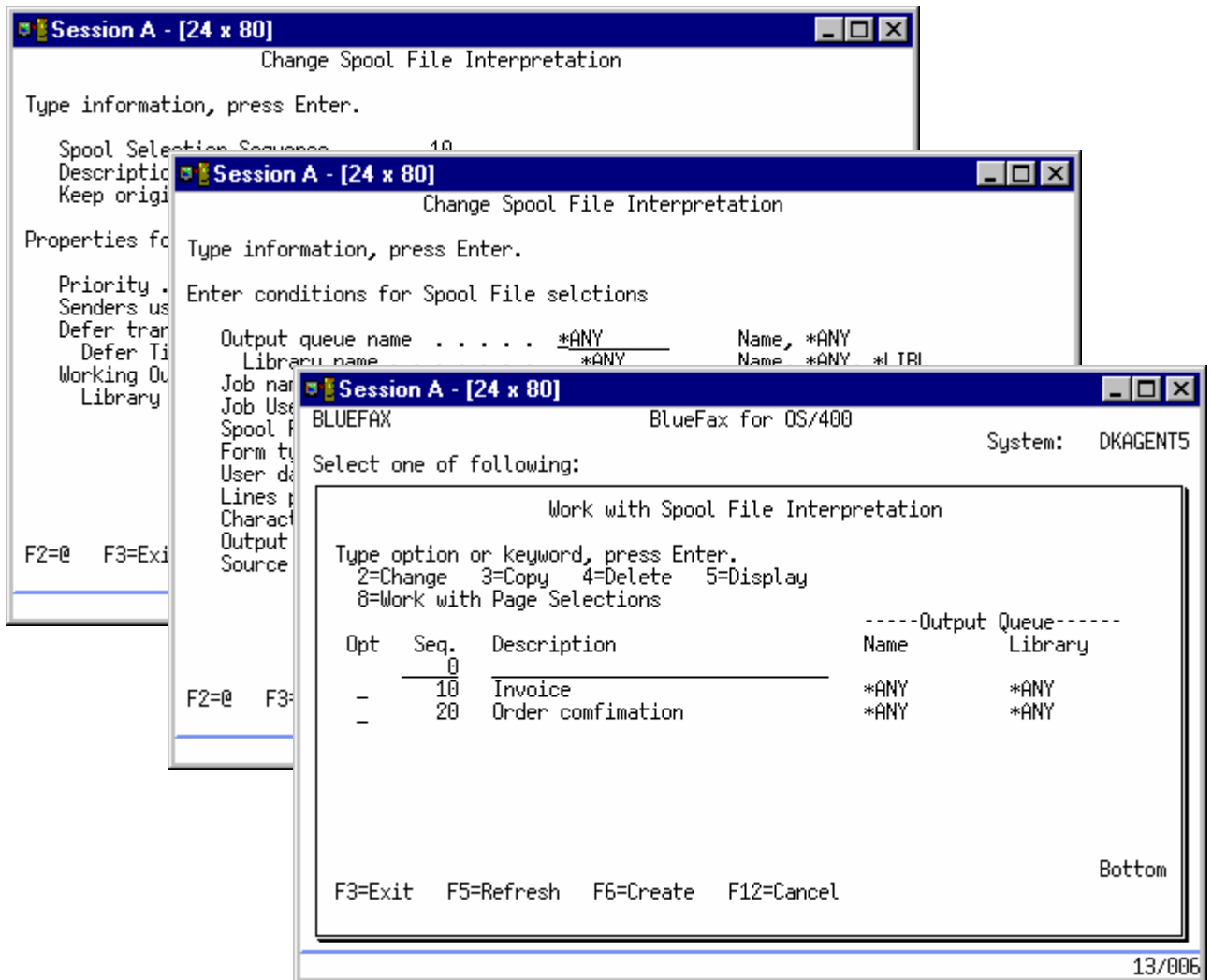
Work with Spool File Interpretation (WRKSPLFITP)

The function is found as option 14 on the BlueSeries main menu. This option enables you to maintain the Spool File selections, used in the BlueSeries "Spool File Interpretation" function.

The first thing to do is to create one or more Spool File selections. This is to determine the type of print you want to interpret. The interpretation will follow the sequence number, starting low, and the first match determines the next step: Which "Spool File Attributes" will trigger the interpretation.

The simple way is to select your Spool Files using "Spool File FormType".

Example: If you work with two types of print - an Invoice (INVOICE) and an Order confirmation (ORDCOM) - you will only need two primary selections. The Interpreter will work starting from the first match.



Page Interpreter

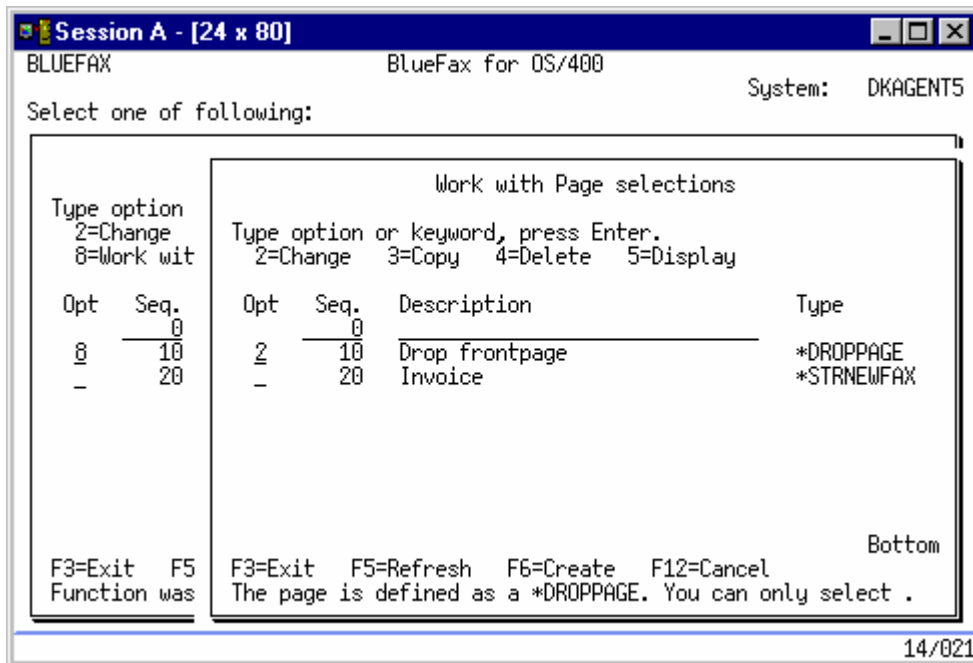
When a Spool File match is found, the interpretation of the Spool File data itself will begin. Different actions are taken all depending of the content of the page.

Example:

Some Spool application contains a page one with information regarding the user, number of pages etc. This is typically page you normally want to omit from your fax transmission.

You can also find yourself in a situation where some print covers more that one page pr. recipient. An example is an invoice covering two pages. A new fax transmission will start each time the word "Page 1" is found on a given location on the print. Other "trigger words" can of course also be used.

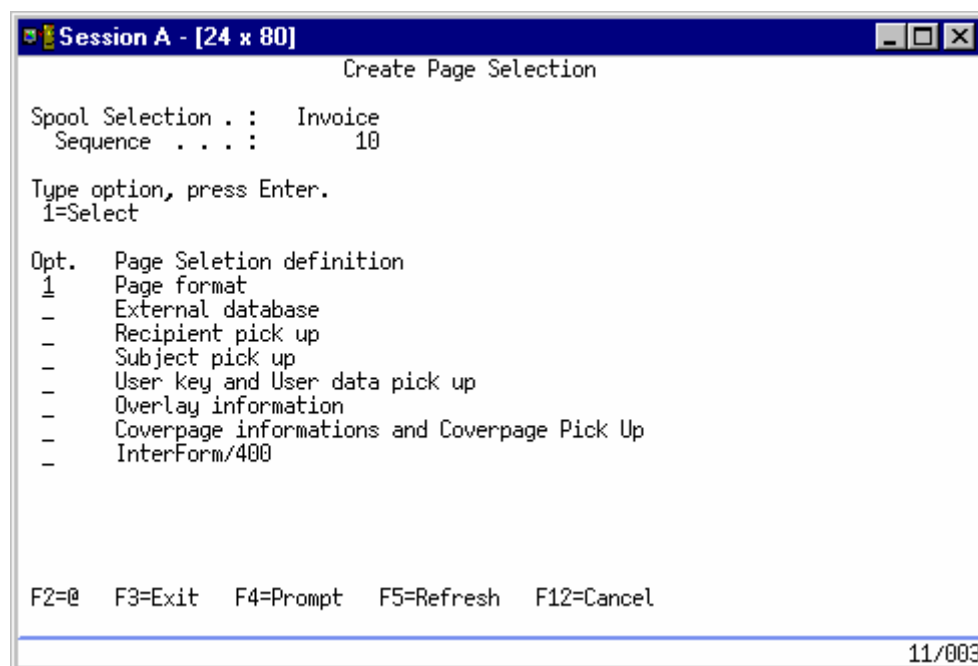
The sequence number is - just like for the Spool File Selection - the key for the succession of the interpretation of the actual page. If a page format e.g. does match to sequence number 10 the interpretation will start to work with this, and only this, page. It is always the lowest sequence number, which gets the first priority.



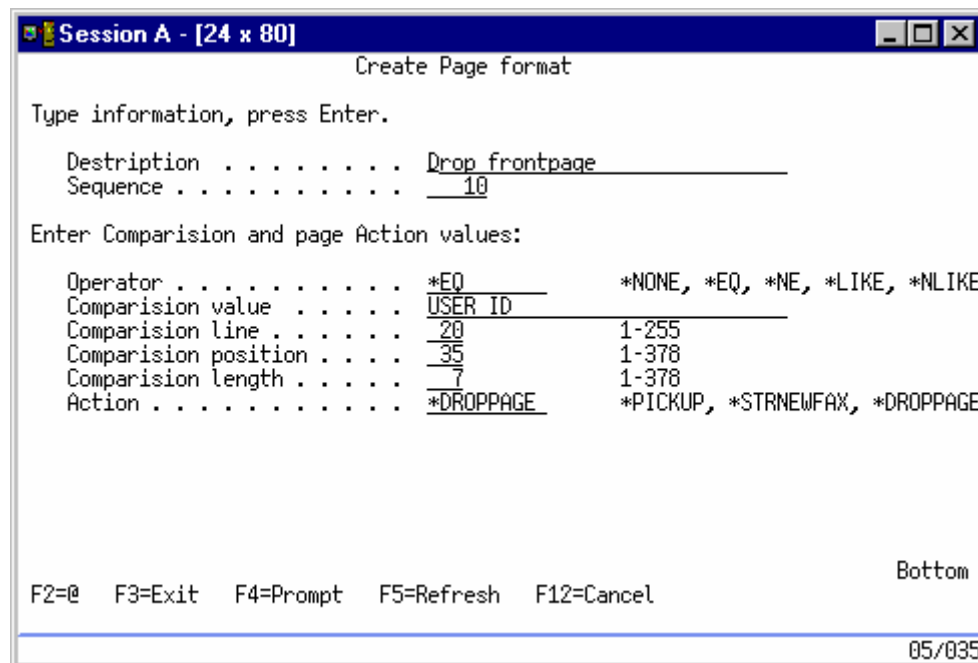
Use option 8 from the list of Spool File selections (WRKSPLFITP), to work with the maintenance of the page formats. The list is empty the first time you enter the panel and you will need to press F6 to create a page selection. The already created page formats are displayed with comments and type. The "Type" indicates "the action" to be taken e.g. *DROPPAGE.

Maintenance of the page format

The maintenance panel is the menu seen below:



Use option "1=Select" to set the conditions in the Page Format.

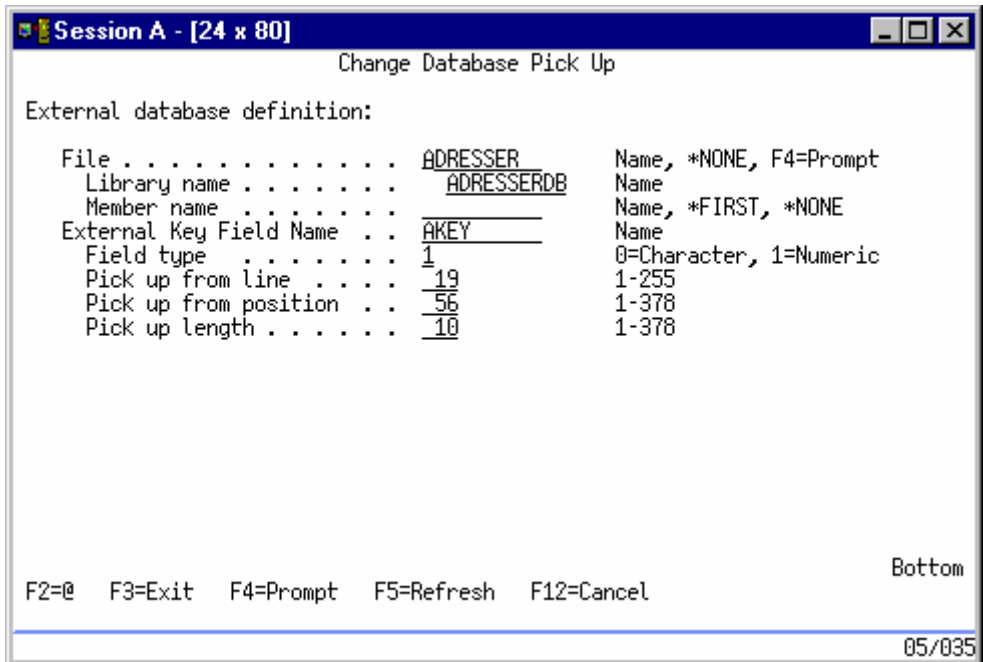


The action (*DROPPAGE) in this example triggered as follows:
 The front page (page one of the spool file) must NOT be sent as a fax. The page is omitted if "USER ID" (length 7 bytes), are found in line 20 position 35.

Definition of an external database

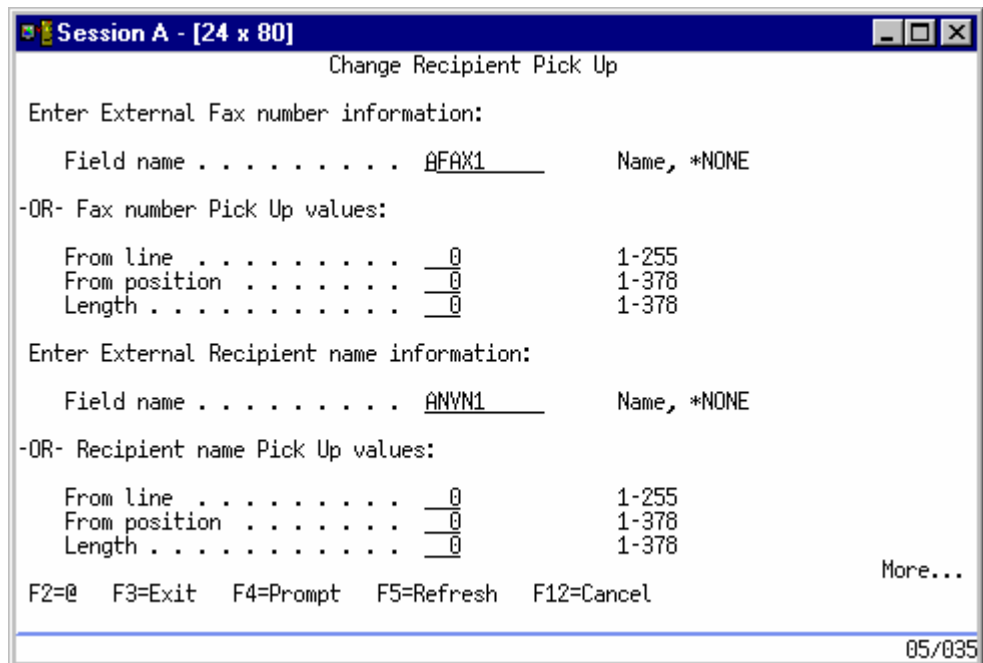
You can be in a situation where information regarding the recipient, must be fetched from an external database, as it is not found on the print itself.

Select "External Data base" from the "Page selection menu:



You will in this example "tell" that you will fetch data from a physical file named "ADRESSER" in library ADRESSERDB. The key field (in this case a unique customer number) with the name AKEY, is numeric, and are placed in 19 position 56 and with a length of 10.

Return to the "Create Page Selection". Select "Recipient pick up", to define the filed which determines the fax number, recipient- and attention name in third party database:



It is as you have seen, possible to fetch information direct from the data found in the print. You can thus combine data from the print and from the external database.

Enclose Subject from the print

The subject to be enclosed can also be picked up from the data in the print. The subject will be displayed in the subject line in the cover page. The information in the subject can be picked up from the print, and can be information like order #, Our reference, etc.

Line, position and length of data must also be indicated.

User key and user data pickup

As it applies for the "Subject", "User Key" and "User Data" will follow the fax, until it is deleted from the system. Many places in BlueSeries can refer to these fields. It can e.g. be cover page programs (handling of cover page) and the fax log (WRKXJOB).

Line, position and length of data must also be indicated.

Overlay information

Use this panel to determine which overlays are to be used with the fax.

Example: If you print an invoice, you will typically select the printer drawer containing paper with company logo. Overlay on a fax is used in a similar way.

See also InterForm.

Cover page information

The function is used to automatically add a cover page to the fax. The cover page is the standard BlueSeries cover page with company logo, senders name, page number and main text.

The main text can be fetched from the print where you as usual define the line, position and length of data you want to pick up and add to the cover page.

InterForm

This function is only available if InterForm is installed on your AS/400. If this is the case it is possible to use the InterForm builder program to send this type of page. See next chapter.

Work with BlueSeries and InterForm.

Versions prior to BlueSeries 5.0 PTF0070 used a special interface for InterForm/400 that is described in this chapter "Work With BlueSeries and InterForm".

This interface is deactivated from version 5.0 ptf0071. The file that is sent as mail and fax is the genuine PCL file generated from InterForm. There can be special situations where customers wish to keep the old interface and we have for this reason created a data area where one can determine if the new or old method should be used.

The Data area is named IFPCL and is set to '0' if the old method is used and is set to '1' if the new method are to be used ('1' is default).

Old method:

```
CHGDTAARA DTAARA(IFPCL) VALUE('0')
```

New method:

```
CHGDTAARA DTAARA(IFPCL) VALUE('1')
```

The data area is created the first time the interface for InterForm/400 is used. You can thus not change the data area before you have worked with minimum one InterForm file using SNDXSPLF or the "Spooled File Expert".

Read the next chapter "**Integration between BlueSeries and InterForm**"

Work with graphics "Old Method".

When you work with handling of graphics e.g. Company logo is important, that you have in mind, that there is a basic difference in the graphics of the two programs.

Graphics in InterForm have a resolution on 600 x 600 dpi.

while,

Graphics in BlueSeries have the standard fax resolution on 200 x 200 dpi.

These two dimensions are not compatible !.

To sum up; **Text** generated by InterForm can be faxed directly by BlueSeries – but graphics in an InterForm document (company logo etc.) must be added separately.

There are two way to add graphics (hereafter called logo) to an InterForm document.

- a) Logo is added to BlueSeries from " virtual printer drawer".
The logo is added to BlueSeries as an overlay with a fixed placing.
- b) Logo is added by InterForm, but is fetched from BlueSeries.
The logo is added to BlueSeries as an image with a random placing determined by InterForm.

Method a). Virtual printer drawer.

When you print a InterForm document on a laser printer, a solution could be, to let the documents be printed on preprinted paper with company logo, while the copies for internal use are printed on blank paper. InterForm can automatically select which drawer to use.

When you fax a InterForm document via BlueSeries, you can use the same method - but BlueSeries will in this case simulate the "drawer with the preprinted paper".

The overlay is imported in BlueSeries as described in chapter 5.1.1 in the User manual.

When you fax your InterForm document you must use the SNDFAXSPLF command described here in the Programmers Reference manual.

Method b) Add a logo to InterForm.

This method integrates the logo (in fax format) into the InterForm cliché and is a bit more complicated.

We take (in this example) that you are an InterForm user - and that you already are using a logo in an InterForm document. Please note - this procedure requires that the logo is saved in two formats a) the InterForm format on 600 x 600 dpi and b) the BlueSeries format on 200 x 200 dpi. Note - These two logos must have the same name. So when the InterForm document is faxed via BlueSeries - BlueSeries will "read" the name in the script and add the 200 x 200 dpi logo on the placing.

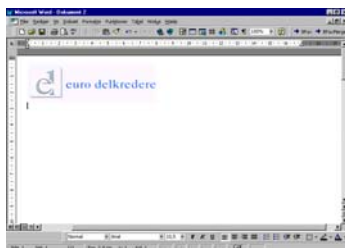
One can say, that you are performing a copy/paste from BlueSeries into InterForm and it is thus very important that the logo have the right size. The logo of this operation must be the logo you used, when you designed your InterForm document.

We will now take this logo and 1) fax it via BlueSeries, to make it available in the right Tiff format 2) "cut" the logo out of the image, 3) import the logo as an image into BlueSeries so it can be 4) used direct into InterForm.

We will in this example use the logo "EUROD".

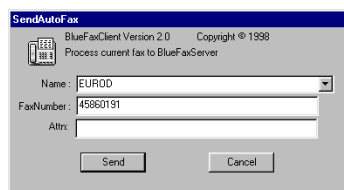


1). The best way to import an image like the logo above into BlueSeries is to use the BlueSeries Win95/NT client. This will secure that the image instantly has got the right Tiff format.



Use your any word-processing program (e.g. Word) to place the logo in a document. The placing can be random but it is an advantage, if it is placed in the top left corner.

It is important that the logo have got exactly the same size, that the one you use in your InterForm document.



Use the BlueSeries PC client, to fax the logo, in order to make the image available for BlueSeries.

Remember to use a meaningful name.

You can fax to any fax machine of your choice or to a dummy number. The important thing is to place the

document with the logo in the faxlog . Remember - You must to **NOT** add any fax-coverage to this document!!!

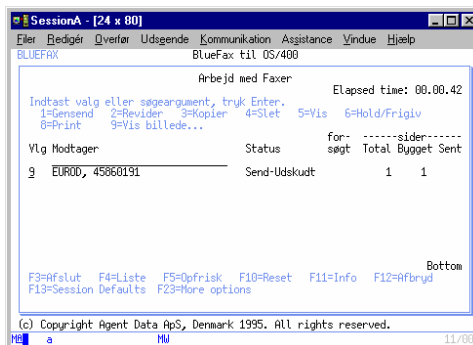
2) Sign on to your AS/400.

When you actually import your logo into BlueSeries you must "cut/trim" the logo so it fits your InterForm document. The image will otherwise have the size of the full page.

To du this operation you must know the coordinates of the logo.

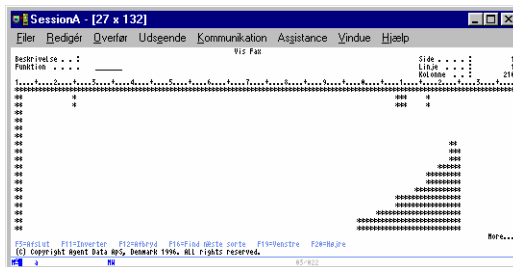
Do as follows:

Sign on to the BlueSeries menu
 Select option 3 "Work with Faxes"
 Find the fax in the log (EROD in this example).



Mark the fax with "9=Display image"

You will now see the image in a very enhanced version. Each dot represents 1/200 inch.



You must now find the coordinates which frames your logo.

- Start horizontal position.
- Start vertical position.
- End horizontal position.
- End vertical position.

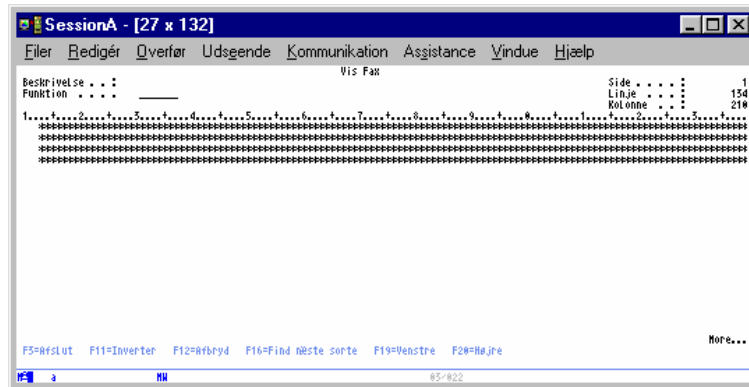
We know that "Start horizontal and vertical position" is 1,1 but we must find "End horizontal and vertical position x,y.

(1,1)



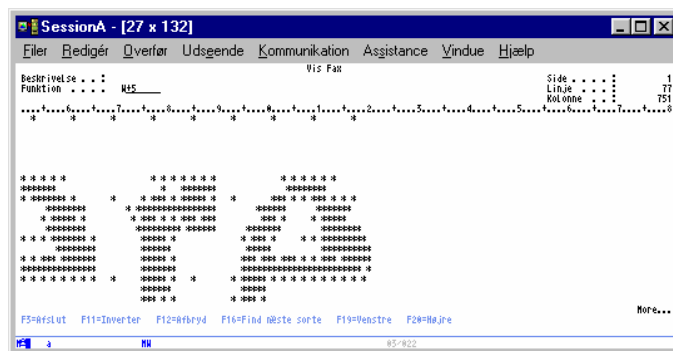
(x,y)

If you scroll the page downwards you can find the line which indicates the "End Horizontal position" of the image. The position is when the line moves out of the picture.



Read the coordinate in the "line field" in the top right corner. End Horizontal position (x) is in this example **138** (134+4).

Scroll right to find the End Vertical position (y). You might have to navigate around in the image. You can scroll left using F19 and scroll right using F20. If you need to scroll e.g. 5 points to the right - use the Function field in the top left corner and write w+5. If you need to move left write w-5.



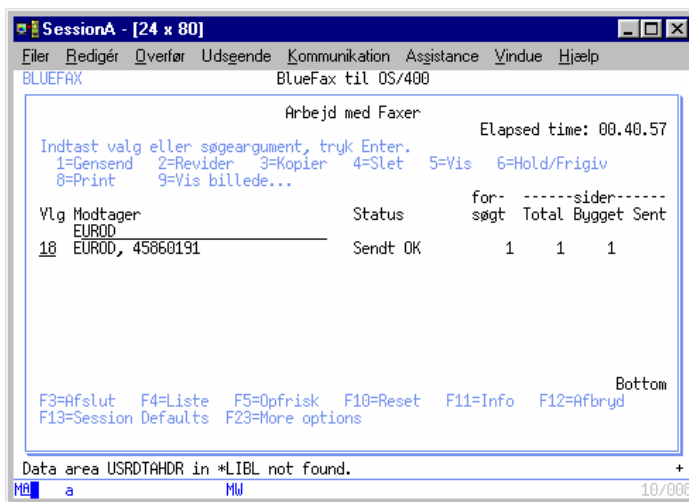
Read the coordinate in the "column field" in the top right corner. End Vertical position (y) is in this example **821** (820 +1)

We have now found the coordinates:

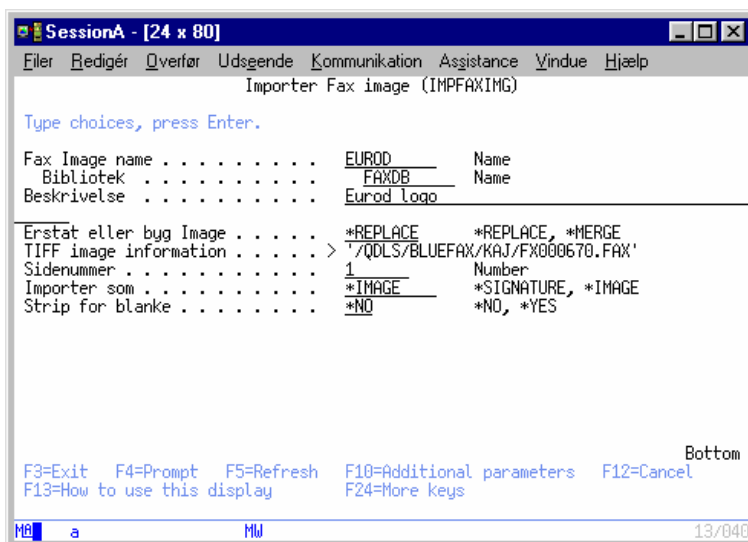
Start horizontal position:	1
Start vertical position:	1
End horizontal position:	138
End vertical position:	821

3)
 Import the logo as an image to BlueSeries.

Select option 3 on the BlueSeries menu and find the transmission and mark it with "18=Import Image"



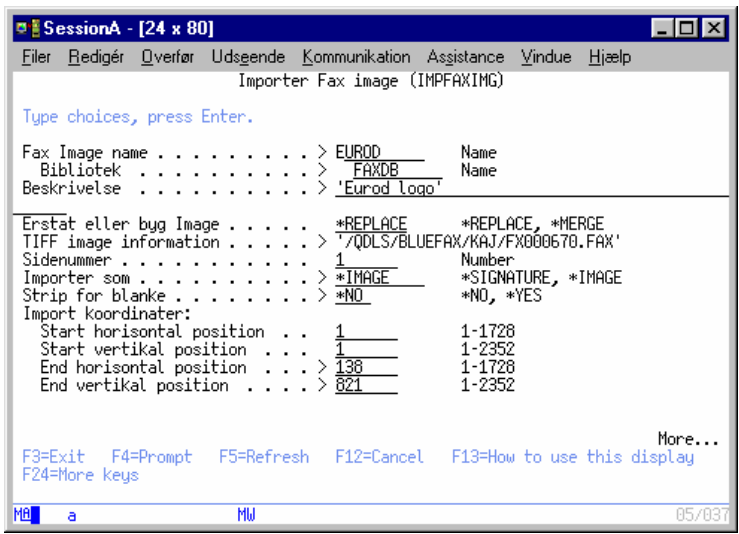
It will bring you to the panel "Import fax image":



- | | |
|-------------------------|--|
| Fax Image name | Type the name of the logo. NOTE - It must be the same name you use on the logo in you InterForm script. |
| Library | FAXDB |
| Description | A description in clear text e.g. "Eurod Logo". |
| Replace or Merge Image | *REPLACE |
| TIFF image information: | This path information is set automatically. |
| Page number | Normally 1 |
| Import as: | *IMAGE
(*SIGNATURE are only used when signatures are imported to this document). |

Strip for blanks: Normally, NO

Press F10 to enter the coordinates of the logo.



Enter the coordinates:

```

Start horizontal position: 1
Start vertical position: 1
End horizontal position: 138
End vertical position: 821
    
```

Press "ENTER"

4)

The logo, named EUROD, is now prepared and ready in BlueSeries as an image in 200x200 dpi format, and will be "pasted" on the InterForm document, when this is faxed via BlueSeries.

Integration between BlueSeries and InterForm/400

How can I integrate BlueSeries with InterForm/400?

If you want InterForm, to automatically send a spool file to BlueSeries, these rules must be followed:

1. One (1) Spool File = One (1) recipient. It applies, that if you have a Spool File with different recipients on different pages - the Spool **MUST** be split up in one Spool pr. recipient.
2. BlueSeries must know the recipient. There are different methods to identify the recipient; a) via the SNDFAXSPLF command, b) .FAXNO(12345678) in the Spool File Data and c) via a fixed recipient to a output file.

This document will describe how to use SNDFAXSPLF.

The enclosed program (SNDIFFAX) can send a fax via BlueSeries. It requires, that minimum the recipients fax number, and name, is found in "User Defined Data" on the Spool file.

You must use the OS/400 command OVRPRTF:

```
OVRPRTF FILE(MYSPPOOL) USRDFNDDTA('FAX:004545768191    Agent Data ApS')
```

You must then tell InterForm/400 (Auto Forms Control), that the "User Exit program" must be used in a specific Output queue.

It requires that you have authorization to make changes in those of your application programs, where OVRPRTF is to be placed before data are written in the Spool file. (Remember 1 Spool File = 1 recipient).

You might have to make a fix in your application programs, so there is a CLOSE after every Spool File Fax.

This method is very similar to the normal way a Spool file is handled in BlueSeries. (See Programmers Reference Manual for SNDFAXSPLF)

Split User Exit Program

You can find yourself in a situation, where you are unable to make fixes, in you application programs (e.g. no source available). But there is still help to find in InterForm/400.

InterForm/400 has a facility enabling you, to split one spool file in many small Spool files. There are different ways to do this - please advice your InterForm manual.

It is e.g. possible to call a "User Exit Program" in the beginning of each split. This "User Exit Program" can receive data from the Spool file, which can be used to turn up entries from a 3rd party database.

The User Exit Program SPLEXIT is made for this purpose. The program is prepared so it is possible for the user to make is own program to 1) select user data form the database, 2) return the fax number and recipients name. This will enable the "User Defined Data" on the new Spool file to contain information of the recipient. You can now use the User Exit Program of "InterForm/400 Auto Forms Control's" as described previously.

The User Exit Program SPLEXIT is only used to CALL another program (STMT 70.00) which can be used to fetch e.g. a fax number and a recipient.

SPLEXIT's 5 first parameters are data, which comes directly from the Spool file, which is fetched by InterForm/400's split function. Example: The first field could contain a customer number that is fetched from the Spool file and send on the User Exit program (SPLEXIT).

```

Columns . . . : 1 80 Browse
                FAXTOOLS/APFSRC
SEU==>
FMT **  ...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+... 8
0001.00 /*-----*/
0002.00 /* This is a sample program to be used as user exit program in */
0003.00 /* split */
0004.00 /* */
0005.00 /* When coding your own user exit programs, you have to have */
0006.00 /* the same entry parameters as in this program. */
0007.00 /*-----*/
0008.00
0009.00 PGM          (&ENTRYTXT1 &ENTRYTXT2 &ENTRYTXT3 &ENTRYTXT4 +
0010.00              &ENTRYTXT5 &OUTQ      &OUTQLIB  &WIDTH    +
0011.00              &LENGTH   &LPI       &CPI       &OVRFLW   +
0012.00              &FONT    &PAGRTT   &FORMTYPE  &SPLFNAME +
0013.00              &USRDTA  &HOLD     &SAVE      &COPIES  +
0014.00              &RPLUNPRT &RPLCHR   &ALIGN     &DRAWER  +
0015.00              &RETURNTXT1 &RETURNTXT2 &RETURNTXT3 &RETURNTXT4 +
0016.00              &RETURNTXT5 &RETURNTXT6 &RETURNTXT7 &RETURNTXT8 +
0017.00              &RETURNTXT9 &RETURNTXT10 &RETURNUDFD)
0018.00
0019.00          DCL          &ENTRYTXT1  *CHAR      30
. . . .
0069.00
0070.00          MYPGM PARM(&ENTRYTXT1 &ENTRYTXT2)
0071.00
0072.00          CHGVAR      VAR(&FAXNO)  VALUE(&ENTRYTXT1)
0073.00          CHGVAR      VAR(&RCPNAM)  VALUE(&ENTRYTXT2)
0074.00          CHGVAR      VAR(&CPGPAG)  VALUE(' *NONE ')
0075.00
0076.00          CHGVAR      VAR(&RETURNUDFD) VALUE('FAX:' *CAT &FAXNO +
0077.00              *CAT &RCPNAM *CAT &CPGPAG)
0078.00
0079.00          CHGVAR      VAR(&RETURNTXT1) VALUE('SENT BY FAX TO: ' +
0080.00              *CAT &FAXNO)
0081.00
0082.00          ENDPGM
***** End of data *****

```

The User Exit program can call your own user program with the necessary parameters. This program could e.g. be a RPG program which does nothing but a simple CHAIN to your customer database with the customer number (ENTRYTXT1). Example:

```

Columns . . . : 1 80 Edit FAXTOOLS/APFSRC
SEU==>
FMT FX  ....FfilenameIPEAF.....L..I.....Device+.....KExit++Entry+A....U1.....
***** Beginning of data *****
0001.00 FCUST  IF  E  K  DISK  991111
0002.00 C  *ENTRY  PLIST  991111
0003.00 C  PARM  ENY1  30  991111
0004.00 C  PARM  ENY2  30  991111
0005.00 C  ENTY1  CHAINCUSTR  80  991111
0006.00 C  *IN80  IFEQ *OFF  991111
0007.00 C  MOVELCFAXNO  ENY1  P  Customer Fax No  991111
0008.00 C  MOVELCNAME  ENY2  P  Customer Name  991111
0009.00 C  ELSE  991111
0010.00 C  MOVEL*BLANK  ENY1  P  Not Found  991111
0011.00 C  MOVEL*BLANK  ENY2  P  991111
0012.00 C  ENDIF  991111
0013.00 C  RETRN  991111
***** End of data *****

```

The field &RETURNUDFD (in User Exit program SPLEXIT STMT 76.00) changes the User Define Data for the Spool File which is used by Auto Forms Control's user exit program (as described above).

(The examples are the courtesy of "System og Metode ApS")

Merge your existing address database with BlueSeries database.

You can use this CL program example to upgrade the BlueSeries Phone book e.g. daily.

```

0002.00 Pgm
0003.00   DCL          VAR(&KEY) TYPE(*CHAR) LEN(10)   /* Work field for numeric to
                                alphanumeric converting */
0004.00   DCLF        FILE(MYFILE)                    /* Input file to be read from the
                                top*/
0005.00   OVRDBF      FILE(MYFILE) POSITION(*START)    /* Prepare read from top of file
                                (just like SETLL in RPG)*/

0005.01
0006.00 loop:
0007.00   RcvF                          /* Fetch a record (same as READ in RPG) */
0008.00   MonMsg Cpf0000 exec(Goto Eof)  /* End when end of file */
0009.00   chgvar &key  &CUSTNBR        /* The customer number is changed from
                                numeric to alphanumeric */

0009.01   if (&FAXNBR *NE ' ') then(Do) /* Checking for fax number */
0009.02
09.03 /* Add the customer to the Fax Phone book if he is not already there,
09.04 otherwise changes it */
0010.00   FAX/ADDFAXRCP RCPID(&KEY) RCPNAME(&NAME ) +
0011.00   RCPATTN(&ATT) FAXNBR(&FAXNBR) +
0012.00   REPLACE(*REPLACE)
0012.01   EndDo
0013.00   Goto Loop /* Fetch next */
0013.02
0014.00 Eof:
0015.00 EndPgm

```

This program will read through your address database, and the address will be added to the BlueSeries phonebook for each customer with a fax number. The keyword *REPLACE in the command means, that an occurrence already found will be corrected.

PCL Support

This matrix matches "Table 1-1. PCL Feature Support Matrix" in "HP PCL 5 Comparison Guide"

SUPPORT	FUNCTION	COMMAND	Support; Y=Yes, N=No, I=Ignore P=Planned support
I	Configuration (Apple Talk)	Miscellaneous Ec&b#W[data]	
		JOB CONTROL	
Y	Universal Exit/Start of PJJ(UEL)	Ec%-12345X	
Y	Reset	EcE	Y
I	Number of Copies	Ec&l#X	
I	Simplex/Duplex Print	Ec&l#S	
Y	Left(Long-Edge) Offset Registration	Ec&l#U	
Y	Top(Short-Edge) Offset Registration	Ec&l#Z	
Y	Unit of Measure	Ec&u#D	
		PAGE CONTROL	
I	Page (job Size)	Ec&l#A ExEcutive (1) Letter (2) Legal (3) A4 (26) Monarch Envelope(80) Comm. 10 Evelope(81) Intl. DL Evelope(90) Intl. C5 Evelope(91) Intl. B5 Evelope(100) Custom (101)	
Y	Orientation	Ec&l#O	
	Page Side SelEction	Ec&a#G	On non-duplex printers, this command causes a conditional page eject.
I	Job Separation	Ec&l#1T	

I	Paper Source	Ec&l#H
		EjEct page (0)
		Main Paper source (1)
		Manual Feed (2)
		Manual Evelope Feed (3)
		Alternate Paper Source (4)
		Optional Lg. Source (5)
		Evelope Feeder (6)
I	Output Bin	Ec&l#G
Y	Print DirEction	Ec&a#P
Y	Left Margin	Ec&a#L
Y	Right Margin	Ec&a#M
I	Clear Horizontal Margins	Ec9
Y	Top Margin	Ec&l#E
Y	Text Lentg	Ec&l#F
I	Perforation Skip	Ec&l#L
Y	Horizontal Motion Index	Ec&k#H
Y	Vertical Motion Index	Ec&l#C
Y	Line Spacing	Ec&l#D

CURSOR POSITIONING

Y	Horizontal Position	Ec&a#C
Y		Ec*p#X
Y		Ec&a#H
Y	Vertical Position	Ec&a#R
Y		Ec*p#Y
Y		Ec&a#V
Y	Half Line Feed	Ec=
Y	Line Termination	Ec&k#G
Y	Push/POP Position	Ec&f#S

FONT SELECTION

The primary font printer commands in this table can be spEcified as sEcondary by replacing the left paranthesis "(" in the command with a right parenthesis ")".

Y	Symbol Set	Ec(ID
Y	Spacing (Primary)	Ec(S#P
Y	Pitch (Primary)	Ec(S#H
Y	Height (Primary)	Ec(S#V
Y	Style (Primary)	Ec(S#S
Y	Stroke Weight (Primary)	Ec(S#B
Y	Typeface Weight (Primary)	Ec(S#T
Y	Font SelEction by ID# (Primary)	Ec(#X
Y	SElEct Default Font (Primary)	Ec(3@
L	Underline	Ec&d#D (Enable)
L		Ec&d@ (Disable)
N	Transparent Print Data	Ec&p#X[data]

FONT MANANGEMENT

Y	Assign FontID #	Ec*c#D
Y	Font Control	Ec*c#F

USER-DEFINED SYMBOL SET

Y	Symbol Set ID Code	Ec*c#R
Y	Define Symbol Set	Ec(f#W[data]
Y	Symbol Set Control	Ec*c#S

SOFT FONT CREATION

I	Font Descriptor	Ec)s#W[data]
I	Character Code	Ec*c#E
I	Download Character	Ec(s#W[data]

MACROS

Y	Macro ID	Ec&f#Y
---	----------	--------

Y	Macro Control	Ec&f#X
PRINT MODEL IMAGING		
L	Source Transparency Mode	Ec*v#N
L	Pattern Transparency Mode	Ec*v#O
Y	Area Fill ID	Ec*c#G
Y	Select Curve Pattern	Ec*v#T
		Solid Black (1)
		Solid White (1)
		HP Shading Pattern (2)
		Cross-hatch Pattern (3)
		User-defined Patter (4)
N	Logical Operation	Ecl#O
N	Pixel Placement	Ecl#R
USER-DEFINED PATTERN		
N	Define Pattern	Ec*c#W[data]
N	Set Pattern Reference Point	Ec*p#R
N	User-defined Pattern Control	Ec*c#Q
RASTER GRAPHICS		
Y	Resolution	Ec*t#R
Y		75 Dots/Inch (75)
Y		100 Dots/Inch (100)
Y		150 Dots/Inch (150)
Y		200 Dots/Inch (200)
Y		300 Dots/Inch (300)
Y		600 Dots/Inch (600)
Y	Graphics Presentation	Ec*r#F
Y	Resolution Height	Ec*r#T
Y	Raster Width	Ec*r#S
Y	Start Raster Graphics	Ec*r#A

Y	Y Offset	Ec*b#Y
I	Set Compression mode (method)	Ec*b#M
Y		Unencoded (0)
N		Run-Lenght Encoded (1)
N		TIFF Encoded (2)
N		Delta Row Encoded (3)
N		Mode 5 (5)
Y	Transfer Raster Data # of Bytes	Ec*b#W[data]
Y	End Graphics	
Y	Version B	Ec*rB
Y	Version C (Preferred)	Ec*rC
RECTANGULAR AREA		
FILL		
Y	Horizontal Rectangle Size	Ec*c#A
Y		Ec*c#H
Y	Vertical Rectangle Size	Ec*c#B
Y		Ec*c#V
Y	Pattern ID	Ec*c#G
Y	Area Fill ID	1-100 Shading
Y		1-6 for Cross Hatch
N		0-32767 for user defined
Y	Fill Rectangle Area	Ec*c#P
Y		0-Black (solid)
Y		1-White (erase) (1)
Y		2-Shaded (gray) (2)
Y		3-Cross-hatch Pattern (3)
Y		4-User-defined Patttern (4)
Y		5-Current Pattern (5)
RECTANGULAR AREA		
FILL		
N	Set Status Readback Location Type	Ec*s#T
N	Set Status Readback Location Unit	Ec*s#U

N	Set Status Readback Location Entity	Ec*s#I
N	Free Space	Ec*s1M
N	Flush All Pages	Ec&r#F
I	Echo	Ec*s#X

PICTURE FRAME (for Vector Graphics)

Y	Picture Frame Horizontal Size	Ec*c#X
Y	Picture Frame Vertical Size	Ec*c#Y
Y	Set Picture Frame Anchor Point	Ec*cØT
Y	HP-GL/2 Horizontal Plot Size	Ec*c#K
Y	HP-GL/2 Vertical Plot Size	Ec*c#L
Y	Enter HP-GL/2	Ec%#B
Y	Enter PCL Mode	Ec%#A

PROGRAMMING HINTS

Display Functions

I	On	EcY
I	Off	EcZ

HP-GL/2 GRAPHICS

(Y) HP-GL/2
 Commands listed in Table A-2
 Expect as shown below

N	Bezier Fill Type	FT <i>fill type</i> [:] Odd/even Non-Zeroe Winding
N	Label Origin	LO <i>position</i> [:] 1-9 / 11-19 21
N	Merge Control	MC Mode, opcode
N	Pixel Placement	PP Mode

N			x3_control_pt_increments,
N			y3_control_pt_increments]
Y	Circle	CI	radius[,chord_angle];
Y	Plot Absolute	PA	[x,y...[,x,y]];
Y	Plot Relative	PR	[x,y...[,x,y]];
Y	Pen Down	PD	[x,y...[,x,y]];
Y	Pen Up	PU	[x,y...[,x,y]];
N	Relative Arc Three Point	RT	x_incr_inter,y_incr_inter,x_incr_end,y_incr-end,y_incr-end[,chord_angle];
N	Polyline Encoded	PE	[flag[val]] coord_pair...[flag[val]] coord_pair]];

POLYGON GROUP

Y	Fill Rectangle Absolute	RA	x_coordinate,y_coordinate;
Y	Fill Rectangle Relative	RR	x_increment,y_increment;
N	Edge Rectangle Absolute	EA	x_coordinate,y_coordinate;
N	Edge Rectangle Relative	ER	x_increment,y_increment;
N	Fill Wedge	WG	radius,start,angle,sweep_angle[,chord_angle];
N	Edge Wedge	EW	radius,start,angle,sweep_angle[chord_angle];
N	Polygon Mode	PM	polygon_definition;
N	Fill Polygon	FP	Ø-Odd/Even 1 - non-zero-winding
N	Edge Polygon	EP	None

CHARACTER GROUP

N	Select Standard Font	SS	None
N	Select Alternate Font	SA	None
N	Absolute Direction	DI	[run,rise];
N	Relative Direction	DR	[run,rise];
N	Absolute Character Size	SI	[width,height];
N	Relative Character Size	SR	[width,height];
N	Character Slant	SL	[tangent_of_angle];
N	Extra Space	ES	[width,height];
N	Standard Font Definition	SD	[kind,value...[,kindvalue]];

N	Alternate Font Definition	AD	[kind,value...[,kindvalue]];
N	Character Fill Mode	CF	[fill_mode[edge_pen]];
N	Label Origin	LO	[position]
N	Label	LB	[char...[char]]1bterm
N	Define Label Terminator	DT	[1bterm[,mode]];
N	Character Plot	CP	[space,lines];
N	Transparent Data	TD	[mode];
N	Define Variable Text Path	DV	[path,lines];

LINE AND FILL ATTRIBUTES GROUP

N	Line Type	LT	[line_type[,pattern_length[,mode]]];
N	Line Attributes	LA	[kind,value ...[,kind,value]];
Y	Pen Width	PW	[width[,pen]];
N	Pen Width Unit Selection	WU	[type];
Y	Select Pen	SP	[pen]; <i>(required, 1 for black(recommended) or 0 for white)</i>
N	Symbol mode	SM	[char];
N	Fill Type	FT	[fill_type[,option1[,option2]]];
N	Ancor Corner	AC	[x_coordinate,y_coordinate];
N	Raster Fill Definition	RF	[index[wdt,height,pen_nbr ... pen_nbr]]; <i>(width and height must be < 250)</i>
N	User Defined Line Type	UL	[index[,gap1 ... gapn]];

CONFIGURATION AND STATUS GROUP

Y	Scale	SC	[x1,x2,y1,y2,[type[,left,bottom]]]; or [x1,xfactor,y1,yfactor,2];
N	Input Window	IW	[xLL,yLL,xUR,yUR];
N	Input P1 and P2	IP	[p1x,p1y[,p2x,p2y]];
N	Input Relative P1 and P2	IR	[p1x,p1y[,p2x,p2y]];
N	Default Values	DF	None
N	Initialize	IN	[n];
N	Rotate Coordinate System	RO	[angle];