

InterForm400[®]

eForms & Intelligent Document Management

for i5, iSeries & AS/400

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Users Guide for Intermate InterForm400® V2006.M01

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About This Manual

This manual is intended for the person or people responsible for production printing on the site. For instance the system administrator.

InterForm400® is designed to operate completely transparent to the user, which means this manual is only used for designing overlays, setting up printers and for configuration of sub-system handling the overlays and printers.

InterForm400® requires no programming of any kind in order to operate with existing print jobs. All logical definitions for searching and selecting print jobs are set up in the InterForm400® menus.

The manual describes functions, that may require the purchase of additional modules. Whenever additional module(s) are required it should be mentioned, but that cannot be guaranteed. For guidelines refer to page 19. Ask your local InterForm400 reseller if in doubt.

The terms 'AS/400', 'iSeries' and 'i5' may be used in the manual. Unless mentioned they refer to all 3 types of machines.

How the manual is organized

This manual is built as a technical reference as well as a self study on creating overlays fast and easy. The self study sections are constructed as follows:

Getting Started: Work through this chapter if you are installing the system for the first time. You will end up with an illustrative sample printed through the AutoFormsControl sub-system.

Getting Familiar with Overlays: This section will use the demo overlay as template and lead you through virtually all the design features in InterForm400®. To gain full benefit of this section you should have worked through the section **Getting Started**.

Getting Familiar with Overlay Selectors The overlay selector is a vital element of InterForm400®. It enables specific pages in a spool entry to have unique overlays attached according to the contents of the spool data. To gain full benefit of this section you should have worked through the section **Getting Familiar with Overlays**.

Getting Familiar with Auto Forms Control This chapter will lead you through a real life example of using Auto Forms Control. You will be guided step-by-step through the entire procedure. To gain full benefit of this section you should have worked through the section **Getting Started**.

Getting Familiar with Soft-fonts and Barcodes: This section is structured as a learning-by-doing example which makes extensive use of download fonts and bar codes.

Throughout the manual you will find the following symbols, which will provide you with special information:

☺ **TIP** ☺

If you would like to make an easy thing, then just make a ...

☹️ TROUBLE SHOOTING ☹️

Did you remember to ...

💣 WARNING 💣

Do not do that, as you will end up in deep..

👉 NOTE 👉

Important information

What is new in the 2006 version

This Users Guide describes functions available in version **2006M01** and newer.

Below are listed most of the new features added in InterForm400 since the last Users Guide (version 3-28) intended for InterForm400 version 2004M01.

- **Bookmarks** and **links** can now be added to output PDF files via a command in the *SCS spooled file. Refer to page **396** for more details of the **&&BMK** and **&&URI** commands.
- **Grey TIF** images are now supported in InterForm400. Until now only sharp black/white images have been supported. LZW compressed files are also supported. This will greatly improve the quality of the output images and ease the installation in InterForm400. Refer to page **321** for more information.
- Support for the DBCS flag on spooled files has been added. InterForm400 does not support DBCS, but with the 2006 versions spooled files with **IGCDTA(*YES)** are now also supported for merge in InterForm400.
- PDF output for **InterWord400** spooled files can now be generated. (.IMG commands in the RTF files are not yet supported.)
- Soft fonts based on **True Type Fonts installed for PDF** output can now be restricted only to be included for some PDF files. This can be used for reducing the size of the PDF files for PCs, that already have this TTF installed. Refer to page **288** for details.
- OS400 V4R4M0 is the **minimum release** on which InterForm400 can be installed, but notice that the graphical designer requires V4R5M0 and that some parts requires **V5R1M0** (e.g. the ZIP command, the PDF Security module and the InterFax module). The 2007 versions of InterForm400 are planned to support V5R1M0 as minimum release.
- The **E-mail finishing definition** have been extended:
Up to 9 variables can be defined,
You can present the e-mail text in arial
You can include HTML commands in the e-mail text
You can send each part of the spooled file to 2 receivers (include a CC).
You can use e-mails found in the spooled file more easily.
Two new demo sources for exit programs have been included.
Refer to page **195** for an updated description of the e-mail finishing definition.
- The user exit closing program for the **PDF file naming** finishing definition can now receive up to 20 parameters. A new demo source is included. Refer to page **210** for details.
- The **datamatrix barcode** is now supported for ZPL output. For PCL and PDF output this barcode is not supported yet.
- A new version of **Swiftview** is included in InterForm400. Please reinstall Swiftview on the PCs to get this update.
- The **graphical designer** is now able to change the font for many lines at a time. Refer to page **475** for more information.
- If overprinting have been used in the original *SCS spooled file to print in bold, this bold will now also be printed as bold if you print out the PDF file resulting from a merge in InterForm400.

- Additional copies of each page can now be printed by inserting the command **&&CPY** in the *SCS spooled file that you merge. Refer to page **396** for more information.
- **Stapling** is now supported for additional printers. Stapling for additional Minolta, Ricoh and Lexmark printer models have been added. Selection of the printer model have been restructured to make it easier to find the right printer model. Refer to page **47** and **190** for more information about stapling in InterForm400.

What is new in this manual

This lists the major changes to the manual, that does not concern the new functions. The changes/additions are:

- An alternative way to **install the graphical designer** has been included. Installing via the installation files found in the IFS is described. Refer to page **462** for information.
- It is made clear, that **remapping spooled file text** out of the paper will not remove the possibility to find the text in the resulting PDF files. Unadjusted tabulators will fully remove the text.
- Additional (and hidden) function keys on the **license screen** are now documented in the user manual - refer to page **356** for more information.
- Even tough it was claimed for the 2004 versions the limitation of **300 remap window** lines have not been removed. This limit is however very high, so it should not be a problem for anyone. Overlays using many remap window lines can be made smaller and more efficient and are easier to maintain by using IF..then lines instead. Ask your local InterForm400 contact for more information if needed.
- A link to IBM helping you to setup SMTP in combination with Domino have been added. The link can be found on page **460**.

The modules of InterForm400

From the 2004 versions of InterForm400 a number of modules are offered for InterForm400. Below basic InterForm400 package and the modules are described.

As minimum you need to buy either the InterForm400 Light version or the basic InterForm400 package.

If wanted you need to install the additional modules InterWord400 and InterFax400. InterFax400 is installed via option 80 on the InterForm400 Service menu and requires the InterForm400 CD. The other modules are installed along with InterForm400 and only need to be enabled with a new license code.

Refer to Appendix G on page **388** for details of the light version.

The Basic InterForm400 package

The basic InterForm400 does not contain any of the functions, that are available as a module. That means, that the following is **NOT** included in the basic package:

- ZPL output
- PDF output and E-mailing with attached PDF files
- Possibility to encrypt and digitally sign PDF files created by InterForm400
- InterWord400 (OV400 replacement and AS400 mail merge)
- Possibility to fax (Interfax).
- Swiftview licenses apart from 1 license, that is delivered with InterForm400 for free
- And any other module, that may be offered for InterForm400.

However the number of output queues supported for PCL output in the basic package is unlimited.

The InterForm400 Classic package

The InterForm400 Classic package fits the functionality of the previous versions of InterForm400. The Classic package includes PCL output on an unlimited number of output queues, **ZPL** output, **PDF** output and e-mailing.

If you already have purchased the full InterForm400 license prior to the 2004 versions (and have maintenance) then you will get a 2004 license code for the classic package. If you already have bought InterWord400 or additional SwiftView licenses then the 2004 code will of course also include that.

The ZPL Module

Purchase this module and you will be able to print on ZPL compatible printers.

In order to start working with Zebra output you need to create a Zebra File set. Refer to page **273** for how to do that. This module is included in the classic package.

The PDF and E-mailing Module

If you want to create PDF files in InterForm400 and/or send E-mails with attached PDF files you need this module. This module is included in the classic package.

The PDF Security Module

If you want to encrypt PDF files created by InterForm400 and/or digitally sign them, then you need this module. Note, that you also need to buy the PDF and E-mailing module if you do not have the classic package. Refer to **Appendix Q** on page **480** for more information.

The InterWord400 Module

Can be used as a substitute for OfficeVision400. It converts OV/400 documents into RTF format. Offers also the possibility to do mail merge directly on the iSeries. Ask your local InterForm400 reseller for more details.

The InterFax400 Module

The InterFax400 module enables distribution of the InterForm400 documents via facsimile. The InterFax400 modules ensures a correct translation of the InterForm400 documents. This is done in combination with the E-mail/Fax finishing definition in InterForm400. Note that InterFax400 is only supported for V5R1 or newer.

Getting Started

The idea of the following procedure is to give you a safe and easy start on the InterForm400® system. No knowledge on InterForm400® is required, and only minor OS/400 knowledge is needed.

The final result of the following will print a sample spool entry with a predefined overlay by means of the Auto Forms Control (AFC) system, which is an essential part of the InterForm400® system. The result will be printed on a PCL printer of your own choice.

1. Preparation

- Make sure your OS/400 level is **at least Version 4 release 4** or newer. (Refer to **System Requirements** page 356)
- Make sure you have **QSECOFR** rights on the AS/400, or similar with **USER CLASS *SECOFR** authority. The user profile used for the install must at least have ***ALLOBJ**, ***SECADM** and ***SPLCTL** authorities and must be in the system directory (WRKDIRE).
- Make sure you have a PCL4 or PCL5 compatible printer attached either through Twinax (direct or through a Terminal or a PC emulator card) or a LAN (SNA APPC, TCP/IP LPD, Raw Socket (port 9100) or TN5250E). Any PCL5 Printer configured to use IBM Host Print Transform can be used. Refer to Appendix B page 365 for detailed information on attaching printers.

Note that Laser printers with IPDS as the only language can not be used.

2. Installation

Now you are ready to install the InterForm400® system from a CD-ROM.

Note: Refer to page 357 if you are performing the below steps as an upgrade to an existing InterForm400® installation.

1. Insert the CD into the CD-ROM drive of your AS/400.
2. Enter the following CL command on a command line to install:

LODRUN DEV(*Device*)

Where Device is the name of the Device containing the media. (If you are using the systems default CD-ROM drive you can use *OPT instead of the Device-parameter.)

3. You are now prompted to choose your preferred language for the installation:

Note: If the installation detects an existing version of InterForm400® on your system you will, at this point, get prompted to selected installation method. Refer to page 357 for more information on release updates.

```
InterForm 400 version 2004.M01                                INTER03
DE: Wählen Sie bitte eine Sprache aus, während verwendet zu werden installieren
    Eingabetaste --> Weiter
DK: Vælg sprog for instruktioner under denne installation.
    Tryk på Enter for at fortsætte.
ES: Seleccione por favor un lenguaje para ser utilizado durante instalán.
    Pulse Intro para continuar.
FR: Veuillez choisir la langue à utiliser pendant l'installation.
    Appuyez sur ENTREE pour continuer.
GB: Please select a language to be used during install.
    Press Enter to continue.
PT: Favor selecionar uma língua a ser usada durante a instalação.
    Aperte Enter para continuar.
GB  DE=Deutsch, DK=Dansk, ES=Espaníoles, FR=Français, GB=English, PT=Português
F3=Exit   F12=Cancel
```

4. Confirm on the next screen (with Enter), that you are installing InterForm400. The screen after that requires you to enter a valid licence type, in order to allow the installation to proceed. You can also leave it blank and fill it out later.

```
INS0125                                InterForm 400 version 2004.M00                                INTER03
Type license information, press Enter.
InterForm 400 license code  _____
Notice:
License type and code must match.
InterForm 400 cannot be used before a valid license code is entered.
F3=Exit   F12=Cancel
```

5. In the following screen you can set the preferred language used in InterForm400. The language can be changed later if needed. This is done by option 2 at the *Administration menu* to change the global settings for InterForm400® or use option 4 to select language for specific InterForm400® users.

Note: InterForm400® CL commands like MRGSPLFPDF, APF3812 etc. will be installed in the language chosen here, and can not be changed unless a re-installation is made.

```

INS0121                               InterForm 400 version 2004.M01                               INTER01

Select primary language, press Enter.

Primary language . . . . . GB   DE=Deutsch, DK=Dansk, ES=Españoles,
                                FR=Français, GB=English, PT=Português

Primary language is used for:
1. The language of commands.
2. The language of displays.
3. The language of the manual.

Notice:
Language of commands can only be selected during install.
Primary language can be changed at the administration menu option 2.

F3=Exit   F12=Cancel

```

6. If this is the first time InterForm400® is installed on your system, you should leave the default values. Refer to page 340 for more information on journaling.

```

INS0122                               InterForm 400 version 2004.M01                               INTER01

Select journal, press Enter.

Journal . . . . . APFJRN__
Library . . . . . APF3812__

If a journal is selected, changes are recorded to a journal receiver.

It is recommend to use the journal APFJRN in library APF3812.
This journal will be created during install, if used.

If you select a journal in a other library this journal must already exist.

F3=Exit

```

7. The installation guide now gives you an overview of parameters you have chosen, for the installation of InterForm400®. Press F10 to start installation. Note that Status messages will be shown at the bottom of the screen during installation.

```
INS0129                      InterForm 400 version 2004.M01                      INTER03

Start installation with selected options.

Device . . . . . : OPT01
Category . . . . . : *OPT
CISC/RISC . . . . . : *RISC
License type . . . . . : *Demo
Licensed modules . . . . . : *Classic, *PDF-Security, *InterWord

Primary language . . . . . GB
Journal . . . . . APFJRN
Library . . . . . APF3812

Press F10 to install.

F3=Exit  F10=Start installation  F12=Cancel
```

8. Press F10 to complete the installation.

3. Setting Up the System

The system is now ready for setting up administrators, file-sets, print queues and printers.

Enter the InterForm400® menus:

APF3812/APFMENU

When entering InterForm400® for the first time, you will be asked to appoint an administrator. Enter option **80. Administration Menu** and go through the menu points 1 - 6, as follows:

1. Enter **1. Appoint Administrator** to appoint an administrator of InterForm400®, (e.g. QSECOFR). It is recommend to allow access to ALL until the system enters production.
2. Enter **2. Configure InterForm 400.**
3. Type in a default output queue. Select printer type according to the supported HP PCL emulation of your printer. (It is recommended to select **HP4 or HP4D** (D for duplex) in order to have support for all fonts used in the overlay sample). Refer to page 374 for other values.
Always select **ASCII850** as interface type.
(see list of Interface types page 378 in the user guide)
Enter Y/N (Yes/No) whether you want to "**Allow Users to override default printer type**". Answer 'Y' if in doubt.

```
Configure InterForm 400                                     APF101D
                                                            1/7
Specify default output queue for users with no individual output queue.
Users may override value when using the system.

Output queue . . . . . PRT01
Library . . . . . QUSRSYS

Specify default printer type

Printer type . . . . . HP4          (IBM4019 IBM4029 IBM4039 HPII HPIID HPIIP
                                     HPIII HPIIID HPIIIP HP4 HP4D HP4_PJL
                                     HP4D_PJL HP5C HP4500 HP4500D
                                     ZEBRA203 ZEBRA300)

Interface          ASCII850        (SYSTEM SYSTEM850 SYSTEM852 ASCII8
                                     ASCII850 ASCII852 WORKSTN WS31N
                                     WS347N WS348NIDA3X IDA5219 IDA812N)

Allow users to override default printer type ?          Y (Y N)

F3=Exit                                               F12=Cancel
```

When you press Enter you are presented with the screen below. Here you decide what form type to use as default (use ***STD** if in doubt), the paper size, and whether or not the InterForm400 users are allowed to override the paper size on overlays (See more on page 38).

```

Configure InterForm 400
APF101D
2/7

Specify default form type for the InterForm 400 system.

Users may override value when using the system.

Form type      *STD_____

Select paper size  4  1 = LETTER      5 = COM-10      A = LEDGER
                   2 = LEGAL        6 = MONARCH     B = A3
                   3 = EXECUTIVE    7 = C5          C = A5
                   4 = A4           8 = DL

Do you want to define paper size on the individual overlays      Y (Y N)

F3=Exit
F12=Cancel

```

Leave the macro offset value at "0". Refer to page 269 for additional info

```

Configure InterForm 400
APF101D
3/7

Number to be added to the macro numbers the system works with . . .  ___0

The reason to add a number can be, that printers are equipped with
flash-simm cards, that does not correspond to the HP standard saying,
that a macro in the printers internal memory should be selected,
even if it has the same number as a macro in the flash-simm.

F3=Exit
F12=Cancel

```

If you do not intend to exchange overlays between a number of InterForm400® installations, you can answer N to using DDM. Refer to page 270 for more information on using DDM.

```

Configure InterForm 400
APF101D
4/7

Do you want to use DDM to InterForm files
on other AS/400

Use DDM . . . . . Y (Y N)

F3=Exit
F12=Cancel

```

Enter the **Network name/NetServer Name** of the AS/400 you work on. This name can be found with the command APF3812/DSPNETSVRA, or can be found under "other computers" on your Client Access connected Windows PC. This option is used in relation to the PCL viewer and the DDM features. If you

are in doubt you can also specify the IP address of the AS/400 - without surrounding ".

Sharename can be used for situations, where you do not want to share the complete QDLS (In InterForm400 it used mainly for the possibility of a graphical view). If you instead have shared either the APF3812 folder or the APF3812/VIEW folder you can state the sharename here. Note, that you need to add the share before InterForm400 will accept this sharename. Use e.g. the command: APF3812/ADDFILSHR to share a folder.

Public authorisation: When you view a merge graphically a temporary file is created in APF3812/VIEW. You can restrict access to this file, so that the public authority is *EXCLUDE. Then only the file creator and users profiles with authority *ALLOBJ have access to the file.

NOTE

The change of PUBLIC authority of the files in QDLS/APF3812/VIEW is only used when creating new files (not when replacing existing). To use the new authorisation delete the files in QDLS/APF3812/VIEW, that holds the names of your end users. Do not delete the file SVIEW.EXE.

```
Configure InterForm 400                                APF101D
                                                       5/7

The Name that is used for this AS/400
under "Other computers" on PC's.

Networkname . . . . . QS4449079__
Sharename. . . . . VIEW_____

Public authorisation to files that are created in the APF3812/VIEW folder.

                                0   0=*EXCLUDE
                                1   1=*ALL

F3=Exit                                F12=Cancel
```

The selection of **Primary language** for operating InterForm400® was chosen during the installation of InterForm400®. It can be altered here if needed.

```
Configure InterForm 400                                APF101D
                                                       6/7

Select primary language for:
1. The language of displays.
2. The language of the manual.

Language code . . . . . GB

DE=Deutsch, DK=Dansk, ES=Espanoles, FR=Français, GB=English

F3=Exit                                F12=Cancel
```

If you want Auto Forms Control to monitor output queues with printers attached, you now have the option to state which form type to print from the shared output queues. State **N** for not using the program, APF3812/STRWTRCHK program if in doubt.

Configure InterForm 400	APF101D 7/7
<p>Do you want to use the APF3812/STRWTRCHK program as validity checking program for the STRPRTWTR and STRRMTWTR commands, to avoid a writer to be started with FORMTYPE(*ALL) on one of the output queues defined in Auto-Forms-Control, and if yes, what formtype has to replace *ALL when a writer is started on one of these output queues.</p>	
<p>Use APF3812/STRWTRCHK as a validity checker N (Y N)</p>	
<p>Formtype to replace *ALL _____</p>	
<p>This option is especially usefull, if you are using the same output queue for both input to AFC-functions and for output to a printer, as a writer never should be started with FORMTYPE(*ALL) on souch an output queue.</p>	
<p>F3=Exit F12=Cancel</p>	

4. Enter **4. Work with InterForm400 users**. Press F6 to enter your AS/400 user ID. Later you can add additional users which will have access to configure and/or define overlays and merge-definitions in InterForm400®.
5. Enter **5. Work with file sets**. Press F6 to create an overlay file set called e.g. TEST (select 1=Black/White Laser for Printer Class). This file set is referred in the Getting Familiar with Overlays section on page 76. Later you can add file sets for different purposes or for specific users.
6. Enter **6. Connect users with overlay file sets**. Connect your user profile to file set SAMPLE and the file set you created in the previous step.
7. Start subsystem AUTO_FORM: From the Select **5. Work with Auto Forms Control** from the InterForm400 Main Menu followed by option **10. Start AUTO_FORM subsystem**.

You can now proceed to install and setup the PCL/PDF-viewer (please refer to page **430** for further information) and the graphical designer (refer to page **461** for more information).

4. Work With Overlay/AFC Sample

You are now ready to start working with the overlay, SAMPLE delivered with the package.

First we will make sure that our device is changed to use the sample queue which the InterForm400® demo is preset for:

Printer Writer (Twinax, or TCP/IP (TN5250E or Raw Socket))

Make sure the printer writer **PRTXXX** (determined in step 3) is started. If not, the following command will start the printer writer with our sample output queue **AFC_OUT1**, which was created by the installation program previously:

```
STRPRTWTR DEV(PRTXXX) OUTQ(APF3812/AFC_OUT1)
```

If the printer writer is already started and attached to another output queue, the following command will change **PRTXXX** to be attached to output queue **AFC_OUT1**:

```
CHGWTR WTR(PRTXXX) OUTQ(APF3812/AFC_OUT1)
```

Remote Writer (TCP/IP LPD)

Using a TCP/IP LPD attached printer does not require a printer device description. You should instead follow the procedure explained on page **370 Attaching through a TCP/IP Print Server** in order to configure queue **AFC_OUT1** as a remote LPD writer.

The entire environment should now have been set up. The AUTO_FORM sub-system is running, and we have a PCL compatible printer attached to a predefined AFC output queue (AFC_OUT1).

You can verify that the **AFC job AFC_INPUT1** is actually started in sub-system AUTO_FORM by entering the InterForm400® main menu and select option **12. Work with Active subsystem AUTO_FORM** in menu **5. Work with Auto Forms Control**.

In a new installation, the job, **AFC_INPUT1** is set NOT to automatic start with the subsystem, AUTO_FORM. You can change it this way: From the InterForm400® main menu choose: **5. Work with Auto Forms Control**, 1. Functions attached to Output Queues, choose option **2** for AFC_INPUT1, Change '**Autostart job**' from **N** (No) to **Y** (Yes). Start and stop the subsystem and the job will run.

We will now create a demo spool entry, which the AFC system will merge automatically with a sample overlay called **IF400DEMO** and send to the AFC output queue **AFC_OUT1**.

The demo spool entry will appear on the output queue **AFC_INPUT1** which is defined as input queue for the AFC_INPUT1 job (The names of the input queue and the AFC job are in this example identical).

You could work with spool entries of your own as input to the AFC_INPUT1 job. A new spool entry will, after a while, appear in output queue AFC_OUT1 as a result of the merge process. However, for best understanding of the example we recommend that you create a demo spool entry according to the following description

Enter the InterForm400® menus again with the command **APF3812/APFMENU**. You will this time be asked to select a file-set. Select file-set **SAMPLE**.

Select **80. Administering InterForm400**

Enter **12. Service functions** and select option **1. Create Demo Spool Entry** (more info on the demo spool entry on page **337**)

You should now receive four pages on print queue **AFC_OUT1** with text and Intermate overlays. You will find a re-print of one of the pages in the printout in the following section.

☹ **TROUBLE SHOOTING** ☹

NOT PRINTING!

Q Is there a message on the printer e.g. a request to change the forms?

A Reply "G" to such messages. You can enter queue AFC_OUT1 from the InterForm400® main menu by selecting option **10. Work with output queue** from the main menu.

Q Is the sub-system AUTO_FORM active, and is the AFC job AFC_INPUT1 started?

A Check the sub-system by entering WRKACTJOB (more info page **133, 247**)

Q Do the spool entry in queue AFC_INPUT1 have status READY?

A Try to HOLD the spool entry in queue AFC_INPUT1 and release it again (the AFC functions only works on jobs getting status READY in the defined input queues).

☹ **TROUBLE SHOOTING** ☹

PRINT IS GARBLED!

Q Is the printer type chosen in InterForm400® matching your printer (same PCL level)?

A Your printer must be at least HP II compatible, so try defining this printer type in InterForm400®. (More info on printer types page **374**)

(More info on interface types page **378**)

☺ **TIP** ☺

Instead of printing the document, you can use the SwiftView PCL viewer delivered with the InterForm400®. Refer to Appendix **L. PCL Viewing (SwiftView)** for information on setting up and using the viewer.

👉 **NOTE** 👉

When you merge a spooled file in InterForm400® make sure, that the first line in the spooled file (containing text) does not include characters in position 300 or above. These positions are reserved for InterForm400® information.

5. About The Print Results

Maybe you noticed that page 2-4 was printed slightly faster than page 1. The reason is that the overlay is loaded into the printer as a macro at the beginning of the spool entry and is being called from the printer memory on page one and the succeeding pages. The example contains some bit images to give a feeling of this.

Notice that the address field text and the reference text are printed with a different font than the rest of the text. The lines and columns where these text strings are found in the spool entry are re-mapped by definitions in the sample overlay **IF400DEMO**. Enter **1. Design Overlay** on the main menu and select overlay **IF400DEMO** and look at the overlay elements defined in here. Do not make changes to this overlay, as it will be used as template in section **Getting familiar with Overlays**.

Try entering **5. Work with Auto Forms Control** on the main and select **1. Functions attached to Output Queues**. Select **2** for **Change AFC_INPUT1** and look into the definitions found in here.

You should now investigate further on your own. You will probably be amazed how simple the concept really is. We suggest that you either proceed with the section **Getting familiar with overlays** which leads you through a process of adding more advanced overlay elements to the sample you have been working on. Alternatively you can start building your own definitions.

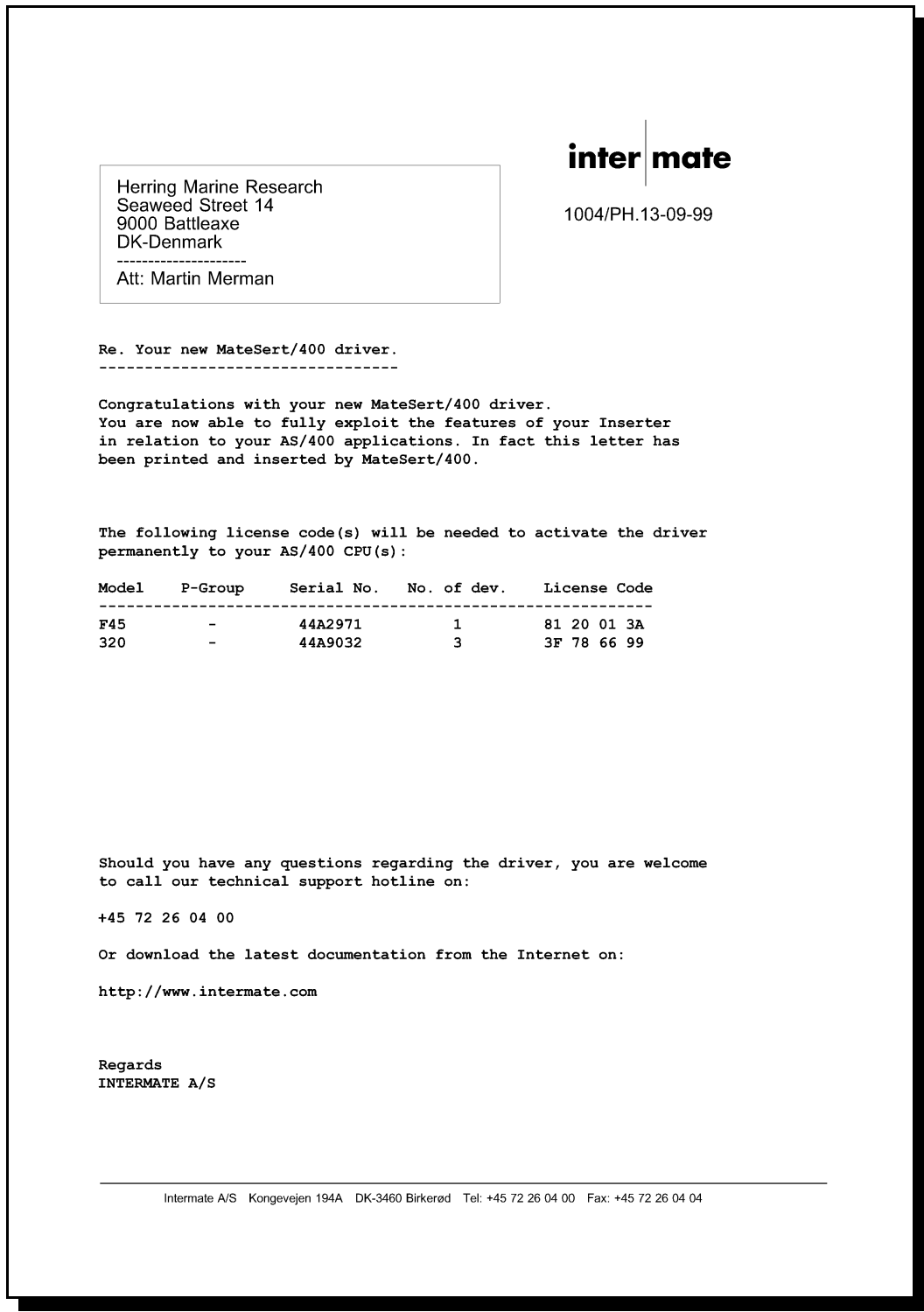
 **WARNING** 

***DO NOT** create new overlays intended for production in the file-set **SAMPLE**. A future release update will not update the changes you make in the file-set **SAMPLE**. Neither will changes made to AFC-definitions in AFC-job/queue **AFC_INPUT1**, unless a "Light" code is entered in the old version which is being updated from)*

 **WARNING** 

***DO NOT** make any changes to the overlay **IF400DEMO** at this stage if you intend to work with the **Getting familiar with overlays** section.*

Illustration of the demo spool entry merged with the overlay IF400DEMO delivered with InterForm400® (The illustration is a screen shot of the InterForm400® PCL viewer function:):



Menu Structures and General Operation

The InterForm400® system can be included in one of your menus and can be called from here (refer to the section **Relations to other applications** page 362). You can also enter the InterForm400® system via a command line by entering:

APF3812/APFMENU

You will then be presented with the InterForm400® main menu:

```
InterForm 400 - MAIN MENU
Select one of the following options:
1. Design overlay
2. Test print overlay
3. Merge spool entry with overlay
4. Work with overlay selectors
5. Work with Auto Forms Control
6. Work with Output Schedule Control
7. Work with joint reports
8. Select file set
9. Select output queue and printer type
10. Work with actual output queue
80. Administering InterForm 400
90. Exit InterForm 400

Option: __

F3=Exit          F6=Display messages          F12=Cancel

System.....: INTER01
Workstn ID...: QPADEV0003
User ID.....: PETER
Administrator: *ALL
File set.....: PETER
Output queue.: PETER_5SI
library....: QGPL
Printer type.: HP4D
Interface...: ASCII850
Version.....: 2006M01
```

In the upper right corner of the display you will find a selection of information.

System: The system name of the AS/400 machine you are currently running on (relevant when two or more systems are connected).

Workstn ID: The name of the workstation you are sitting at.

User ID: The name of your user profile.

Administrator: The user profile name of the InterForm400® system administrator. This person is the only one who can use the option "Administering InterForm400" on the main menu. If an administrator has not been appointed this option is open to anybody.

File set: The name of the file-set you are currently operating on. Refer to **Select File set** page 119 for further description.

Output queue: The name of the output queue for your session in the InterForm400® system when printing from within the menus (not via Auto Forms Control).

Printer type: The default printer type of your session, which is only shown if the administrator has allowed users to select Printer type (this is done under option 9 on the main menu). Refer to page 374 for more information.

Interface: The protocol conversion mode you are using for the default printer.

Version: The release number of InterForm400[®], also reflecting the year of the release. The number will be followed by an M##, which is the modification number. M23 would mean modification 23.

At the bottom of the display you can see which command keys can be used everywhere in the system. How to use them is only described here:

F3: Brings you back to the previous menu. In the main menu F3 exits the InterForm400[®] system.

F12: Always takes you one screen backwards in the system.

F6: Displays the message queue.

Additionally using the **ATTN** key when your job is a group job will bring you out of the InterForm400[®] system temporarily. When you return to the InterForm400[®] system you will continue from the point at which you pressed ATTN.

1. Design Overlay

Note, that InterForm400® comes with a graphical designer. See Appendix O on page 461 and onwards to see how to install and use it.

In this menu overlay definitions and manipulation with spool data are defined.

```
Design InterForm 400 overlay                                APF300D
Overlay name      _____  F4=List
F3=Exit          F4=Prompt          F12=Cancel
F13=Set view/print parameters
```

Overlay names can be up to 10 characters long. The first character must be a letter A-Z. No blanks or special characters can be used in the name; ONLY "_" (underscore) is permitted.

Selecting an existing overlay

Press **F4** to get a list of existing overlays to select from or type the name of the overlay.

You may be refused access with the message 'Overlay in use by user XXX in designer job NNN' a Graphical Designer job is editing the same overlay. If you are sure, that this other job can be stopped you can do so by selecting option '80. Administering InterForm400' and '52. Work with Designer job overlay locks'. Stop the job with option 4-Remove.

Creating a new overlay

Type in a name of the overlay you want to create and press **Enter**

Copy Overlay from Another Overlay

Type in a name of the new overlay you want to copy to and press **Enter**. Press **F9** to enter a overlay name to copy from and press **Enter**

```
Design InterForm 400 overlay                                APF300D

Name of overlay to copy from

_____

F3=Exit      F4=Prompt      F9=Copy from another file set      F12=Cancel
F10=Copy from another AS/400
```

Press **F9** to enter a overlay name to copy from and press **Enter**, or press **F10** to enter the name of another AS/400 to copy from. You can then copy overlays from InterForm400® on another AS/400 using DDM. (see page **270** for more information)

If the overlay is not known, or if placed in another file set press **F9** once more to get a list of file sets to choose from. Select the file set containing the overlay you want to copy from, and select the overlay you want to copy.

Global settings of an overlay

The global settings of the overlay depends on the type of file set in which the overlay is placed. These are the settings for file sets used for PCL printers and PDF output:

Design InterForm 400 overlay		APF300D
Overlay name	TEST	
Overlay text	_____	
Line spacing	040___	in 1/240 of an inch (*INPUT, 1-720)
Rotation	000___	(*INPUT, 0, 90, 180, 270)
Extra left margin positions	_0	(0-99)
Maximum number of print positions	378	(1-378)
Extra blank lines on top	_0	(0-99)
Font	0066__	*INPUT, fontnumber F4=List
Extended page def.	N	(Y N)
Drawer / Papertype	*PRINTER	(*INPUT, *PRINTER, 1-255, Name) F4=List
Paper Size	0	F4=List
Pages per side	__	
Copy management	N	(Y N)
Duplex print	N	(N=no S=short edge margin L=long edge margin)
Duplex margin	__0	in 1/240 of an inch (1-720)
Back page overlay	_____	Code for placement _ (B=back page F=front)
F3=Exit	F4=Prompt	F11=Delete this overlay F12=Cancel
F13=Set view/print parameters	F14=PCL-view	

The data entered on this page describes how the spool file to be merged with this overlay should be manipulated. The attributes (number of lines per inch, font etc.) of the spool entry will be overwritten by these settings.

Overlay text: For your own information

Line spacing: Is dissolved in n/240 inch. For example 6 lines per inch corresponds to 40/240 inch. You may have been expecting to have to specify line spacing in number of lines per inch. We have chosen this method to give you a higher degree of freedom of choice. This setting can be overwritten by **Extended Formatting**. By stating ***INPUT** the value is set according to the attribute of the spool entry.

Rotation: Informs the system how the contents of the input spool entry should be rotated on the paper. You may specify 000, 090, 180 or 270 degrees (counter clockwise). The values 180 and 270 can only be used in connection with IBM3812/16. In connection with other printer types these values will be perceived as 000. By stating ***INPUT** the value is set according to the attribute of the spool entry. The attributes ***COR** and ***AUTO** is also inspected.

Extra Left

Margin: Number of character the print should be offset from the left margin. Extra positions defined here will be included in **Extended Formatting**

Max Print pos: Maximum Print Position should normally be set to 240. However, in case the spool entry, intended for merging with the overlay, contains unwanted characters to the right, the number of print positions to be truncated can be specified here.

Extra blank

lines: Extra blank lines inserted before line one of the spool entry. This value can be suppressed by **Extended Formatting**.

Font: This font will be the global font for the entire spool entry unless

otherwise specified by Extended Formatting or the overlay definitions **Remap Window** and **Tabulator**. By stating ***INPUT** the value is set according to the attribute of the spool entry

- F4:** Gives a list of available fonts. The standard IBM 3812 font ID's is predefined (refer to page 382 or look at the font list in the back of this manual). Other fonts can be defined to the system and will then be available here (See section 1. Description of additional fonts page 279)

```

Overview Fonts                                     FNT100D

Type Selection, Press Enter.
  1=Select Font

Select one of the following:
-   0281      Gothic Text 20
-   0290      Gothic Text 27
-   0751      Sonoran-Serif 8-pt Roman Medium
-   1051      Sonoran-Serif 10-pt Roman Medium
-   1053      Sonoran-Serif 10-pt Roman Bold
-   1056      Sonoran-Serif 10-pt Italic Medium
-   1351      Sonoran-Serif 12-pt Roman Medium
-   1653      Sonoran-Serif 16-pt Roman Bold
-   2103      Sonoran-Serif 24-pt Roman Bold
-   3998      MICR E-13B
-   3999      POSTNET barcode
-   9902      Sample - Univers 8p
-   9903      Sample - Univers 10p
-   9904      Sample - Univers 1p Bold
-   9906      Sample - Univers 18p Bold

F3=Exit                                           F12=Cancel

```

Extended page def: When stating Y in this field you can override the global settings of **Line Spacing, Extra blank lines on top** and **Font**. Formatting is done for intervals of lines and is especially convenient if large areas of text should be re-mapped or if you want to format the spool data into columns.

Drawer: Depends on the printer type. Valid values are:
***INPUT** = The drawer specified in the spool entry
***PRINTER** = Printer default paper source
1-255 = Printer specific paper source
Name = Paper type (prompt with F4 to list valid types)
The values 1-255 is inserted in the HP PCL command Esc&I#H (see **Cassette Selection** page 376). For details about how to select drawer by use of paper type refer to page 331 and 376.

Paper Size: Is only visible if you have allowed individual paper sizes for the overlays. If you specify **0** in **Paper Size** the default value from the administration menu option **2. Configure InterForm 400** will be used for this overlay (more info page 269).

Pages per side (Multi-up): Blank or 1 indicates **no** multi-up functionality. When 2 or more are indicated, the overlay definitions **Tabulator** and **Remap Window** will be able to handle the total number of lines set for the Multi-up.

E.g. a spool page has 66 lines and multi-up is set to include 2 spool pages on one laser printed page. A **Tabulator** will then be able to handle line 1-132 (2 x 66), resulting in both spool pages will have the same tabulator. The same applies for the **Remap Window**. The spool pages included in the multi-up function could also be formatted in

separate ways. I.e. removing of headers and footers of the additional pages included in multi-up print.

Copy

Management: Stating **N** in this field, will enable you to define advanced pagination within the overlay for use with spool entries consisting of different types of contents (see using Page control page **52**).

Stating **Y** will enable you to create several copies of each page. Also design elements can be dedicated to specific copies. This is for instance used when making copies of Invoices where the overlay for the copy should have basically the same elements as the original but should be characterized by the text "COPY" printed across.

Duplex options

These options are only visible if you have selected duplex print for the actual file-set (Option **5. Create/Delete Overlay File Sets** page **273**). If the field **Duplex print** is filled in with **N**, only the front of the paper is used.

Duplex print:

If you answer **S** or **L** in the **Duplex print** field, both sides of the paper is used, including the answer you have given about the duplex margin being at the long or short edge of the paper. When filling in **S** or **L** for **Duplex print** together with **N** for **Copy Management** the **Page Control** on the **Design Overlay** screen will be extended to include selection for restricting overlay to odd or even pages (See **Page control** page **52**)

Forced front page:

Controls if the overlay for which the Duplex function has been selected, always should be printed on a front page, when a overlay selector is used. By stating *YES, you will avoid that an intended first page is printed on the duplex side of the previous page.

Duplex margin:

This value in the field states the width of the binding margin in n/240 inch.

Back page overlay:

This field can be left blank meaning that you want to use the same overlay on both sides of each sheet. If the field is filled in with an overlay name, only the front pages will be used for print and the back pages will contain the back page overlay **without** any spool data.

It is however, possible to put variable data on both sides of the sheet with different overlays, by leaving this field blank, and using sub-overlays. A simple "main" overlay should be made, that contains two sub-overlays calls only. In the two If..then lines in the main overlay, the field "number of lines to remap", will indicate the lines the sub-overlay should process. All formatting must be handled by the sequence lines in the sub-overlays.

Entering *VAR in this field will bring up a screen, where the conditions for selecting the overlay must be stated. Note that *VAR can only be used with **Code for placement=B** (or blank):

Design InterForm 400 overlay		APF300D
Overlay name	TEST	
Overlay text		
Line spacing	040	in 1/240 of an inch (*INPUT, 1-720)
Rotation	000	(*INPUT, 0, 90, 180, 270)
Extra left margin positions		
Maximum number of print positions	:	Variable Back Page Overlay :
Extra blank lines on top	:	Prefix _____ :
Font	:	Line number . . _____ :
Extended page def.	:	Position ____ - ____ :
Drawer	:	:
Paper Size	:	:
Multi-up	:	F3=Exit F12=Cancel :
Copy management	:	:
Duplex print	:	.....: edge margin)
Duplex margin	0	in 1/240 of an inch (1-720)
Back page overlay	*VAR	Code for placement B (B=back page F=front)
	F4=Prompt	F11=Delete this overlay F12=Cancel
F13=Set print parameters		

Prefix The first part of the back page overlay name. The overlay which is called by this function consists of this prefix plus the character string found by **Line number** and **Position**. For instance if the prefix is INV, and Line Number and Position finds the string 001, the back page overlay should be named INV001.

The Prefix must consists of minimum 1 character, which can not be a number. The Prefix plus the string found with Line Number and Position can not exceed a total of 10 characters.

Line Number: The print line in the spool entry defining the last part of the back page overlay name.

Position: The column interval containing the last part of the overlay name.

Code for Placement: The possibility of placing the back page overlay on the front of the physical printed page is a unique feature of the system, which overcomes a common problem for duplex printing on pre-printed forms. Normally a HP printer will print the back page of a duplex print first in order to have it faced down in the output tray. This means pre-printed forms has to be turned upside-down in the input paper tray depending on the print being simplex or duplex. When stating **F** (front) as code for placement you will not have to do this, as the system will reverse the order before printing.

☺ **TIP** ☺

An easy way of making "short bind" duplex, is to define the front page overlay as normal, but rotate the back page overlay 180 degrees.

Function keys for display of a spool file

F13: Set view/print parameters:

This function is used to set the attributes of the spool file you want to merge the overlay with. This must be done prior to selecting F14, F18 or F19.


```

Select Parameters for view / Print
APF730D

Overlay name      _____
or Overlay Selector _____
Primary/Secondary set _          1=Primary 2=Secondary
Spooled file:
  Job name       _____
  User           _____
  Job number     _____
  File name      _____
  Spool file no. _____      Number, *ONLY, *LAST
Code page       _____      Number, *INPUT
Form type       A4_____
Copies         __1_____      (1-255)
Drawer / Paper type *PRINTER__ (*PRINTER, *INPUT, *OVERLAY, 1-255, Name)
View format     _          1=PCL 2=B/W PDF 3=Color PDF

Name of output queue to search if spooled file is unknown:

  Output queue   _____
  Library        _____

F3=Exit          F4=List overlays

```

Overlay Name Name of an overlay in the file-set you want to view together with a spool file when using the PCL viewer (F14). This is required, though the information is used for PCL viewing only.

Primary/Secondary Set: If you have defined **Copy Management** for the overlay (see page 53 and 46) you can test if you have made the correct selection of overlay elements, by printing the overlay elements for one of the two sets only. If this field is left **blank** (default) the system will as default pick the **Primary** set.

Overlay Selector: If you have defined an **Overlay Selector** you can test if it is able to pick the correct overlay. In this case **Overlay Name** above must be blank. (refer to section **Working with Overlay selectors** page 122)

Spooled File: Spooled file attributes can be entered here.

There is an alternative to typing all the information manually. If you type the name of an **output queue** in the bottom of the screen and press **Enter**, you can fetch the information about the spool entry from a view of the selected output queue by selecting with option 1:

```

Work with Output Queue

Queue:   PRTHP3           Library:  QUSRSYS

Type options, press Enter
  1=Select 2=Change 3=Hold 4=Delete 5=Display 6=Release 8=attributes

Opt  File           User           User Data     Sts   Pages  Copies  Form Type  Pty
  1  QPRINT          INTERMATE     INVOICE       RDY    1      1      *STD        5
  _  QPRINT          INTERMATE     PROFIT        RDY    5      1      *STD        5

Parameters for option 2
====> _____
F3=exit  F11=View 2  F12=Previous  F21=Description  F24=More keys

```

- Code page:** This defines if a specific code page should be forced for the spool entry. ***SYSVAL** means that the default code page specified for the system will be used, unless a specific code page is defined as attribute for the spool entry.
- Form type:** The Form type of the resulting printout. Default ***STD**
- Copies:** 1-99
- Drawer:** Overwrite the drawer settings of the overlay **global settings**. For details about how to select drawer by use of paper type refer to page **331** and **376**.
- View:** You can specify what you want to view when you press F14 in overlay design. If you choose '**1=PCL**' pressing F14 will display the result of a merge to PCL - in SwiftView. Choosing option **2** or **3** will make InterForm400® create a PDF file and display it using Acrobat Reader (assuming that Acrobat Reader is associated with PDF files on your PC). Refer to page **430** for more information.

NOTE
 In order to get PDF output you need to purchase the PDF module or the classic package for InterForm400.

- Output Queue:** The name of the output queue where the spool entry to be merged is placed.
- Library:** The library of the above output queue. If left blank the library list will be used.

F18: DSPSPLF
 With the Remap Window this function is relevant for displaying the spool entry in order to determine lines and columns for the Remap Window. F18 prompts the command DSPSPLF with the job information set by **F13 Set view/Print parameters**, or by in menu **3. Merge spool entry with overlay** (page 117). Pressing **F18** will only appear if this has been set **prior** to entering this menu .

F19: DSPPFM

This function works like **F18**, but prompts the commands DSPPFM for displaying the spool entry as a physical file. This is useful for revealing reprinted lines (bolding), which is not displayed with F18 DSPSPLF.

Remember to subtract the first 4 positions containing SKIP/SPACE information, when calculating coloumn positions in the DSPPFM view..

Considerations for Zebra overlays

NOTE

Creation of ZPL output in InterForm400 requires purchase of the ZPL module or the classic package.

For overlays intended to be used for label printers the Design Overlay screen will look like this:

Design ZEBRA overlay		ZEB300D
Overlay name	TEST	
Overlay text	_____	
Label length	__.000	
Label width	__.000	
Temperature	_0_	-30 - 30
Print speed	2	2, 3, 4, 5, 6, 8 inches/second
Line spacing	040__	in 1/240 of an inch (*INPUT, 1-720)
Rotation	000__	(*INPUT, 0, 90, 180, 270)
Font	0012__	*INPUT, fontnumber F4=List
Copy management	Y	(Y N)
F3=Exit F4=Prompt F11=Delete this overlay F12=Cancel F13=Set print parameters		

The especially Zebra related parameters are:

Label length/width:

The length and width of the labels to print on.

Temperature: The temperature to use for the printing head. This number is a **relative** value (-30 to 30) for the temperature to use for the print head of the Zebra printer. This value will be added to the **Darkness** value specified on the printers display. That is if Darkness is 10 and temperature is 5 the actual Darkness value for merges with this overlay will be 15. If the sum of temperature and Darkness is outside the range 0-30 the nearest value is used.

Print speed: Specify the printing speed in number of inches per second. Note, that the highest possible print speed varies from one model to another.

TIP

If you want to insert text, frames or images in reverse i.e. white on black background you can do it by first adding a frame with black filling (=pattern) and then place the text or

image on top of the black frame (without specifying white in an Ink command). In this manner you reverse the part of the text or image, that overlaps the black frame.

👉 **NOTE** 👉

Make sure, that the label length stated is correct. If not this will affect the positioning of elements placed with rotation 90 and 270.

💣 **WARNING** 💣

*Use a relatively low temperature e.g. 0 in order to avoid burn through of the ribbon and **potential damage** to the print head. The wear of the print head increases when using a higher temperature (or using a lower distance between paper and print head).*

😊 **TIP** 😊

The print speed and temperature are related i.e. a higher speed might require a higher temperature and for lower speeds a lower temperature may be sufficient.

😊 **TIP** 😊

*Regarding **barcode printing** on label printers: If possible it is a good idea to place the lines of the bars parallel with the travelling direction of the paper. In such a setup the print head will not need to cool off and heat up for each bar thus making it possible to print faster and use a lower temperature/Darkness setting.*

👉 **NOTE** 👉

The actual commands within a merged Zebra spooled file is **ZPL**. That is the main reason why you cannot view the overlay or the merged result using SwiftView or Acrobat Reader. So when designing for Zebra you need to do test prints instead of viewing the result graphically.

Extended Page Definition

Extended formatting is used to format intervals of lines from the spool entry. This method can be used as alternative to using the design command type **9. Remap Window**, and will work with **8. Tabulator** lines

If the global setting **Extended Page Definition** equals **Y**, the following screen will be displayed

```
Update extended page definition                                APF305D

Overlay name: MYDEMO      Overlay text: Mydemo

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display  8=Start AFC-job  9=End AFC-job
    From    Top-    Left    Line-
Opt  linenbr. margin  margin  spacing  Font

(No extended page definitions - Press F6 to create.)

F3=Exit      F5=Refresh      F6=Add      End
F12=Cancel
```

The Global settings **Line Spacing**, **Extra blank lines on top** and **Font** will be decisive until the first line of extended page definition is met.

- From line number:** A line number of the spool entry, from which the formatting should change. The formatting will be valid until a new line number is defined.
- Top margin:** Absolute margin from top edge of the page dissolved in whole inches and pels (see **Measuring formats** page 48).
- Left margin:** Absolute margin from the left edge of the page dissolved in whole inches and pels (see **Measuring formats** page 48). Note that this value will be added to the leftmargin value of the overlay command type **8. Tabulator**.
- Line spacing:** Measured in n/240". For instance 6 lines per inch (1/6") will give the value 40.
- Font:** The font ID of the formatted text.
- F4:** Prompting of the font list
- F18:** This function will display the spool entry with the job information used for merge in option **3. Merge spool entry with overlay** (page 117). Pressing **F18** will only work if this merge has been made **prior** to entering this menu.

Copy Management

Copy management is used to define the number of copies one single overlay should produce when triggered. The following screen will automatically appear when pressing **Enter** from the **global settings** menu where **Y** is filled in for **Copy Management** :

Design InterForm 400 overlay		APF300D
Overlay name: IF400DEMO	Overlay text: Demo overlay for InterForm 400	
Number of copies of each page		
Primary set	2_____	1-9, *VAR, *INPUT
Secondary set	1_____	1-9, *VAR, *INPUT
F3=Exit	F12=Cancel	

Two sets of copies each consisting of up to 9 copies from a single spool entry can be defined. The overlay elements (boxes, lines, images etc.) used on the primary and the secondary sets can be different according to the definitions of a single overlay (See **Copy Management page 53**)

Primary set: A value of 1 to 9 copies can be defined.

By selecting ***VAR** you will be able to define a line and a column number in the spool entry where the desired number of copies are specified. This of course requires the application to insert this in the spool entry.

***INPUT** will use the COPIES attribute of the original spooled file. Notice however, that values higher than 9 will be interpreted as 1.

When used with **Auto Forms Control** this set (***PRI**) is the default set to be used in **1. Merge with overlay** (see page **140**)

Primary set	*VAR	Print line	Position
-----------------------	------	------------	----------

Secondary set: This is basically just an extra set of copies made from the same spool entry. The secondary set is mainly intended to be used to create an extra set with a fixed number of copies, independent of the variation of copies in the main set. Stating a number for "Secondary set" will not force a printout of this set. The secondary set will only be printed if the Auto Forms Control definition **1. Merge with overlay** states **Primary /Secondary set=*SEC.** (see page **140**), or if you in **3. Merge spool entry with overlay** (page **117**) have stated **2=secondary.**

Source Drawers for Copies

After having stated the number of copies, pressing **Enter** will extend the screen to include definitions of source drawers:

```

Design InterForm 400 overlay                                APF300D

Overlay name: IF400DEMO   Overlay text: Demo overlay for InterFomr400

Number of copies of each page

Primary set . . . . . 2          *VAR, 1-9
Secondary set . . . . . 1        *VAR. 1-9

Select paper from the following drawers:

Copy      Primary      Secondary
  1      _____  _____
  2      _____  _____

Valid drawers
1-255
Valid paper types:
F4=List

Do you want stapling . . Y/N    _

F3=Exit                                F12=Cancel
F13=Set view/print parameters      F14=PCL-view      F18=DSPSPPLF      F19=DSPPFM

```

Here you can define from which drawer each copy should be taken from.

See **Cassette Selection** page 376 for more information of selecting by drawer number. Refer to page 376 and 331 for information of how to select drawer by paper type.

⚠ WARNING ⚠
Different printer manufacturers have diverting opinions of which value should correspond to which physical drawer. Therefore please consult your printers technical reference to verify the drawer mapping.

Stapling

This option defines if the copies should be stapled. This option can only be used on the printers stated below. Remember to use printer type HP4_PJL or HP4D_PJL when merging.

```

Design InterForm 400 overlay                                APF300D

Overlay name: TEST      Overlay text:

Number of copies of each page
Primary printout . . . . . 2
Secondary printout . . . . .
Select paper from the follo :
Copy :
  1 : printer type 1=HP5Si Mopier
  2 :                2=Lexmark Optra N
:                3=IBM NP24 / IP32/40
:                4=Kyocera 7000/9000
:                5=Xerox N24 / N32 / N40
:                6=Xerox DC 240/255/265
:                7=Océ 3165
: Notice: Stapeling requieres use of
Do you want stapling . . Y/ : printertype HP4_PJL or HP4D_PJL.
:
F3=Exit : F3=Exit F12=Cancel
F13=Set print parameters :

```

Measuring Methods

All coordinates entered in InterForm400® must be dissolved into inches and pels.

Digits before the decimal point specify inches, and the digits after the decimal point specify pels and must not exceed 239. An inch is dissolved into 240 pels.

Examples of values:

1"	1,000	= 1,000
1 ½"	1,(240/2)	= 1,120
1 1/6"	1,(240/6)	= 1,040
1 5/6"	1,(240/6 x 5)	= 1,200
1,85"	1,(240 x 0,85)	= 1,204

You will notice that it would be most convenient to use a ruler indicating lines per inch.

When multiplying and subtracting values it might seem a little more complicated, the following are examples and the formulas used to solve it:

$$\begin{aligned} 3,100 + 1,200 &= 4,+300 \Rightarrow 4+1,(300-240) &= 5,060 \\ 3,100 - 1,200 &= 2,-100 \Rightarrow 2-1,(240-100) &= 1,140 \end{aligned}$$

Orientation of design elements

All positions are measured absolute to the upper left corner of the page, but depending on the type of overlay element and rotation of the page:

Text, Images, PCL files. Relative to the **upper left corner** depending on the rotation specified by **Rotation** under **global settings**.

Frames and lines: Relative to the **upper left corner** of a **Portrait** page, **regardless** of the rotation specified in the **global settings**.

☺ **TIP** ☺

*You can print out a **ruler** from the Service menu option **4. Print ruler** (see page ?). If you will use an ordinary ruler, it is an advantage to find one with indication of **6 lines per inch**. Using the **overlay "ruler"** in file set "sample", as an **sub-overlay** is also a method for easy positioning of overlay elements and spool data.*

The Design Screen

Note: Refer to Appendix O on page **461** for information of how to install and use the InterForm400® graphical designer.

When you press **Enter** from the previous screens you will finally reach the screen where the entry of overlay elements are made:

```
Design InterForm 400 overlay                                APF300D
Overlay name: IF400DEMO   Overlay text: Demo overlay for InterForm400
Seqnbr. Type  Overlay definition

Seqnbr. Type
_____

F3=Exit      F5=Service      F12=Cancel      F18=View Spool entry
```

An overlay consists of a number of sequence lines, each defining a part of the overlay like frames, lines, text constants etc.

When entering a screen with existing sequence lines the last entered lines will be displayed. The system simply believes that you intend to continue entering overlay elements

You can scroll through the lines using page-up and page-down.

Each line in the overlay definition is accessed via its **sequence number**. If you select an existing sequence number you will be able to update or delete this particular line. If you select a line number not already in the definition it means you wish to add a new line.

Sequence numbers can be entered with 1 decimal position. This opens up the possibility of inserting a new line anywhere in the definition, as the specification of a line with a decimal results in the addition of 1 to the sequence numbers of all succeeding lines in the definition. The new line is placed in the vacant space in the reference series. As example entering **12,1** will insert a sequence number between line 12 and 13. When saved the inserted sequence line is assigned number **13** and the following lines are incremented by one.

After entering a sequence number press the **Field Exit** key to add or edit this line. The key mapping of keyboards varies from one PC to another. The **Field Exit** key could be assigned to e.g. the right **Ctrl** key, the **Enter** key or the **+** key of your numeric keyboard.

Service Options

By pressing **F5** you will get a list of service options:

```
Design InterForm 400 overlay                                APF300D
Overlay name: IF400DEMO  Overlay text: Demo overlay for InterForm 400
Seqnbr. Type  Overlay definition

Select one of the following options:
1. Move the placement on the page
2. Move definitions to another sequence number.
3. Copy definition into this overlay
4. Delete lines
5. Resequencing
6. Print overlay definition
Option:  _
```

With these you can organize the overlay definitions:

1. Move the placement on the page

Here you can enter an interval of sequence lines and adjust them horizontal and vertical in a single action instead of changing entering each line.

```
In this function you can move the overlay up/down or left/right on the page.
Line interval to be moved . . . . . : 0000_ - 0000_
Distance to move:
- to the right +/- _____
- downwards    +/- _____
```

2. Move definitions to another sequence number

If you made a lot of lines, you might want to reorganize them in order to get a better overview. With this option you define an interval of sequence lines to be moved to another line number.

```
In this function you can move an interval of definition lines to another
sequence number.
Sequence number from/to to be moved . . . . 0000 - 0000
Inserted at sequence number . . . . . ___1
```

3. Copy definitions into this overlay

This option allows you to copy definitions in the same overlay or from another overlay

In this function you can copy lines into this overlay definition.

```
Overlay to be copied from . . . . . TEST_____ blank = this overlay
Sequence numbers from/to to be copied . . 0000_ - 0000_
Inserted at sequence number . . . . . ___1_

F4 = overview overlays
F24 = shift to look at FROM-overlay
```

- 4. Delete lines**
This option you delete an interval of lines instead of entering each lines and press F11.

In this function you can delete an interval of definition lines:

```
Interval . . . 0000_ - 0000_
```

- 5. Resequencing**
If you have deleted lines you will get in the situation that you have free line numbers to insert new overlay definitions on. This option will sort all remaining lines numerical.

In this function you can resequence the lines in this overlay definition.

Press ENTER for resequencing. Press F12 for unchanged.

- 6. Print overlay definitions**
This option will print out a detailed list of the existing overlay definitions on your default printer.

Overlay Element Selection Filters

When entering a sequence number and you press **Field Exit** the following entry screen will appear:

```

Design InterForm 400 overlay                                APF300D

Overlay name: IF400DEMO   Overlay text: IF400DEMO

Seqnbr. Type   Overlay definition

Seqnbr. Type                                     Page control
 1,0   _   1 = Frame           2 = Horizontal       _   BLANK = all pages
        3 = Vertical          4 = Line             1 = first page only
        5 = Text              6 = Print-info      2 = page 2 and succ.
        7 = Ink                8 = Tabulator       9 = last page only
        9 = Remap window      I = Image
        ? = If .. then        F = PCL-file
        G = HP-GL/2 file      S = Suboverlay
        * = Comment

F3=Exit                                     F12=Cancel           F18=View Spool entry

```

The right side of the screen will contain entries for **Copy management** or **Page control** depending on the value for **Copy management** in the global settings of the overlay

Page Control

The **Page Control** fields are used to assign this specific sequence line to all printed pages or to selected pages only.

The entry fields for **Page control** will appear if **N** has been selected for **Copy Management** in the global settings of the overlay. (see **Copy Management** page 39)

```

Seqnbr. Type                                     Page control
 1,0   _   1 = Frame           2 = Horizontal       _   BLANK = all pages
        3 = Vertical          4 = Line             1 = first page only
        5 = Text              6 = Print-info      2 = page 2 and succ.
        7 = Ink                8 = Tabulator       9 = last page only
        9 = Remap window      I = Image
        ? = If .. then        F = PCL-file
        G = HP-GL/2 file      S = Suboverlay
        * = Comment

F3=Exit                                     F12=Cancel           F18=View Spool entry

```

⚠ WARNING ⚠
Do not use page control in conditioned overlays. (The overlay called by an If..Then line).

If **S** or **L** is filled in for Duplex Print for the global settings of the overlay the Page Control will be extended with a possibility of entering if page numbering should be made on odd or even pages only:

Seqnbr.	Type			Page control
1,0		1 = Frame	2 = Horizontal	- BLANK = all pages
		3 = Vertical	4 = Line	1 = first page only
		5 = Text	6 = Print-info	2 = page 2 and succ.
		7 = Ink	8 = Tabulator	9 = last page only
		9 = Remap window	I = Image	- BLANK = all pages
		? = If .. then	F = PCL-file	1 = odd pages
		G = HP-GL/2 file	S = Suboverlay	2 = even pages
		* = Comment		
F3=Exit		F12=Cancel		F18=View Spool entry

Copy Management

The entry fields for **Copy Management** will appear if **Y** has been selected for **Copy Management** in the global settings of the overlay.(see **Copy Management** page 39)

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	-	-
		5 = Text	6 = Print-info	Secondary	-	-
		7 = Ink	8 = Tabulator			
		9 = Remap Window	I = Image			
		? = If .. then	F = PCL-file			
		G = HP-GL/2 file	S = Suboverlay			
		* = Comment				
F3=Exit		F12=Cancel		F18=View Spool entry		

The **Copy management** field is used to assign this specific sequence line to all printed copies or to selected copies only.

The following are examples of definitions for copy control:

Use this overlay element on **all** copies of Primary and Secondary sets (all fields left blank):

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	-	-
		5 = Text	6 = Print-info	Secondary	-	-
		7 = Ink	8 = Tabulator			

Use this overlay element on the **first copy** (the original) of the Primary set **only**:

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	1	1
		5 = Text	6 = Print-info	Secondary	-	-
		7 = Ink	8 = Tabulator			

Use this overlay element on the **first copy** of the Primary set and the **first copy** of the Secondary set:

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	1	1
		5 = Text	6 = Print-info	Secondary	1	1
		7 = Ink	8 = Tabulator			

Use this overlay element on **all copies** of the Primary set:

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	1	6
		5 = Text	6 = Print-info	Secondary	-	-
		7 = Ink	8 = Tabulator			

Use this overlay element **all** copies of both sets **except** the first one in the Primary set,

Seqnbr.	Type			Copy management	From	To
1	1	1 = Frame	2 = Horizontal		-	-
		3 = Vertical	4 = Line	Primary	2	6
		5 = Text	6 = Print-info	Secondary	1	6
		7 = Ink	8 = Tabulator			

Overlay elements

Up to 9999 overlay elements can be made in one overlay.

1=FRAME

Seqnbr.	Type		Inch.pel	Repetition
11,0	1	Frame		
		Top edge	_____	Move right _____
		Left edge	_____	Move down _____
		Right edge	_____	Extra times _____
		Bottom edge	_____	
		Thickness in pels	_____	NW NE SW SE
		Round/Sharp (R S)	__ Radius	__ __ __ __
		Pattern	__ F4=List	
F3=Exit		F11 = delete	F12=Cancel	F18=View Spool entry

Top Edge: **Inches, pels** absolute to the upper edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Left Edge: **Inches, pels** absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Right Edge: **Inches, pels** absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Bottom Edge: **Inches, pels** absolute to the upper edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Thickness in pels: Thickness of a border in pels (1/240"). Zero means no border.

Round/Sharp: Determines whether the corners of the frame will be round or sharp. You can also specify the radius in pels of each of the 4 corners (NorthWest, NorthEast, SouthWest, SouthEast).

You can mix sharp and round corners by entering a radius in pels for the corners you want round, and state zeros for the corners you want sharp.

If you specify **R** for round corners without entering radius in any of the 4 fields, the system will use the default value of **24** as radius for all 4 corners.

Unfortunately HP11, HP11D, HP11P and other PCL4 printers can not draw round corners. On those printers corners will always be sharp.

Pattern: Defines a fill pattern for the frame. Left blank means no pattern. Refer to page **59** on how to use patterns.

Repetition

Move right: **Inch,pels** of the right movement of a duplicate of the frame relative to the value for **left edge**

Move Down: **Inch,pels** of the vertical movement of a duplicate of the frame relative to the value for **Top edge**

Extra times: Extra copies of the frame excluding the original. Extra copies will be displaced relative to each other according to the settings of **Move right** and **Move Down**.

- NW:** Radius in pels for the North West corner of the frame
- NE:** Radius in pels for the North East corner of the frame
- SW:** Radius in pels for the South West corner of the frame
- SE:** Radius in pels for the South East corner of the frame

Color

Printing: When working in a file-set defined for color printing, the frame definitions will offer an additional pattern setting for color print. When having selected a color **INK** setting prior to the frame settings, this color **INK** selection will then be used for the printed frame and pattern. Frames defined with **Thickness in pels** (if any), will always be printed as a solid line.

Seqnbr.	Type		Inch.pel	Repetition
3.0	1	Frame		
		Top edge	_____	Move right _____
		Left edge	_____	Move down _____
		Right edge	_____	Extra times _____
		Bottom edge	_____	
		Thickness in pels	__3	NW NE SW SE
		Round/Sharp (R S)	S	Radius _____
		Pattern, B/W-prt	_	F4=List
		Pattern, color-prt B F4=List		
F3=Exit	F4=Prompt	F11>Delete	F12=Cancel	
F13=Set view/print parameters	F14=PCL-view			

2=HORIZONTAL LINE

Seqnbr.	Type		Inch.pel	Repetition
1	2	Horizontal line		
		From top edge	_____	Move right _____
		Left end	_____	Move down _____
		Right end	_____	Extra times _____
		Thickness in pels	__	
F3=Exit	F12=Cancel	F18=View Spool entry		

From Top Edge:

Inches, pels absolute to the upper edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Left end:

Inches, pels absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Right end:

Inches, pels absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Thickness in pels:

Thickness of a line in pels (1/240"). Zero means no border.

Move right:

Inch,pels of the right movement of a duplicate of the line relative to the value for **left edge**

Move Down:

Inch,pels of the vertical movement of a duplicate of the line relative to the value for **Top edge**

Extra times:

Extra copies of the line excluding the original. Extra copies will be displaced relative to each other according to the settings of **Move right** and **Move Down**.

3=VERTICAL LINE

Seqnbr.	Type	Inch.pel	Repetition
1	3	Vertical line	
		From top edge _____	Move right _____
		From left _____	Move down _____
		Lower end _____	Extra times _____
		Thickness in pels _____	
F3=Exit		F12=Cancel	F18=View Spool entry

From Top

Edge: **Inches, pels** absolute to the upper edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

From left: **Inches, pels** absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Lower end: **Inches, pels** absolute to the upper edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Thickness in pels:

Thickness of a the line in pels (1/240"). Zero means no border.

Move right: **Inch,pels** of the right movement of a duplicate of the line relative to the value for **left edge**

Move Down: **Inch,pels** of the vertical movement of a duplicate of the line relative to the value for **Top edge**

Extra times: Extra copies of the line excluding the original. Extra copies will be displaced relative to each other according to the settings of **Move right** and **Move Down**.

4=LINE

Seqnbr.	Type	Inch.pel	Repetition
n,0	2	Line	
		Endpoint 1 from top _____	Move right _____
		from left _____	Move down _____
		Endpoint 2 from top _____	Extra times _____
		from left _____	
		Thickness in pels _____	
F3=Exit		F12=Cancel	F18=View Spool entry

This definition works similar to the two previous definitions. It distinguish itself by enabling lines to be diagonal. This also means you will have to define coordinates for each endpoint.

Endpoint 1

From Top: **Inches, pels** absolute to the top edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

From left: **Inches, pels** absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Endpoint 2

- From Top:** **Inches, pels** absolute to the top edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.
- From left:** **Inches, pels** absolute to the left edge of a portrait page regardless of the rotation specified by the **global settings** for the overlay.

Thickness

in pels: Thickness of a the line in pels (1/240"). Zero means no border.

Move Right: **Inch,pels** of the right movement of a duplicate of the line relative to the value for **left edge**

Move Down: **Inch,pels** of the vertical movement of a duplicate of the line relative to the value for **Top edge**

Extra times: Extra copies of the line excluding the original. Extra copies will be displaced relative to each other according to the settings of **Move right** and **Move Down**.

A limitation of this line definition is, that it is ignored when:

- using a HP II type (PCL4) of printer definition in InterForm
- used on back page overlays on HP II and HP III type printers.

If you are making horizontal and vertical lines it is recommended that you use definition 2 and 3, and only use this definition for making diagonal lines.

5=TEXT

This can be used to insert text constants with varying fonts in the overlay.

Seqnbr.	Type		Inch.pel
26,0	5	Text constant	From top edge _____
			From left _____
			Rotation _____
			Font _____ F4=List
			Text _____

F3=Exit F4=Prompt F12=Cancel F18=View Spool entry

From Top: **Inches, pels** absolute to the top edge of the rotation specified by the **global settings** for the overlay.

From left: **Inches, pels** absolute to the rotation specified by the **global settings** for the overlay.

Rotation: The available values for rotation are: 000, 030, 090, 120, 180, 210, 270, 300 degree. Values 180 and 270 can be used with HPGL/2 compatible printers only (PCL5 or PCL5e). Values 030, 120, 210 and 300 requires a HPGL/2 compatible printer.

Font: The font ID of the formatted text.

Text: Text field

6=Print-info (Print information)

Seqnbr.	Type	Inch.pel
1.0	6	Print-info
		From top edge _____
		From left _____
		Rotation _____
		Font _____0
		Info-type _____
		F4=List
		F4=List
F3=Exit	F4=Prompt	F12=Cancel

From Top: Inches, pels absolute to the top edge of the rotation specified by the **global settings** for the overlay.

From left: Inches, pels absolute to the rotation specified by the **global settings** for the overlay.

Rotation: The available values for rotation are: 000, 090, 180, 270 degree. Values 180 and 270 can be used with HPGL/2 compatible printers only (PCL5 or PCL5e).

Font: The font ID used for printing out the information required below.

Info-type: Type of information to be printed (can be prompted with F4). Here you can specify to either print out page numbers or information about the job, that created the spool file.

Value:	Prints out:
*PAGNBR	Page number of the actual page.
*ENDPAGE	Total number of pages.
*MUPPAGNBR	The actual page number when using Multi-Up.
*JOBNAME	The job name.
*USER	Userprofile used for the job.
*JOBNBR	Job number of the job.
*JOB	All information above, about the job.
*PGM	The program, that created the spool file.
*PGMLIB	Library of the program, that created the spool file.
*OVERLAY	The overlay, that has been merged with.
*FILESET	File set of the merged overlay.

☺ TIP ☺

You can print out the text: 'Page X out of Y', where X is *PAGENBR and *ENDPAGE is Y. Place the text 'Page out of ' using option 5=Text, and then place the two numbers using option 6=Print-info with *PAGENBR and another with *ENDPAGE.

7=INK (fill pattern for succeeding sequence lines)

```
Segnbr. Type
  1,0 7 Ink

                Select ink for the succeeding lines
                Pattern      8 blank = unchanged,
                                0 = 100% white shading,
                                1-8 = 1-100% shading, ...

F3=Exit                                F12=Cancel
F13=Set view/print parameters  F14=PCL-view
```

Normally the system overwrites whatever might be the original contents, while leaving the background unaltered.

With this overlay element the **Ink** can be changed enabling printing white on black background, a pattern transparently on another pattern etc. The possibilities are numerous.

Pattern : For the pattern the following are valid:

0	100% white shading (erases background)
1	2% shading
2	10% shading
3	20% shading
4	35% shading
5	55% shading
6	80% shading
7	99% shading
8	100% shading
A	1% shading (600 DPI)
B	3% shading (600 DPI)
C	6% shading (600 DPI)
D	8% shading (600 DPI)
E	24% shading (600 DPI)
-	Horizontal lines
!	Vertical lines
/	Diagonal lines (to the right)
\	Diagonal lines (to the left)
+	Horizontal and vertical lines
X	Crossing diagonal lines

Examples on use of Ink:

We have first made four large frames with fill pattern "A" (diagonal stripes \\\) (refer to page ? on how to print the pattern sheet).

In the sequence lines after, we have defined 4 small frames with fill pattern "!" (vertical stripes |||) and 4 text constants printed with font **2103**, which fits in the large frames.

In frame **1** and **2** we state an Ink just before the text line. You will notice, that the pattern of the elements are placed on top of the previous placed elements.

If you want the small frame and text to be shown without the lines of the larger frame you could choose to first place the same frame and text with fill pattern 0 (erase background) before reprinting it with the wanted Ink as seen in frame **3**. Here '!' is used for the small frame and 'I' is used for the text.

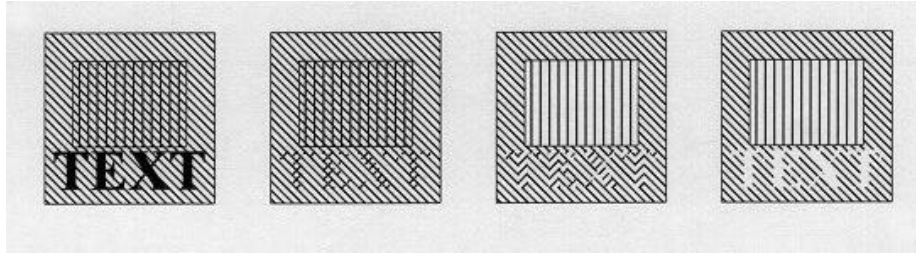
Frame **4** shows the result when choosing pattern = 0 (erase background) for the Ink and printing TEXT. See the results below:

Black Ink

Slash (/) Ink

**(0) Ink followed
by Ink(/) / Ink(!)**

(0) Ink



You can also insert an image as a watermark, if you change the ink to be shading . Note however, that you cannot use Ink to change PCL files into watermarks.

Color

Printing: When working in a file-set defined for color printing the INK settings will have additional options, as per below.

```
Seqnbr. Type
  2.0  7   Ink

          Select ink for the succeeding lines
          Pattern, B/W-prt  _   blank = unchanged,
                                0 = 100% white shading,
                                1-8 = 1-100% shading, ...
          Pattern, color-prt 8   (See above)
          Color                _3 1=Black, 2=Grey, 3=Red, ..
F3=Exit      F4=Prompt      F11=Delete   F12=Cancel
F13=Set view/print parameters  F14=PCL-view
```

This enables printing of spool data, text constants, lines and frames in color on PCL compatible color laser printers.

☹ **TROUBLE SHOOTING** ☹

Remember to select a color printer when printing to a PCL compatible color laser printer (HP5C, HP4500, HP4500D)

👉 **NOTE** 👉

Ink commands in main overlays will have not effect in conditioned suboverlays called by If..Then.

8=TABULATOR (Paragraph tabulation)

A "tabulator" performs formatting and horizontal movement of an interval of lines in the spool date. Almost the same result can be obtained by using command type **9. Remap Window**.

The line and position numbers to be entered are those appearing in the input, regardless of a general margin or extra blank lines defined for the overlay.

Seqnbr.	Type				
1	8	Tabulator			
	Input:	Line	___ - ___		
		Position	___ - ___		
	Print:	From left edge	_____	Adjustment	_ (U L C R N B +)
		Font	_____	F4=List	
	Condition:	Position	___ - ___		
		Is > = < N	_ - _		
		Blank after	_	B = Blank condition after	
F3=Exit	F4=Prompt	F12=Cancel	F18=View Spool entry		

Input Line: The line interval to read including both lines entered here.

Input Position: The Column interval to read including both positions entered here

From left: **Inches, pels** absolute to the rotation specified by the **global settings** for the overlay. If moved beyond the paper edge (e.g. 14") the data will be removed from the data stream. Note that the Left edge is measured from the physical paper edge unless the line interval of the Tabulator is included in an **Extended Page Definition** interval. In this case the Left Edge of the Tabulator is measured from the **Left Margin** defined in the Extended Page Definition.

Adjustment: Formatting of the text field. The Valid values are:

- U** **Un-formatted.** The area is printed without any changes to formatting, and spaces.
- L** **Left-adjustment.** Spaces proceeding the first character in text lines in the tabulator area are removed, causing the area to be left adjusted at the position indicated by **From Left**.
- C** **Centred.** Spaces within the tabulator area before and after text lines are being removed, and the area is centred around the position indicated by **From Left**.
- R** **Right-adjustment.** Spaces following the character in text lines in the tabulator area are removed, causing the area to be right adjusted at the position indicated by **From Left**.
- N** **Numeric.** Indicates if the text lines in the tabulator area should be considered as numbers (amounts).
- B** Print succeeding spaces in barcode data. Indicates if the spaces in the column interval succeeding the barcode data should be converted to barcode. This only apply to the barcodes 128 and 3of9. The barcodes will always be left-adjusted. (Normally succeeding spaces will be ignored.)

+ Opens up for **Extended Adjustment** for definition of Underline of text in the tabulator and/or lines of periods (known as punctuation or dot leaders) made after each line of the tabulator. The following options appear when + is entered:

Adjustment: The adjustment of the underlined or punctuated lines. Values U, L, C, R or N according to the above

Underline: Underlining of text in the tabulator (spaces are not underlined).

Punctuation

Length: If the last position of a line in the tabulator, defined by the second **Input Position** field, is a **period sign**, a line of punctuation will be printed. The punctuation will start after the last printable character, and end at the position (inches,pels) stated in this field counting from the position stated in **From Left**. Only Adjustment values **U** and **L** can be used. No punctuation will be made if other values are used, if no period sign is found or if the text exceeds the punctuation length.

Font: The new font of the formatted text.

Condition: An optional set of values used if the tabulator should be executed on a certain condition.

Position: Only activate the tabulator If a character string in the interval of lines defined by the Tabulator matches this character string according to the following condition.

Is >=<N Only run tabulator if this following field contains a **text** string or a **number** which match one of the following valid operators:

> Greater than a number entered in the following field

= Equal to a number or a text string (case sensitive) or a number entered in the following field.

< Less than a number entered in the following field

N Not equal to a number or a text string (case sensitive) or a number entered in the following field.

A Acceptable characters. All the characters in marked interval must be one of the characters in the following field.

U Unacceptable characters. None of the characters in the marked interval must be one of the characters in the following field.

(See page 66 for a tip on use of '>' and '<')

Blank After: Stating **B** will remove the text string or the number which has been used for the condition from the resulting print out.

F18: With the Tabulator the function is relevant for displaying the spool entry in order to determine lines and columns for the tabulator. F18 prompts the command DSPSPLF with the job information used for merge in option 3. **Merge spool entry with overlay** (page 117). Pressing **F18** will only work if this merge has been done **prior** to entering this menu.

⚠ WARNING ⚠

If two or more overlapping tabulators are defined the first defined will take the text it needs and leave blank positions in the relevant place for the next tabulator. **A maximum of 200 tabulators per overlay can be defined.**

😊 TIP 😊

You can use a tabulator (left or unadjusted) to delete areas of text. Just tabulate the area over the edge of the paper (e.g. 14"). This will not produce unnecessary code in the data stream. InterForm400® detects if the code is defined to be printed outside the printable area, and will then just ignore it. In case you have made many re-mappings you can define a tabulator as the last sequence line which takes an area from line 1 to 72 and position 1 to 132, and move it outside the page, thereby deleting any remaining data.

Extended Adjustment (+) does not support fixed width fonts e.g. Courier.

😊 TIP 😊

You can align numbers, where some are negative by use of numeric adjustment (**N**). See below.

Input data is formatted for fixed pitch font tabulation

	0	1	2
	1	2	3
	4	5	6
	7	8	9
	0	1	2
	3	4	5
1	MICKEY	MOUSE	1.100,00
2	refund	EARS	-2.100,00
3	total		1.000,00-

If the above was uncritically printed with a proportional spaced font we would experience the result displayed below on the left, due to varying width of characters in the font.

If we made a tabulator that defined column 16 to 25 of line 1 to 3 to be printed with numeric adjustment, we would get the result displayed to the right. Notice that the **minus** is compensated for in the right alignment.

Proportional font without tabulator

MICKEY MOUSE	1.100,00
refund EARS	-2.100,00
total	1.000,00-

Proportional font with a numerical adjusted tabulator

MICKEY MOUSE	1.100,00
refund EARS	-2.100,00
total	1.000,00-

9=REMAP WINDOW (re-mapping text areas)

Definition of a **Remap Window** gives you the possibility of taking a particular part of a given text line and print it elsewhere on the page, e.g. with rotation and another font.

A maximum of **300 Remap Window lines** are allowed in one overlay. Additional remap window lines are ignored. If this limitation is a problem you should use 'If..Then' lines instead to create overlays, that are more efficient and easier to maintain. Contact your local InterForm400 dealer to get more information of how to do that if in doubt.

Seqnbr.	Type					
1	9	Remap window	Input line	___ - ___	Position	___ - ___
		Print:	From upper edge	_____	Line spacing	. . _____
			From left edge	_____	Ignore blank lines	_ (Y N)
			Adjustment	_	(U L R C N B E +)	
			Rotation	_____		
			Font	_____	F4=List	
			Blank original	_	B = blank original version	
		Condition:	Position	___ - ___		
			Is > = < N	_____		
			Blank after	_____	B = Blank condition after	

- Input Line:** The line interval to read including both lines entered here. If the end line is left blank or the same as the begin line, only one line will be remapped.
- Position:** The Column interval to read including both positions entered here. The maximum position interval is **198** characters.
- Upper edge:** **Inches, pels** absolute to the upper edge of the page according to the rotation specified by the **global settings** for the overlay.
- From left edge:** Inches, pels absolute to the left edge of the page according to the rotation specified by the global settings for the overlay.
- Line Spacing:** Measured in n/240" which means 6 lines per inch will give the value 40. Failure to fill in this value, will default to a linespacing of zero resulting all text to be printed in one line.
- Ignore Blank Lines:** Enabling this option will cause all blank lines to be discarded.
- Adjustment:** formatting of the character string. Valid values are:
- U** **Un-formatted.** The character string is printed without any changes to formatting, and spaces.
 - L** **Left-adjustment.** Spaces preceding the first character in the character string are removed, causing the string to be left adjusted at the position indicated by **From left**.
 - C** **Centred.** Spaces within the character string before and after printable characters are being removed, and the string is centred around the position indicated by **From left**.
 - R** **Right-adjustment.** Spaces following the character in the character string are removed, causing the string to be right adjusted at the position indicated by **From left**.
 - N** **Numeric.** Indicates if the characters in the character string should be considered as numbers (amounts).
 - B** Print succeeding spaces in barcode data. Indicates if the spaces in the coloumn interval succeeding the barcode data should converted to barcode. This only apply to the barcodes 128 and 3of9. The barcodes will always be left-adjusted.
 - E** **Full Justification.** (aligning both left and right margins). This function enables changes to the number of letters per line, based on the font size and the **max. line width** of the justification. Distance between words is automatically adjusted.
- Maximum line width::** Defines the maximum length of the justified text line.(Inch/pels)

Right margin adjustment: Defines when a text line should not be justified. This is based on the percentage of text characters versus blank spaces left on the last line of a remapped paragraph.(0-100%)

Escape sequences: Used when working with spool files having escape sequences integrated. (See Appendix H, page 390)

- + Opens up for **Extended Adjustment** for definition of Underline of text in the Remap Window and/or a line of periods (known as punctuation or dot leaders) made after the text. following options appear when + is entered:
 - Adjustment:** The adjustment of the underlined or punctuation lines. Values U, L, C, R or N according to the above.
 - Underline:** Underlining of text in the Remap Window (spaces are not underlined).
 - Punctuation Length:** If the last position of the text line in the Remap Window, defined by the second **Input Position** field, is a **period sign**, a line of punctuation will be printed. The punctuation will start after the last printable character, and end at the position (inches,pels) stated in this field counting from the position stated in **From Left**. Only Adjustment values **U** and **L** can be used. No punctuation will be made if other values are used, if no period sign is found or if the text exceeds the punctuation length.

Font: The new font of the formatted text.

Blank original **B** specifies, that the original text should be removed.

Condition: An optional set of values used if the remapping should be executed on a certain condition.

Position: Only activate the Remap Window If the character string read by the Remap Window matches this character string according to the following condition:

Is >=<N Only run tabulator if this following field contains a **text** string or a **number** which match one of the following valid operators:

- > Greater than a number entered in the following field.
- = Equal to a number or a text string (case sensitive) or a number entered in the following field.
- < Less than a number entered in the following field.
- N** Not equal to a number or a text string (case sensitive) or a number entered in the following field.
- A** Acceptable characters. All the characters in marked interval must be one of the characters in the following

field.
U Unacceptable characters. None of the characters in the marked interval must be one of the characters in the following field.
 (See page **66** for a tip on use of '>' and '<')

Blank After: Stating **B** will remove the text string or the number which has been used for the condition from the resulting print out.

☺ **TIP** ☺

If you specify **B** for **Blank original** above, the text removed cannot be used for any conditions (**If..Then**). If you want to combine the two, then do not blank the original in the remap. Instead insert an additional line tabulating (**type=8**) the unwanted text outside the page e.g. 14 inches from the left.

☹ **WARNING** ☹

Extended Adjustment (+) and **Full Adjustment (E)** does not support fixed width fonts e.g. Courier.

☹ **WARNING** ☹

Even though you can remap text out of the visible paper, the text is still possible to find the resulting PDF file when you merge with a spooled file. If you want to eliminate that possibility use an unadjusted tabulator to remove the spooled file text.

☺ **TIP** ☺

If you want to compare a column of numbers (Right justified) to a specific value using '<' or '>' and want to condition a **Tabulator**, **Remap** or **If..Then** on the result, you should include a space in front of the number, that you compare with.

This compare will work fine also for large numbers, that are much wider than the compared value.

(Reason: A space (' ') has a lower value than all digits '0'-'9'.)

I=IMAGE

Seqnbr.	Type	Inch.pel	
1	I Image	From top edge	_____
		From left	_____
		Image name	_____
		Reverse Image	<input type="checkbox"/> R = Reverse Image
		Resolution	<input type="text"/> 75,100,150,200,300,600

F4 = overview images F18=View Spool file

From top edge: **Inches, pels** absolute to the upper edge of the page according to the rotation specified by the **global settings** for the overlay.

From left edge: **Inches, pels** absolute to the left edge of the page according the rotation specified by the **global settings** for the overlay.

Image name: The image imported under **8. Work with Images** in the administration menu. Refer to page 319 for details.

Reverse Image: Entering **R** here will cause the image to be printed in negative. This option is meant to reverse images to normal in relation to

some scanning utilities which saves TIFF reversed. Note, that performance wise it is better to reverse if necessary during install of the image in InterForm400 - refer to page **319** for more information.

Resolution:

The resolution by which the image was scanned. This option can also be used to scale the image. For example an image scanned in 300 dpi can be scaled to double size in the print out by entering 150 here. Entering 600 here will cause the same image to be scaled to half size, but only if the printer supports a 600 dpi resolution (HP4 and compatibles). The resolution of 200 dpi is commonly used if the overlay is intended for faxing through the BlueFax fax program also.

Color Printing:

When working in a file-set defined for color printing the Image settings will have an additional definition for **color images**. The resolution of the color image can be adjusted from the original settings, by stating an specific resolution for Horizontal and Vertical values, respectively. (1-600 DPI).

If the resolution settings are left blank, the original resolution settings of the imported image will be used.

The Black/White image definition is available to facilitate printing of the same overlay both on black and white and color laser printers.

⚠ WARNING ⚠

Note that you can not specify rotation. An image always has the orientation specified in the global settings for the overlay.

?=IF...THEN (conditional nesting of overlays)

This feature is useful in the situation where the appearance of the overlay has to be dependent of the text that is merged with the overlay. This can be caused by a spool entry containing two or more different print outs, say invoices and credit notes, and where you want different overlays on the individual printout.

Another use of the "If..then" feature is the case where a detail in the printout shall result in adding an extra detail to the overlay (see example page **101**). Finally the **If..then** feature can be used for formatting print lines or groups of print lines appearing in random line positions (see example page **107**)

Seqnbr.	Type				
1,0	?	If	Input line	___ - ___	
			Position	___ - ___	
			Is > = < N	_____	
		Then	Overlay	_____	Nos. of lines to remap _____
			Upper edge	_____	A/+/- _
			Left edge	_____	A/+/- _
			Blank after	_	B = blank original text

F18=View Spool file

Input Line: The line interval to read including both lines entered here.

Input Position: The Column interval to read including both positions entered here

Is >=<N Only call the sub-overlay if this following field contains a **text** string or a **number** which match one of the following valid operators:

- >** Greater than a number entered in the following field
- =** Equal to a number or a text string (case sensitive) or a number entered in the following field.
- <** Less than a number entered in the following field
- N** Not equal to a number or a text string (case sensitive) or a number entered in the following field.
- A** Acceptable characters. All the characters in marked interval must be one of the characters in the following field.
- U** Unacceptable characters. None of the characters in the marked interval must be one of the characters in the following field.

(See page 66 for a tip on use of '>' and '<')

Overlay: The name of the overlay to be used as sub-overlay. If the name entered here is **MACROxxxxx** where xxxxx represents a numeric number (e.g. MACRO00001) InterForm400® will make a PCL macro call using this number. This will require the PCL macro to be loaded into the printer prior to using the main overlay. The PCL file can be loaded into the printer by the InterForm400® HPMACRO command (see page 402, 416).

Number of lines to remap: This parameter is used to pass on a line interval to a sub-overlay which can process the lines with **Remap Windows** or **Tabulator** commands. The first line of the interval will be the line defined by **Input line** of the line interval and will be regarded as line 1 in the sub-overlay, i.e. the sub-overlay will consider the interval as a virtual spool entry to process.

Defining ***VAR** for this function, will cause this **If..then** command to continue checking all lines starting from the beginning of the input line interval, until another **If..then** command is met, provided that it is within the line interval of the original **If..then** command. If conditions for more **If..then** commands are true concurrently, the field **Lines to remap** is only used from the last **If..then** command.

This feature is designed specifically to format item lines printed in varying lines, and with varying number of lines between the item groups (see example page 107).

Vertical cursor repositioning
 When you enter a number of lines to remap (other than 0) you are prompted for a vertical repositioning like below:

```

Vertical cursor repositioning
before execute of sub overlay

Position related to actual position

Number of pels . . ____ ( -99 - 99 )

Or reposition related to previous
non blank input line

Number of pels . . ____ ( 0 - 999 )

F3=Exit          F12=Cancel

```

With this function you can vertically reposition the rest of the spooled file i.e. move the spooled file contents and all relatively positioned elements e.g. tabulators and remaps.

Position related to actual position:

This will move the rest of the spooled file up (negative value) or down (positive value). See page 107 for an example which uses this option.

Reposition related to previous non blank input line:

Use this repositioning e.g. in order to close the gap of blank lines on the original spooled file. (Use the If..Then on the next non blank line.)

Upper Edge:

Inches, pels position according to the entry of the following field:

- A** Vertical position of the sub-overlay is made absolute to the upper edge of the paper. Vertical positioning of elements in the sub-overlay is added to this value.
- +** The sub-overlay is re-positioned downwards relative to the position of the string matching the criteria for the sub-overlay to be called. Vertical positioning of elements in the sub-overlay is added to this value.
- The sub-overlay is re-positioned upwards relative to the position of the string matching the criteria for the sub-overlay to be called. Vertical positioning of elements in the sub-overlay is added to this value.



Left Edge:

Inches, pels position according to the entry of the following field:

- A** Horizontal position of the sub-overlay is made absolute to the left edge of the paper. Horizontal positioning of elements in the sub-overlay is added to this value.
- +** The sub-overlay is re-positioned to the right relative to the position of the string matching the criteria for the sub-overlay to be called. Horizontal positioning of elements in the sub-overlay is added to this value.
- The sub-overlay is re-positioned to the left relative to the position of the string matching the criteria for the sub-overlay to be called. Horizontal positioning of elements in the sub-overlay is added to this value.

Blank After:

Stating **B** will remove the text string or the number, which has been used for the condition, from the resulting print out.

 **WARNING** 
Global settings of the sub-overlay, inserted by the if..then line, will be ignored as well as 6 = Print-info.

WARNING

Up to 300 'If..Then' lines can be defined for an overlay.

WARNING

Only one level of conditioned sub-overlays is possible. 'If..Then' lines placed in overlays, which are called by 'If..Then' are never executed.

WARNING

Totally blank lines are not considered for the If..Then line i.e. a condition on one or more blank characters on a totally blank line will not trigger a call of the suboverlay. The OS/400 command DSPSPLF will show the lines which can be conditioned.

F=PCL-FILE

Insertion of a PCL-file might be one of the most important features of the system, as designing forms more and more is a job for a PC. InterForm400® allows a single overlay to be combined of several PCL forms as well as having standard elements included as described in the previous sections.

When overwriting (updating) a PCL-file on the system all overlays referring to this PCL resource will automatically be updated. An "encapsulated" PCL-file (including PCL and/or HP-GL/2) generated in any PC application equipped with an HP11, HP111 or HP4 driver can be transferred to the system by a **File Transfer**, a **Virtual Print** or copying between shared folders by means of **Client Access 400** (PC Support) (see **Importing PCL overlay from PC print file** page 325). Note that inclusion of PCL-files for the Printer/Interface type chosen as default, has to be confirmed under **2. Set default output queue and printer type** (page 268).

Seqnbr.	Type	Inch.pel	
1.0	F PCL-file	From top edge	_____ (+ -)
		From left	_____ (+ -)
		File name	_____

The overlay element that defines the PCL file to be inserted is quite simple. It is, however, possible to fine adjust the placement of the PCL form compared to the positions defined in the original PCL-file. This frees you from starting up the PC applications if only the overall placement needs to be changed.

From top edge Inches, pels vertical position of the PCL file is made absolute to the upper edge of the paper. Vertical positioning of elements in the PCL file is added to this value. Adding a minus after the value, will cause an movement upwards. (e.g. **1,120-** for 1½" negative movement)

From left edge Inches, pels horizontal position of the PCL file is made absolute to the left edge of the paper. Horizontal positioning of elements in the PCL file is added to this value. Adding a minus after the value, will cause a movement to the left. (e.g. **1,120-** for 1½" movement to the left)

Color printing:

When working in a file-set defined for color printing the PCL-file settings will have an additional definition for color PCL-files.

The Black/White PCL-file definition is available to facilitate printing of the same overlay both on black and white and color laser printers.

⚠ WARNING ⚠

The system does not check the contents of the PCL file to be PCL4, PCL5 or PCL5e code. Printing code made for a PCL5e on a PCL5 printer might cause problems, as well as printing PCL5 on a PCL4 printer definitely will go wrong. It is recommended to use an HP III driver to create the PCL files on the PC

G=HP/GL-2-FILE

A HP-GL/2 file can be file transferred to the system for storage as a member in the physical file **APF3812/GL2**. The PC file containing the HP-GL/2 code must be transferred to the system by a File Transfer function.

This feature has been superseded by the PCL imports option. Contact Intermate A/S for details, if import of HPGL files is needed.

Design APF3812 overlay		APF300D
Overlay name: PROFIT	Overlay text: Final Result DM /YTD	
Seqnbr. Type	Overlay definition	
Seqnbr. Type		Inch.pel
2,0 G	HP-GL/2 file	From top edge _____
		From left _____
		Height _____
		Width _____
		Rotation _____
		Scale factor _____
		Line width _____
		File name _____
F3=Exit	F4=Prompt	F12=Cancel

If you are using HP4 compatible printers only, you should choose to use the F=PCL-file sequence line solely, as this will treat a HP-GL/2 files and PCL-files equally. This means you can use the procedures for reading in PC-print into PCL-files explained on page 325 to retrieve the HP-GL/2 file from the PC environment instead of using the Client Access (PC-support) file-transfer function.

From top edge

Inches, pels vertical position of the HP-GL/2 file is made absolute to the upper edge of the paper. Vertical positioning of elements in the PCL file is added to this value. Adding a minus after the value, will cause an movement upwards. (e.g. **1,120-** for 1½" negative movement)

From left edge

Inches, pels horizontal position of the PCL file is made absolute to the left edge of the paper. Horizontal positioning of elements in the PCL file is added to this value. Adding a minus after the value, will cause a movement to the left. (e.g. **1,120-** for 1½" movement to the left)

⚠ WARNING ⚠

Note that the system will wrap the HP-GL/2 code into a PCL macro when printing, and only HP4 (PCL5e) printers allow HP-GL/2 code in PCL macros.

S=SUBOVERLAY

If you are printing general company info in several overlays, i.e. the company letter head, it is convenient to place this info in a separate overlay. With this function you can place such information in an overlay that can be called as a sub-overlay from any other overlays. I.e. changing e.g. the phone number only have to be done in this overlay.

```
Design InterForm 400 overlay                                APF300D
Overlay name: Invoice      Overlay text: Invoice overlay
Seqnbr. Type  Overlay definition

Seqnbr. Type
  1,0  S      Suboverlay

                                Overlay name COMPINF

F3=Exit                                F12=Cancel
```

The name of the overlay to be used as sub-overlay. If the name entered here is **MACROxxxxx** where xxxxx represents a numeric number (e.g. MACRO00001) InterForm400® will make a PCL macro call using this number. This will require the PCL macro to be loaded into the printer prior to using the main overlay. The PCL file can be loaded into the printer by the InterForm400® HPMACRO command (see page 402, 416).

WARNING

***Global settings** of the sub-overlay, inserted by the S=Suboverlay, will be ignored as well as **6 = Print-info**.*

*** = COMMENT**

This function will insert a comment in your overlay definition. Introducing a comment line in the overlay definition is for easy overview purposes only and will not affect the resulting print.

Seqnbr.	Type	Overlay definition
0001	*	Insert Intermate Logo in Upper Right Corner
0002	I	Image DEMOIMAGE Top 01.100 Left 04.180
0003	*	Receipient Frame
0004	1	Frame top 01.100 left 00.200 right 04.120 bottom 02.160
0005	*	Remap Receipient Adress into Receipient frame
0006	9	Remap window 06-011 pos 08-040 top 1.160 left 1.000 L
Seqnbr. Type		
1.0	*	Comment
Insert Intermate Logo in Upper Right Corner		

How the sequence lines in overlay design are executed

The execution order of the sequence lines is depending on the type of the line. They are executed in this order:

1st.	Frames, Lines, Text (option 5), Print-info, Ink, Images, PCL-files, HP/GL-files and Suboverlays.
2nd.	9=Remap Window
3rd.	?=If..Then
Last	8=Tabulator

Normally it is not necessary to remember this order, but when you mix them you could get a problem: If you specify to blank out remapped text by use of option **9=Remap Window**, then you cannot use the text for a condition in **If..Then**. This can be solved by not blanking out the text in the **Remap Window** and instead insert an **8=Tabulator** to tabulate the text out of the page after the If..Then has been executed.

If you have several **?=If..Then lines**, remapping the same line(s), then only the last condition met will have the lines remapped. The other conditional overlays are executed, but no lines are transferred.

⚠ WARNING ⚠

*A deviation from the rules above are seen if you transfer 2 or more lines to a sub-overlay by use of **If..Then**. The second and following lines are transferred first - even before any **Remap Windows** in the main overlay are executed.*

👉 NOTE 👉

Ink lines in the main overlay will have no effect in conditioned sub-overlays (called by **If..Then**).

👉 NOTE 👉

If you use absolute positioning for the sub-overlay called by **If..Then** you will notice this: **Tabulators** in the sub-overlay are unaffected by the positioning of the sub-overlay. **Remap Windows** in the sub-overlay add the vertical position specified in the **If..Then** command whereas the horizontal position is ignored.

😊 TIP 😊

Regarding design of Zebra overlays: *If you want to insert text, frames or images in reverse i.e. white on black background you can do it by first adding a frame with black filling (=pattern) and then place the text or image on top of the black frame (without specifying white in an Ink command). In this manner you reverse the part of the text or image, that overlaps the black frame.*

Getting Familiar With Overlays

The following sections are structured so you will be brought through a process of improving the visibility of the sample spool entry **IF400DEMO** introduced in the **Getting Started** section.

The chapter requires you have:

- Run the **Getting Started** section.
- A **PCL5 capable printer** attached to your default InterForm400® output queue (displayed in the upper right field on the **main menu**), or have configured the PCL Viewer
- Not made changes to the sample overlay **IF400DEMO** delivered with the system.

It is recommend that you have:

- Two terminal sessions available.
- Quiet surroundings
- A cup of coffee

You can start by printing the overlay **IF400DEMO** if you like to know how the final result will appear.

Please abstract from the fact that it is not a piece of design artwork. We have concentrated mainly on using as many features of the system as possible.

Step 1. Making a Work Copy of the Overlay IF400DEMO

In order to keep the original sample we should first make a copy of the overlays to work with. To prevent the changes we make to be overwritten by future updates of the SAMPLE file-set, we will do the changes in our **TEST** file-set which was created on page 28 in the **Getting Started** section.

Enter **8** in the option field on the **main menu**:

```

                                Select File-set

Select one of the following file-sets, then press Enter.
  l=Select

Opt  File-ID      Description
  _   SAMPLE      InterForm 400 Samples
  1   TEST       Test file-set

F3=Exit                                     F12=Cancel
```

Now enter **1** in the option field to select **TEST** and press **Enter**

Now enter **1. Design Overlay** on the **main menu** and press **Enter**:

```

                                Design InterForm 400 overlay                                APF300D

Overlay name      MYDEMO_____

F3=Exit           F4=List overlays           F12=Cancel
```

Here we type the name of the new overlay we want to create. We can name this overlay **MYDEMO**. We type **MYDEMO** and press **Enter**:

```

                                Design InterForm 400 overlay                                APF300D

Overlay name      MYDEMO_____

Overlay text
Line spacing      040      in 1/240 of an inch (*INPUT, 1-720)
Rotation          000      (*INPUT, 0, 90, 180, 270)
Extra left margin positions      0      (0-99)
Maximum number of print positions      378      (1-378)
Extra blank lines on top      0      (0-99)
Font              0066      *INPUT, fontnumber      F4=List
Extended page def.      N      (Y N)
Drawer            *PRINTER (*INPUT, *PRINTER 1-9, 20-39)
Paper Size        0      F4=List
Pages per side    _
Copy management   N      (Y N)
Duplex print      N      (N=no S=short edge margin L=long edge margin)
Duplex margin     _0      in 1/240 of an inch (1-720)
Back page overlay _____ Code for placement _ (B=back page F=front)

F3=Exit          F4=Prompt          F9=Copy from another overlay          F12=Cancel
F13=Set view/print parameters      F14=PCL-view
```

This screen already has some options filled in. All that will be overwritten by the settings of the overlay IF400DEMO we are copying from. We notice that since we are actually creating a new overlay it is possible to copy an existing overlay with **F9**. We press **F9** to

copy from another overlay:

```

Design InterForm 400 overlay                                APF300D

Name of overlay to copy from                                _____

F3=Exit          F4=Prompt          F9 = copy from another file-set F12=Cancel
  
```

We know that the **IF400DEMO** overlay is in another file-set, so we have to press **F9** once more to get a list of file-sets to choose from.

```

.....
:          Overview InterForm 400 file-sets                :
: 1=Select                                                  :
: 1 SAMPLE      InterForm 400 Samples                    :
:  _ TEST        Test file-set                             :
:                                                         :
:                                                         :
:                                                         :
: F12=Cancel                                               :
:.....
F3=Exit          F4=Prompt          F9 = copy from another file-set F12=Cancel
  
```

We select file-set **SAMPLE** and press **Enter**:

```

.....
:          Overview overlays                                :
: Start with:                                              :
: 1=Select                                                  :
: 1 IF400DEMO   InterForm400 demo                        :
:                                                         :
:                                                         :
: F12=Cancel                                               :
:.....
  
```

Now we select overlay **IF400DEMO** and press **Enter**:

```

Design InterForm 400 overlay                                APF300D

Overlay name      MYDEMO_____

Overlay text      InterForm 400 Demo Overlay_____
Line spacing      _40      in 1/240 of an inch (1-720)
Rotation          000      (000 090 180 270)
Extra left margin positions  _8      (0-99)
Maximum number of print positions  378      (1-378)
Extra blank lines on top  _4      (0-99)
Font              _111      F4=List
Extended page def. N      (Y N)
Drawer            *PRINTER (*INPUT, *PRINTER 1-9, 20-39)

Paper Size        0      F4=List
Pages per side    _      (Y N)
Copy management   N      (Y N)
Duplex print      N      (N=no S=short edge margin L=long edge margin)
Duplex margin     _0      in 1/240 of an inch (1-720)
Back page overlay _____ Code for placement _ (B=back page F=front)

F3=Exit          F4=Prompt          F11>Delete this overlay          F12=Cancel
  
```

We have now made a copy of the overlay IF400DEMO from file-set SAMPLE and stored it by the name MYDEMO in file-set TEST.

Step 2. Make a Test Print of the Overlay+Spool Data

Before we start changing things we will make a printout of the overlay so we know what we have to begin with.

We press **F3** to exit to the **main menu**

Enter menu **3. Merge spool entry with overlay:**

```

                                Merge Spooled File with Overlay                                APF730D
Overlay name                     MYDEMO_____
or Overlay Selector              _____
Primary/Secondary set           _             1=Primary  2=Secondary
Spooled file:
  Job name                       _____
  User                           _____
  Job number                     _____
  File name                      _____
  Spool file no.                 _____      Number, *ONLY, *LAST
Code page                       _____      Number, *INPUT
Merge overprint lines           *NO_          *NO, *YES
Form type                       *STD
Copies                           __1        (1-255)
Drawer / Papertype              *PRINTER      (*PRINTER, *INPUT, *OVERLAY, 1-256, Name)

Name of output queue to search if spooled file is unknown:

  Output queue . . . . . AFC_INPUT1
  Library . . . . .   APF3812_____

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

MYDEMO is already filled in because it was the last overlay active in the design menu.

Now go to the lower part of the screen and fill in queue **AFC_INPUT1** and library **APF3812**. In the **Getting Started** section page 30 we created a DEMO spool entry. This is still placed in the queue with the description **PRTCTL**. If you can't find the spool entry, you can create it using option **1. Create demo spool entry** (see page **337**)

We press **Enter** to look at entries in queue AFC_INPUT1:

```

Work with Output Queue

Queue: AFC_INPUT1      Library: APF3812

Type option, Press Enter.
  1=Select 2=Change 3=Hold 4=Delete 5=Display 6=Release 8=Attributes

Opt  File          User          User Data  Sts  Pages  Copies  Form Type  Pty
  1  QPRINT        PETER          PRTCTL    HLD      2      1    DEMO      5

Parameters for option 2
===>_____
F3=Exit  F11=View 2  F12=Cancel  F21=Description  F24=More keys

```

We select the file with option **1** and press **Enter**

```

Merge Spooled File with Overlay
APF730D

Overlay name          MYDEMO____
or Overlay Selector   _____
Primary/Secondary set _  1=Primary, 2=Secondary
Spooled file:
  Job name            DSP010700_
  User                PETER_____
  Job number          073534
  File name           QPRINT_____
  Spool file no.      0005          Number, *ONLY. *LAST)
Codepage              _____      Number, *INPUT)
Form type             *STD_____
Copies                _1          (1-99)
Drawer                *PRINTER    (*PRINTER *OVERLAY 1 2 3 4 5 6)

Name of output queue to search if spooled file is unknown:

Output queue . . . . _____
Library . . . . . _____

F3=Exit              F4=Prompt              F12=Cancel

```

We notice that all the spool file attributes have now been inserted.

We can now press **Enter** to print the Overlay MYDEMO merged with this spool entry and we will automatically be returned to the **main menu**.

Compare your print out with page **32**. In the next sections we will start to re-design the overlay.

☺ **TIP** ☺

*If you select option **3. merge spool entry with overlay** again later you will notice that the overlay name and the spool file attributes are remembered. That means we do not need to select the spool file again for successive printout, as long as you do not leave the InterForm400® menus..*

☺ **TIP** ☺

*An alternativ to printing the overlay is to use the function **F14 PCL-View** in the overlay design window. This will allow you to verify the changes you make on the screen, instead of printing them. The overlay and spool file attributes which you defined in this*

section are remembered, which means you do not need to select **F13** in the overlay to set these attributes for PCL viewing. Refer to **Appendix L - PCL Viewing**

☹ TROUBLE SHOOTING ☹

No printout? select option **10** to view your output queue. Are there any messages ?. Is the queue **AFC_OUT1** still attached to your printer writer ?

Step 3. Entering the Design Window

Now we will enter menu **1. Design overlay** again. **MYDEMO** is still remembered and we press **Enter** until we get the design window:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo
Seqnbr. Type  Overlay definition
0001  I      Image DEMOIMAGE Top 01,100 Left 04,180
0002  8      Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9      Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1      Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9      Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2      Horizontal top 10,120 left 00,200 right 07,120
0007  5      Text T10,160 L01,200 000° Font9902 Intermate A/S Kongev

Seqnbr. Type
-----

F3=Exit          F5=Service          F12=Cancel
```

Here we have a list of the overlay elements we copied from the original IF400DEMO overlay.

Step 4. Printing the Overlay Definition List

Print out a list of the definitions by pressing **F5**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0001  I      Image DEMOIMAGE Top 01,100 Left 04,180
0002  8      Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9      Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1      Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9      Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2      Horizontal top 10,120 left 00,200 right 07,120
0007  5      Text T10,160 L01,200 000° Font9902 Intermate A/S Konge

Select one of the following options:
1. Move the placement on the page
2. Move definitions to another sequence number.
3. Copy definition into this overlay
4. Delete lines
5. Resequencing
6. Print overlay definition
Option:  _
```

We select option **6**. And press **Enter** and the definitions are being printed.

Step 5. Adding Round Corners to the Address Field

The first thing we want to do with our overlay is to make round corners on the address field frame This frame has sequence line number **4**.

We type **4** in the option field and press **Field Exit** (as it is a numeric field). The screen will then show all the available overlay element types.

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0001  I      Image DEMOIMAGE Top 01,100 Left 04,180
0002  8      Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9      Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1      Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9      Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2      Horizontal top 10,120 left 00,200 right 07,120
0007  5      Text T10,160 L01,200 000° Font9902 Intermate A/S Konge

Seqnbr. Type  Page control
  4,0  1      1 = Frame                2 = Horizontal          BLANK = all pages
        3 = Vertical                4 = Line                1 = first page only
        5 = Text                    6 = Page number        2 = page 2 and succ.
        7 = Ink                      8 = Tabulator          9 = last page only
        9 = Remap window            I = Image
        ? = If .. then              F = PCL-file
        G = HP-GL/2 file            S = Sub-overlay
        * = Comment

F3=Exit                                F18=DSPSPFLF           F12=Cancel
```

The **Type** of sequence line 4 is already set to **1** equalling **Frame** and we press **Enter** to proceed into the actual values for the frame:

```

Design InterForm 400 overlay
APF300D

Overlay name: IF400DEMO      Overlay text: IF400DEMO

Seqnbr. Type Overlay definition
0001 I Image DEMOIMAGE Top 01,100 Left 04,180
0002 8 Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003 9 Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004 1 Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005 9 Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006 2 Horizontal top 10,120 left 00,200 right 07,120
0007 5 Text T10,160 L01,200 000° Font9902 Intermate A/S Konge

Seqnbr. Type Inch.pel Repetition
4,0 1 Frame Top edge _1,100 Move right _____
Left edge _0,200 Move down _____
Right edge _4,120 Extra times ____
Bottom edge _2,160
Thikness in pels __1 NW NE SW SE
Round/Sharp (R S) R Radius _ _ _ _
Pattern _ F4=List

F3=Exit F4=Prompt F11=Delete F12=Cancel
F13=Set view/print parameters F14=PCL-view F18=DSPSPLF F19=DSPPFM

```

Specify **R** for round corners, but leave the fields NW, NE, SW and SE blank. This means, that the systems default radius of **24** pels will be used for the corners.

We press **Enter**, to save the changes for line **4**.

☺ **TIP** ☺
*Keeping a second terminal session open with the InterForm400® main menu, will enable you to access **2. Test print overlay** or **3. Merge spool file with overlay** quickly, without having to leave the design window.*

Step 6. Edit Subject Text

Now we will change the appearance of the subject header text (Re. Your new...). We therefore type **8** and press **Field Exit** in order to add our first new sequence line. As we want the text to remain in the same vertical position, we can use a Tabulator command to adjust the text and change the font. We chose **type 8** to select a tabulator:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type Overlay definition
0001  I Image DEMOIMAGE Top 01,100 Left 04,180
0002  8 Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9 Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1 Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9 Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2 Horizontal top 10,120 left 00,200 right 07,120
0007  5 Text T10,160 L01,200 000° Font9902 Intermate A/S Kongev

Seqnbr. Type
  8,0  8  Tabulator
          Input:   Line      ___ - ___
          Position  ___ - ___
          Print:   From left edge  ___ Adjustment _ (U L C R N +)
          Font     ___      F4=List
          Condition: Position    ___ - ___
          Is > = < N  - _____
          Blank after  _ B = Blank condition after

F3=Exit      F4=Prompt      F18=DSPSPLF      F12=Cancel
```

In order to determine which lines should be formatted by the tabulator we press **F18** to display our spool entry. This is actually just a shortcut to the command DSPSPLF, but the entries to the command is automatically fetched from the values we saw in the screen **3**. **Merge spool entry with overlay.**

☹ TROUBLE SHOOTING ☹

*If pressing **F14**, **F16** or **F18** has no effect it means no spool attributes is available in the window we filled in on page **80**. The reason could be, that you have performed that step in another terminal session. Either define these attributes with **F13** in the screen with the overlay global settings or exit this screen and print once using **3. Merge spool entry with overlay** and re-enter the above screen, or alternatively display the spool file in another session by entering the queue and selecting option **5=display**.*

```

                                DISPLAY OUTPUT FILE

File . . . . . : QPRINT                                Page/Line 1/3
Function . . . . :                                     Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
                                                                1

Herring Marine Research
Seaweed Street 14
9000 Battleaxe
DK-Denmark
-----
Att: Martin Merman
                                                                1004/PH.30-04-97

Re. Your new MateSert/400 driver.
-----
Congratulations with your new MateSert/400 driver.
You are now able to fully exploit the features of your Inserter
in relation to your AS/400 applications. In fact this letter has
been printed and inserted by MateSert/400.
The following license code(s) will be needed to activate the driver
permanently to your AS/400 CPU(s):
                                                                END
F3=Exit      F12=Cancel      F19=Left      F20=Right      F24=More keys

```

In the upper right corner we see that the first print line starts in line **3**.

```

                                DISPLAY OUTPUT FILE

File . . . . . : QPRINT                                Page/Line 1/15
Function . . . . : +1                                  Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Re. Your new MateSert/400 driver.
-----
Congratulations with your new MateSert/400 driver.
You are now able to fully exploit the features of your Inserter
in relation to your AS/400 applications. In fact this letter has
been printed and inserted by MateSert/400.
The following license code(s) will be needed to activate the driver
permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.      No. of dev.      License Code
-----
F45         -                44A2971         1                81 20 01 3A
320         -                44A9032         3                3F 78 66 99
Should you have any questions regarding the driver, you are welcome
to call our technical support hotline on:
+45 72 26 04 00
Or download the latest documentation from the Internet on:
                                                                END
F3=Exit      F12=Cancel      F19=Left      F20=Right      F24=More keys

```

Blank lines will not be displayed in a spool file. Therefore we must type **+1** in the function field and press **Enter** until the subject header line (Re. Your new...) is located just below the ruler. (If you pressed Enter one to many, just correct **+1** to **-1** and press **Enter** to move in the opposite direction.)

In the upper right corner we now see that the line number for the subject header is **15**. The ruler shows us that the text starts in position **8** and ends in position **40**.

```

Design InterForm 400 overlay
APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0001  I      Image DEMOIMAGE Top 01,100 Left 04,180
0002  8      Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9      Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1      Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9      Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2      Horizontal top 10,120 left 00,200 right 07,120
0007  5      Text T10,160 L01,200 000° Font9902 Intermate A/S Kongev

Seqnbr. Type
  8,0  8      Tabulator
           Input:   Line      _15 - _15
                    Position  __8 - _70
           Print:   From left edge ____4 Adjustment C (U L C R N B +)
                    Font      9906      F4=List
           Condition: Position  ___ - ___
                    Is > = < N  - _____
                    Blank after  _ B = Blank condition after

F3=Exit      F4=Prompt      F18=DSPSPLF      F12=Cancel

```

As we can not be sure the subject header will not exceed position 40 we define a safety margin by including characters up to position **70**. We define that the text should be centered around the middle of the page by defining **4** inches for the horizontal position and **C** for adjustment.

We select from the font list (F4) a 18 point Univers font for the text.

We press **Enter** to save sequence line **8**.

Step 7. Formatting the body text

We now want to format the body text to print centered with a proportional spaced font. We use the same procedure as in the previous section, and we therefore type **9** to create a new sequence line and we press **Field exit** followed by type **8** to create a new tabulator:

```

Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type Overlay definition
0001  I Image DEMOIMAGE Top 01,100 Left 04,180
0002  8 Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9 Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1 Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9 Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2 Horizontal top 10,120 left 00,200 right 07,120
0007  5 Text T10,160 L01,200 000° Font9902 Intermate A/S Kongev
0008  8 Tabulator lin.015-015 pos 08-070 left 4,000C font 9907
Seqnbr. Type
  9,0  8 Tabulator
        Input:      Line          _18 - _26
                   Position       __8 - _80
        Print:      From left edge _____4 Adjustment C (U L C R N B +)
                   Font           9903      F4=List
        Condition: Position        ___ - ___
                   Is > = < N      - _____
                   Blank after     - B = Blank condition after
F3=Exit      F4=Prompt      F18=DSPSPLF      F12=Cancel

```

Again we define a safety margin by stating **80** for maximum position. We select a 10 point Univers font for the text.

We use **F18** to find the line interval for the upper part of the body text (Congratulations...) And we format the text with a 10 point Univers font from the font list.

We press **Enter** to save sequence line **9** and type **10** followed by **Field exit** and **8** to create the next tabulator for the lower part of the body text:

```

Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type Overlay definition
0009  8 Tabulator lin.043-055 pos 08-080 left 4,000C font 9903

Seqnbr. Type
 10,0  8 Tabulator
        Input:      Line          _43 - _55
                   Position       __8 - _80
        Print:      From left edge _____4 Adjustment C (U L C R N B +)
                   Font           9903      F4=List
        Condition: Position        ___ - ___
                   Is > = < N      - _____
                   Blank after     - B = Blank condition after
F3=Exit      F4=Prompt      F18=DSPSPLF      F12=Cancel

```

Again we use **F18** to find the line interval for the lower body text (Should you have..) And we format the text identical to sequence line 9.

Step 8. Making Equal Distance Between Column Headers

We now want to Format the column headers in the middle of the page (Model, P-Group...) in intervals of 1 inch. As we want to adjust the vertical position as well we will use the **Remap Window** command. We type **11** to create a new sequence line followed by **Field exit** and we select type **9**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0009      8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0010      8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903

Seqnbr. Type
11,0      9      Remap window  Input line    _28 - _28  Position __8 - _14
Print:      From upper edge 05,060  Line spacing . . _40
            From left edge 000002  Ignore blank lines  N (Y N)
            Adjustment      C          (U L R C N B E +)
            Rotation        000
            Font             9902      F4=List
            Blank original  _         B = blank original version
Condition:  Position       ___ - ___
            Is > = < N      -
            Blank after     -         B = Blank condition after
F3=Exit    F4=Prompt      F18=DSPSPLF      F12=Cancel
```

By using **F18** we find the column header "Model" to be in line **28** position **8** to **12**. However we state position **14** for safety reasons. **Line spacing** and **Ignore blank lines** are not important as we are operating with only one line. However a good working rule is always to set the line spacing to 6 lpi ($1/6" = 40/240" = 40$ pels).

Note that we are not blanking the original text as we might want to use the text later. Blanking of unwanted text is done as the last step in this exercise:

We press **Enter** to save and proceed with column header "P-Group". We type **12** to create a new sequence line followed by **Field exit** and **9**:

```
Seqnbr. Type
12,0      9      Remap window  Input line    _28 - _28  Position _15 - _25
Print:      From upper edge 05,060  Line spacing . . _40
            From left edge 000003  Ignore blank lines  N (Y N)
            Adjustment      C          (U L R C N B E +)
            Rotation        000
            Font             9902      F4=List
            Blank original  _         B = blank original version
Condition:  Position       ___ - ___
            Is > = < N      -
            Blank after     -         B = Blank condition after
F3=Exit    F4=Prompt      F18=DSPSPLF      F12=Cancel
```

We press **Enter** to save and proceed with column header "Serial No.". We type **13** to create a new sequence line followed by **Field exit** and **9**:


```

Seqnbr. Type
  13,0  9  Remap window  Input line   _28 - _28  Position _26 - _39
          Print:         From upper edge 05,060 Line spacing . . _40
                          From left edge 000004 Ignore blank lines  N (Y N)
                          Adjustment      C          (U L R C N B E +)
                          Rotation        000
                          Font             9902      F4=List
                          Blank original  _         B = blank original version
          Condition: Position  ___ - ___
                          Is > = < N     -
                          Blank after    _         B = Blank condition after
F3=Exit  F4=Prompt  F18=DSPSPLF  F12=Cancel

```

We press **Enter** to save and proceed with column header “No. of dev”. We type **14** to create a new sequence line followed by **Field exit** and **9**:

```

Seqnbr. Type
  14,0  9  Remap window  Input line   _28 - _28  Position _40 - _53
          Print:         From upper edge 05,060 Line spacing . . _40
                          From left edge 000005 Ignore blank lines  N (Y N)
                          Adjustment      C          (U L R C N B E +)
                          Rotation        000
                          Font             9902      F4=List
                          Blank original  _         B = blank original version
          Condition: Position  ___ - ___
                          Is > = < N     -
                          Blank after    _         B = Blank condition after
F3=Exit  F4=Prompt  F18=DSPSPLF  F12=Cancel

```

We press **Enter** to save and proceed with column header “License Code”. We type **15** to create a new sequence line followed by **Field exit** and **9**:

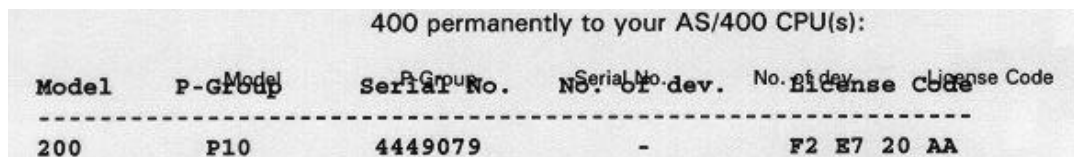
```

Seqnbr. Type
  15,0  9  Remap window  Input line   _28 - _28  Position _54 - _70
          Print:         From upper edge 05,060 Line spacing . . _40
                          From left edge 000006 Ignore blank lines  N (Y N)
                          Adjustment      C          (U L R C N B E +)
                          Rotation        000
                          Font             9902      F4=List
                          Blank original  _         B = blank original version
          Condition: Position  ___ - ___
                          Is > = < N     -
                          Blank after    _         B = Blank condition
afterF3=Exit  F4=Prompt  F18=DSPSPLF  F12=Cancel

```

We press **Enter** to save sequence line 15.

If you made a test print of the overlay or a PCL view with F14 at this stage you will discover that both the original text and the remapped text is printed (as illustrated below). This is just a temporary issue and is dealt with in step 17.



Step 9. Making Equal Distance between Item Line Columns

We now want to perform the same actions for the item-line columns below the dotted line. As the horizontal positions of the item line columns are identical to the column headers, we can copy the sequence lines 11 to 15 and just correct the vertical position (from upper edge) and the input line numbers.

We select **F5** for service functions and select **3. Copy definitions into this overlay**:

```

Design InterForm 400 overlay                                APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0009   8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0010   8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0011   9      Remap window 28-028 pos 08-014 top 5,060 left 2,000 C
0012   9      Remap window 28-028 pos 15-025 top 5,060 left 3,000 C
0013   9      Remap window 28-028 pos 26-039 top 5,060 left 4,000 C
0014   9      Remap window 28-028 pos 40-053 top 5,060 left 5,000 C
0015   9      Remap window 28-028 pos 54-070 top 5,060 left 6,000 C

In this function you can copy lines into this overlay definition.

Overlay to be copied from . . . . . _____ blank = this overlay
Sequence numbers from/to to be copied . . 0011_ - 0015_
Inserted at sequence number . . . . . 16___

F4 = overview overlays
F24 = shift to look at FROM-overlay

```

We define the copies of line 11 to 15 to be inserted from sequence line 16 and onwards.

By using **F18** we find the item lines to range from line **30** and onwards. We estimate the last possible item line to be in the line just before the lower part of the body text, i.e. line **42**:

We enter each sequence line from **16** to **20** and correct the line interval to **30-42**, but leave all other values untouched:

```

Seqnbr. Type
16,0   9      Remap window  Input line    _30 - _42  Position __8 - _14
          Print:      From upper edge 05,060  Line spacing . . _40
          From left edge 000002  Ignore blank lines  N (Y N)
          Adjustment    C          (U L R C N B E +)
          Rotation      000
          Font          9902      F4=List
          Blank original _          B = blank original version
          Condition:   Position    ___ - ___
          Is > = < N   _
          Blank after  _          B = Blank condition after
F3=Exit  F4=Prompt      F18=DSPSPFLF      F12=Cancel

```

```

Seqnbr. Type
 17,0  9  Remap window  Input line   _30 - _42  Position _15 - _25
      Print:      From upper edge 05,060  Line spacing . . _40
                  From left edge 000003  Ignore blank lines  N (Y N)
                  Adjustment      C          (U L R C N B E +)
                  Rotation         000
                  Font             9902      F4=List
                  Blank original   _        B = blank original version
      Condition: Position         ___ - ___
                  Is > = < N      - _____
                  Blank after     _        B = Blank condition after
F3=Exit  F4=Prompt      F18=DSPSPFLF      F12=Cancel

```

```

Seqnbr. Type
 18,0  9  Remap window  Input line   _30 - _42  Position _26 - _39
      Print:      From upper edge 05,060  Line spacing . . _40
                  From left edge 000004  Ignore blank lines  N (Y N)
                  Adjustment      C          (U L R C N B E +)
                  Rotation         000
                  Font             9902      F4=List
                  Blank original   _        B = blank original version
      Condition: Position         ___ - ___
                  Is > = < N      - _____
                  Blank after     _        B = Blank condition after
F3=Exit  F4=Prompt      F18=DSPSPFLF      F12=Cancel

```

```

Seqnbr. Type
 19,0  9  Remap window  Input line   _30 - _42  Position _40 - _53
      Print:      From upper edge 05,060  Line spacing . . _40
                  From left edge 000005  Ignore blank lines  N (Y N)
                  Adjustment      C          (U L R C N B E +)
                  Rotation         000
                  Font             9902      F4=List
                  Blank original   _        B = blank original version
      Condition: Position         ___ - ___
                  Is > = < N      - _____
                  Blank after     _        B = Blank condition after
F3=Exit  F4=Prompt      F18=DSPSPFLF      F12=Cancel

```

```

Seqnbr. Type
 20,0  9  Remap window  Input line   _30 - _42  Position _54 - _70
      Print:      From upper edge 05,060  Line spacing . . _40
                  From left edge 000006  Ignore blank lines  N (Y N)
                  Adjustment      C          (U L R C N B E +)
                  Rotation         000
                  Font             9902      F4=List
                  Blank original   _        B = blank original version
      Condition: Position         ___ - ___
                  Is > = < N      - _____
                  Blank after     _        B = Blank condition after
F3=Exit  F4=Prompt      F18=DSPSPFLF      F12=Cancel

```

The vertical position (from the upper edge) of sequence line 16 to 20 are currently identical to the column headers in sequence line 11 to 15, but the item columns are supposed to start 1 line lower than the column headers.

We could now edit each line from 16 to 20 and correct that. However, instead we use the service function to adjust the vertical positioning of the entire range of lines from 16 to 20:

We press **F5** and we select option **1. Move the placement on the page:**

```

Design InterForm 400 overlay
APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0017  9  Remap window 30-042 pos 15-025 top 5,060 left 3,000 C
0018  9  Remap window 30-042 pos 26-039 top 5,060 left 4,000 C
0019  9  Remap window 30-042 pos 40-053 top 5,060 left 5,000 C
0020  9  Remap window 38-042 pos 54-070 top 5,060 left 6,000 C

In this function you can move the overlay up/down or left/rigth on the page.

Line interval to be moved . . . . . : 0016_ - 0020_

Distance to move:
- to the right +/- _____
- downwards    +/- 0,040__

```

1 line at 6 lpi is 1/6" equaling 40 pels (40/240") meaning our vertical movement should be 0,040. When we press **Enter** we discover that the top position of the entire range changes from 5,060 to 5,100.

Step 10. Defining the Column Headers White on Black

Now we would like to make the column headers appear with white text on a black background.

First we will need to define a black box, which is created as a frame with black filling. It is very important that the frame is defined in a sequence line before the text in order to place it as a background for the text.

We therefore insert a line before line 11 which is the remapping of the column header "Model".

Insertion between line 10 and 11 is done by typing the sequence line number 10,1 followed by **Field Exit**:

```

Design InterForm 400 overlay
APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0009  8  Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0010  8  Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0011  9  Remap window 28-028 pos 08-014 top 5,060 left 2,000 C
0012  9  Remap window 28-028 pos 15-025 top 5,060 left 3,000 C
0013  9  Remap window 28-028 pos 26-039 top 5,060 left 4,000 C
0014  9  Remap window 28-028 pos 40-053 top 5,060 left 5,000 C
0015  9  Remap window 28-028 pos 54-070 top 5,060 left 6,000 C
0016  9  Remap window 28-028 pos 08-014 top 5,100 left 2,000 C      +
Seqnbr. Type  Inch.pel  Repetition
10,1  1  Frame      Top edge    05,030  Move right  _____
      Left edge  01,120  Move down  _____
      Right edge  06,116  Extra times  ____
      Bottom edge  05,068
      Thikness in pels  001  NW NE SW SE
      Round/Sharp (R S)  S  Radius  _ _ _ _
      Fill pattern  8 F4=List

F3=Exit      F18=DSPSPFLF      F12=Cancel

```

We use our ruler to find proper coordinates for our frame (see page ? on how to print a ruler).

We prepare the values for the edges to match the formatting we will make for the item lines later. This step usually requires some test printing in order to find the exact values unless very exact calculations are performed.

We enter **8** as fill pattern for our frame, which is a black pattern (see patterns, page ?).

We press enter and our line is given sequence number **11**.

We will now have to change the text color (ink) for the column headers to white. The sequence lines defining the column headers have now changed to the interval **12 to 16** due to the insertion of the frame.

We insert a change of Ink after the black box and before the first column header (Remap Windows) by selecting sequence line **11,1**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: IF400DEMO      Overlay text: IF400DEMO

Overlay name: MYDEMO        Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0009   8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0010   8      Tabulator lin.043-055 pos 08-080 left 4,000C font 9903
0011   1      Frame top 05,030 left 01,120 right 06,116 bottom 05,068
0012   9      Remap window 28-028 pos 08-014 top 5,060 left 2,000 C
0013   9      Remap window 28-028 pos 15-025 top 5,060 left 3,000 C
0014   9      Remap window 28-028 pos 26-039 top 5,060 left 4,000 C
0015   9      Remap window 28-028 pos 40-053 top 5,060 left 5,000 C
0016   9      Remap window 28-028 pos 54-070 top 5,060 left 6,000 C      +
Seqnbr. Type
 11,1   7      Ink

                Select ink for the succeeding lines
                Pattern          0      blank = unchanged,
                0 = 100% white shading,
                1-8 = 1-100% shading, ...

F3=Exit                F18=DSPSPFL                F12=Cancel
```

We fill in **0** as pattern press **Enter** to save our new line **12**

In order not to have the rest of the text in the overlay printed in white, we will have to change the ink back to black after the last column header, which now has sequence number 17.

We insert a line after line 17 by entering **17,1**:

```

Design InterForm 400 overlay
APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0017  9  Remap window 28-028 pos 54-070 top 5,060 left 6,000 C
0018  9  Remap window 30-042 pos 08-014 top 5,100 left 2,000 C
0019  9  Remap window 30-042 pos 15-025 top 5,100 left 3,000 C
0020  9  Remap window 30-042 pos 26-039 top 5,100 left 4,000 C
0021  9  Remap window 30-042 pos 40-053 top 5,100 left 5,000 C
0022  9  Remap window 30-042 pos 54-070 top 5,100 left 6,000 C

Seqnbr. Type
 17,1  7  Ink

                Select ink for the succeeding lines
                Pattern          8  blank = unchanged,
                                0 = 100% white shading,
                                1-8 = 1-100% shading, ...

F3=Exit          F18=DSPSPLF          F12=Cancel

```

We enter **8** for 100% shading (Black), which will ensure that the following sequence lines will be visible. We press **Enter** to save our new sequence line **18**.

Step 11. Defining the Item Line Bars

We would now like to exploit the Repetition and Pattern options in the overlay element Frame to make shaded horizontal “bars” to provide a better appearance of the item lines.

We place this definition before the first remapping of an item column. The item column “Model” now has sequence line 19. We therefore enter sequence line **18,1**:

```

Design InterForm 400 overlay
APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0017  9  Remap window 28-028 pos 54-070 top 5,060 left 6,000 C
0018  7  Ink  Foreground = BLACK      Background = UNALTERED
0019  9  Remap window 30-042 pos 08-014 top 5,100 left 2,000 C
0020  9  Remap window 30-042 pos 15-025 top 5,100 left 3,000 C
0021  9  Remap window 30-042 pos 26-039 top 5,100 left 4,000 C
0022  9  Remap window 30-042 pos 40-053 top 5,100 left 5,000 C
0023  9  Remap window 30-042 pos 54-070 top 5,100 left 6,000 C

Seqnbr. Type  Frame      Top edge      Inch.pel      Repetition
 18,1  1  Frame      Top edge      05,110      Move right
                Left edge      01,120      Move down    0,080
                Right edge     06,116      Extra times  5
                Bottom edge     05,150
                Thickness in pels  000      NW NE SW SE
                Round/Sharp (R S)  S Radius  _ _ _ _
                Fill pattern      B F4=List

F3=Exit          F18=DSPSPLF          F12=Cancel

```

We want the shaded frames to be 1/6" thick with a distance of 1/6" between.

First we must find out where to place the first frame. We want to place our first frame behind every second item line starting with item line number two. This means 0,175" (240x0,175 = 42 pels) lower than the black frame. We see that the black frame (sequence

line 11) ends 5,068 from the top. We add 42 pels to 5,068 and get **5,110**.

We state the same values for left and right edge as the black frame, and define the thickness of our frame to be 1/6" (40/240") by adding 40 to the top edge.

We do not want a border only a raster filling, and therefore we leave this blank. But we will have a light shading and we enter the value **B** which is a light 600dpi pattern.

For the repeated frames we must first state the distance from the top of the first frame to the top of the next frame. We want to place a frame behind every second item line and as the frame is 1/6" (40 pels) thick in the vertical direction and we want 1/6" inch between the frames, we must add these two values. This gives us 40+40 = **80** pels.

We want 6 frames total which means we should repeat the frame **5** extra times.

We press **Enter** to save our new sequence line **19**.

Step 12. Defining the 5 Item Coloumn Frames

We now want to define some frames to divide the item lines columns in the spool entry:

We want to place the definition just after the previous definition of the raster frames, and we enter **19,1** for inserting an overlay element before sequence line 20:

Seqnbr.	Type	Overlay definition	Inch.pel	Repetition
0017	9	Remap window 28-028 pos 54-070	top 5,060 left 6,000 C	
0018	7	Ink	Foreground = BLACK Background = UNALTERED	
0019	1	Frame	top 05,110 left 01,120 right 06,116 bottom 05,150	
0020	9	Remap window 30-042 pos 08-014	top 5,100 left 2,000 C	
0021	9	Remap window 30-042 pos 15-025	top 5,100 left 3,000 C	
0022	9	Remap window 30-042 pos 26-039	top 5,100 left 4,000 C	
0023	9	Remap window 30-042 pos 40-053	top 5,100 left 5,000 C	
0024	9	Remap window 30-042 pos 54-070	top 5,100 left 6,000 C	
19,1	1	Frame	Top edge 05,072 Left edge 01,120 Right edge 02,116 Bottom edge 07,120 Thikness in pels 001 Round/Sharp (R S) S Fill pattern _ F4=List	Move right <u> </u> 1 Move down <u> </u> Extra times <u> </u> 4 NW NE SW SE Radius <u> </u> <u> </u> <u> </u> <u> </u>

F3=Exit F18=DSPSPFL F12=Cancel

The line should start just below the black frame defined in sequence line 11.

We add 4 pels to the bottom of the black frame and we get **5,072** for the top of the item line frame.

We set the left edge equal to the black frame (1,120) and we set the right edge 1 inch higher minus a few pels (1,120-0,004=1,116). This will give a small space between each column frame.

We measure the bottom edge to be around 7½" (**7,120**).

As we have precisely 1 inch between each column we can move right **1** inch and repeat **4** times to get 5 identical columns.

We press **Enter** to save our new sequence line **20**.

Step 13. Defining the logo as a water mark

Instead of a signature we want to place the logo as a watermark in the bottom of the page.

For this we use the logo already used in the top of the overlay, but manipulate it to work as a watermark. We intend to do the following compared to the original logo (see page **32**):

- Reverse it.
- Scale it to double size
- Grayscale it

We define the sequence line for the logo just after the other logo by entering sequence line **1,1**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0001  I      Image DEMOIMAGE Top 01,100 Left 04,180
0002  8      Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0003  9      Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0004  1      Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0005  9      Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0006  2      Horizontal top 10,120 left 00,200 right 07,120
0007  5      Text T10,160 L01,200 000° Font9902 Intermate A/S Kongev
0008  8      Tabulator lin.015-015 pos 08-070 left 4,000C font 9907 +
Seqnbr. Type  Inch.pel
  1,1  I      Image      From top edge  09,100
                        From left      02,120
                        Image name    DEMOIMAGE_
                        Reverse Image  R      R = Reverse Image
                        Resolution    150    75,100,150,200,300,600

F3=Exit      F4=Prompt      F18=DSPSPFLF      F12=Cancel
```

We position the logo where a signature would usually be placed, namely in the bottom of the page.

We select the same image file as used for the top logo.

We state **R** to reverse the image, and we press **Enter** to save the corrections to the new sequence line **2**.

The logo is created for printing in 300 dpi, so in order to scale to double size we simply define the resolution to be **150** dpi, that means we simply get twice as much space between every dot in the image.

The logo now needs to be dimmed in order to appear as a watermark. For this we change the ink of the image. This is the same procedure we used for printing the column headers white on black.

We insert a sequence line just before the image by entering line **1,1**, and we select 7 for Ink:


```

Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type Overlay definition
0001  I  Image DEMOIMAGE Top 01,100 Left 04,180
0002  I  Image DEMOIMAGE Top 09,100 Left 02,120
0003  8  Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0004  9  Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0005  1  Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0006  9  Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0007  2  Horizontal top 10,120 left 00,200 right 07,120
0008  5  Text T10,160 L01,200 000° Font9902 Intermate A/S Kong +
Seqnbr. Type
  1,1  7  Ink

                Select ink for the succeeding lines
                Pattern          C  blank = unchanged,
                                   0 = 100% white shading,
                                   1-8 = 1-100% shading, ...

F3=Exit      F4=Prompt      F18=DSPSPFL      F12=Cancel

```

We select **C** for pattern which is a medium shading.

We press **Enter** to save the new line **2**.

As usual we will need to set the Ink back to default just after the logo.

we enter **3,1** and select 7 for Ink:

```

Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type Overlay definition
0001  I  Image DEMOIMAGE Top 01,100 Left 04,180
0002  7  Ink   Foreground =          Background = UNALTERED
0003  I  Image DEMOIMAGE Top 09,100 Left 02,120
0004  8  Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0005  9  Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0006  1  Frame top 01,100 left 00,200 right 04,120 bottom 02,160
0007  9  Remap window 13-013 pos 57-072 top 1,220 left 5,200 C
0008  2  Horizontal top 10,120 left 00,200 right 07,120          +
Seqnbr. Type
  3,1  7  Ink

                Select ink for the succeeding lines
                Pattern          8  blank = unchanged,
                                   0 = 100% white shading,
                                   1-8 = 1-100% shading, ...

F3=Exit      F4=Prompt      F18=DSPSPFL      F12=Cancel

```

We enter **8** for 100% shading (Black) and we press **Enter** to save our new line **4**.

Step 14. Defining the Copy Management

We will now add the text COPY on "page two" copies only. To do this we will first have to enable and configure the **copy management**.

We press **F12** to exit to the global settings.

```

Design InterForm 400 overlay                                APF300D

Overlay name          IF400DEMO

Overlay text          _____

Line spacing          040___   in 1/240 of an inch (*INPUT, 1-720)
Rotation              000___   (*INPUT, 0, 90, 180, 270)
Extra left margin    _0       (0-99)
      positions
Maximum number of    378       (1-378)
  print positions
Extra blank lines    _0       (0-99)
  on top
Font                 0066_    *INPUT, fontnumber      F4=List
Extended page def.   N        (Y N)
Drawer               *PRINTER (*INPUT, *PRINTER 1-9, 20-39)
Paper Size           0        F4=List
Pages per side       _
Copy management      Y        (Y N)
Duplex print         N        (N=no S=short edge margin L=long edge margin)
Duplex margin        ___0     in 1/240 of an inch (1-720)
Back page overlay    _____ Code for placement _ (B=back page F=front)

F3=Exit      F4=Prompt      F11=Delete this overlay      F12=Cancel
F13=Set view/print parameters  F14=PCL-view
  
```

We state **Y** for **Copy Management** in order to be able to let our overlay control the number of copies and the overlay elements which should be used on each copy. (refer to page 46)

By pressing enter we get the screen for definition of **Copy Management**:

```

                Design InterForm 400 overlay                                APF300D

Overlay name: MYDEMO      Overlay text: Mydemo overlay

Number of copies of each page

  Primary set . . . . . 2_____ *VAR, 1-9
  Secondary set . . . . . 1_____ *VAR. 1-9

F3=Exit                                                    F12=Cancel
  
```

Here we fill in **2** copies for the **Primary Set** which means we would like two pages generated from each page in the source spool entry. Note that the number of copies entered here include the original. (refer to page 46 For detailed info on **Primary Set**)

We will not use the **Secondary set** so we just enter **1**. (refer to page 46)

We now press **Enter** to fill in the drawers.

```

Copy      Primary  Secondary
  1      _____ 1 _____ 1
  2      _____ 4
Valid drawers
1-255
valid paper types:
F4=List

Do you want stapling . . Y/N      N

F3=Exit                                F12=Cancel
F13=Set view/print parameters      F14=PCL-view      F18=DSPSPFLF      F19=DSPPFM

```

We define that the originals (copy one) should be taken from drawer 1, and copies from drawer 2 (Note that we are inserting the PCL value "4" as the second drawer. Refer to page 376 for more information on how to select drawers). We can later in the design window specify for each forms element (boxes, lines, images etc.) if it should be used for the original, the copy or both. (see **Copy Management** page 53)

We will not use the secondary set in this exercise so we just fill in 1 in the remaining field.

We will not use stapling in this exercise, so we fill in N in this field.

When we press **Enter** we re-enter the design window.

Step 15. Defining the COPY Symbol as Watermark

The intention of the copy sign is to place this information as a watermark in the address field. We can therefore place the definition between the two Ink changes we made for the logo watermark, and thereby exploit the same raster pattern definition.

We create a new sequence line 3,1 between the two Ink changes :

```

Design InterForm 400 overlay                                APF300D

Overlay name: MYDEMO      Overlay text: Mydemo

Seqnbr. Type  Overlay definition
0001  I  Image  DEMOIMAGE Top 01,100 Left 04,180
0002  7  Ink   Foreground =          Background = UNALTERED
0003  I  Image  DEMOIMAGE Top 09,100 Left 02,040
0004  7  Ink   Foreground = BLACK    Background = UNALTERED
0005  8  Tabulator lin.003-003 pos 72-072 left12,000L font 0011
0006  9  Remap window 06-011 pos 08-040 top 1,160 left 1,000 L
0007  1  Frame  top 01,100 left 00,200 right 04,120 bottom 02,160
0008  9  Remap window 13-013 pos 57-072 top 1,220 left 5,200 C      +
Seqnbr. Type                                     Copy management
  3,1  -  1 = Frame          2 = Horizontal          From To
        3 = Vertical        4 = Line          Primary 2 2
        5 = Text            6 = Page number  Secondary - -
        7 = Ink             8 = Tabulator
        9 = Remap window   I = Image
        ? = If .. then    F = PCL-file
        G = HP-GL/2 file  S = Sub-overlay
        * = Comment

F3=Exit                                F12=Cancel
F13=Set view/print parameters      F14=PCL-view      F18=DSPSPFLF      F19=DSPPFM

```

Before we enter a type we remember that this forms element should only be activated on the copy which means we will have to fill in Copy Management. By entering values for Primary set and not for Secondary set, we define that our copy management definitions apply to the Primary set only (see **Copy management** page 53)

We now proceed by entering type **5** for **Text**:

Seqnbr.	Type		Inch.	pel	
3,1	5	Text constant	From top edge	_2,120	
			From left	_1,120	
			Rotation	000	
			Font	7001	F4=List
			Text	COPY_____	
<hr/>					
<hr/>					
F3=Exit		F4=Prompt		F12=Cancel	

We place the text approximately in the middle of the address field. If you want to tilt the copy watermark you can define a rotation of 030, 120, 210 or 300 degrees.

For the font out line we can prompt the font list with **F4**. The largest font currently assigned to the system is font ID 2103 with point size 24 (see font list on page **383**).

We can now choose to use this font, or we can assign a new font ID a larger font.

If you feel comfortable enough with InterForm400® by now, you should try to assign the large font, Go to **80. Administration Menu** (either in this session by exiting with F3, or by using another session). Go to section **7. Work with fonts** and select **1. Description of additional fonts**. Now perform the steps described in the **Example of defining a resident Printer Font** on page **281**).

Afterwards we re-enter sequence line **4** in our overlay **MYDEMO**.

If you have chosen for now to use the existing 24 point font you should enter font ID 2103.

If you used the example on page 281 to create a 70 point font, you should enter font ID 7001.

The text is of course **COPY**.

We press **Enter** to save sequence line **4**.

Step 16. Defining the Relatively Positioned Sub-form

When looking through the demo spool entry some may wonder why the number "2" appear in the "No. of dev." column for InterForm400® license codes.

The customers might have had the same question, and we would therefore like to add a note next to these item lines explaining that this is a light version, and "2" means it is limited to two printers.

This is one of the more advanced features of the system, generally known as "nested overlays".

We will have to create a new simple overlay where we will define the text we want printed when "2" appears in this column.

We press **F3** to exit this overlay.

We re-enter 1. Design overlay and we create a new overlay with the name LIGHT:

Design InterForm 400 overlay		APF300D
Overlay name	LIGHT	
Overlay text	Sub-overlay for MYDEMO_____	
Line spacing	040___ in 1/240 of an inch (*INPUT, 1-720)	
Rotation	000___ (*INPUT, 0, 90, 180, 270)	
Extra left margin positions	_0 (0-99)	
Maximum number of print positions	378 (1-378)	
Extra blank lines on top	_0 (0-99)	
Font	0066_ *INPUT, fontnumber F4=List	
Extended page def.	N (Y N)	
Drawer	*PRINTER (*INPUT, *PRINTER 1-9, 20-39)	
Pages per side	___	
Paper Size	0 F4=List	
Copy management	N (Y N)	
Duplex print	N (N=no S=short edge margin L=long edge margin)	
Duplex margin	__0 in 1/240 of an inch (1-720)	
Back page overlay	_____ Code for placement _ (B=back page F=front)	
F3=Exit	F4=Prompt	F9=Copy from another overlay F12=Cancel
F13=Set view/print parameters	F14=PCL-view	

We keep these default settings as the main definitions of overlay MYDEMO will have higher priority.

We enter sequence line 1 and select 5 for text:

```

Design InterForm 400 overlay
APF300D

Overlay name: LIGHT      Sub overlay for MYDEMO

Seqnbr. Type  Overlay definition

Seqnbr. Type                               Inch.pel
  1,0   5   Text constant From top edge   _1,000
                               From left    _6,120
                               Rotation      000
                               Font         9903      F4=List
                               Text         (Light version)_____

F3=Exit      F4=Prompt      F18=DSPSPLF  F11=Delete  F12=Cancel

```

We prepare the text to be positioned horizontally just outside the last frame for the item columns (**6,120**).

The vertical position will be controlled by the position where "2" is found and is therefore not critical. We state **1** in order to have the text within the page borders if we decide to make a testprint of the sub overlay alone.

We press Enter to save line **1** and we exit the form by **F3**.

We now enter our overlay MYDEMO again, until we are in the design window with our sequence lines.

Before we create our if-then statement we must find out where to find the text value "2". We first take a look at the spool entry by **F18**:

```

DISPLAY OUTPUT FILE
File . . . . . : QPRINT                               Page/Line 1/30
Function . . . . +1                                  Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
F45      -      44A2971      1      81 20 01 3A
320      -      44A9032      3      3F 78 66 99
Should you have any questions regarding the driver, you are welcome
to call our technical support hotline on:
+45 72 26 04 00
Or download the latest documentation from the Internet on:
http://www.intermate.com
Regards
INTERMATE A/S
Florence Flowers
Tulip Road 16
4000 Marigold
DK-Denmark
-----
More...

F3=Exit  F12=Cancel  F19=Left  F20=Right  F24=More Keys

```

We do not need to find the specific page with the value "2". We know it will always appear in column **47** somewhere in the line interval **30** to **42**.

We create a new sequence line 30 and select ? to make an If-then statement:

Design InterForm 400 overlay		APF300D	
Overlay name: MYDEMO		Overlay text: MYDEMO	
Seqnbr.	Type	Overlay definition	
0025	9	Remap window 30-042 pos 08-014 top 5,100 left 2,000 C	
0026	9	Remap window 30-042 pos 15-025 top 5,100 left 3,000 C	
0027	9	Remap window 30-042 pos 26-039 top 5,100 left 4,000 C	
0028	9	Remap window 30-042 pos 40-053 top 5,100 left 5,000 C	
0029	9	Remap window 30-042 pos 54-070 top 5,100 left 6,000 C	
Seqnbr.	Type		
30,0	?	If	Input line 30 - 42
			Position 47 - 47
			Is > = < N = 2
		Then	Overlay LIGHT Nos. of lines to remap 00
			Upper edge 1,060 A/+/- -
			Left edge _____ A/+/- A
			Blank after B = blank original text
F3=Exit		F18=DSPSPLF	F12=Cancel

We can expect "2" to appear in any item line from **30** to **62**, which means this will be our interval, and we enter Position **47** to **47** as we only search for one character

We now state the operand "equal to" represented by a "=" sign.

We enter **LIGHT** as overlay name (or press F4 to select it from the list)

The vertical position should be relative to the item lines containing "2". It could seem we do not need to state any value as we want the text to be placed at the same vertical position as "2"

But, we remember that we defined the text in the sub-overlay LIGHT to start 1" down, which means we must move 1" up to level this out. Additionally we have moved the first line of the item columns 1/4" up with Remap Window commands (sequence lines 25 to 29) compared to the original position defined by the global settings of the overlay

We therefore need to adjust 1+0,25" totally in negative direction ($1+(0,25 \times 240) = 1,060$). By stating - (minus) in the field A/+/- we define the movement to be upwards relative to the found text (=2).

The left edge should be exactly as defined in the sub-overlay LIGHT. Therefore we just state **A** in the field A/+/- which means we use the **absolute** positioning of the sub-overlay.

We press **Enter** to save line 30.

Step 17. Cleaning the Overlay for Remaining Text

If you printed the overlay at this stage, you will discover that the original text used for re-mapping are still visible.

On purpose we have not used "B=Blank after" in the Remap Window commands, as we have not been sure that we would have needed the text for other purposes.

Instead we have waited to this moment, where we will clean all remaining text by a single command.

We define our last sequence line **31**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: MYDEMO          Overlay text: MYDEMO

Seqnbr. Type  Overlay definition
0025  9  Remap window 30-042 pos 08-014 top 5,100 left 2,000 C
0026  9  Remap window 30-042 pos 15-025 top 5,100 left 3,000 C
0027  9  Remap window 30-042 pos 26-039 top 5,100 left 4,000 C
0028  9  Remap window 30-042 pos 40-053 top 5,100 left 5,000 C
0029  9  Remap window 30-042 pos 54-070 top 5,100 left 6,000 C
0030  ?  If lin 030-042 pos 047-047 = 2                      Then LIGHT

Seqnbr. Type
31,0  8  Tabulator
      Input:  Line      ___1 - _80
           Position  ___1 - _70
      Print:  From left edge ___14 Adjustment L (U L C R N B +)
           Font      ___11      F4=List
      Condition: Position  ___ - ___
           Is > = < N  - _____
           Blank after  _ B = Blank condition after
F3=Exit      F4=Prompt      F18=DSPSPPLF      F12=Cancel
```

Here we define one large tabulator which operates on the area from line 1 to 70 and position 1 to 80. Anything which not already have been fomatted by **Tabulators** or **Remap Window** commands will now be moved **14** inches to the right. Moving text beyond the paper edge will cause InterForm400® to discard the text.

We press **Enter** to save our last sequence line.

Step 18. The Result

Now we print the overlay merged with the spool entry using **3. Merge Spool entry with overlay**.

If your printout looks like the illustration on the next page, and you understood what went on, you can consider yourself quite familiar with InterForm400®.

We have brought you through the heaviest kind of design you will experience with InterForm400®.

A vital feature of the system which we did not use, is import of PCL files made in graphical applications (e.g. Windows). The actual insertion of the PCL file is so simple that we decided to leave it out from this example. (more info on PCL files on page 70 and 325)

You will probably realize that even if you create your complete overlay in Word, PageMaker, JetForm or another graphical tool and import it into your overlay definition, you will have to make some formatting within InterForm400® regarding copies, re-mapping, conditional selections etc.

With this section our intention was to show you the potential of InterForm400® as a Forms Management System and we haven't even talked about the Auto Forms Control features yet. A similar example on Auto Forms Control features are made on page 155)

☹ TROUBLE SHOOTING ☹

Not the result as the following example?

Q Did you use a PCL5 compatible printer?

Q Are you sure all your entries was correct?.

A Try locating the overlay elements which went wrong and check the corresponding overlay definition.

☹ TROUBLE SHOOTING ☹

Everything looks fine but the horizontal bars are missing?

Q Did you use a HP4 or HP4D printer type?

A Your printer might not be fully supporting 600 dpi which is used for the patterns in this example. Some printers emulate 600 dpi by printing 300 x 600 dpi. You should then either change the pattern according to a pattern printout on your printer (see page ?), or change the printer type using in InterForm400® to HPIII or HPIIID.

Final print of MYDEMO merged with the sample spool entry.(The illustration is a screenshot of the InterForm400® PCL viewer function:)

Herring Marine Research
Seaweed Street 14
9000 Battelaxe
DK-Denmark

Att: Martin Merman

inter mate

1004/PH.13-09-99

Re. Your new MateSert/400 driver.

Congratulations with your new MateSert/400 driver.
You are now able to fully exploit the features of your Inserter
in relation to your AS/400 applications. In fact this letter has
been printed and inserted by MateSert/400.

The following license code(s) will be needed to activate the driver
permanently to your AS/400 CPU(s):

Model	P-Group	Serial No.	No. of dev.	License Code
F45	-	44A2971	1	81 20 01 3A
320	-	44A9032	3	3F 78 66 99

Should you have any questions regarding the driver, you are welcome
to call our technical support hotline on:

+45 72 26 04 00

Or download the latest documentation from the Internet on:

<http://www.intermate.com>

Regards
INTERMATE A/S
inter mate

Intermate A/S Kongevejen 194A DK-3460 Birkerød Tel: +45 72 26 04 00 Fax: +45 72 26 04 04

Example of Advanced use of Sub-overlays (Random text lines)

A very strong feature of InterForm400®, is the ability to handle spool entries with randomly positioned text lines so each line gets an individual formatting. The general description on using sub-overlays are described on page 67, **?=lf..then**.

The following is an example of a print job consisting of a random number of Item groups, each containing a random number of Item lines. The Item groups will furthermore appear in random line positions, and there will be a footer appearing in a random line position.

Page 1:

```
*.....1.....2.....3.....4.....5.....6.....+
1
2      Testing remap of item lines with random line positions
3
4
5      ITEM Fish:
6      Shark
7      Flounder
8      Herring
9      Salmon
10
11
12     ITEM Pets:
13     Cat
14     Dog
15     Chinchilla
16     Parrot
17     Hamster
18     ITEM Riding animals:
19     Horse
20     Camel
21     Elephant
22
23     This should be a fixed footer
```

Page 2:

```
*.....1.....2.....3.....4.....5.....6.....+
1
2      Testing remap og item lines with random line positions
3
4
5
6      ITEM Cars:
7      Rover
8      Porsche
9      Volvo
10     Mercedes
11     Opel
12     Audi
13
14     ITEM Aeroplanes:
15     Ellehammer
16     Boeing
17     MIG
18
19     This should be a fixed footer
```

(Line numbers are not part of the spool entry)

We want to format this print job as follows:

1. The text ITEM should be placed as a header of each item group with a 16 point font.
2. The Item group names (Fish, Pets etc), should be moved down and placed as sub-headers below the header (ITEM), and should be printed with a 12 point font.
3. The items should be printed just below the item group name, with a 10 point font.
4. The footer should be placed in a fixed position with Courier 10.

Creating the Main overlay:

This overlay will be used to call the different sub-overlays, which will perform the actual formatting of the spool entry:

We enter **1. Design overlay**, and we create a new overlay named **MAIN**. We leave the global overlay settings untouched and enter the design window. Here we define the If..then line that will search for the item groups:

```
Design InterForm 400 overlay                                APF300D

Overlay name: MAIN          Overlay text:

Seqnbr. Type  Overlay definition

Seqnbr. Type
  1,0  ?      If . . . . . Input line  __1 - _70
                               Position  __11 - _14
                               Is > = < N  = ITEM_____
                               Then . . . . . Overlay  SUB1_____ Nos. of lines to remap *VAR
                               Upper edge  _0,040  A/+/- -
                               Left edge   _____ A/+/-
                               Blank after  _       B = blank original text

F3=Exit          F11=Delete      F12=Cancel
F13=Set view/print parameters  F14=PCL-view      F18=DSPSPLF  F19=DSPPFM
```

We are not sure in which line the item group will appear, so we will just check all lines from **1 to 70**.

The horizontal position of the text **ITEM** will always be fixed in position **11-14**.

We enter the name of the sub overlay **SUB1**, which we will create later for formatting of the footer.

We define ***VAR** for **Number of lines to remap**, as we do not know how many item lines each item group will consist of.

We define a negative movement of 1/6" (**0,040**). We press **Enter** and we get the following screen:

```
Vertical cursor repositioning
before execute of sub overlay

Position related to actual position

Number of pels . . _40  ( -99 - 99 )

Or reposition related to previous
non blank input line

Number of pels . . ____ ( 0 - 999 )

F3=Exit          F12=Cancel
```

In this screen we offset the cursor 1/6" (**40 pels**) downwards to compensate for the negative movement we just made. This may seem strange, but the purpose is to generate an extra line between each item group. This is needed because we want to split the **ITEM** header, which was originally a single line, into two lines.

We now press **Enter** to save the If..then line and we define a new If..then line that will

search for the footer :

```
Design InterForm 400 overlay                                APF300D

Overlay name: MAIN      Overlay text:

Seqnbr. Type  Overlay definition
0001   ?     If lin 001-070 pos 011-014 = ITEM                Then SUB1

Seqnbr. Type
2,0   ?     If . . . . . Input line  __1 - _70
                               Position  __11 - _14
                               Is > = < N = This_____
Then . . . . . Overlay  SUB2_____ Nos. of lines to remap __05
                               Upper edge _____ A/+/- A
                               Left edge  _____ A/+/- _
                               Blank after _          B = blank original text

F3=Exit          F11=Delete      F12=Cancel
F13=Set view/print parameters  F14=PCL-view      F18=DSPSPLF  F19=DSPPFM
```

We are not sure in which line the footer will appear, so we will just check all lines from **1 to 70**.

The horizontal position of the text **“This”** will always be fixed in position **11-14**.

We enter the the name of the sub-overlay **SUB2**, which we will create later for formatting of the footer.

We define **5** for **Number of lines to remap**, as we do not expect the footer to consist of more than 5 lines.

We define **A** (or blank) for upper edge, which means the sub overlay will control the vertical position. We press **Enter** and we get the following screen:

```
Vertical cursor repositioning
before execute of sub overlay

Position related to actual position

Number of pels . . __0 ( -99 - 99 )

Or reposition related to previous
non blank input line

Number of pels . . ____ ( 0 - 999 )

F3=Exit          F12=Cancel
```

The sub-overlay will control the vertical placement, so we just state **0** for this offset.

Creating the sub-overlay for formatting item groups

We now press **Enter** to save the If..then line and press **F3** to exit the overlay. We enter **1**. **Design Overlay** again, and we create the first of our sub-overlays **SUB1**:

Here we create a **9. Remap Window** line, which we will use to format the item header:

```

Design InterForm 400 overlay
APF300D

Overlay name: SUB1      Overlay text:

Seqnbr. Type  Overlay definition

Seqnbr. Type
 1,0  9  Remap window  Input line   __1 - __1  Position _10 - _14
      Print:           From upper edge _____ Line spacing . . _40
                        From left edge  _2,000  Ignore blank lines  N (Y N)
                        Adjustment      L        (U L R C N B E +)
                        Rotation        000
                        Font            1653      F4=List
                        Blank original  B        B = blank original version
      Condition:      Position         ___ - ___
                        Is > = < N     - _____
F11=Delete          Blank after       -          B = Blank condition after

```

The first data delivered from our If..then line in the main overlay will be:

```

line 1  ITEM Fish:
line 2  Shark
line 3  Flounder
line 4  Herring
line 5  Salmon
line 6
line 7

```

Originally the line interval for this item group were 5-11, but the sub-overlay sees the lines as a spool entry consisting of the lines beginning with the first line that meets the conditions of the If..then line, until the last line before the condition is true again ("ITEM Pets" in line 8).

The text "ITEM" is therefore found in line 1 position 10-14, and we just position this text, as we normally do with a remap line. The main overlay defines that the item group should be placed relative (vertical) to where the text "ITEM" was found in the data stream, and we therefore define 0 as the upper edge.

We select font 1653, which is a 16 point Times Roman.

We press **Enter** and we define a new Remap Window line, that will remap the item sub-headers:

```

Design InterForm 400 overlay
APF300D

Overlay name: SUB1      Overlay text:

Seqnbr. Type  Overlay definition
0001  9      Remap window 01-001 pos 10-014 top 0,000 left 2,000 L

Seqnbr. Type
2,0  9  Remap window  Input line    __1 - __1  Position __15 - __70
      Print:           From upper edge __0,040 Line spacing . . __40
                       From left edge  __2,080 Ignore blank lines  N (Y N)
                       Adjustment      L          (U L R C N B E +)
                       Rotation        000
                       Font            1351      F4=List
                       Blank original  B          B = blank original version
      Condition:      Position          ___ - ___
                       Is > = < N      - _____
F11=Delete           Blank after      _          B = Blank condition after

```

The item sub-header is found in the same line as the header (ITEM) but in position **15-70**. We therefore define the same input line interval as before.

We define an upper edge of 1/6" (**0,040**), in order to place the sub-header one line below the header.

We select font **1351**, which is a 12 point Time Roman.

Finally we also need to place the subsequent lines until the next item group. We are using ***VAR** so it can be a variable number of lines. We remap the next 69 lines to be sure:

```

Design InterForm 400 overlay
APF300D

Overlay name: SUB1      Overlay text:

Seqnbr. Type  Overlay definition
0001  9      Remap window 01-001 pos 10-014 top 0.000 left 2.000 L
0002  9      Remap window 01-001 pos 15-070 top 0.040 left 2.000 L
0003  9      Remap window 02-070 pos 01-070 top 0.080 left 2.100 L

Seqnbr. Type
3.0  9  Remap window  Input line    __2 - __70  Position __1 - __70
      Print:           From upper edge __0,080 Line spacing . . __40
                       From left edge  __2,100 Ignore blank lines  N (Y N)
                       Adjustment      L          (U L R C N B E +)
                       Rotation        000
                       Font            1051     F4=List
                       Blank original  B          B = blank original version
      Condition:      Position          ___ - ___
                       Is > = < N      - _____
F11=Delete           Blank after      _          B = Blank condition after

```

The lines are placed below the splitted header line with a line distance of **40** pels and printed in the font **1051** (Times New Roman 10 pt).

Creating the sub-overlay for formatting the footer

We press **Enter** and **F3**, and we enter **1. Design Overlay** again to create our second sub-overlay **SUB2**:

```
Design InterForm 400 overlay                                APF300D
Overlay name: SUB2      Overlay text:
Seqnbr. Type  Overlay definition
0001    9      Remap window 01-070 pos 01-070 top 7,000 left 1,000 L

Seqnbr. Type
1,0    9      Remap window  Input line    __1 - __5 Position __1 - _70
Print:      From upper edge _7,000 Line spacing . . _40
            From left edge  _1,000 Ignore blank lines  N (Y N)
            Adjustment      L      (U L R C N B E +)
            Rotation        000
            Font             __11      F4=List
            Blank original  B      B = blank original version
Condition: Position        ___ - ___
            Is > = < N      - _____
F11=Delete  Blank after    -      B = Blank condition after
```

We are not quite sure how many lines and positions the footer consists of. We therefore define both the line interval to **1-5** (5 lines are remapped from the **Main** overlay) and position interval to **1-70** in order to be sure we get everything.

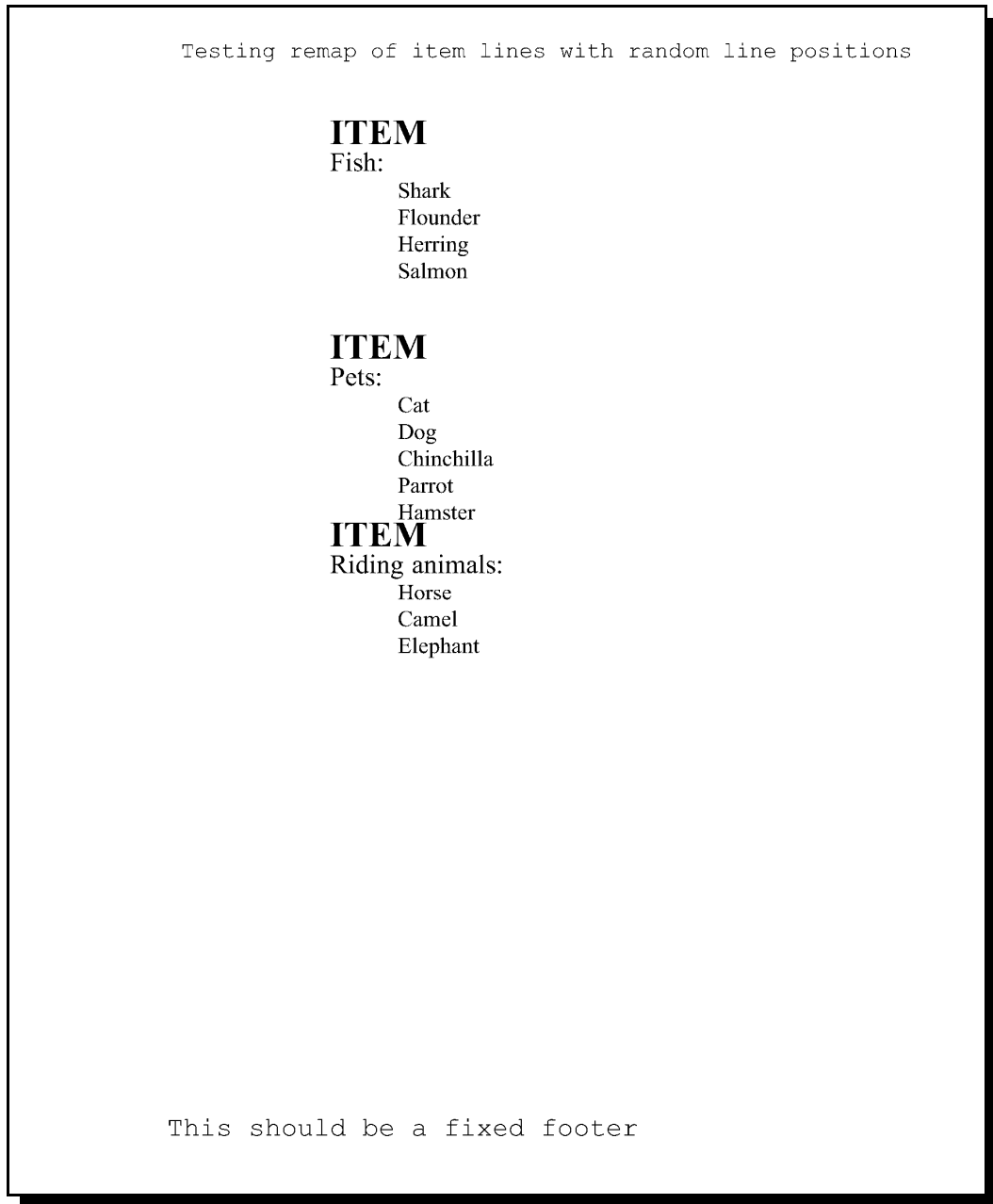
We define an upper edge of 7" (**7,000**), in order to place the sub header one line below the header.

We select font **11**, which is a Courier 10, and press **Enter** to save the definition

The result

Below is the result when the spool entry is merged with the overlay **MAIN**. The result is not intended to be a graphical wonder in any way, but is merely intended to demonstrate the flexibility of this feature.

Page 1:



Testing remap og item lines with random line positions

ITEM

Cars:

Rover
Porsche
Volvo
Mercedes
Opel
Audi

ITEM

Aeroplanes:

Ellehammer
Boing
MIG

This should be a fixed footer

Main Menu Local Environment Setup

2. Test Print Overlay

With option 2 on the main menu you are able to make a test print of an overlay.

The choice of overlay is made in this display:

```
Test Print Overlay                                     APF720D

This program prints a test version of a given overlay. No data is merged with
it.

Overlay name      _____

Page control      _          Blank = all definitions of the overlay
                               1 = overlay printed as page 1
                               2 = overlay printed as page 2 and following
                               9 = overlay printed as last page

Code page         *SYSVAL      *SYSVAL, Number
Form type         *STD_____
Copies            _1          (1-255)
Drawer / papertype *PRINTER    (*PRINTER, *OVERLAY, 1-9, 20-39, 251-255)

F3=Exit
F4=List overlays
```

Overlay Name Name of an overlay in the file-set you have open. **F4** will prompt for overlay names.

Page Control: Inserting 1, 2 or 9 is used if Page Control is used, and you want to test the definitions which are used on specific pages only.

Code page: If the system is used by multiple countries, the national characters in the overlays will get printed differently in each country. This option will allow the default code page of the central computer to be overruled.

Form type: The Form type of the resulting printout. Default *STD

Copies: 1-99

Drawer: Overwrite the global drawer settings of the overlay.

3. Merge Spool Entry with Overlay

With option 3 on the main menu you are able to create a printout in which a spool-entry is merged with an overlay and placed in the default output queue for your session.

Merge Spooled File with Overlay		APF730D
Overlay name	_____	
or Overlay Selector	_____	
Primary/Secondary set	_	1=Primary 2=Secondary
Spooled file:		
Job name	_____	
User	_____	
Job number	_____	
File name	_____	
Spool file no.	_____	Number, *ONLY, *LAST
Code page	_____	Number, *INPUT
Merge overwrite lines	*NO_	*NO, *YES
Form type	A4_____	
Copies	_1	(1-255)
Drawer / Papertype	*PRINTER	(*PRINTER, *INPUT, *OVERLAY, 1-256, Name)
Labels / Continuous	1	1 = Seperate labels 2 = Continuous
Media type	1	1=Termo transfer 2=Termo media
Print mode	1	1=Tear off 2=Rewind 3=Peel off 4=Cutter
Name of output queue to search if spooled file is unknown:		
Output queue	_____	
Library	_____	
F3=Exit	F4=Prompt	F12=Cancel

Overlay Name : Name of an overlay in the file-set you have open. **F4** will prompt for overlay names.

Primary/Secondary Set: If you have defined **Copy Management** for the overlay (see page **53** and **46**) you can test if you have made the correct selection of overlay elements, by printing the overlay elements for one of the two sets only. If this field is left **blank** (default) the system will as default pick the **Primary** set.

Overlay Selector: If you have defined an **Overlay Selector** you can test if it is able to pick the correct overlay. In this case **Overlay Name** above must be blank. (refer to section **Working with Overlay selectors** page **122**)

Spooled File: Spooled file attributes can be entered here.

There is an alternative to typing all the information manually. If you type the name of an **output queue** in the bottom of the screen and press **Enter**, you can retrieve the information about the spool entry from a view of the selected output queue by selecting with option **1**:

```

Work with Output Queue

Queue:  PRTHP3          Library:  QUSRSYS

Type options, press Enter
  1=Select 2=Change 3=Hold 4=Delete 5=Display 6=Release 8=attributes

Opt  File           User           User Data     Sts   Pages  Copies  Form Type  Pty
  1  QPRINT          INTERMATE     INVOICE       RDY    1      1    *STD       5
  _  QPRINT          INTERMATE     PROFIT        RDY    5      1    *STD       5

Parameters for option 2
===> _____
F3=Exit  F11=View 2  F12=Previous  F21=Description  F24=More keys

```

Code page: If the system is used by multiple countries, national characters may get printed differently in each country if the code page is not specified in the spool entry. This option will allow the code page of spool entry, to be overruled. If this field is left blank and the spool file does not specify an explicit code page, the system value will be used.

Merge overprint lines: Some spooled files will not react as expected when merging with an overlay. This is the case when spooled files use overprinting i.e. printing two lines on one e.g. for printing in bold - or if the output fields are defined in the wrong order in the printer file.

Enable this feature and the overprinted spooled file lines are printed as one meaning e.g. that bold created in this manner will be ignored. If you press F19-DSPPFM in the green screen designer and you see '0's in the left side of the screen, then this option should most probably be activated.

Form type: The Form type of the resulting printout. Default ***STD**

Copies: 1-99

Drawer: Overwrite the drawer settings of the overlay **global settings**.

NOTE: Labels/Continuous, media type and print mode are all active for ZPL (Zebra) output only.

Labels / Continuous: Select **1=Labels** if the media contains of separate labels. select **2=Continuous** if the media is not separated into labels (in this case you would probably select **4=Cut** for the **print mode** parameter).

Media type: Select **1=Termo transfer** if you use a non heat sensitive media otherwise use option **2=Transfer media**.

Print mode: **1=Tear off** mean that you will manually tear of the labels. **2=Rewind** can be used for rewinding all printed labels onto another roll. This requires special hardware installed. **3= Peel off** will print only one label at a time waiting for the

current label to be peeled off. (This also requires additional hardware).

4=Cut (requires hardware cutter) normally cuts the media for each print job unless you use **2=Continuous** - then **4=Cut** will cut out each label.

Output Queue: The name of the output queue where the spool entry to be merged is placed

Library: The library of the above output queue. If left blank the library list will be used.

☺ **TIP** ☺

*After a merge with an overlay the spool attributes are saved in this screen for future test prints until the InterForm400® menus are left. As long as these information are kept, you will be able to view the contents of the spool entry directly by pressing **F14, F18 or F19** from within the design menu*

8. Select File set

A file set consists of related files defining overlays and report compositions.

If the system administrator has granted you rights to access more than one file set your main menu will include the option **8. Select file-set**.

When you choose option 8 on the main menu you get the following screen:

```
                                Select File-set

Select one of the following file-sets, then press Enter.
  1=Select

Opt   File-ID      Description
-     TEST        Testing InterForm 400 possibilities
-     SAMPLE      Sample overlay

F3=Exit
```

You select the file set you wish to use by typing **1** in one of the lines.

Once you press **Enter**, the system returns to the main menu. The selected file set now appears in the upper right corner of the **main menu**.

If you have access to more than one file set, then the above screen will be presented to you already when you enter the InterForm400® main menu, if you enter with the command, **APF3812/APFMENU KARTSET(*SELECT)**.

9. Select Output Queue and Printer Type

When you enter the InterForm400® main menu, the system is connected with the output queue which has been specified as the user output queue in your user profile for the InterForm400® system (refer to the page 268 and 272).

If you choose **option 9** on the main menu you will be allowed to change the name of the output queue to be used for test printouts from the InterForm400® system.

```
Select output queue

Enter the name of an output queue to be used for InterForm400-output.

Output queue PRTXXX_____
Library      QUSRSYS_____

Also select the type of printer to be used.

Printer type . . .  HP4D_____ (IBM4019 IBM4029 IBM4039 HP4 HP4D HP4_PJL
                        HP4D_PJL HP5C HP4500 HP4500D
                        ZEBRA203 ZEBRA300)
Interface          ASCII850___ (SYSTEM SYSTEM850 SYSTEM852 ASCII8
                        ASCII850 ASCII852 WORKSTN WS31N
                        WS347N WS348NIDA3X IDA5219 IDA812N)
```

When the display appears, it already contains the name of the output queue which is currently active.

Output queue: Specify the name of the output queue you wish to use temporarily.

Library: Specify the library of the queue, or leave blank to search library list.

Printer type: If users are allowed to override standard printer type (refer to 2. **Set default output queue and printer type** page 268), you can select printer type and Interface. Refer to page 374 For more information.

Interface: Selects interface. Always use ASCII850.

Once you press **Enter** the system returns to the main menu, and the new output queue, Printer and Interface type will appear in the upper right corner of the screen.

(For more information on selection of printers and interfaces refer to page 268 and page 374)

10. Work with actual Output Queue

If you choose option 10 on the main menu you will work with the output queue which is currently active for output from the InterForm400® system. This is convenient when operating with different forms types which causes the spool queue to generate messages requesting your reply.

This function activates the command APFWRKOUTQ and adds your default InterForm400® output queue to the command. This screen, however, has extended features compared to the usual WRKOUTQ screen. If you have installed the PCL Viewer, **Swiftview**, you can e.g. use option **5=display** to view spool entries containing PCL data

(datatype *ASCII). Refer to **Appendix L** for more information on the PCL Viewer.

The following command can be entered from outside InterForm400®.

APF3812/APFWRKOUTQ

You can also see the number of pages that a merged spooled file consists of. If you have used a PJI printer type for the merge in InterForm400, you can even change the page range of the merged spooled file with option 2 - change spooled file.

Option '1' on the APFWRKOUTQ command has been extended compared to the OS400 WRKOUTQ. In APFWRKOUTQ you can also chose to merge a selected spooled file into a PDF file and send it as an e-mail.

☺ **TIP** ☺

If you need an AS/400 command line, and you do not have a second session, and you do not want to exit the InterForm400® menu, you can use this option to obtain a command line.

Working with Overlay Selectors

An **Overlay Selector** will allow you to make conditioned overlay selections on certain character combinations in the print data of the spool entry. The overlay selector decides what overlay to merge with for each page of the merged spool file.

☺ **TIP** ☺

*It is not necessary to define an AFC definition to let the **Overlay Selector** take effect. An overlay selector can be used when making an interactive merge using option **3. Merge Spool Entry with Overlay** on the main menu.*

When selecting option **4. Working with Overlay Selectors** on the main menu the following screen appears:

```
Work with Overlay selectors                                     AFC300D

Start with . . . _____

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt  Selector  File-set  Description

(No overlay selectors)

                                                                End
F3=Exit      F5=Refresh      F6=Add          F12=Cancel
```

Press **F6** to create a new Overlay Selector:

```
Add Overlay selectors                                       AFC300D

Selector name . . . _____
Description . . . . _____
File set . . . . . _____

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

- Selector Name:** The name you will be referring to in the AFC function **1. Merge with overlay** in **Functions attached to output queues** (see page 140), and when making interactive merge using option **3. Merge spool entry with overlay** (page 117)
- Description:** For your information.
- File set:** The file set which the overlay selector should be restricted to select overlays from.

Selection Criteria Entries

```

Add Overlay selectors                                     AFC300D
Selector name . . . INTERMA_
Description . . . Selection for INVOICE_____
File-set . . . . . TEST
Seqnbr.  Overlay name  Overlay description

Seqnbr
_____

F12=Cancel

```

You can now enter the specific requirements your spool entry data should meet for selecting a certain overlay. You can have several sequence lines checking on many different types of spool entries under the same selector definition, or you can make selectors for each print job type.

If the conditions for a sequence line are true for a given page of the spool entry being checked, the rest of the sequence lines will be ignored.

When entering a sequence line you will get the following screen:

```

Add Overlay selectors
AFC300D

Selector name . . . INTERMA_
Description . . . Selection for INVOICE_____
File-set . . . . . TEST_____
Seqnbr.   Overlay name   Overlay description

Seqnbr   Overlay name
1,0      INV_FRONT_
AND/OR   Print line   Position   Oper   Compare value
_____  _____  _____  _____
AND_     1             1 - 7     EQ    INVOICE_____
_____  _____  _____  _____
_____  _____  _____  _____
_____  _____  _____  _____
_____  _____  _____  _____
F11=Delete      F12=Cancel

```

Overlay name: The name of the overlay to call in the file-set defined in the entry screen for the Overlay Selector (page 122)

AND/OR: Relate this statement to the previous statement

Print Line: The print line in the spool entry to search

Position: The column interval to search

Oper. The operator relating to the compare value

The operators used are standard operators known from e.g. Query/400:

- EQ** Equal to compare value
- NE** Not equal to compare value
- LT** Less than compare value
- LE** Less than or equal to compare value
- GT** Greater than compare value
- GE** Greater than or equal to compare value
- PAGE** Select only for certain pages. This can be used for spooled files with unknown contents.

Compare Value: The character string or numeric value which the operator should be compared to. If the operator is **PAGE** you can use these values:

- *FIRST** Only for the first page of the spooled file.
- *LAST** Only for the last page of the spooled file.
- *ODD** Only for odd page numbers
- *EVEN** Only for even page numbers

Getting Familiar with Overlay Selectors

The following makes use of the demo spool entry delivered with InterForm400®. You can print this from the menu **12. Service Functions** under the administration menu.

Our intention is to make a selector which prints all letters of the spool entry regarding the MateSert/400 driver with the overlay **IF400DEMO** delivered with this system. For pages regarding InterForm we want to use the modified version **MYDEMO** which was created in section **Getting Familiar with Overlays**.

Step 1. Placing overlays in One File set

As one selector is limited to operate with overlays from the same file set, we will first make a copy of the overlay **IF400DEMO** from fileset **SAMPLE** into file set **TEST**. First make sure you are standing in file set **TEST** (check upper right corner). If not, you should change file set with option 8 on the main menu.

Enter option **1. Design Overlays** on the main menu

Design InterForm 400 overlay		APF300D
Overlay name	IF400DEMO _____	
F3=Exit	F4=List overlays	F12=Cancel

Here we can type in the same name as the overlay in file set **SAMPLE**. There will be no conflict of names, as they are located in separate file sets.

Design InterForm 400 overlay		APF300D
Overlay name	IF400DEMO	
Overlay text	_____	
Line spacing	040___ in 1/240 of an inch (*INPUT, 1-720)	
Rotation	000___ (*INPUT, 0, 90, 180, 270)	
Extra left margin positions	_0 (0-99)	
Maximum number of print positions	378 (1-378)	
Extra blank lines on top	_0 (0-99)	
Font	0066_ *INPUT, fontnumber F4=List	
Extended page def.	N (Y N)	
Drawer / Papertype	*PRINTER (*INPUT, *PRINTER, 1-255, Name) F4=List	
Paper Size	0 F4=List	
Pages per side	___	
Copy management	N (Y N)	
Duplex print	N (N=no S=short edge margin L=long edge margin)	
Duplex margin	___0 in 1/240 of an inch (1-720)	
Back page overlay	_____ Code for placement _ (B=back page F=front)	
F3=Exit	F4=Prompt	F9=Copy from another overlay F12=Cancel
F13=Set view/print parameters	F14=PCL-view	

Since we are actually creating a new overlay we can use **F9** to copy from another overlay/file set:

```

Design InterForm 400 overlay
APF300D

Name of overlay to copy from _____

F3=Exit      F4=Prompt      F9 = copy from another file-set F12=Cancel

```

We know that the **IF400DEMO** overlay is in another file set so we have to press **F9** to get a list of file sets to choose from.

```

: .....
: Overview InterForm 400 file-sets :
: 1=Select :
: 1 SAMPLE InterForm 400 Samples :
: _ TEST Test file-set :
: :
: :
: :
: F12=Cancel :
: .....
F3=Exit      F4=Prompt      F9 = copy from another file-set F12=Cancel

```

We select file-set **SAMPLE** and press **Enter**:

```

: .....
: Overview overlays :
: Start with: :
: 1=Select :
: 1 IF400DEMO InterForm400 demo :
: :
: :
: :
: F12=Cancel :
: .....

```

Now we select overlay **IF400DEMO** and press **Enter**:

```

Design InterForm 400 overlay
APF300D

Overlay name      IF400DEMO

Overlay text      InterForm 400 Demo Overlay____
Line spacing      _40_      in 1/240 of an inch (*INPUT, 1-720)
Rotation          000_      (000 090 180 270)
Extra left margin positions _8      (0-99)
Maximum number of print positions 378      (1-378)
Extra blank lines on top _4      (0-99)
Font              _111_      *INPUT, fontnumber      F4=List
Extended page def. N      (Y N)
Drawer / Papertype *PRINTER (*INPUT, *PRINTER, 1-255, Name) F4=List
Paper Size        0      F4=List
Pages per side    _      (Y N)
Copy management   N      (Y N)

F3=Exit      F4=Prompt      F11=Delete this overlay      F12=Cancel
F13= Set view/print parameters      F14=PCL-view

```

We have now made a copy of the **IF400DEMO** overlay from file-set **SAMPLE** and stored it by the same name in file-set **TEST**. We can now exit to the design menu with **F3**.

Step 2. Examining Spool Entry Selection Criteria

Before we create the overlay selector we need to examine the spool entry in order to find something that distinct the pages.

Press **F13= Set view/print parameter**. Enter the overlay name and go to the bottom of the screen to enter the Output Queue where the spool file resides. Find the DEMO spool entry in the output queue and select it with option 1. Press Enter.

```

Select Parameters for view / print                                     APF730D

Overlay name                IF400DEMO_
or Overlay Selector         _____
Primary/Secondary set      _          1=Primary  2=Secondary
Spooled file:
  Job name                  _____
  User                     _____
  Job number                _____
  File name                 _____
  Spool file no.           _____      Number, *ONLY, *LAST
Code page                  _____      Number, *INPUT
Merge overprint lines      *NO_        *NO, *YES
Form type                  *STD_____
Copies                     _1          (1-255)
Drawer / Papertype         *PRINTER    (*PRINTER, *INPUT, *OVERLAY, 1-256, Name)

Name of output queue to search if spooled file is unknown:

Output queue . . . . . AFC_INPUT1_
Library . . . . .   APF3812___

F3=Exit                    F4=Prompt                    F12=Cancel

```

In the design screen **F18=DSPSPLF** will appear and the contents of the spool file can now be viewed directly from the design screen.

By typing **+1** and pressing **Enter** a few times we find the word **MateSert** in line 15 position 21 to 28 on all letters regarding the MateSert/400 program.

```

DISPLAY OUTPUT FILE

File . . . . . : QPRINT                                           Page/Line 1/15
Function . . . . +1                                           Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Re. Your new MateSert/400 driver.
-----
Congratulations with your new MateSert/400 driver.
You are now able to fully exploit the features of your Inserter
in relation to your AS/400 applications. In fact this letter has
been printed and inserted by MateSert/400.
The following license code(s) will be needed to activate the driver
permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.      No. of dev.      License Code
-----
F45        -              44A2971         1                81 20 01 3A
320        -              44A9032         3                3F 78 66 99
Should you have any questions regarding the driver, you are welcome
to call our technical support hotline on:
+45 43 26 02 99
Or download the latest documentation from the Internet on:
END

F3=Exit      F12=Cancel      F19=Left      F20=Right      F24=More keys

```

By typing **P+1** (page forward) and pressing **Enter** a few times we find that the text InterForm is found in line 15 position 21 to 29 on all pages regarding InterForm400®.


```

                                DISPLAY SPOOL FILE
File . . . . . : QPRINT                               Page/Line 3/15
Function . . . . : P+1                               Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Re. Your new InterMate/400 Forms Management System.
-----
Congratulations with your new InterMate/400 software.
InterMate/400 will enable you to print Electronic Forms and perform
advanced data remapping and copy management of you existing SCS
print data. InterMate/400 exploits the advanced features of
standard HP-PCL printers and is the chosen forms management
solution for several hundreds of organisations.
The following license code(s) will be needed to activate InterMate
400 permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.      No. of dev.      License Code
-----
200        P10          4449079         -                F2 E7 20 AA
F35        P20          44B2031         2                AA BB 01 23
E60        P30          44D3971         -                1A BC DE 44
F45        P20          44A1460         -                79 10 22 F1
F3=Exit    F12=Cancel    F19=Left        F20=Right        F24=More keys

```

We are now ready to make a selector which picks the correct overlay according to the above conclusion.

Step 3. Entering the Selection Criterias in the Selector

We select option 4 on the main menu and press F6 to add a new selector:

```

                                Add Overlay selectors                                AFC300D
Selector name . . . MYSELECT
Description . . . Selection for MateSert and InterMate letters_____
File-set . . . . . TEST_____

                                                                                               End
F3=Exit          F5=Refresh                                           F12=Cancel

```

We define the name **MYSELECT** which should be placed in file-set **TEST** and we press **Enter**

```

Add Overlay selectors
AFC300D

Selector name . . . MYSELECT
Description . . . . Selection for MateSert and InterMate letters_____
File-set . . . . . TEST_____
Seqnbr.   Overlay name   Overlay description

Seqnbr   Overlay name
1,0      IF400DEMO_
AND/OR Print line   Position   Oper   Compare value
      _15           _21 - _28  EQ    MateSert_____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
F11=Delete           F12=Cancel

```

We enter a new sequence line by typing **1** followed by **Field Exit**, and we type in the overlay name **IF400DEMO** which we want to use if the conditions stated in this sequence line are **true**.

We now define that if we in Print line **15** position **21** to **28** has a text string which equals **MateSert** (case sensitive). the condition is true.

We press **Enter** to save this sequence line and enter sequence line **2**.

```

Add Overlay selectors
AFC300D

Selector name . . . MYSELECT
Description . . . . Selection for MateSert and InterMate letters_____
File-set . . . . . TEST_____
Seqnbr.   Overlay name   Overlay description
0001      IF400DEMO      Demo overlay for InterForm 400

Seqnbr   Overlay name
2,0      MYDEMO_____
AND/OR Print line   Position   Oper   Compare value
      _15           _21 - _29  EQ    InterMate_____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____
F11=Delete           F12=Cancel

```

In this we just define that if we have **InterMate** in line **15** position **21** to **29** we will choose the overlay **MYDEMO**.

We press Enter and press F3 to leave the Overlay Selector menus.

Step 4. Testing the Selector

We now enter menu point **3. Merge Spool Data with Overlay** on the main menu.

```

Merge Spooled File with Overlay
APF730D

Overlay name
or Overlay Selector  MYSELECT
Primary/Secondary set  _ 1=Primary, 2=Secondary
Spooled file:
  Job name           DSP010700_
  User               PETER
  Job number         073534
  File name          QPRINT
  Spool file no.    0005_      (no. / *ONLY / *LAST)
Code page           Number, *INPUT
Merge overprint lines *NO_      *NO, *YES
Form type          *STD
Copies             __1      (1-255)
Drawer / Papertype *PRINTER  (*PRINTER, *INPUT, *OVERLAY, 1-256, Name)

Name of output queue to search if spooled file is unknown:

  Output queue . . . .  _____
  Library . . . . .    _____

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

We use the same procedure as in **Getting Familiar With Overlays**, but instead of stating an overlay, we enter our selector **MYSELECT**.

We notice that page **1, 2 and 4** uses overlay **IF400DEMO** (see page **32**), and page **3** uses overlay **MYDEMO** (see page **106**).

The selector can also be used in an Auto Forms Control definition. You can try the selector in the section **Getting Familiar with Auto Forms Control** later.

General Description of Auto Forms Control Sub-system

Auto Forms Control (AFC) is a unique facility of the InterForm400® system, which enables you to define automatic control of merging spool entries with overlays without the need of any programming.

Auto Forms Control is monitoring data queues of defined output queues, looking for spool files to become ready. When a spool file becomes ready, a dataqueue entry will be created which wakes up the AFC job associated with the specific output queue.. A copy of the spool file will be created and processed according to the AFC entries made for the monitored output queue.

Auto Forms Control takes *SCS spool files from the spool system, adds an electronic form and manipulates the spool data accordingly and sends the resulting spool file (containing PCL code) back to the spool system.

When installing InterForm400®, Auto Forms Control is also automatically installed. During the installation of Auto Forms Control the following objects will be created on the system:

- Sub-system description: **APF3812/AUTO_FORM**
- User profile: **AFCOPER PASSWORD(*NONE)**
SPCAUT(*SPLCTL)
- Job description: **APF3812/AUTO_FORM**

Note that if you want to make use of the feature of InterForm400® to transform AFPDS spool entries into *USERASCII, and these AFP jobs are using resource libraries not listed in the system library list, then the above job description must be changed in order to include these libraries in the library list.

The setup of the primary functions of Auto Forms Control is managed by selecting menu option 5 on the main menu. The same menu can be entered directly by the program call:

CALL APF3812/AFCADM

The menu appears like this:

```
InterForm400® - Auto Forms Control                System.....: INTER01
                                                    Workstn ID...: QPADEV0003
Select one of the following options:              User ID.....: PETER

  1. Functions attached to Output Queues
  2. Forms Type Table
  3. Split Definitions
  4. Finishing Definitions
  5. Sort Definitions
  6. User output queue

  8. Work with E-mail senders

10. Start AUTO_FORM subsystem
11. End AUTO_FORM subsystem
12. Work with active subsystem AUTO_FORM

Option:  __

F3=Exit                F6=Display messages        F12=Cancel
```

Beside the above definitions the function Overlay Selector can be used within the AFC definitions. The overlay selector is used when the spool data should be the “trigger” for the

merge in AFC. This function is found as option 4 in the main menu.

10. Start AUTO_FORM subsystem

Auto Forms Control is running as an ordinary AS/400 subsystem, and therefore has to be started as such. It is a good idea to let the subsystem start automatically at IPL. This is done by inserting the following commands in your startup program:

```
STRSBS SBSD(APF3812/AUTO_FORM)
MONMSG CPF0000
```

Of course, you can always start the sub-system manually, by the command:

```
STRSBS APF3812/AUTO_FORM
```

11. End AUTO_FORM subsystem

Before applying a new license code or making upgrades to the AUTO_FORM sub-system, this should be ended.

This can be done in the menu or by the command (check first if jobs are currently being processed):

```
ENDSBS SBS(AUTO_FORM) OPTION(*IMMED)
```

12. Work with Active Subsystem AUTO_FORM

This menu item is a shortcut to the command:

```
WRKACTJOB SBS(AUTO_FORM)
```

Overview of AFC Main Definitions

Name of output queue AFC is monitoring for incoming spool files.
“INPUT QUEUE”

The default output queue for AFC to send the processed print.
“OUTPUT OUTPUT QUEUE”

Add Auto Forms Control Definition

```

Output queue . . . . .
Library . . . . .

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . .
Autostart job . . . . . (Y N)
Code page . . . . . Number, *SYSVAL

Default output output queue and printer type
Output queue . . . . .
Library . . . . .
InterForm 400 printer type
Interface . . . . .

Optional template AFC-definition to be executed after this definition
Template AFC-definition:
Output queue . . . . .
Library . . . . .

F3=Exit F10=Additional parameters F12=Cancel
    
```

Name of other AFC definition which functions also should be used for this AFC definition.
“TEMPLATE”

“AFC Functions” for the monitored **“INPUT QUEUE”**, based on the spool file selection criteria. (*Attributes*)

Update AFC-functions attached to output queues AFC305D

```

Queue: _____ Library: _____

Seqnbr Funct Form type Save Jobname Filename Device file Program
0001 1 DEMO
Merge, Overlay: IF400DEMO Fileset: SAMPLE
0002 6 DEMO
Hold Spooled File

Seqnbr Function Attributes of input file for which to execute the function
1.0 1
Form type . . . . . DEMO_____
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____

F3=Exit F13=Fold/Unfold F11=Delete F12=Cancel
    
```

The “INPUT QUEUE” mentioned above is a created output queue without a device attached. This enables InterForm400® to pick up the spool files, without the printer writer is processing the spool file.

AFC usually operates with both an “INPUT QUEUE” and the standard defined “OUTPUT QUEUE” with a printer attached, but AFC can operate on one output queue shared with a printer. For more about this feature refer to page 27 and page 160.

Auto Forms Control Definitions

When selecting option **1. Functions Attached to Output Queues** in the menu **5. Work with Auto Forms Control** on the main menu we get this screen:

```
Work with Auto Forms Control output queues                                AFC300D

Start with . . . . .

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display  8=Start AFC-job  9=End AFC-job

Opt   Outq      Library   Description
_     AFC_INPUT1 APF3812   Job for sample printout

End

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

The first time this screen is entered only the **Sample** queue **AFC_INPUT1** will exist (see the **Getting Started** section page 21).

Press **F6** to create a new AFC definition. When created press **F5** to update the screen above.

Entering queue and job names to an AFC definition

When changing or adding an AFC definition, the entry screen below will be shown.

```
Add Auto Forms Control Definition                                AFC302D

Output queue . . . . . _____
Library . . . . . _____

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . . _____
Autostart job . . . . . _ (Y N)
Code page . . . . . _____ Number, *SYSVAL F4=List

Default output output queue and printer type
Output queue . . . . . _____
Library . . . . . _____
InterForm 400 printer type . _____
Interface . . . . . _____

Optional template AFC-definition to be executed after this definition
Output queue . . . . . _____
Library . . . . . _____

F3=Exit      F4=Prompt      F10=Additional parameters  F12=Cancel
```

After entering the output queue you can press **F10** to insert or change additional parameters:


```

Additional parameters

Type additional info and press Enter. Press F12 to exit.
Job name AUTO_FORM job . . . *OUTQ_____ *OUTQ, Name

Job description . . . . . *DEFAULT__ *DEFAULT, Name
Library . . . . . _____
Library list option . . . . *JOBDB_____ *CURRENT, *JOBDB,
                               *SYSVAL, *NONE
Separator drawer . . . . . *NONE *NONE, 1-9, 20-39

F12=Cancel

```

Output Queue: Name of output queue, AFC should be monitoring for incoming spool files (INPUT QUEUE). The output queue you intend to use for AFC functions **should not** have a printer device attached. The reason for this is that the AFC sub system only works on spool entries that gets the status ***RDY** in the queue. If the queue also had a printer device attached, you could risk that the jobs would be printed before the AFC system managed to complete its automatic functions. (See Getting Familiar with AFC, Example 2 for an alternative way of setting up AFC)

Library: Insert library or leave blank to search library list.

Description: For your own information.

Job name: The contents of the field **job name AUTO_FORM job** is used as name for the job in the subsystem, which performs the automatic functions. It is recommended to use the same name as used for the output queue.

Auto Start: If **Y** is entered the AFC functions for this queue will be started automatically after IPL or when the subsystem AUTO_FORM is started.

If **N** is entered the subsystem job has to be started manually.

Code page: This defines if a specific code page should be forced for the spool entries processed by this AFC definition. *SYSVAL means that the default code page specified for the system will be used, unless a specific code page is defined as attribute for the spool file.

Default Output Queue and Printer Type

Output Queue/

Library: A default output queue for the result of e.g. AFC merges can be entered here. This queue will be used for the AFC definition lines having *DEFAULT as keyword. For AFC definitions having a specific queue defined this default queue setting will be ignored.

If these fields are left blank, the keyword *DEFAULT will not be accessible in the AFC definition lines, i.e. a specific queue must be entered for each AFC definition line.

Printer Type/ Interface:

Same functionality as above, but for Printer Type and Interface Type.

Template AFC-definition to be executed after this definition

Output Queue/ Library:

If these options are filled in, the same spool entry will be processed by the AFC definitions defined for the output queue stated here. This is done immediately after the processing of this set of AFC definitions, as if the other queues AFC definitions were placed in direct extension to these queues definitions.

Note that if the AFC definition 9=Exit is executed in the original queue, the spool file will not be processed by the AFC definitions for the queue stated here.

This option is especially relevant when several printers should have the same AFC definition. A Template AFC definition can be made, which then can be referred to from other AFC definitions.

Additional parameters

Job name: The name of the job handling this output queue. The job will run in the subsystem AUTO_FORM. ***OUTQ** means, that the job will be named the same as the output queue.

Job description: The job description to use for this job. ***DEFAULT** refers to job description APF3812/AUTO_FORM.

Library list option: Specifies the initial library list of the AFC job. Possible values are: ***CURRENT**, ***JOB**, ***SYSVAL** and ***NONE**.

Separator Drawer: Default drawer to select for separator pages. A separator page can be printed as a front page of each merged spool file. The separator page has to be requested for each merge. The separator page contains the following information:

```
Output from InterForm400 merge

Overlay name . . . . . : IF400DEMO
File set . . . . . : SAMPLE
Primary / secondary . . . . . : *PRI
Copies . . . . . : 001

Input spooled file:

*.Jobname . . . . . : QPADEV0002
*.Userprofile . . . . . : KSE
*.Jobnumber . . . . . : 092247
*.Date . . . . . : 2001-04-25
*.Time . . . . . : 02:40:15
*.Filename . . . . . : QPRINT
*.Filenummer . . . . . : 0004
*.Number of pages . . . . . : 0000007
Kim Egekjaer
```

AFC Definition Entries

The AFC function screen gives the possibility of entering sequence lines which will all be executed for each spool entry getting RDY in the input queue for the AFC definition.

```

Update AFC-functions attached to output queues                                AFC305D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program

Seqnbr Function
1,0  -
      1 = Merge with overlay          9 = Exit
      2 = Send Network Spooled File   A = Change Attributes
      3 = Transform *AFPDS to *USERASCII B = Split spooled file
      4 = Copy Spooled File           C = Prepare for Finishing
      5 = Move Spooled File           D = Sort Spooled File
      6 = Hold Spooled File           F = Change writer
      7 = Delete Spooled File         P = Send PDF E-mail
      8 = Call Program                * = Comment

F3=Exit                                F12=Cancel

```

When selecting a function the first screen will allow you to enter the spool file attribute(s) used as criteria for executing this sequence line:

```

Update AFC-functions attached to output queues                                AFC305D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001  1      DEMO
      Merge, Overlay: IF400DEMO Fileset: SAMPLE
0002  6
      Hold Spooled File

Seqnbr Function  Attributes of input file for which to execute the function
1,0  1
      Form type . . . . . DEMO_____
      Save attribute . . . . . _
      Jobname . . . . . _____
      Spooled file name . . . . . _____
      Device file . . . . . _____
      Library . . . . . _____
      Program that opened file . . . . . _____
      Library . . . . . _____

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

When entering more than 1 spool file attribute, the selected attributes have to be valid before AFC will execute the sequence line (Logical AND function). If an entry is left blank, the spool file attribute is ignored.

1=Merge with Overlay

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . : PRTHP3_AFC
Library . . . . . : QUSRSYS

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program

Seqnbr Function
  1,0   1                Merge with overlay

Output queue for merged print . _____
Library . . . . . _____
InterForm 400 printer type . . . _____
Interface . . . . . _____
Merge overprint lines . . . . . *NO_      *NO,*YES
Find overlay in forms type table N      (Y N)

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

In this screen the specifications for the output device is entered:

**Output queue/
library:**

The queue to receive the resulting print out. If a specific queue, Printer type and Interface type has been defined in the previous screen, the keyword ***DEFAULT** will be preset for this field. This is overwritten when entering a queue and a library here. Note that the keyword ***DEFAULT** apply to both Output queue, library, InterForm400® printer type and Interface.

**Printer Type/
Interface:**

The printer type (refer to page 374) and protocol conversion (refer to page 378) used for the above printer. Note that the keyword ***DEFAULT** entered for output queue will apply for these settings as well, i.e. the settings for Printer type and Interface type from the previous screen will be used.

**Merge overprint
lines:**

Specifies, that overprinted lines will be printed as one line. Refer to page 118 for more information.

**Find overlay in
forms type table:**

Stating Y will cause the **Forms type table** to be used for the **form type** stated for this entry. See page 170 for information on how to use the **Forms type table**. If stating N you will get the below screen.

In the following screen the definitions for the overlay is entered:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . : PRTHP3_AFC
Library . . . . . : QUSRSYS

Seqnbr  Funct   Form type  Save Jobname  Filename  Device file  Program

Seqnbr  Function
  1,0    1      Merge with overlay

Overlay name . . . . . _____
File set . . . . . _____
Or overlay selector . . . . . _____
Primary/Secondary set . . . . . *PRI          *PRI, *SEC
Form type . . . . . _____
Copies of each page . . . . . _____ *INPUT, 01-99

F3=Exit          F13=Fold/Unfold      F11=Delete        F12=Cancel

```

- Overlay name:** The Overlay you want to merge with. Use **F4** to get a list
- File set:** The file set containing the above overlay. Use **F4** to get a list.
- Overlay selector:** If the above is not filled in, it means you intend to use an Overlay Selector in order to search the spool data for special conditions, that will select the overlay. See page **122** On how to use the **Overlay Selector**.
- Primary/Secondary Set:** This option will decide if the Primary or the Secondary set of copies of an overlay are to be processed. The two sets of copies are defined in **Copy Management** (page **46**) if the **Global Setting, Copy Management** is set to **Y**. If this setting is **N** for the overlay, the overlay is regarded as **Primary**. ***PRI** is default for this option.
- Form Type:** The Form type of the resulting print out. It is recommended to use ***STD** for all output in order to avoid prompting for change of forms from the queue.
- Copies:** You can decide how many exact duplicates you want of each page in the spool entry. Note that if you want different contents for the duplicates you must define this in **Copy Management** for the overlay, or you can define another sequence line in this AFC definition which processes the same spool entry once more but with a different overlay.

This screen is only shown if you are merging with an overlay or overlay selector for a label printer (i.e. Zebra):

Seqnbr	Function	
1.0	1	Merge with overlay
	Labels/Continuous	. _ 1=Labels 2=Continuous
	Media type	. . . . . _ 1=Termo transfer 2=Termo media
	Print mode	. . . . . _ 1=Tear off 2=Rewind 3=Peel off 4=Cut

Labels / Continuous: Select **1=Labels** if the media contains of separate labels. select **2=Continuous** if the media is not separated into labels (in this case you would probably select **4=Cut** for the **print mode** parameter).

Media type: Select **1=Termo transfer** if you use a non heat sensitive media otherwise use option **2=Transfer media**.

Print mode: **1=Tear off** mean that you will manually tear of the labels. **2=Rewind** can be used for rewinding all printed labels onto another roll. This requires special hardware installed. **3= Peel off** will print only one label at a time waiting for the current label to be peeled off. (This also requires additional hardware). **4=Cut** (requires hardware cutter) normally cuts the media for each print job unless you use 2=Continuous - then **4=Cut** will cut out each label.

In the following screen the spool attributes for the final output is entered:

Update AFC-functions attached to output queues					AFC305D
Output queue	. . . . .	:	PRTHP3_AFC		
Library	. . . . .	:	QUSRSYS		
Seqnbr	Funct	Form type	Save Jobname	Filename	Device file Program
Seqnbr	Function				
1,0	1		Merge with overlay		
	Output spooled file name	. _____		*INPUT, Navn	
	User data	. . . . . _____		*INPUT, *JOB, *USER ...	
	Seperator drawer	. . . . . _____		*NONE, *DEFAULT, Number	
	Hold output spooled file	. _____		*NO, *YES	
	Save output spooled file	. _____		*NO, *YES	
	Archive in InfoStore/400	. _____		1=PCL, 2=PCL and SCS	
	Archive ID _____			
F3=Exit		F13=Fold/Unfold		F11=Delete	F12=Cancel

Output spooled file name: This entry controls the spool file name.

User data: You can change the spool file description of the resulting print data, so the spool file can be located on the output queue. By entering ***PAGES**, InterForm400® will display the number of pages included in the output from the merge process in the User data field. This is convenient when using the interface types ASCII850 and ASCII8. These types produces output with datatype *ASCII, which result in the spool queue displaying *1 for number of pages. When inserting the keyword *PAGES the following field will be displayed:

```

Seqnbr Function
1,0 1 Merge with overlay
                                     .....
Output spooled file : Text before number of pages :
User data . . . . : _____ : ...
Seperator drawer . : F3=Exit F12=Cancel : mmer
Hold output spooled :
Save output spooled : .....
Archive in InfoStore/400 . _ 1=PCL, 2=PCL and SCS
Archive ID . . . . . _____
F3=Exit F13=Fold/Unfold F11=Delete F12=Cancel

```

Here you can type in a help text which will be added before the number of pages as the first 4 characters in the user data field. *JOB or *USER can also be specified making the user data field contain either the job name or the user profile of the original spool file.

Separator Drawer: See page 119 for explanation

Hold output spooled file: This affects the status of the output spooled file on the queue.

Save output spooled file: This will affect the spool file attribute SAVE of the output spooled file.

Archive in InfoStore/400: InterForm400® automatically detects if InfoStore/400 is installed. If that is the case, then this (and the next) option emerges enabling direct archiving from InterForm400® in InfoStore/400. Here you can decide to archive the merged PCL spool file or both the PCL file and the original SCS spool file.

Archive ID: Archive ID in InfoStore/400, where the spool files are to be stored.

InfoStore/400 is an archiving system developed by Solitas AG, Read more about InfoStore/400 on <http://www.solitas.com>.

2=Send Network Spooled File

```

Seqnbr Function
1,0 2 Send Network Spooled File
                                     .....
Send to:
User ID . . . . _____
Address . . . . _____
Data format . . _____ *RCDDATA, *ALLDATA
F3=Exit F13=Fold/Unfold F11=Delete F12=Cancel

```

A spool entry can be sent to another system for processing or a processed job can be sent to another system for printing.

For instance could an AFC output queue have the function **1.Merge with APF3812 overlay** defined, and the receiving output queue for the result is an AFC input queue could have **2.Send Network Spooled File** defined.

User ID: Use a divided user address from a directory list (see contents using the WRKDIRE command), or a distribution list (see possible distribution lists using the command WRKDSTL).

Address: Refer to the above

Data format: You can either use *RCDDATA or *ALLDATA. *RCDDATA can be used for *SCS files, While *ALLDATA is required, when sending merged PCL files. For more information refer to the description of the DTAFMT parameter of the OS/400 SNDNETSPLF command.

3=Transform AFPDS to *USERASCII

Seqnbr	Function	
1,0	3	Transform *AFPDS to *USERASCII
		Output queue for ASCII print . . _____
		Library _____
		InterForm400 printer type . . . _____
		Interface _____
F3=Exit	F13=Fold/Unfold	F11=Delete F12=Cancel

AFPDS (Advanced Function Printing Data Stream) spool files are made for printer devices with AFP(*YES), which can only be printed out by IPDS printers.. This feature gives the possibility of printing advanced print consisting of lines, frames, different font types etc. directly from an application program. By using this transformation feature it is possible to print out these advanced definitions on an ordinary PCL printer.

**Output queue/
library:**

Output from the transformation will become a spool entry by the type *USERASCII. This output queue must therefore have a **PCL** printer attached which is defined as a ***3812** device. If a specific queue, Printer type and Interface type has been defined in the previous screen, the keyword ***DEFAULT** will be preset for this field. This is overwritten when entering a queue and a library here. Note that the keyword ***DEFAULT** apply to both **Output queue** and **library**, **InterForm400® printer type** and **Interface**.

**Printer type/
Interface:**

A PCL printer type and protocol conversion method according to the choices listed on page (see page **374** and **378**). Note that only ASCII850 and ASCII8 interface types can be used (see page 378).

Note, if you want to make use of this feature to transform AFPDS spool entries into *USERASCII, and these AFPDS spool files are using resource libraries not listed in the system library list, then the APF3812/AUTO_FORM job description must be changed in order to include these libraries in the library list.

⚠ WARNING ⚠
*The transformation can not convert **bar codes** and **AFP images** into PCL. These definitions will just be ignored in the process.*

⚠ WARNING ⚠
AFPDS print can not be used as input for an ordinary overlay merge.

4=Copy Spooled File

```

Update AFC-functions attached to output queues          AFC305D

Output queue . . . . :   PRTHP3_AFC
Library . . . . . :   QUSRSYS

Segnbr Function
 1,0   4       Copy Spooled File

New output queue . . . . . _____
Library . . . . . _____
Hold output spooled file . . . . *NO_      *NO, *YES
Save output spooled file . . . . *NO_      *NO, *YES

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

New Output queue: Output from this process will become a spool entry in the new output queue with the same attributes as the original spool entry. If a default queue has been defined, the keyword ***DEFAULT** will be preset for this field.

Hold output spooled file: This affects the status of the copied spooled file on the receiving queue.

Save output spooled file: This will affect the spool file attribute SAVE of the copied spooled file.

5=Move Spooled File

```

Segnbr Function
 1,0   5       Move Spooled File

New output queue . . . . . *DEFAULT__  Name,*DEFAULT,*USER
Library . . . . . _____
Hold output spooled file . . . . *NO_      *NO, *YES
Save output spooled file . . . . *NO_      *NO, *YES

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

New Output queue: Output from this process will move the spool entry to a new output queue. Following sequence lines will therefore not process the spool entry. If a default queue has been defined for this output queue (see page 137), the keyword ***DEFAULT** will be preset for this field.

The value ***USER** indicates, that the spooled file should be moved to the preferred queue of the spooled file owner. Refer to page 244 for details of the **user output queues** and an example.

NOTE

If ***USER** is used and the specific user is not on the list (see page 244) the **6=Move** command is ignored, an exit is performed and the spooled file remains in the output queue.

NOTE

***USER** is not allowed for the InterForm400 Light version.

Hold output spooled file: This affects the status of the moved spooled file on the receiving queue.

Save output

spooled file:

This will affect the spool file attribute SAVE of the moved spooled file.

6=Hold Spooled File

This function holds the **original input spool entry** for the AFC definition.

7=Delete Spooled File

This function deletes the **original input spool entry** for the AFC definition.

8=Call Program

Seqnbr	Function		
1,0	8	Program call	
		Program name	_____
		Library	_____
		User profile	AFCOPER_____ AFCOPER, *OWNER
F3=Exit	F13=Fold/Unfold	F11=Delete	F12=Cancel

This function gives you the possibility of letting Auto Forms Control perform operations that are not contained in this system. It could for instance be to store spooled print in a spool archive. Other useful features is to make a merge using the APF3812 CL command in order to create a PCL file in the folder system as seen on page 405, or even E-mail the merged file as a PDF file using the MRGSPLPDF command (see page 349).

Program name: A program to be called at this point

The program can be called with the following 7 parameters regarding the relevant spool entry:

Job name	*CHAR 10
User	*CHAR 10
Job number	*CHAR 6
File name	*CHAR 10
File number	*CHAR 4
Output queue	*CHAR 10
Library	*CHAR 10

An example of an exit program can be seen in the source member, FUNKT_8 in source file APF3812/APISRC.

User profile: The user profile under which the user exit program will run.

If e.g. a merge is done by use of the APF3812/APF3812 command the same user profile will be the owner of the merged spooled file.

⚠ WARNING ⚠

*All exit programs called by InterForm400® **must** be owned by QSECOFR. If it is not the AFC job will halt with an error message. Change the owner with the command: CHGOBJOWN OBJ(library/program) OBJTYPE(*PGM) NEWOWN(QSECOFR)*

9=Exit

This function will cause all remaining AFC functions (sequence lines) to be skipped.

If you want to insert AFC functions, that are to be executed for all spooled files not specifically handled in previous lines you could use this function. Just after handling a specific spooled file insert this function to exit from AFC.

Example:

Below we have defined, that spooled files with form type '**DEMO**' should be merged with overlay '**IF400DEMO**', spooled files with form type '**DEMO2**' should be merged with overlay '**RULER**' and all other spooled files should be moved to output queue, PRT01 where they will be printed.

Update AFC-functions attached to output queues							AFC305D
Queue:	AFC_INPUT1	Library:	APF3812				
Seqnbr	Funct	Form type	Save Jobname	Filename	Device file	Program	
0001	1	DEMO					
		Merge, Overlay: IF400DEMO	Fileset: SAMPLE				
0002	9	DEMO					
		Exit					
0003	*						
0004	1	DEMO2					
		Merge, Overlay: RULER	Fileset: SAMPLE				
0005	9	DEMO2					
		Exit					
0499	*						
0500	5		Move spooled file, new outq: PRT01	library: QUSRSYS			
F3=Exit		F5=Service		F13=Fold/Unfold			

A=Change attributes

Seqnbr	Function	
1,0	A	Change attributes
		Form Type _____ Form type, *SAME
		User data _____ User data, *SAME
		Restart with sequence no. 1 _ (Y N)
F3=Exit		F13=Fold/Unfold F11=Delete F12=Cancel

With this you can change FORMTYPE or USRDATA attributes of the input spool entry.

The idea of changing the form type is the requirement for a spool entry, which has been processed under e.g. the overlay name INVOICE to be run through the statements defined for the overlay SHIPPING. If the original spool entry had form type **Invoice** a sequence line **1.Merge with InterForm400® overlay** would have made one printout. After this sequence line you change the forms type of the original spool entry to **Shipping** which will cause another **1. Merge with InterForm400® overlay** to add the SHIPPING overlay and produce a new print-out.

Form Type User data

The new form type assigned to the original input spool entry.
The text description attached to a spool entry when viewing an output queue. Changing of USRDATA will normally only be done to



indicate that a spool entry has been processed.

B=Split spooled file

Seqnbr	Function		
n,0	B	Split spooled file	
		Split definition name _____	
F3=Exit	F4=prompt	F11=Delete	F12=Cancel

This function is used to split a spooled file into several separate spool files which can be processed independently.

A **Split definition** must exist before this function can be selected. See **Split definitions** on page **173** for more information.

 **WARNING** 

*Make sure, that you are not creating a loop in Auto Forms Control when you insert a split definition. If you e.g. create new spooled files with a split definition and these new spooled files are placed back on the same outq, then the new spooled file should **NOT** be able to trigger the split definition again...*

C= Prepare for Finishing

Seqnbr	Function		
1,0	C	Prepare for Finishing	
		Finish definition name _____	
		Output queue for prepared print *DEFAULT_____	
		Library _____	
		Form type _____	
F3=Exit	F4=prompt	F11=Delete	F12=Cancel

This function is used to pre-process an SCS spool entry in order to insert information for the Finishing Equipment. Refer to section **Finishing Definitions** page **181** for more information.

Finishing Definition

Name: The Finishing definition name. Use F4 to select from a list.

Output queue/ library:

Output from the pre-process will be a new SCS spool entry. If a default queue has been defined, the keyword ***DEFAULT** will be preset for this field. This is overwritten when entering a queue and a library here. ***INPUT** in this field Indicates that the new spool entry must be written to the same output queue where the input spool entry exists.

As the new spooled file afterwards will be input to a merge operation, ***INPUT** will often be appropriate. Note that the keyword ***DEFAULT** and ***INPUT** apply to both **Output queue** and **library**.

WARNING

Even though ***DEFAULT** is the default value it is most likely **WRONG**. ***DEFAULT** will place the temporary spooled files on the outq where the printer is attached and making it impossible to make them run through the **P=Send E-mail** function.

Form type: The form type entered here should be used as condition for a **1. Merge with overlay** following this AFC definition. The formtype could typically be **FNSHREADY** (Finish ready).

If you use an E-mail finishing definition this screen will appear:

```

Seqnbr Function
 10.0      C          Prepare for Finishing

                                Prepare for E-mail requires settings for
                                print that will not be send.
                                Output queue non E-mail print . _____
                                Library . . . . . _____
                                Form type . . . . . _____

F3=Exit                                     F12=Cancel

```

On this screen you specify on which output queue you want to place the pages, that cannot be e-mailed (no receiver was found). This should normally be an AFC monitored output queue so that a InterForm400® merge and print can be done.

WARNING

Make sure, that you are not creating a loop in Auto Forms Control when you insert a finishing definition. If you e.g. create new spooled files with a finishing definition and these new spooled files are placed back on the same outq, then the new spooled file(s) should **NOT** be able to trigger the finishing definition again...

D=Sort Spooled File

```

Seqnbr Function
 2,0      D          Sort Spooled File

                                Sort definition name . . . . . _____
                                Outque for sorted print . . . . *DEFAULT__
                                Library . . . . . _____
                                Form type . . . . . _____

F3=Exit                                     F11=Delete       F12=Cancel

```

This function is used to sort the spool entry according to criteria defined in a Sort Definition. Refer to section **Sort Definitions** page 230 for more information.

Sort Definition

Name: The Sort definition name.

**Output queue/
library:**

Output from the Sort process will be a new SCS spool entry. If a default queue has been defined, the keyword ***DEFAULT** will be preset for this field. This is overwritten when entering a queue and a library here. ***INPUT** in this field Indicates that the new spool entry must be written to the same output queue where the input spool entry exists.

As the new spooled file afterwards will be input to a merge operation, *INPUT will often be appropriate. Note that the keyword *DEFAULT and *INPUT apply to both **Output queue** and **library**.

Formtype: The formtype entered here should be used as condition for a **1. Merge with overlay** following this AFC definition. The formtype could typically be **SORTED**.

WARNING

*Make sure, that you are not creating a loop in Auto Forms Control when you insert a sort definition. If you e.g. create a new spooled files with a sort definition and these new spooled files are placed back on the same outq, then the new spooled files should **NOT** be able to trigger the sort definition again...*

F=Change Writer

Seqnbr	Function		
2,0	F	Change writer	
		Writer name _____ Name, *OUTQ	
		Form type _____	
F3=Exit	F13=Fold/Unfold	F11=Delete	F12=Cancel

Writer name: The name of the writer to change. When stating *OUTQ the writer attached to the output queue specified in the default settings for the AFC definition will be used.

Formtype: The formtype which the writer program will be restricted to process. All other formtypes will be left for InterForm400® to process.

This function makes it possible to use the same OUTQ for both input to and output from **InterForm400®**, and in cases where you have to use more than one type of paper and need to receive a message for changing paper.

In cases where you only use one type of paper in the printer you place an AFC function **F=CHGWTR** and change the formtype to e.g. *STD. This will restrict the writer to process spool entries of this type only. The next AFC function must be **9=EXIT** conditioned by formtype *STD. This will cause InterForm400® to stop processing print jobs of this type, and leave them for the AS/400 to print normally.

If you actually use more than one type of paper in your printer, and want to get the message to change forms in the printer, then you can define a **F = CHGWTR** for each formtype you want to receive a message for changing paper.

For instance, if you want the formtypes *STD and IF400 to be used for output to your printer, while other formtypes should be used for input conditions to other AFC functions, the following 4 AFC definitions should be made in the beginning:

1. For formtype=*STD, use F=CHGWTR to change formtype to *STD
2. For formtype=*STD, use 9=EXIT
3. For formtype= IF400, use F=CHGWTR to change formtype to IF400
4. For formtype=IF400, use 9=EXIT

Note that this function can be substituted by a more efficient method as described on page 27.

☺ **TIP** ☺

*Using option **F** can sometimes fail to change the writer job, if the printer is very fast. Fast printers might print out before Auto Forms Control can get to the print. Therefore it is recommended to use the more efficient way as described on page 27.*

G=Archive to MultiArchive/400

This option is only visible when the program MultiArchive/400 library MLTARC400 is detected on the system. MultiArchive/400 is a software only archiving system developed by the Danish company MultiSupport A/S. As InterForm400®, MultiArchive/400 exploits *SCS type spool entries. The interaction between InterForm400® and MultiArchive/400 controls that spool files are archived with the necessary spool file information, and AutoFormsControl is controlling that data is not archived again when reprinting from the archive through InterForm400®.

Read more about MultiArchive/400 on <http://www.multi-support.dk>.

Seqnbr	Function	
3,0	G	Archive to MultiArchive/400
		Archive name _____
		Item type _____
F3=Exit		F12=Cancel

H=Archive in InfoStore/400

This option opens up, when InfoStore/400 is installed on the same AS/400 as InterForm400®. You can use this to archive *SCS spooled files in InfoStore/400.

Seqnbr	Function	
1.0	H	Archive in InfoStore/400
		Archive ID _____

For archiving both PCL and *SCS spooled files see page 143.

InfoStore/400 is an archiving system developed by Solitas AG, Read more about InfoStore/400 on <http://www.solitas.com>.

P = Send PDF E-mail

```
Seqnbr Function
 1.0    P      Send spooled file as PDF email

          Overlay name . . . . . _____
          File set . . . . . _____
          or overlay selector . . . . . _____
          Primary/Secondary set . . . . *PRI      *PRI, *SEC
          Save email . . . . . *NO_        *NO, *YES
```

This function is used to distribute E-mails. Note, that the spool file first has to be handled by a E-mail finishing definition before this function. See page **195** And **218**. Refer to page **459** for information of how to set up SMTP on the AS/400.

NOTE
In order to get PDF output you need to purchase the PDF module or the classis package for InterForm400.

N = PDF File naming and -save

```
3.0    N      Save spooled file as PDF

          Overlay name . . . . . IF400DEMO_
          File set . . . . . SAMPLE_____
          or overlay selector . . . . . _____
          Primary/Secondary set . . . . *PRI      *PRI, *SEC
          Merge overprint lines . . . . *NO_        *NO, *YES
          PDF File naming definition . . KSE_PDF____
```

This function executes a PDF file naming finishing definition. It will create PDF files, that are the result of a merge with the specified overlay or overlay selector. Refer to page **206** for more information of the PDF file naming finishing definition.

NOTE
In order to get PDF output you need to purchase the PDF module or the classic package for InterForm400.

* = Comment

```
Seqnbr Function
 1.0    *      Comment
          _____
```

Use comment lines to great extent in order to keep track of what the AFC functions do. It makes future changes quicker and more safe.

Convert SAP spool entries (datatype *IBMSCS)

The program **SAP100C** delivered with **InterForm400®** is used to convert the SAP systems proprietary spool format with datatype *IBMSCS to ordinary spool entries with *SCS. The program can be called from the AFC function **8=Call Program**.

The SAP format is intended to be additionally formatted by the native PCL drivers embedded in SAP, and can not be sent to a printer directly.

Control commands (CR, LF, FF) in SAP spool entries are formatted as text and not as hex values. For instance is 0Dh0Ch formatted as F0hC4hF0hC3h. SAP generated spool entries has no meaningful attributes like page length/width. Instead the formtype indicates the format (eg. DINA4 or 51X132). **InterForm400®** does not use this information as the page size definition is controlled by the overlay.

The source code for the program is placed in the file SAPSRC in the APF3812 library, as there might be other flavours of SAP print (*IBMSCS), which has not yet been considered, and which a programmer may need to adjust to.

SAP spool entries (datatype *IBMSCS2)

The latest releases of SAP software is creating spool file format with datatype *IBMSCS2, which is the same as *SCS and can be used directly in InterForm400®.

Generating multiple copies in input spool entries.

When defining a finishing definition for which you want to use an overlay containing Copy Management, you will need to enter an overlay containing the number of copies in the Pre-process definition for the Finishing definition. Alternatively the program **APF3812/PRSCOPY** delivered with **InterForm400®** can be used to create a new SCS spool entry with multiple copies of selected pages, from an input spool entry with data type *SCS. The program can be used with AFC function **8=Call Program**.

The input spool entry should have a number from 1-9 placed in position 1 line 1, which PRSCOPY takes as information on how many copies to generate. The copies will be placed immediately after the original in the new spool entry. Page one of the copies (the original) will have a "C" placed in position 1 line 1. This field can be used for selecting specific forms using the "Overlay Selector". Pages with a blank or characters other than 1-9 in position 1 line 1 will be copied to the resulting spool entry as they are.

The resulting spool entry can be recognised by the characters "PRS", which has been added as the last 3 characters of the formtype. If the original form type name used all available characters, the last 3 characters of the form type will be replaced with "PRS".

☺ **TIP** ☺

*A similar function can be obtained by using Copy Management and stating *VAR as the number of copies. Refer to page 53 for more information.*

Getting Familiar with Auto Forms Control

The following sections are structured so you will be brought through a process of creating AFC definitions for processing of the **IF400DEMO** from the **Getting Started** section.

The chapter requires you have:

- Performed step **13, 14, 18** and **19** in the **Getting Started** section.
- A **PCL5 capable printer** attached and configured.
- Not made changes to the AFC definition **AFC_INPUT1**.

The following two examples will cover the following:

Example 1: We will edit the existing AFC definition **AFC_INPUT1**, to move spool files with type ***STD** to the output queue **AFC_OUT1** without adding an overlay, and to move spool files with formtype **DEMO** (the sample spool entry) to the queue **AFC_INPUT2** after doing a merge.

Example 2: We will define a new AFC definition **AFC_INPUT2** and use the same queue as input and output for Auto Forms Control. We will make a merge overlay definition for processing printjobs with formtype **DEMO** (the sample spool entry). These printjobs are automatically transferred from AFC definition **AFC_INPUT1** by the definitions made in example 1.

Example 1, Using Separate queues for Input and Output

Step 1. Checking the Writer

First we will assign our writer to the correct queue.

Printer Writer (Twinax, or TCP/IP (TN5250E or Raw Socket))

If the printer writer is already started and attached to another output queue, the following command will change **PRTXXX** to be attached to output queue **AFC_OUT1**. (If the writer is not started just replace **CHGWTR** with **STRPRTWTR**)

```
CHGWTR WTR(PRTXXX) OUTQ(APF3812/AFC_OUT1)
```

Remote Writer (TCP/IP LPD):

You can not change a remote writer to use another queue as it is the queue itself which contains the definition of the writer (IP address). You should instead follow the procedure explained on page **370 Attaching through a TCP/IP Print Server** in order to configure queue **AFC_OUT1** as a remote writer.

Step 2. Checking if Auto Forms Control is running

Select option **5. Work with Auto Forms Control** on the main menu and enter menu item **12. Work with active subsystem AUTO_FORM**. If the sub-system is not active, return with **F3** and start the subsystem with option **10. Start AUTO_FORM** subsystem.

If the **AFC_INPUT1** job does not start up with the subsystem you can manually start it by selecting **'1. Functions attached to Output Queues'** from the AFC menu followed by option **'8=Start AFC-job'** for the **AFC_INPUT1** outq.

```

                                Work with Active Jobs                                INTER01
                                27.02.98 10.20.02
CPU %:    9,7    Elapsed time:  00.03.36    Active jobs:  131

Type options, press Enter.
  2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
  8=Work with spooled files  13=Disconnect ...

Opt  Subsystem/Job  User      Type  CPU %  Function      Status
---  ---          ---      ---   ---    ---          ---
---  AUTO_FORM     QSYS     SBS   0,3    DEQW          DEQW
---  AFC_INPUT1    AFCOPER  BCH   0,2    PGM-AFC700   DEQW

Parameters or command
====>
F3=Exit      F5=Refresh  F10=Restart statistics  F11=Display elapsed data
F12=Cancel   F23=More options  F24=More keys

```

Use this screen to verify that your AFC jobs are running, and for replying on messages in error situations.

Step 3. Entering Auto Forms Definition AFC_INPUT1

Now enter option 1. **Functions attached with to Output Queues** and select the AFC definition AFC_INPUT1.

```

                                Work with Auto Forms Control output queues                                AFC300D

Start with . . . . .

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display  8=Start AFC-job  9=End AFC-job

Opt  Outq          Library      Description
  2   AFC_INPUT1   APF3812     Job for sample printout

End

F3=Exit      F5=Refresh  F6=Add      F12=Cancel

```

Note that it is not necessary to end the AFC job in order to make changes to an AFC definition. Changes will take effect immediately.

```

Update Auto Forms Control Definition                                AFC302D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . . Job for sample printout_____
Autostart job . . . . . Y (Y N)
Code page . . . . . *SYSVAL Number, *SYSVAL F4=List

Default output output queue and printer type
Output queue . . . . . AFC_OUT1__
Library . . . . . APF3812__
InterForm 400 printer type . HPIII__
Interface . . . . . ASCII850__

Optional template AFC-definition to be executed after this definition
Output queue . . . . . _____
Library . . . . . _____

F3=Exit F4=Prompt F10=Additional parameters F12=Cancel

```

We do not make changes to these settings but press Enter once more.

Step 4. Defining move of print jobs with type *STD

On the next screen we notice that we have two definitions already.

```

Update AFC-functions attached to output queues                    AFC305D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812
Seqnbr Funct Form type Save Jobname Filename Device file Program
0001 1 DEMO
Merge, Overlay: IF400DEMO Fileset: SAMPLE
0002 6
Hold Spooled File

Seqnbr Function
____ -

F3=Exit F5=Service F13=Fold/Unfold

```

The first line defines the merge and printing of the demo spool entry used in the **Getting Started** section.

The second line defines that the demo spool entry should be **Held** after processing. That means the demo spool entry will remain in the queue after it has been used to create a new spool entry with overlay which is sent to the printer.

We now add an AFC function as the first line. We type **0,1** and press **Field Exit**. Here we select function **5 move spooled file**. We press **Enter** and we define the criteria ***STD**, which means this AFC function should only be processed for spool entries having formtype ***STD**:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    1      DEMO
Merge, Overlay: IF400DEMO Fileset: SAMPLE
0002    6
Hold Spooled File

Seqnbr Function
0,1    5      Move Spooled File

New output queue . . . . . AFC_OUT1__      *DEFAULT, *USER
Library . . . . . APF3812__
Hold output spooled file . . . . *NO_      *NO, *YES
Save output spooled file . . . . *NO_      *NO, *YES

F3=Exit          F13=Fold/Unfold          F12=Cancel

```

We want to send all spool entries with formtype ***STD** to the output queue **AFC_OUT1** without adding any overlay. When we press Enter, we see the AFC function appear as the first line:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    5      *STD
Move spooled file, new outq: AFC_OUT1 library: APF3812
0002    1      DEMO
Merge, Overlay: IF400DEMO Fileset: SAMPLE
0003    6
Hold Spooled File

Seqnbr Function
0,1

F3=Exit          F5=Service          F13=Fold/Unfold

```

Step 5. Defining move of Print jobs with Formtype DEMO

Currently sequence line 3 defines that all files should be put on hold when they have been processed by line 1 and 2.

This means that currently the sample spool entry with form type DEMO is put on hold and stays in the queue. We now want to move this type of spool file to queue AFC_INPUT2, so it can be processed by the AFC definition for that queue.

We enter a sequence line between sequence line 2 and 3, meaning that we will move the demo spool entry, after it has been used to create a merged spool file on queue AFC_OUT1, but before it would get put on hold by sequence line 3:

We enter sequence line **2,1** and press **Field Exit**. We enter form type DEMO as the criteria for executing the move operation and we press **Enter**:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001   5      *STD
      Move spooled file, new outq: AFC_OUT1 library: APF3812
0002   1      DEMO
      Merge, Overlay: IF400DEMO Fileset: SAMPLE
0003   6
      Hold Spooled File

Seqnbr Function
 2,1   5      Move Spooled File

      New output queue . . . . . AFC_INPUT2  *DEFAULT, *USER
      Library . . . . . APF3812_____
      Hold output spooled file . . . . *NO_      *NO, *YES
      Save output spooled file . . . . *NO_      *NO, *YES

F3=Exit          F13=Fold/Unfold          F12=Cancel

```

Print jobs having neither *STD nor DEMO as form type will be put on hold on queue AFC_INPUT1 by the last sequence line

Press **Enter** to save the new sequence line 3 and press **F3** to exit the AFC definition window.

Step 6. Testing new functions in AFC_INPUT1

We can now try to release a demo spool entry using option **1. Create Demo Spool Entry** under **12. Service Functions** in the Administration menu.

You will notice that the demo spool entry is printed with overlay **IF400DEMO** to the queue **AFC_OUT1** just as we experienced in the **Getting Started** section.

Now try changing the default output queue for your current job to be **AFC_INPUT1**. This is done by the following command:

```
CHGJOB OUTQ(APF3812/AFC_INPUT1)
```

Try to make a screen dump or print a log or another system report. Example:

```
PRTDEVADR CTL01
```

It will now be printed to queue **AFC_INPUT1**, but as it has formtype ***STD** it will be moved to queue **AFC_OUT1** and be printed as normal.

We will also notice that the demo spool entry (form type DEMO) has been moved to queue **AFC_INPUT2**, where it is placed with status ***RDY**:

```
WRKOUTQ APF3812/AFC_INPUT2
```

Example 2, Using same Queue for Input and Output

We will now create a new AFC queue, which will be used for both input and output for Auto Forms Control

Step 1. Checking the Writer

First we will make sure our printer only prints out one specific form type, and leave others to AFC.

The easiest way to do this is from the InterForm400® Main Menu to choose **80. Administering InterForm 400, 2. Configure InterForm 400** and then press Enter several times to get the screen below:

```
Configure InterForm 400                                     APF101D
                                                           7/7
Do you want to use the APF3812/STRWTRCHK program as validity checking program
for the STRPRTWTR and STRRMTWTR commands, to avoid a writer to be started with
FORMTYPE(*ALL) on one of the output queues defined in Auto-Forms-Control, and
if yes, what formtype has to replace *ALL when a writer is started on one of
these output queues.

Use APF3812/STRWTRCHK as a validity checker      N   (Y N)

Form type to replace *ALL . . . . . _____

This option is especially useful, if you are using the same output queue
for both input to AFC-functions and for output to a printer, as a writer
never should be started with FORMTYPE(*ALL) on such an output queue.

F3=Exit                                           F12=Cancel
```

In this screen you state Y to use STRWTRCHK as a validity checker, and specify which particular form type the printer writer is restricted to process.

In case you do not want to use this general change, you can specify a specific form type when starting or changing writer jobs as seen below.

Printer Writer (Twinax, or TCP/IP (TN5250E or Raw Socket))

If the printer writer is already started and attached to another output queue, the following command will change **PRTXXX** to be attached to output queue **AFC_INPUT2**. (If the writer is not started just replace **CHGWTR** with **STRPRTWTR**)

```
CHGWTR WTR(PRTXXX) OUTQ(APF3812/AFC_INPUT2)
FORMTYPE(*STD)
```

Defining formtype *STD for the writer will limit the subsystem QSPL to process jobs with this formtype only, thus leaving all jobs regardless of formtype to be processed by subsystem AUTO_FORM:

Remote Writer (TCP/IP LPD)

You can not change a remote writer to use another queue as it is the queue itself which contains the definition of the writer (IP address). You should instead follow the procedure explained on page **370 Attaching through a TCP/IP Print Server** in order to configure queue **AFC_INPUT2** as a remote writer. Note that remote writer must be started

with formtype *STD in order to limit the subsystem QSPL to process jobs with this formtype only, thus leaving all jobs regardless of formtype to be processed by subsystem AUTO_FORM.:

```
STRRMWTR OUTQ(APF3812/AFC_OUT1) FORMTYPE(*STD)
```

☺ **TIP** ☺

When using the same output queue for both Input and output it is highly recommended to include the form type when starting the writer jobs in program QSTRUPPGM, in order to be sure that the writers are started up with the correct Form Type after IPL. However this is automatically fixed, when using STRWTRCHK as described above.

⚠ **WARNING** ⚠

*Note that some PC emulated writers, such as the Client Access printer session, automatically starts the writer with FORMTYPE=*ALL when initialising. Then the only practical solution is the one mentioned first above (APF3812/STRWTRCHK).*

Step 2. Creating the AFC Definition:

Enter menu **5. Work with Auto Forms Control** and select option **1. Function attached to Output queues**. Here we press **F6** to create a new definition:

```

Update Auto Forms Control Definition                                AFC302D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . . DEMO queue for both input and output
Autostart job . . . . . Y (Y N)
Code page . . . . . *SYSVAL Number, *SYSVAL F4=List

Default output output queue and printer type
Output queue . . . . . AFC_OUT2__
Library . . . . . APF3812__
InterForm 400 printer type . HP111__
Interface . . . . . ASCII850__

Optional template AFC-definition to be executed after this definition
Output queue . . . . . _____
Library . . . . . _____

F3=Exit F4=Prompt F10=Additional parameters F12=Cancel

```

Here we define the queue to monitor should be **AFC_INPUT2**. We assign the same name for the AUTO_FORM subsystem job, as it will be easier to recognise the correct job when looking at active jobs.

As we will use the same queue for Input and Output for our AFC definitions, we assign the same queue name for the default output queue.

For printer and interface type we state values matching our specific printer.

There should be no criteria for changing the writer, so we press **Enter** twice to get the AFC function entry screen.

Step 3. Restricting the writer to process type *STD jobs only

Note: This step can be ignored, if you restrict the writer jobs using the STRWTRCHK option as first mentioned.

We create our first AFC function by entering 1 followed by **Field Exit**

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program

(No functions defined)

Seqnbr Function
  1,0   F           Change writer

                               Writer name . . . . *OUTQ_____ Name, *OUTQ
                               Form type . . . . . *STD_____

F3=Exit          F13=Fold/Unfold          F12=Cancel

```

The first AFC function we enter is **F=CHGWTR**. This function is the first action taken for any spool file printed to queue AFC_INPUT2.

By stating *OUTQ instead of a specific writer name (PRTXXX) we define that the writer to change should be the one currently assigned to the default queue AFC_INPUT2 defined in the previous screen.

Step 4. Preventing following AFC functions to process type *STD

In order to let all spool files with form type *STD be printed without further processing by **InterForm400®**, we define an **Exit** in a new sequence line. We type 2 and press **Field Exit**.

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001   F
      Change writer: *OUTQ Form type: *STD

Seqnbr Function  Attributes of input file for which to execute the function
  2,0   9
      Form type . . . . . *STD_____
      Save attribute . . . . . _
      Jobname . . . . . _____
      Spooled file name . . . . . _____
      Device file . . . . . _____
      Library . . . . . _____
      Program that opened file . . . . . _____
      Library . . . . . _____

F3=Exit          F13=Fold/Unfold          F12=Cancel

```

By function **9=EXIT** we define that all spool files with form type ***STD** should not be processed further by any sequence line after this..

Step 5. Defining the Overlay Merge

Now we want to define the merge of our demo spool entry with our overlay **IF400DEMO**. We enter sequence line **3** and press **Field Exit**. We enter form type **DEMO** as the criteria for executing the move operation and we press **Enter**:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    F
Change writer: *OUTQ Form type: *STD
0002    9
*STD
Exit

Seqnbr Function  Attributes of input file for which to execute the function
3,0    1
Form type . . . . . DEMO_____
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____
F3=Exit          F13=Fold/Unfold          F12=Cancel

```

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    F
Change writer: *OUTQ Form type: *STD
0002    9
*STD
Exit

Seqnbr Function
3,0    1    Merge with overlay

Output queue for merged print . *DEFAULT__
Library . . . . . _____
InterForm 400 printer type . . . _____
Interface . . . . . _____
Merge overprint lines . . . . . *NO_          *NO, *YES
Find overlay in form type table N (Y N)

F3=Exit          F13=Fold/Unfold          F12=Cancel

```

We select function **1=Merge** and enter **DEMO** as condition for processing this sequence line. We press Enter and we define ***DEFAULT** for the output queue which should receive the merged print. The default is **AFC_INPUT2** according to the previous screen.

Note that ***DEFAULT** include Library, Printer Type and Interface.

We define that we do not want to search an overlay table, and we press **Enter** to get the entry field for defining the overlay:

```

Update AFC-functions attached to output queues                                AFC305D

Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    F
0002    9      Change writer: *OUTQ Form type: *STD
          *STD
          Exit

Seqnbr Function
3,0    1      Merge with overlay

          Overlay name . . . . . IF400DEMO_
          File set . . . . . SAMPLE
          or overlay selector . . . . .
          Primary/Secondary set . . . . *PRI          *PRI, *SEC
          Form type . . . . . *STD
          Copies of each page . . . . . *INPUT          *INPUT, 01-99

F3=Exit          F4=Prompt          F12=Cancel

```

If you have worked through section **Getting Familiar with Overlay Selectors**, You could enter the selector **MYSELECT** instead of an Overlay name.

It is very important that we define the form type to be ***STD**. The resulting spool entry of this AFC function will be sent back to the same queue **AFC_INPUT2** and get status ***RDY**. That means the first two AFC definitions we defined will be executed for the new spool entry. However, the second line (**9=EXIT** on formtype ***STD**), will see to that the merged print is not processed once more by sequence line 3, but instead processed by the writer as result of sequence line 1=**CHGWTR**, which defined the writer to process jobs with formtype ***STD**.

We now press **Enter** to decide the spool file attributes of the merged print out.

```

Update AFC-functions attached to output queues                                AFC305D

Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001    F
0002    9      Change writer: *OUTQ Form type: *STD
          *STD
          Exit

Seqnbr Function
3,0    1      Merge with overlay

          Output spooled file name . _____ *INPUT, Name
          User data . . . . . IF400DEMO_ *INPUT, *JOB, *USER ...
          Sperator drawer . . . . . _____ *NONE, *DEFAULT, Nummer
          Hold output spooled file . *NO_ *NO, *YES
          Save output spooled file . *NO_ *NO, *YES

```

As user data we state the same name of the overlay, which will allow us to verify the spool entry on the output queue **AFC_INPUT2**.

We press Enter to save this AFC definition.

Step 6. Cleaning up processed jobs

The spool entry which was used for creating the new spool entry with overlays, will stay in the queue with status ready, unless we define an AFC function to handle it.

We have several possibilities. We could just hold it with function 6, but we could also choose to move it to another queue in order to save it. This queue could then be cleared every Friday, when we are sure no re-prints are needed.

Finally we could choose just to delete the job which we intend to do in sequence line 4:

```
Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT2
Library . . . . . : APF3812
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001   F
      Change writer: *OUTQ Form type: *STD
0002   9
      *STD
      Exit
0003   1
      DEMO
      Merge, Overlay: IF400DEMO Fileset: SAMPLE

Seqnbr Function  Attributes of input file for which to execute the function
 4,0   7
      Form type . . . . . DEMO_____
      Save attribute . . . . . N
      Jobname . . . . . _____
      Spooled file name . . . . . _____
      Device file . . . . . _____
      Library . . . . . _____
      Program that opened file . . . . . _____
      Library . . . . . _____
F3=Exit          F13=Fold/Unfold          F12=Cancel
```

We define that all spool entries with form type DEMO should be deleted, but only if the spool file attribute SAVE=*NO. If SAVE=*YES there might be a good reason for it, which means we should leave them alone.

We press **Enter** to save

We have not considered what to do with spool files with other form types than *STD or DEMO. They will therefore just stay in the queue with status *RDY.

Now one might wonder if the spool files with form type *STD also remains in the queue, but they are automatically deleted when the writer has printed them.

Step 7. Activating the AFC job AFC_INPUT1

We now press F3 to exit our AFC definition and we select option 8 to start the AFC job.

```
Work with Auto Forms Control output queues                                AFC300D
Start with . . . . . _____
Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display  8=Start AFC-job  9=End AFC-job

Opt   Outq      Library      Description
_     AFC_INPUT1 APF3812     Job for sample printout
8     AFC_INPUT2 APF3812     DEMO queue for both Input and Output

End

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

Step 8. Testing the new AFC definition AFC_INPUT2

We can now try to release a demo spool entry using option 1. **Create Demo Spool Entry** under **12. Service Functions** in the Administration menu.

If you made the changes to AFC definition AFC_INPUT1 according to Example 1, the demo spool entry will automatically be moved to AFC_INPUT2 as result of sequence line 3 (function 5=move). If you did not make the changes you will have to move the spool file manually from outq AFC_INPUT1 to AFC_INPUT2 and release it.

As in Example 1 you can try changing your default print queue to **AFC_INPUT2** with the command:

```
CHGJOB OUTQ(APF3812/AFC_INPUT2)
```

Try to make a screen dump or print a log or another system report. Example:

```
PRTDEVADR CTL01
```

It will now be printed to queue **AFC_INPUT2**, but the formtype ***STD** will cause the job to print without interference from Auto Forms Control.

We will also notice that the demo spool entry (formtype DEMO) has been deleted after it has been used to generate the merged printout.

Using a “TEMPLATE” AFC definition

As all printers being used together with InterForm400® has to have an AFC-definition defined, the use of a TEMPLATE AFC definition is very useful. A lot of the printers being monitored by AFC, will often have the same requirements in terms of which spool files are to be merged with which overlays.

In the following example we delete the AFC entries made for AFC definition AFC_INPUT1, even though the use of a template definition will also work when AFC entries is made in the main AFC definition. The template AFC entries will always be executed after the AFC entries made in the main AFC definition.

```

Update Auto Forms Control Definition                                AFC302D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . . Job for sample printout
Autostart job . . . . . Y (Y N)
Code page . . . . . *SYSVAL Number, *SYSVAL F4=List

Default output output queue and printer type
Output queue . . . . . AFC_OUT1
Library . . . . . APF3812
InterForm 400 printer type . HP4_PJL
Interface . . . . . ASCII850

Optional template AFC-definition to be executed after this definition
Output queue . . . . . TEMPLATE__
Library . . . . . QGPL_____

F3=Exit F4=Prompt F10=Additional parameters F12=Cancel

```

Rather than making the same AFC entries for a lot of similar monitored output queues, we create an AFC definition with entries, which will operate as a template for other AFC definitions:

Create an output queue **without** a device attached.: CRTOUTQ QGPL/TEMPLATE

Create an AFC definition as per below, using option 1. Functions attached to output queue from the AFC menu option 5. Work with Auto Forms Control. Press F6 to create.

```

Update Auto Forms Control Definition                                AFC302D

Output queue . . . . . : TEMPLATE__
Library . . . . . : QGPL_____

Type choices and then press Enter. Press F3 or F12 to exit.
Description . . . . . Template AFC-definition_____
Autostart job . . . . . Y (Y N)
Code page . . . . . *SYSVAL Number, *SYSVAL F4=List

Default output output queue and printer type
Output queue . . . . . TEMPLATE__
Library . . . . . QGPL_____
InterForm 400 printer type . HP4_PJL__
Interface . . . . . ASCII850

Optional template AFC-definition to be executed after this definition
Output queue . . . . . _____
Library . . . . . _____

F3=Exit F4=Prompt F10=Additional parameters F12=Cancel

```

We will create a simple AFC entry for this AFC definition, where we want to merge the spool files with Form Type DEMO, with overlay IF400DEMO and send the resulting print to the DEFAULT output queue, as follows:

```

Update AFC-functions attached to output queues                                AFC305D

Output queue . . . . . :    TEMPLATE
Library . . . . . :    QGPL
Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001   1      DEMO
Merge, Overlay: IF400DEMO Fileset: SAMPLE

Seqnbr Function  Attributes of input file for which to execute the function
1,0   1
Form type . . . . . DEMO_____
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____
F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

We will define that the print should be directed to the *Default output queue

```

Seqnbr Function
1,0   1          Merge with overlay

Output queue for merged print . *DEFAULT____
Library . . . . . _____
InterForm 400 printer type . . . _____
Interface . . . . . _____
Merge overprint lines . . . . . *NO_  *NO, *YES
Find overlay in forms type table N (Y N)

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

The spool file should be merged with overlay IF400DEMO in file set SAMPLE and the resulting spool file should have Form Type MERGED.

```

Seqnbr Function
1,0   1          Merge with overlay

Overlay name . . . . . IF400DEMO_
File-set . . . . . SAMPLE_____
Or overlay selector . . . . . _____
Primary/Secondary set . . . . . *PRI  *PRI, *SEC
Form type . . . . . MERGED_____
Copies of each page . . . . . *INPUT *INPUT, 01-99

F3=Exit          F13=Fold/Unfold      F11=Delete      F12=Cancel

```

The attributes of the resulting spool file we leave as *INPUT and set *NONE for Separator Drawer and *NO for Hold or SAVE spool file.

Seqnbr	Function	
1,0	1	Merge with overlay
		Output spooled file name . *INPUT_____ *INPUT, Navn
		User data *INPUT_____ *INPUT, *JOB, *USER ...
		Seperator drawer *NONE_____ *NONE, *DEFAULT, Nummer
		Hold output spooled file . *NO_ *NO, *YES
		Save output spooled file . *NO_ *NO, *YES
F3=Exit	F13=Fold/Unfold	F11=Delete F12=Cancel

Now start the AFC definition AFC_INPUT1 and TEMPLATE with function 8 in '1. Functions attached to output queues'. If you do not already have the demo spool entry in output queue AFC_INPUT1 you can create this demo spool file, using function '1. Create Demo Spool Entry' in '12. Service Functions' which you will find from the '80. Administration menu'.

When you release the demo spool file in output queue AFC_INPUT1, you will see that AFC will process the spool file according to the AFC entries made in the TEMPLATE definition, however the resulting spool file will still be directed to the default output queue AFC_OUT1, which we have defined for AFC output queue AFC_INPUT1.

2. Form Type Table

An alternative to stating the **Form Type** directly in **1= Merge with Overlay** (refer to page **139**) is to create a table which has all available form types listed.

Apart from having the forms listed in a well-arranged manner, the form types table gives the possibility of defining 3 copies with 3 different overlays for each page in the input spool entry.

Note that an AFC definition must be defined which lets the selection from the **Forms type table** take effect.

When selecting the menu point **2. Form Type Table** from the Auto Forms Control administration menu the following screen will appear:

```
Enrollment of Form Types to Auto Forms Control                                AFC310D
Form type of spooled file . . . _____
F3=Exit  F5=Refresh  F6=Add form type  F11=View 2  F12=Cancel
```

The overlay selection entry field

Pressing F6 to add a new form type results in the screen below:

```
Add form type to form type table                                            AFC310D
Form type . . . . . _____
Merge with
File-set . . . . . _____
Overlay name . . . . . _____
Primary/Secondary set . . _____ *PRI, *SEC
Form Type . . . . . _____
Copies . . . . . _____ 1-99, *INPUT
And if filled in, merge with
File-set . . . . . _____
Overlay name . . . . . _____
Primary/Secondary set . . _____ *PRI, *SEC
Form Type . . . . . _____
Copies . . . . . _____ 1-99, *INPUT
And if filled in, merge with
File-set . . . . . _____
Overlay name . . . . . _____
Primary/Secondary set . . _____ *PRI, *SEC
Form Type . . . . . _____
Copies . . . . . _____ 1-99, *INPUT
F3=Exit  F4=List  F12=Cancel
```

This screen contains the possibility to produce three different print-outs of the spool entry with individual overlays attached. All sets will be printed on the same queue defined by the

AFC definition **1.Merge with overlay** which has **Find overlay in forms type table = Y**.
(refer to page **140**)

File-set: The file-set where the overlay is placed. Prompt available file-set with **F4**

Overlay name: The overlay to use from the above file-set

Form type: The form type for the merged output. It is recommended to use ***STD** in order to avoid messages from the writer about changing forms.

Copies: The number of copies produced from each page of the input spool entry.

Split Definitions

With the Split Definition you will be able to select specific pages in a spool entry on basis of contents of these pages. A split function will create a new spool entry with pages meeting the criteria. The conditional selection of pages works in the same way as the overlay selector described on page 122.

When entering **3. Split definitions** in the menu **5. Work with Auto Forms Control** on the main menu the following screen is displayed.

```
Work with Split Definitions                                AFC300D
Start with . . . _____
Type option, Press Enter.
  2=Change   3=Copy   4=Delete   5=Display
Opt   Split name   Description
F3=Exit      F5=Refresh  F6=Add      F12=Cancel
End
```

Press **F6** to create a new split definition.

Split Definition Entries

```
Create Split Definition                                SPL310D
Split definition name . : SHIPPING__
Description . . . . . : Extract_invoices_only_____
Seqnbr. Split detail description
Seqnbr. Split detail description
_____
F3=Exit      F5=Resequenece  F12=Cancel
```

You can now enter the specific requirements your spool entry data should meet for selecting a certain overlay.

When Entering a sequence line you will get the following screen:

Change Split Definition				SPL310D	
Split definition name . : SHIPPING_					
Description : Extract invoices only					
Seqnbr.					
Seqnbr	Split detail description				
1,0	_____				
	AND/OR	Print line	Position	Oper	Compare value
	_____	_____	_____ - _____	_____	_____
	_____	_____	_____ - _____	_____	_____
	_____	_____	_____ - _____	_____	_____
	_____	_____	_____ - _____	_____	_____
	_____	_____	_____ - _____	_____	_____
	_____	_____	_____ - _____	_____	_____
F3=Exit				F11=Delete	F12=Cancel

- Split detail description:** Description of the pages selected by this detail line.

- AND/OR:** Relate this statement to the previous statement.

- Print Line:** The print line in the spool entry to search.

- Position:** The column interval to search.

- Oper.** The operator relating to the compare value.
The operators used are standard operators known from e.g. Query/400:
 - EQ** Equal to compare value
 - NE** Not equal to compare value
 - LT** Less than compare value
 - LE** Less than or equal to compare value
 - GT** Greater than compare value
 - GE** Greater than or equal to compare value

- Compare Value:** The character string or numeric value which the operator should compare with.

Calling a User Exit Program with the extracted spool pages

```

Change Split Definition SPL310D

Split definition name . . : IF400ONLY
Description . . . . . : Sort IF400 Pages

Split detail description : IF400 ONLY

User exit program
Program name . . . . . *NONE_____ *NONE, name
Library . . . . . _____ name

F3=Exit F12=Cancel

```

This screen can be used to call a user exit program, that inserts information in the spool entry resulting from the split.

InterForm400® will call the program with a set of parameters consisting of up to either 5 or 10 lines each containing a field of up to 30 positions. The amount of exit parameters depends on the format: 01 equals 5 exit parameters, 02 equals 10 exit parameters, 03 equals the 10 exit parameters as well as 300 character parameter, that contains all attributes of the original spooled file.

For additional information on return parameters look into the sample programs, **SPLEXIT**, **SPLEXIT02** and **SPLEXIT03** in the source file **APISRC** in library **APF3812**.

An example could be a customer ID which the user exit program uses to look up a fax number in a database, which is returned to InterForm400® to insert in the spool entry resulting from the split.

```

Change Split Definition SPL310D

Split definition name . . : IF400ONLY
Description . . . . . : Sort IF400 Pages

Split detail description : IF400 ONLY

User exit program
Program name . . . . . GETFAXNR          *NONE, name
Library . . . . . QGPL                  name
Format . . . . . 02                    01, 02, 03
When to call . . . . . 1                1=Every page 2=When exit parm changes

Exit parameter data
1. Linenbr. 13_ Position 57_ - 60_      6. Linenbr. ___ Position ___ - ___
2. Linenbr. ___ Position ___ - ___      7. Linenbr. ___ Position ___ - ___
3. Linenbr. ___ Position ___ - ___      8. Linenbr. ___ Position ___ - ___
4. Linenbr. ___ Position ___ - ___      9. Linenbr. ___ Position ___ - ___
5. Linenbr. ___ Position ___ - ___      10. Linenbr. ___ Position ___ - ___

Return data is to be printed in the following positions
1. Linenbr. 14_ Startposition 60_      6. Linenbr. ___ Startposition ___
2. Linenbr. ___ Startposition ___      7. Linenbr. ___ Startposition ___
3. Linenbr. ___ Startposition ___      8. Linenbr. ___ Startposition ___
4. Linenbr. ___ Startposition ___      9. Linenbr. ___ Startposition ___
5. Linenbr. ___ Startposition ___      10. Linenbr. ___ Startposition ___

F3=Exit F12=Cancel

```

Note that there are no user exit programs delivered with InterForm400®, as they must be written specifically for the application or database they should integrate to.

☺ **TIP** ☺

You can only add to (not overwrite) the contents of the spooled file by use an exit program. If you want to overwrite the contents you need to use the CRTPBSPLF command - see page 406.

💣 **WARNING** 💣

All exit programs called by InterForm400® **must** be owned by QSECOFR. If it is not the AFC job will halt with an error message. Change the owner with the command: CHGOBJOWN OBJ(library/program) OBJTYPE(*PGM) NEWOWN(QSECOFR)

Defining the spool file attributes for the result of a Split

Change Split Definition		SPL310D
Split definition name	: SHIPPING_	
Description	: Extract invoices only	
Split detail description : Split Invoice/Credit		
Output queue	_____	*INPUT, *NONE, Name
Library	_____	
Page size		
Length, Lines per page	_____	*INPUT, 1-255
Length, positions per line	_____	*INPUT, 1-378
Lines per inch	_____	*INPUT, 3, 4, 6, 7.5, 8, 9, 12
Lines per inch	_____	*INPUT, 3, 4, 6, 7.5, 8, 9, 12
Characters per inch	_____	*INPUT, 5, 10, 12, 13.3, 15...
Overflow line number	_____	*INPUT, 1-255
Font ID	_____	*INPUT, *CPI, 3, 5, 11, 12...
Degree of page rotation	_____	*INPUT, *AUTO, *COR, 0, 90...
Form type	_____	*INPUT, Character value, *STD
Spool file name	_____	*INPUT, *USER, *JOBNAME, Name
User data	_____	*INPUT, *USER, *JOBNAME ...
Hold spooled file	_____	*INPUT, *NO, *YES
Save spooled file	_____	*INPUT, *NO, *YES
F3=Exit		F12=Cancel

Output queue: The output queue where the resulting spool entry from the split should be sent to.

The value ***NONE** means that the pages are not printed, but the user exit program is called. This allows for a user exit program to take data from pages which are not printed, and transfer them to the following pages.

The rest of the values are corresponding to the spool file attributes found in a printer file (PRTF).

Blank fields equals *INPUT, which means the attributes of the original spool entry will be copied to the resulting spool entry from the split. A user exit program can overwrite these values, if any of the fields are filled out, when returning from the exit program.

The original spool entry will after the split remain untouched with status ***RDY** and could be processed immediately by other AFC definitions, even another **Split definition**.

Example Using Split

The following makes use of the demo spool entry delivered with InterForm400®. You can print this from the menu **12. Service Functions** under the administration menu.

The distinction between MaterSert/400 and InterMate400™ letters is the text “MateSert” or “InterMate” which is located on each page in line **15** position **21 - 29**:

```
DISPLAY SPOOL FILE
File . . . . . : QPRINT                               Page/Line 3/15
Function . . . . +1                                   Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Re. Your new InterMate/400 Forms Management System.
-----
Congratulations with your new InterMate/400 software.
InterMate/400 will enable you to print Electronic Forms and perform
advanced data remapping and copy management of you existing SCS
print data. InterMate/400 exploits the advanced features of
standard HP-PCL printers and is the chosen forms management
solution for several hundreds of organisations.
The following license code(s) will be needed to activate InterMate
400 permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.    No. of dev.    License Code
-----
200        P10              4449079       -              F2 E7 20 AA
F35        P20              44B2031       2              AA BB 01 23
E60        P30              44D3971       -              1A BC DE 44
F45        P20              44A1460       -              79 10 22 F1
F3=Exit    F12=Cancel      F19=Left      F20=Right      F24=More keys
```

We now enter item **3. Split definitions** on the Auto Forms menu.

```
Create Split Definition                               SPL310D
Split definition name . . IFLETTER__
Description . . . . . Extract InterMate letters_____
F3=Exit                                             F12=Cancel
```

Here we press **F6** to add a **Split definition**, which we assign the name **IFLETTER**

```

Change Split Definition                                     SPL310D

Split definition name . : IFLETTER
Description . . . . . : Extract InterMate letters

Seqnbr.   Split detail description

Seqnbr   Split detail description
 1,0     Split InterMate/MateSerter_____
        AND/OR Print line   Position   Oper   Compare value
        _____ _15     _21 - _29  EQ    InterMate_____
        _____
        _____
        _____
        _____
        _____
        _____
F3=Exit                                     F4=Prompt   F11=Delete   F12=Cancel

```

We press **1** and **Field Exit** to create a new sequence line, and we fill in, that this split definition should run, if the text in line **15** from position **21** to **29** equals (**EQ**) **InterMate** (case sensitive).

When we press Enter a screen for specifying a user exit program is shown. The exit program can be used for collecting data from other applications or databases, for insertion in the document. We are not using this facility, so the value *NONE is kept.

```

Change Split Definition                                     SPL310D

Split definition name . : IFLETTER
Description . . . . . : Extract InterMate Letters

Split detail description : Split InterMate/MateSerter

User exit program
Program name . . . . . *NONE_____ *NONE, name
Library . . . . . _____ name

F3=Exit                                     F12=Cancel

```

When we press **Enter** again, a screen is shown, where we can state the spool file attributes of the spool entry created by the split function. Note that the original spool entry used for making the split will remain untouched:

```

Change Split Definition                                     SPL310D

Split definition name . . . : IFLETTER_
Description . . . . . : Extract InterMate letters

Split detail description : Split InterMate/MateSerter

Output queue . . . . . AFC_INPUT1 *INPUT, *NONE, Name
Library . . . . . APF3812_____

Page size
Length, Lines per page . . . . . _____ *INPUT, 1-255
Length, positions per line . . . . . _____ *INPUT, 1-378
Lines per inch . . . . . _____ *INPUT, 3, 4, 6, 7.5, 8, 9, 12
Lines per inch . . . . . _____ *INPUT, 3, 4, 6, 7.5, 8, 9, 12
Characters per inch . . . . . _____ *INPUT, 5, 10, 12, 13.3, 15...
Overflow line number . . . . . _____ *INPUT, 1-255
Font ID . . . . . _____ *INPUT, *CPI, 3, 5, 11, 12...
Degree of page rotation . . . . . _____ *INPUT, *AUTO, *COR, 0, 90...
Form type . . . . . IFLET_____ *INPUT, Character value, *STD
Spool file name . . . . . _____ *INPUT, *USER, *JOBNAME, Name
User data . . . . . _____ *INPUT, *USER, *JOBNAME ...
Hold spooled file . . . . . *NO_____ *INPUT, *NO, *YES
Save spooled file . . . . . _____ *INPUT, *NO, *YES
F3=Exit                                     F12=Cancel

```

We have defined that the spool entry containing the InterMate/400 letters should be sent to queue **AFC_INPUT1**, which means back to our AFC input queue. We define ***NO** for hold spooled file which means the spool entry will here get status ***RDY**.

We are changing the form type to **IFLET**. This is done to enable the AFC functions to process the spool entry on basis of the form type. The original spool entry containing **both** MateSert/400 and InterMate/400 letters will still be available with the original form type **DEMO**.

We press **Enter** and **F3** to exit this screen. We press **F5** to verify the creation of the Split definition and press **F3** to leave the Split menu.

In an AFC definition we can activate the split definition **IFLETTER**, by using function **B**:

```

Update AFC-functions attached to output queues             AFC305D

Output queue . . . . . AFC_INPUT1
Library . . . . . APF3812

Seqnbr Funct Form type Save                               New output queue

Seqnbr Function
1,0 B Split spooled file

Split definition name . IFLETTER_____

F11=Delete F12=Cancel

```

The Split definition will cause the demo spool entry to have pages extracted and another SCS spool entry with form type **IFLET** is created and placed after the original spool entry in the queue.

We can now merge the new spool entry with an overlay conditioned by the Formtype **IFLET** or by using an Overlay Selector:

```

Update AFC-functions attached to output queues                                AFC305D
Output queue . . . . . : AFC_INPUT1
Library . . . . . : QUSRSYS

Seqnbr Funct Form type Save                                         New output queue
0001   B   DEMO
          Split, definition: IFLETTER

Seqnbr Function  Attributes of input file for which to execute the function
2,0   1
          Form type . . . . . IFLET
          Save attribute . . . . .
          Jobname . . . . .
          Spooled file name . . . . .
          Device file . . . . .
          Library . . . . .
          Program that opened file . . . . .
          Library . . . . .
F3=Exit          F13=Fold/Unfold                                         F12=Cancel

```

```

Seqnbr Function
1,0   1          Merge with overlay
          Output queue for merged print . AFC_OUT1___
          Library . . . . . APF3812___
          InterForm 400 printer type . . . HP4___
          Interface . . . . . ASCII850___
          Find overlay in forms type table N (Y N)
F3=Exit          F13=Fold/Unfold          F11=Delete          F12=Cancel

```

Finishing Definitions

This function is used for departmental printing with need for immediate stapling, folding and/or insertion into envelopes and other related functions.

Currently the following finishing functions are supported:

1. Folding and insertion into envelopes using the Prinserter® (Winsserter in the US).
2. Stapling on Canon, HP, Kyocera, Lexmark, IBM, Océ, Ricoh and Xerox models.
3. Individual insertion systems attached to a PCL printer.
4. Folding and insertion into envelopes using the PFE MailPrinter
5. E-mail and fax distribution. Fax distribution requires the purchase of a fax module for InterForm400.
6. PDF file creation
7. Reformatting of spooled files

Note that the Interface type of InterForm400® must be ASCII850 or ASCII8 and the printer type must be a HP4/HP4D/HP4_PJL type device when using the finishing functions.

Defining Prinserter® Pre-process Definition. Fixed number of pages

This function is typically used for mailings which is based on the same number of pages for all recipients.

Enter Menu point **4. Finishing Definitions** on the menu **5. Work with Auto Forms Control**. Enter **F6** to create a new finishing definition and select **01** for making the definition valid for the Prinserter:

Update Finish Definition		PRS310D
Definition name	:	TESTDEF
Description	:	test of prinserter
Type of Finishing	:	01 Prinserter
F3=Exit		F12=Cancel

If Copy Management is used in the overlay intended to be used for the inserted pages, the next screen must be filled in. The Prinserter definition will then check the overlay for the number of pages defined in Copy Management.

```

Create Finish Definition
PR310D

Definition name . . . . . PRINS
Description . . . . .

.....
Ty :
: Already during the Prepare for Finishing function, the
: system has to know the number of copies of the individual
: page. If a succeeding merge with overlay function uses copy
: management, you will have to tell here which overlay will
: be used during the merge function.
:
:
:   Overlay name . . . . . _____
:   File set . . . . . _____
:   Or
:   Selector name . . . . . _____
:   Primary/Secondary set . . _____ *PRI, *SEC
:
: F3=Exit          F4=Prompt          F12=Cancel
:
:.....
F3=Exit          F12=Cancel

```

Now enter the fixed number of pages that should go into the envelope. If an enclosure is required, this is included in this number.

```

Update Finishing Definition
PR310D

Definition name . . . . . : TESTDEF

Description . . . . . Mailing , 4 pages per envelope_

Type of Finishing . . . . . : 01          Prinserter

Pages per envelope . . . . . 4_____ *VAR, 1-5
Enclosure . . . . . _____ *NO, *YES
Flap size mm . . . . . _____ 36-61
Seal envelope . . . . . _____ *NO, *YES

F3=Exit          F12=Cancel

```

Definition name: Referred to by the AFC function **C=Prepare for Finishing**

Pages per envelope: State a fixed set of pages, e.g. by stating 4 will produce 10 envelopes from a 38 page spool entry.

When Description and Pages per envelope are filled in, pressing Enter will bring up the screen above. Now fill in:

Enclosure: Enclosures can be pre-folded, folded manually, or folded by the Prinserter.

Flap size mm: Flap size of the Envelope measured in millimetres as the widest point of the envelope flap. This is mainly important in connection to sealing.

Seal envelope: Seal envelope with water.

When pressing Enter the Prinserter definition is updated.

Go to section **Using the Prinserter definition with Auto Forms Control** on page 216 in order to test the definition. You can use the spool entry which can be created under Service Functions in the administration menu. This spool entry will be referred to for the examples in the following sections.

Defining Prinserter® pre-process Definition. Variable number of pages

The more advanced pre-processors can on basis of boolean equations determine the level break between pages in a spool entry, and thereby allow varying number of pages to be inserted into envelopes. The pre-processor can additionally define that the varying pages should be sorted in to groups where each group contains a fixed number of pages. This is in reality a postage group sorting mechanism.

Defining Print Order of Sorted Groups

Enter Menu point **4. Finishing Definitions** in the Auto Forms Control menu. Press **F6** to create a new Finishing definition and select **01** to make it valid for the Prinserter.

Create Finishing Definition		PRS310D
Definition name	TESTDEF	
Description	Our first Prinserter definition	
Pages per envelope	*VAR	*VAR, 1-5
Flap size mm	40	36-61
Seal envelope	*YES	*NO, *YES
Pages per envelope group 1	-	
Enclosure group-1	-	
Pages per envelope group 2	-	
Enclosure group-2	-	
Pages per envelope group 3	-	
Enclosure group-3	-	
Pages per envelope group 4	-	
Enclosure group-4	-	
Pages per envelope group 5	-	
Enclosure group-5	-	
F3=Exit		F12=Cancel

Definition name: Referred to by the sub-system function **C=Prepare for Finishing**

Pages per envelope: Define ***VAR** (Variable) for Pages per envelope

When **Enter** is pressed the above screen will appear. Now fill in:

Flap size mm: Flap size of the Envelope measured in millimetres as the widest point of the envelope flap. This is mainly important in connection with sealing.

Seal envelope: Seal envelope with water.

Pages per envelope

Group 1 - 5:

Up to 5 different postage franking groups can be defined. Valid values are 1 to 5.

If none of the postage groups are defined, all pages will be printed to the upper bin. If only the first group is filled in with 5 pages, all sets of pages will be inserted into envelopes in the same order as the original spool entry.

If more postage groups are filled in the original spool entry will be sorted so sets of pages from 1 page to the number of pages defined in group 1 are inserted first. Then sets with pages defined in group 1 plus 1 page, to the number defined in group 2, are inserted. etc.

If pages for one recipient exceeds the highest page count defined in any group, these pages will be printed to the upper bin.

Any set of pages that exceeds 5 pages (excl. enclosure) will automatically be printed to the upper bin in order to be inserted manually into larger envelopes.

Enclosure Group 1-5: An enclosure can be defined for each of the groups, as this of course affects the weight of the envelope. Valid values are 0=no enclosure and 1=add enclosure

Example 1, Non sorted

We want all sets of pages from 1 to 3 pages to be inserted in the same order as the original spool entry. Sets of pages from 4 to more pages should not be inserted but be printed to the upper bin. All envelopes should have an enclosure:

```
Pages per envelope group 1  3
Enclosure group-1 . . . .  1
Pages per envelope group 2  -
Enclosure group-2 . . . .  -
Pages per envelope group 3  -
Enclosure group-3 . . . .  -
Pages per envelope group 4  -
Enclosure group-4 . . . .  -
Pages per envelope group 5  -
Enclosure group-5 . . . .  -
```

Try stating 1 instead of 3 in the above sample for **Pages per envelope Group 1** and run the test spool entry with this definition combined with the definitions of either example 1 on page 213 Or example 2 on page 214. You will then notice that the letters for Florence Flowers are not inserted, as the number exceeds the maximum number of sheets in one envelope defined above.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the Prinserset definition.

Example 2, Sorting in Ascending Weight

Same example as above, but all envelopes with only one page should be printed first, then envelopes with 2 pages and finally all envelopes with 3 pages:


```

Pages per envelope group . 1
Enclosure group-1 . . . . 1
Pages per envelope group . 2
Enclosure group-2 . . . . 1
Pages per envelope group . 3
Enclosure group-3 . . . . 1
Pages per envelope group . -
Enclosure group-4 . . . . -
Pages per envelope group . -
Enclosure group-5 . . . . -

```

Try running this example with the test spool entry combined with the definitions of either example 1 on page 213 or example 2 on page 214. You will then notice that the letters for Forrest Friends are sorted so it is printed before the envelope with the two letters for Florence Flowers.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the Prinsserter definition.

Example 3 , Sorting in Franking groups:

By measuring the weight of envelopes with varying number of pages we have determined that an envelope with 2 page and 1 enclosure is within the lowest postage group informed by our governmental post office.

The next postage group allows max. 5 pages in all, which means we should decide if we want to pay the higher charge just for adding the enclosure which will bring the total number of pages in the envelope to 6. We decide not to add an enclosure for these envelopes in order to stay in the cheaper postage group.

We enter the following definitions:

```

Pages per envelope group . 2
Enclosure group-1 . . . . 1
Pages per envelope group . 4
Enclosure group-2 . . . . 1
Pages per envelope group . 5
Enclosure group-3 . . . . 0
Pages per envelope group . -
Enclosure group-4 . . . . -
Pages per envelope group . -
Enclosure group-5 . . . . -

```

The above definition will cause all sets of pages of 1 or 2 to be inserted randomly according to the input spool entry, but with an enclosure (ie. max. 3 sheets total). Secondly all sets with 3 or 4 pages plus an enclosure are processed (ie. max. 5 sheets total). Finally we prevent moving into the higher charge (which starts with 6 pages per envelope) by defining that envelopes with 5 pages should not have an enclosure.

We do not have to take into account what to do when 6 or more pages are attempted to be inserted as InterForm400® automatically outputs these pages in the upper tray for manual insertion. It can then be decided at that stage if the enclosure should be added manually.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the Prinsserter definition.

Defining PFE MailPrinter® Pre-process Definition

This pre-processor can on basis of boolean equations determine the level break between pages in a spool entry, and thereby allow varying number of pages to be inserted into envelopes. The pre-processor can additionally define that the varying pages should be sorted in to groups where each group contains a fixed number of pages. This is in reality a postage group sorting mechanism.

This function is typically used for mailings which is based on the same number of pages for all recipients.

Enter Menu point **4. Finishing Definitions** on the menu **5. Work with Auto Forms Control**. Enter **F6** to create a new finishing definition and select **04** for making the definition valid for the PFE MailPrinter:

```
Update Finish Definition                                     PRS310D
Definition name . . . . . : FINISHPFE
Description . . . . . : Finish definition for PFE Mail Printer

Type of Finishing . . . . . : 04           PFE Mail-Printer
Envelope type . . . . . : 2               1 = Window envelope
                                           2 = Printed envelope

F3=Exit                                                    F12=Cancel
```

Definition name: Referred to by the sub-system function **C=Prepare for Finishing**

Envelope Type: Here we can decide whether we use a window envelope, or we want to use a plain envelope, where we get the possibility of printing on the envelope.

Create Finish Definition		PRS310D
Definition name	: PFEDEF1	
Description	: Finish definition for PFE Mail Printer	
Type of Finishing	: 04	PFE Mail-Printer
Envelope type	: 2	Printed envelope
Overlay for envelope		
Overlay name	_____	
File set	_____	
or selector	_____	
Primary / secondary	_____	*PRI *SEC
Overlay for contents		
Overlay name	_____	
File set	_____	
or selector	_____	
Primary / secondary	_____	*PRI *SEC
F3=Exit	F4=Prompt	F12=Cancel

Overlay or Overlay Selector for envelope will only appear, if we have selected 2. Printed envelope. This overlay could contain logo, sender address and a franking mark. The definition for placing the Recipient name and address on the printed envelope, should also be defined in the envelope overlay. The envelope overlay **MUST** be in the same file set as the overlay for the contents.

Overlay or Overlay Selector for contents should be filled in as per the requirement. Note if Copy Management is defined in the overlay for the contents, this will also be handled by InterForm400®. The overlay for the contents **MUST** be in the same file set as the overlay for the Envelope.

! IMPORTANT !

*When defining a 1. Merge with overlay in the Sub-system AutoForms Control following a Finishing definition, the overlay name that should be referred to is the overlay for the contents defined above and **NOT** for the envelope.*

Defining Print Order of Sorted Groups

Enter Menu point **4. Finishing Definitions** in the Auto Forms Control menu. Press **F6** to create a new Finishing definition and select **01** to make it valid for the MailPrinter.

Update Finish Definition		PRS310D
Definition name	: PFEDEF1	
Description	: Finishing Definition for PFE MailPrinter	
Type of Finishing	: 04	PFE Mail-Printer
Envelope type	: 2	Printed envelope
Seal envelope	: *YES	*NO, *YES
Pages per envelope group-1	: _	
Enclosure group-1	: _	
Pages per envelope group-2	: _	
Enclosure group-2	: _	
Pages per envelope group-3	: _	
Enclosure group-3	: _	
Pages per envelope group-4	: _	
Enclosure group-4	: _	
Pages per envelope group-5	: _	
Enclosure group-5	: _	

Seal envelope: Seal envelope with water.

Pages per envelope

Group 1 - 5: Up to 5 different postage franking groups can be defined. Valid values are 1 to 5 .
If none of the postage groups are defined, all pages will be printed to the upper bin. If only the first group is filled in with 5 pages, all sets of pages will be inserted into envelopes in the same order as the original spool entry.
If more postage groups are filled in the original spool entry will be sorted so sets of pages from 1 page to the number of pages defined in group 1 are inserted first. Then sets with pages defined in group 1 plus 1 page, to the number defined in group 2, are inserted. etc.
If pages for one recipient exceeds the highest page count defined in any group, these pages will be printed to the upper bin.
Any set of pages that exceeds 5 pages (excl. enclosure) will automatically be printed to the upper bin in order to be inserted manually into larger envelopes.

Enclosure Group 1-5: An enclosure can be defined for each of the groups, as this of course affects the weight of the envelope. Valid values are 0=no enclosure and 1=add enclosure

Example 1, Non sorted

We want all sets of pages from 1 to 3 pages to be inserted in the same order as the original spool entry. Sets of pages from 4 to more pages should not be inserted but be printed to the upper bin. All envelopes should have an enclosure:

```
Pages per envelope group 1 3
Enclosure group-1 . . . . 1
Pages per envelope group 2 -
Enclosure group-2 . . . . -
Pages per envelope group 3 -
Enclosure group-3 . . . . -
Pages per envelope group 4 -
Enclosure group-4 . . . . -
Pages per envelope group 5 -
Enclosure group-5 . . . . -
```

Try stating 1 instead of 3 in the above sample for **Pages per envelope Group 1** and run the test spool entry with this definition combined with the definitions of either example 1 on page 213 Or example 2 on page 214. You will then notice that the letters for Florence Flowers are not inserted, as the number exceeds the maximum number of sheets in one envelope defined above.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the PFE MailPrinter definition.

Example 2, Sorting in Ascending Weight

Same example as above, but all envelopes with only one page should be printed first, then envelopes with 2 pages and finally all envelopes with 3 pages:

```

Pages per envelope group . 1
Enclosure group-1 . . . . 1
Pages per envelope group . 2
Enclosure group-2 . . . . 1
Pages per envelope group . 3
Enclosure group-3 . . . . 1
Pages per envelope group . -
Enclosure group-4 . . . . -
Pages per envelope group . -
Enclosure group-5 . . . . -

```

Try running this example with the test spool entry combined with the definitions of either example 1 on page 213 or example 2 on page 214. You will then notice that the letters for Forrest Friends are sorted so it is printed before the envelope with the two letters for Florence Flowers.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the PFE MailPrinter definition.

Example 3 , Sorting in Franking groups:

By measuring the weight of envelopes with varying number of pages we have determined that an envelope with 2 page and 1 enclosure is within the lowest postage group informed by our governmental post office.

The next postage group allows max. 5 pages in all, which means we should decide if we want to pay the higher charge just for adding the enclosure which will bring the total number of pages in the envelope to 6. We decide not to add an enclosure for these envelopes in order to stay in the cheaper postage group.

We enter the following definitions:

```

Pages per envelope group . 2
Enclosure group-1 . . . . 1
Pages per envelope group . 4
Enclosure group-2 . . . . 1
Pages per envelope group . 5
Enclosure group-3 . . . . 0
Pages per envelope group . -
Enclosure group-4 . . . . -
Pages per envelope group . -
Enclosure group-5 . . . . -

```

The above definition will cause all sets of pages of 1 or 2 to be inserted randomly according to the input spool entry, but with an enclosure (ie. max. 3 sheets total). Secondly all sets with 3 or 4 pages plus an enclosure are processed (ie. max. 5 sheets total). Finally we prevent moving into the higher charge (which starts with 6 pages per envelope) by defining that envelopes with 5 pages should not have an enclosure.

We do not have to take into account what to do when 6 or more pages are attempted to be inserted as InterForm400® automatically outputs these pages in the upper tray for manual insertion. It can then be decided at that stage if the enclosure should be added manually.

When filled in press Enter, and continue with section **Define Level Break Conditions** on page 212, to finalise the PFE MailPrinter definition.

Defining Stapling Pre-process Definitions

Enter Menu point **4. Finishing Definitions** on the menu **5. Work with Auto Forms Control**. Enter **F6** to create a new finishing definition and select **02** for making the definition valid for stapling:

```

Create Finish Definition PRS310D

Definition name . . . . . STAPLE
Description . . . . . test PH

Type of Finishing . . . . . 02
                                01 = Prinserter
                                02 = Stapling per Recipient
                                03 = Prepare for inserting
                                04 = PFE Mail-Printer
                                05 = Prepare for E-mail/Fax
                                06 = PDF Filenaming
                                07 = Reformat Spooled File

F3=Exit F12=Cancel

```

If Copy Management is used in the overlay intended to be used for the inserted pages, the next screen must be filled in. The Prinserter definition will then check the overlay for the number of pages defined in Copy Management.

If the field below is left blank, and the overlay selected for the pages to be inserted does contain Copy Management, the result will be unpredictable. Note that the overlay entered here is not necessarily the one being printed, but is merely used for pre-defining a value for the Copy Management.

```

Create Finish Definition PRS310D

Definition name . . . . . STAPLE
Description . . . . . test PH

.....
Ty :
: All ready during the Prepare for Finishing function, the
: system has to know the number of copies of the individual
: page. If a succeeding merge with overlay function uses copy
: management, you will have to tell here which overlay will
: be used during the merge function.
:
: Overlay name . . . . . _____
: File set . . . . . _____
: Or
: Selector name . . . . . _____
: Primary/Secondary set . . _____ *PRI, *SEC
:
: F3=Exit          F4=Prompt          F12=Cancel
:
:.....
F3=Exit F12=Cancel

```

Select the printer manufacturer and printer model via the screen below:

Select printer type for stapeling

Printer Manufacturer _

- 1 = HP
- 2 = Lexmark
- 3 = IBM
- 4 = Kyocera
- 5 = Xerox
- 6 = Océ
- 7 = Canon
- 8 = Ricoh
- 9 = Minolta

Notice: Stapeling requieres use of
printertype HP4_PJL or HP4D_PJL.

F3=Exit

F12=Cancel

Continue with section **Define Level Break Conditions** on page 212, to finalise the stapling definition.

Defining Insertion Pre-process Definitions

Enter Menu point **4. Finishing Definitions** on the menu **5. Work with Auto Forms Control**. Enter **F6** to create a new finishing definition and select **03** for making the definition valid for external insertion systems:

```

Update Finish Definition                                     PRS310D

Definition name . . . . . : Stapltst

Description . . . . . : Test af stapling

Type of Finishing . . . . . : 03          Prepare for inserting

Inserting equipment . . . . . _          01 = Prinserter
                                          02 = Stapling per Recipient
                                          03 = Prepare for inserting
                                          04 = PFE Mail-Printer
                                          05 = Prepare for E-mail/Fax
                                          06 = PDF Filenaming
                                          07 = Reformat Spooled File

F3=Exit                                                    F12=Cancel
  
```

These inserter systems are supported:

- 01 = Pitney Bowes
- 02 = PFE Minimailer 2/3 Plus
- 03 = BÖWE OMR
- 04 = Neopost SI 68/72/76

Select **01** and press Enter to define the pre-process definitions for the Pitney Bowes insertion system:

```

Update Finish Definition                                     PRS310D

Inserting equipment . . . . . : Pitney Bowes

Placement of optical marks
  Rotation . . . . . _
  From top edge . . . . . _____
  From left . . . . . _____

Print sequence . . . . . _          1=Normal
                                          2=Pages in reverse order
                                          3=Reverse order per recipient

F3=Exit                                                    F12=Cancel
  
```


Placement of optical marks:

Refer to the documentation of your insertion system for further information on the optical marks.

Rotation: The available values for rotation are: 000, 090, 180, 270 degrees.

From top edge: Absolute margin from top edge of the page dissolved in inches and pels (see **Measuring formats** page 48).

From left edge: Absolute margin from the left edge of the page dissolved in inches and pels (see **Measuring formats** page 48). Note that this value will be added to the left margin value of the overlay command type **8. Tabulator**.

Print Sequence:

This option defines the order which the pages should be output from **InterForm400®**:

Normal: The output order matches the input order.

Pages in reverse order: The output order of the entire print job is reversed.

Reverse order per recipient: The output order is only inversed within the same recipient according to the level break conditions.

Press **Enter** to continue defining the Pitney Bowes pre-processing:

```

Update Finish Definition PRS310D

Inserting equipment . . . : Pitney Bowes

Max. pages per envelope . . ____

What to do if more than max
pages to a recipient . . . . _      1=Outsorting
                                       2=More than 1 envelope

Can there be code for out-
sorting in the printout . . _      1=Yes  2=No

If YES to the above
Line number . . . . . ____
Position . . . . . ____
Value . . . . . ____

F3=Exit F12=Cancel

```

Max. pages per envelope: This indicates the maximum pages to be inserted into an envelope. InterForm400® will insert a “close envelope” command at this point.

What to do if more than max. pages to a recipient:

Outsourcing. InterForm400® will inform the Insertion system to outsort the pages for this recipient ID according to the selections on the next screen.

More than 1 envelope: InterForm400® will automatically continue insertion in new envelopes.

Can there be code for outsourcing in the printout:

Yes: InterForm400® will insert the outsourcing command selected on the next screen, only when the code value defined below is found.

No: InterForm400® will insert the outsourcing command selected on the next screen, whenever a set of pages for a recipient exceeds the number defined in **Max. pages per envelope**.

If YES to the above.

Line number. The line number to find the outsourcing code

Position: The column position to find the outsourcing code

Value: The character value for the outsourcing code, that will inform InterForm400® to insert the outsourcing command according to the selection on the next screen.

Press Enter to define the type of Outsourcing mark:

```
Update Finish Definition                                PRS310D
Inserting equipment . . . : Pitney Bowes
Which types of marks are used
l=Select
- Benchmark (BM)
- End of collation (EOC)
- End of collation mark absence (ECA)
- Beginning of collation (BOC)
- Divert to Deck (DTD)
- Wrap around sequence (WAS) Ascending
- Wrap around sequence (WAD) Decending
- Parity (PR)
- Safty (SF)
F3=Exit                                               F12=Cancel
```

Refer to the documentation of your Pitney Bowes insertion system for a thorough description of the outsourcing marks.

When filled in press Enter, and continue with the next section **Define Level Break Conditions**.

How to distribute E-mails and faxes in InterForm400®:

Setup of E-mailing is done in three steps:

1. Create a new type of finishing Definition (Type 05=E-mail). This splits up the spool file depending on the spool file page data and places details in the User Defined Data field.
2. Insert execution of the e-mail Finishing Definition in Auto Forms Control.
3. Insert execution of function P=Send PDF E-mail in Auto Forms Control

Note, that the E-mail/Fax finishing definition can send both e-mail and faxes in one procedure (Faxing requires purchase of InterFax). If both a fax number and an e-mail is found in the spooled file or returned via a program for one customer then InterForm400 will use the e-mail address. (If the field for the e-mail address is blank InterForm400 will look for a fax number).

NOTE
In order to get PDF output you need to purchase the PDF module or the classic package for InterForm400.

The E-mail/Fax Finishing Definition

You can work with the finishing functions if you from the InterForm400® main menu choose **5. Work with Auto Forms Control** and **4. Finish Definitions**. You can now add a new finishing Definition by pressing F6:

```
                Create Finish Definition                                PRS310D
Definition name . . . . . DEMO_____
Description . . . . . Distribution of the Demo spool file_____

Type of Finishing . . . . . 05          01 = Prinserter
                                          02 = Stapling per Recipient
                                          03 = Prepare for inserting
                                          04 = PFE Mail-Printer
                                          05 = Prepare for E-mail/Fax
                                          06 = PDF Filenaming
                                          07 = Reformat Spooled File

F3=Exit                                     F12=Cancel
```

We are creating a new finishing definition for the InterForm400 Demo spool file. Press Enter to create the finishing definition:

```

Work with E-mail/Fax definition
MAI300D

Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Select one of the following options:

1. How to find E-mail address / Fax number
2. Key definition
3. Definition variables
4. Default PDF-file name
5. Definition E-mail text / Cover page text
6. Definition recipient-ID
7. E-mail addresses and Fax numbers
8. Senders E-mail address
9. Encryption and Signature
10. PDF bookmark definition

Option: __

F3=Exit
F12=Cancel

```

Below we go through the elements of the E-mail finishing definition and do the necessary setup in order to distribute the Demo spool file.

1. How to find E-mail address / Fax number

```

Work with E-mail/Fax definition
MAI300D

Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spooled file

How to find E-mail address / Fax number

Select one of the following options:

1. By key
2. By user exit program
3. Find in spooled file

Option: _

F3=Exit
F12=Cancel

```

On the screen above you define how you intend to determine the e-mail address or fax number to send to for the individual pages. The selection here affects these other options:

- | | |
|--------------------------------|---|
| 1. By key | It will open up option '2. Key definitions' but with the user exit program disabled. Also option '7. E-mail addresses and Fax numbers ' will be enabled. |
| 2. By user exit program | Will open up option '2. Key definitions' with the user exit program enabled. Option '7. E-mail addresses and Fax numbers ' will be disabled. |
| 3. Find in spooled file | Options '2. Key definition' and '7. E-mail addresses and Fax numbers' will both be disabled. (The elements for the e-mail is found in option '6. Definition recipient-ID'). |

2. Key definitions

```
Change E-mail/Fax key definition                                MAI310D
Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Length key field-1 . . . .  ___4 (1 - 30)
Field type key field-1 . .  1    1=Numeric 2=Alfanum. 3=Alfanum. lowercase
Allow blank key field-1 . . N    (Y N)
Key field-1 description . . Customer number_____

Length key field-2 . . . .  ____ (1 - 30)
Field type key field-2 . .  _    1=Numeric 2=Alfanum. 3=Alfanum. lowercase
Allow blank key field-2 . . _    (Y N)
Key field-2 description . . _____

Length key field-3 . . . .  ____ (1 - 30)
Field type key field-3 . .  _    1=Numeric 2=Alfanum. 3=Alfanum. lowercase
Allow blank key field-3 . . _    (Y N)
Key field-3 description . . _____

Mail exit program . . . . . _____ *NONE, name
Library . . . . . _____

F3=Exit  F12=Cancel
```

Up to **3 keys** can be defined. They are identifying the customers by e.g. customer number, department or name. These are the identifiers, that are looked for in the spool file.

You can decide to call a mail exit program. The finishing definition name, all keys and variables are transferred to the program, that can return e.g. what e-mail address to send to.

Sources for mail exit programs can be seen in member, MAILEXIT, MAILEXIT02 and MAILEXIT03 in source file, APISRC in library, APF3812:

- MAILEXIT** This is the first demo source that was made. (Use format = 01 when calling this). This program is mainly included backwards compatibility.
- MAILEXIT02** This is called with parameter format=02. With this you can return the type of text for the contents of the e-mail. Refer to the description of 'Text and -format' on page **199** for more details.
- MAILEXIT03** Called with parameter format=03. Includes the functions of MAILEXIT02 and includes also the possibility to return an additional receiver of the e-mail (CC:).

⚠ WARNING ⚠
*All exit programs called by InterForm400® **must** be owned by QSECOFR. If it is not the AFC job will halt with an error message. Change the owner with the command:
CHGOBJOWN OBJ(library/program) OBJTYPE(*PGM) NEWOWN(QSECOFR)*

In this example we intend to use the 4 digit customer number as the only key. If the spooled file includes the E-mail address in every page the keys are not necessary - just select '3. Find in spooled file' in option '1. How to find E-mail address / Fax number ' and specify the position in option '6. Definition recipient-ID '.

3. Definition variables

```
Change variables MAI315D
Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Variable      Length      Description
*v1           _25        Company name_____
*v2           _25        Contact person_____
*v3           _4         Customer number____
*v4           _50        Subject_____
*v5           ____
*v6           ____
*v7           ____
*v8           ____
*v9           ____

F3=Exit F12=Cancel
```

Up to 9 **variables** can be defined. They are read from the contents of each spool file page. The variables can be referred to in the subject, e-mail text, the name of the attached PDF file, the receiver E-mail address and receiver name. The variables are inserted as *V1 .. *V9 (use upper case 'V').

Above only the length of the variables are defined. Later on we define from where the variables should be fetched (That could depend of the contents of each page).

4. Default PDF-file name

Here you can specify a default name for the attached PDF file. This name can be overridden for specific e-mail text definitions.

```
Work with Default PDF-file name MAI305D
Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Default PDF-file name . . . IF400DEMO.PDF
```

5. Definition E-mail text / Cover page text

InterForm400 provides you with the possibility to include various texts in the e-mail depending on who you are e-mailing to. To do that you simply create 2 or more e-mail texts.

Below one E-mail text definition is made.

```

Change E-mail / cover page text
MAI345D

Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

E-mail text version . . : GB_____

Description . . . . . : Demo spool file (English ver.)__
E-mail subject . . . . . : *V4_____
Text and -format . . . . . : H                T=Text, H=HTML, R=Raw HTML
E-mail text . . . . . :
For *V2, *V1._____

Please read the attached file containing a message for you from_____
Intermate._____

The reason why you have received this mail is, that you are registered as__
our contact person at *V1._____
Please let us know, if that is incorrect._____

PDF-file name . . . . . : *DEFAULT_____
Fax cover page overlay . : IF400DEMO_   Name, *NONE       F4=Prompt
File set . . . . . : SAMPLE_____
F3=Exit  F12=Cancel

```

The E-mail text version is a name identifying this e-mail text. Here we have created a text definition, that could be used for the english speaking customers (GB).

- Text and -format:** With this you specify how the e-mail text is to be presented in the final e-mail:
- T=Text** The contents is shown in a fixed font (courier).
 - H=HTML** HTML codes automatically inserted so the contents are shown in a proportional font (arial).
 - R=Raw HTML** Raw HTML codes in the contents can be included.

As the subject of the mail the subject from the spool file is used (*V4). In the message text we insert both the name of the receiver (*V2) and the company name (*V1). Variables could also be specified for the PDF file name.

Like the variables you can also insert either ***FROM** or ***TO** in order to insert the name of either the sender or receiver of the e-mail.

We can create several different text definitions - e.g. one for each language code.

The fax cover page overlay is for fax support only. Faxing directly from InterForm400 requires the InterFax module.

⚠ WARNING ⚠

When you insert variables in the subject of the mail: Make sure, that you leave enough space, so that the contents of the variable can be inserted on the same line.

6. Definition recipient-ID

A **Recipient-ID** is a description, that tells where to find the keys and variables on the spool file pages. This is combined with a page selection criteria, that is already known from the sorting definition. The page selection criteria makes it possible to find the keys and variables in different places on the page depending on e.g. if either 'INVOICE' or 'CREDIT NOTE' is found in a special place.

In this example the keys and variables are always placed in a fixed position, and therefore the page selection criteria is left blank.

```

Update Finish Recipient-ID PRS330D

Definition name . . . . : DEMO

Sequence number . . . . : 1
Description . . . . . Demo Spool: Get keys and vars.

Page selection criteria

      Print line   Position   Oper   Compare value
      _____   _____   _____   _____
      _____   _____   _____   _____
      _____   _____   _____   _____

Find recipient ID in the following positions
      Print line   Position
      _13         _57 - _60
      _____   _____
      _____   _____
      _____   _____
      _____   _____
      _____   _____

F3=Exit F12=Cancel

```

Regarding the recipient ID:

You should also specify the recipient ID's (=keys) in the bottom. This is used as a way to force a level break.

Normally it is advisable to specify all of the keys (and only the keys) here. But you can use this to split up one e-mail into several: A problem could be, that one E-mail address (=one set of keys) is sent to for several companies, but in order to ease distribution you want to create one E-mail per company. Specify for recipient ID a place on the page, that identifies the different companies (as well as the keys), and that is done automatic. Press Enter.

```

Update Finish Recipient-ID PRS330D

Definition name . . . . : TEST3

Sequence number . . . . : 1
Description . . . . . Demo Spool: Get keys and vars.

Enter where to find key(s) and variables in the print.

Field   Description           Length   Printline   Startposition
Key-1   Customer Number           4        _13_        _57_
Key-2                                     0         _____
Key-3                                     0         _____
*V1     Company Name              25        _6_         _8_
*V2     Contact Name              25        _11_        _13_
*V3     Customer number           4         _13_        _57_
*V4     Subject                   50        _15_        _8_

F3=Exit F12=Cancel

```

On this screen you define where the keys and variables should be found for the page selection stated on the last screen. If you in option '1. How to find E-mail address / Fax

number' defined, that you want to find the e-mail address in the spooled file this screen will also include fields that.

7. E-mail addresses and fax numbers

E-mail addresses and fax numbers are lists of addresses, that InterForm400 can send to. The addresses are identified by the keys defined earlier. For each set of key(s) the e-mail/fax address, the name of the person, e-mail text version and a password for the attached PDF (if used) are registered.

NOTE

This option is only open if you have selected '**1. By key**' in option '1. How to find E-mail address / Fax number'.

WARNING

Password protection of the PDF file requires a purchase of the PDF security module for InterForm400.

```
Work with E-mail addresses and fax numbers                                MAI320D
Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Position to . . . . . _____ Customer number

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt  Customer number
_    1004

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

Press F6-Create to add a new E-mail address or fax number:.

```

Create E-mail address / Fax number MAI330D

Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Customer number . . : 1001

Recipient name . . . . Herring Marine Research_____
E-mail address . . . . Herring@intermate.com_____

_____  

_____  

Or .. Fax number . . . _____
CC Recipient name . . _____
CC E-mail address . . _____

_____  

_____  

E-mail text version . GB_____ F4=Prompt
PDF User Password . . _____

F3=Exit          F4=Prompt          F12=Cancel

```

The Recipient name above can be referred to as *TO in the e-mail text definition above (option 4).

For each receiver you specify what e-mail text version to use.

Note: Use the command **APF3812/WRKMAILADR** to give users access to these addresses without entering InterForm400 - see page **420**.

NOTE

A **PDF user password** can only be used if the InterForm400 security module is enabled.

8. Senders E-mail address

```

Work with E-mail sender information MAI350D

Definition name . . . . . : DEMO
Description . . . . . : Distribution of the Demo spool file

Code for sender . . . . . 1  1=Use fixed sender
                             2=Use owner of spooled file as sender
                             3=If possible, use owner of spooled file,
                               else use fixed sender.

Organisation . . . . . _____ (When 'Code for sender' = 2 or 3)

Fixed sender name . . . . . Kim Egekjaer_____
Fixed sender E-mail adr. . . support@intermate.com_____

_____  

_____  

Send Bcc to sender . . . . . N (Y N)
E-mail adr for Bcc copy . . _____

_____  

_____  

blank = senders E-mail adr
F3=Exit          F12=Cancel

```

In this option you specify who should be specified as sender on the e-mails:

1=Use fixed sender:

Use the name and E-mail address specified in the bottom for all E-mails.

2=Use owner of spooled file as sender:

If you specify this, then the user profile of the original spool file will be retrieved, and the name and E-mail address is extracted from information in the list of E-mail sender addresses found in **8. Work with E-mail senders** in the Auto Forms Control menu. Note, that when you do this, then the sender e-mail address will be found by going through this list in this specific order when comparing with the registrations in 'Work with E-mail senders':

1. User profile and organisation
2. User profile
3. Organisation

3=If possible, use owner of spooled file, else use fixed sender.

A combination of the two codes above.

You can decide, that the sender should receive a copy (BCC - Blind Carbon Copy) of the sent E-mails.

Organisation: If filled out it can be used for the digital signature. Then it will be the digital signature of this organisation that is used for authentication of the PDF file and not the personal digital signature.

9. Encryption and Signature

⚠ WARNING ⚠
Password protection and/or digital signature of the PDF file requires a purchase of the PDF security module for InterForm400.

```
Work with Encryption and Signature Information                                MAI380D

Definition name . . . . . : FILENAME
Description . . . . . : file naming

Type choices, press Enter.

Encryption information
Encrypt PDF File . . . . . N                                (Y=Yes, N=No)
User Access Restrictions . . . . . *NONE_____ *NONE, *NOPRINT ...
                                                    ... *NOCOPY, *NOEDIT

New PDF Master Password . . . . .
Confirm Password . . . . .
Old password, when change . . . . .

Digital Signature Information
Digitally Sign PDF File . . . . . N                                (Y=Yes, N=No)
Certificate . . . . . _____ Name, *OWNER
Organisation . . . . . _____

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

In this screen you can specify if you want to encrypt or digitally sign the attached PDF file - if you e-mail.

Here is the explanations of the fields to fill in:

Encrypt PDF File: State 'Y' if you want to encrypt the PDF file.

PDF Master Password: State a password if needed, that will open all the created PDF files with authority to do all.

User access limitations:

- *NONE** Use this if you want no limitations on what the receiver can do with the created PDF file.
- *NOPRINT** This limitation make it impossible to print the PDF file.
- *NOCOPY** Disables the possibility to copy the contents (text or graphics) of the PDF file.
- *NOEDIT** Makes it impossible to edit the PDF file.

Digitally Sign PDF File: Enables inclusion of a digital signature in the PDF file.

Personal Certificate: Here you can either state the name of an already installed certificate or refer to the certificate of the spooled files owner or sender.

Organisation: If you state ***OWNER** or ***SENDER** as the personal certificate, then the organisation stated will be used for looking up in the table shown in option **'8. Work with E-mail senders'** on the Auto Forms Control menu.

In this manner you can insert different signatures for the same sender/owner depending on the organisation related to the current distribution (or finishing definition). Refer to details of **'8. Work with E-mail senders'** below for more information.

NOTE
Digital signatures and passwords can only be used if you have bought the PDF security module of InterForm400!

10. PDF bookmark definition

```
Work with Bookmark definition name                                MAI390D
Definition name . . . . . : EMAILFAX
Description . . . . . : emailfax test

Bookmark definition name . . _____ Name, *NONE           F4=List

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

If you decide, that the attached PDF file (if you e-mail) should include bookmarks, you can specify what bookmark definition to use here. If you want no bookmarks you can state ***NONE**. Refer to page **238** for more information about the PDF bookmarks.

8. Work with E-mail senders

Note: This option is reached from the Auto Forms Control menu.

```
Work with E-mail senders                                     MAI360D

Position to . . . . . _____ User profile

Type options, press Enter.
  2=Change  3=Copy   4=Delete  5=Display

Opt  User      User name
-    KSE       Kim Egekjaer
-    PDC       Poul D. Christiansen

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

This screen shows/edits information, that are used for the E-mail finishing definition.

Here you enter user profiles, that InterForm400 should recognize as E-mail senders. InterForm400 can use the E-mail address and name you specify here when sending. See page 203. Press **F6** to add a new E-mail sender:

```
Create E-mail sender                                       MAI365D

User profile . . . . . MYUSER_____
User name . . . . . Demo User Profile_____
Organisation . . . . . SALES_DEP_
E-mail address . . . . . SENDER@INTERMATE.COM_____
_____
_____
Personal Certificate . . . MY_CERT_____
```

If you state in the E-mail finishing definition, that the sender of the E-mail should be the owner of the spooled file or if the digital certificate should be either ***OWNER** or ***SENDER**, then this information is used.

First InterForm400 will search for a match for both the user profile and organisation. If not found InterForm400 will take the information, where there is a match for the user profile only. If the is not match found here either a match with the organisation is looked for.

The File Naming Finishing Definition

By creating a finishing definition of type '**06 = PDF File naming**' you can create PDF files in InterForm400 using advanced functions - without any programming! You can use information from the spooled file to break up the spooled file as it is merged into PDF files and let information from the spooled file be a part of the PDF file name and/or the path where it is placed.

The functionality is similar to the E-mail/fax finishing definition but more advanced. You can e.g. define and use up to **34 variables** (and 3 keys) for the path and PDF file names and use exit programs for the variables if necessary.

NOTE
In order to get PDF output you need to purchase the PDF module or the classic package for InterForm400.

When you create a new PDF file naming finishing definition you will see this screen:

```
Work with PDF Filenaming                                PNM300D

Definition name . . . . . : DEMO_MAN
Description . . . . . : Demo for manual

Select one of the following options:

1. Receipt Key Definition
2. Variable Definitions
3. PDF File Name Composition

5. Page selections and Document breaks
6. Receipt ID Information
7. Closing User-Exit
8. Encryption and Signature
9. PDF bookmark definition

Option: _

F3=Exit                                                F12=Cancel
```

1. Receipt Key Definition

This function works exactly as '**1. Key definition**' for the e-mail/fax finishing definition. You can define up to 3 keys identified as *KEY1-3. They can be referred to in the PDF file name/path later in '**3. PDF File Name Composition**'.

The keys are also used in '**6. Receipt ID Information**' where you can state a PDF password depending on who the PDF file is intended for. You can also let a **user exit program** return the passwords to be used. Refer to source file APF3812/APISRC member PNEXIT for more information. A program based on this source can be called with &Entrystep = '*ID'.

Refer to page **197** for more information of definition of the keys.

2. Variable Definitions

Select this option and you will see a list of the defined keys and variables. Press F6 to add new a variable:

```

Create Variable Definition PNM325D

Definition name . . . . . : DEMO_MAN
Description . . . . . : Demo for manual

Type choices and then press Enter. Press F3 or F12 to exit.
Variable . . . . . *VA *VA-*VZ, *V1-*V9
Description . . . . . Customer Name
Max. outputlength . . . . 30 1 - 40

Variable type . . . . . 1
1=Spooled printinfo
2=Spoolfile attribute
3=Auto numerator
4=Date
5=Time
6=System environment info
7=User exit

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

```

The variable can be of various types:

- Spooled print info:** Contains information from the contents of the spooled file. Refers to text in a certain line and interval of positions. Size can be up to 40 characters.

 - Spoolfile attribute:** Can be any of these values: **1**=Unique spoolID (40), **2**=Spoolname, **3**=Spoolno, **4**=Jobname, **5**=Owner, **6**=Jobno, **7**=Formtype, **8**=Userdata, **9**=Programm name, **A**=Program library

 - Auto numerator:** A counter, that increases each time a certain break occurs. You can state:
 - The **number of digits** to use.

 - If it should be fixed in length (***FIXED**) or if preceding blank signs should be removed (***TRIM**).

 - What to do if counter value exceeds the highest value allowed: **1=Wrap** means start from the initial value again and **2=Error** means, that the AFC job will halt with an error.

 - The **increment value** for the numerator.

 - The level of the numerator: ***SYS**, ***TASK**, ***SPOOL**, ***TASKKEY**, ***KEY**:
- *SYS** One common numerator for InterForm400.
 - *TASK** A numerator for this finishing definition.
 - *SPOOL** It is reset for each new incoming spooled file.
 - *TASKKEY** A numerator within this task / finishing definition, that increases each time the key(s) change.
 - *KEY** Like ***TASKKEY** except this works across tasks / finishing definitions.

NOTE

All the autonumerators change for each new PDF file. Except *TASKKEY and *KEY. Normally you would create a new PDF file for each new key, but not necessarily.

Date: Inserts the current date. It can be the: **1=System date**, **2=Job date** (the date of the AFC job) or the **3=Spoolfile creation date**. Many different formats (without delimiters) are supported.

Time: Inserts the current time. It can be either: **1=System** or **2=Spool creation time**.

System environment info: At the moment only '**1=System name**' can be selected.

User exit: Select this possibility and you will see this:

```

User exit program . . . . _____ Name, *NONE
User exit program . . . . _____ Library, *LIBL

Exit fields variables
Parm 1 - 5 . . . . . _____ *KEY1-3, *VA-9
Parm 6 - 10 . . . . . _____

```

So with this option you can call your own program to insert a value in a variable e.g. found by using other variables. You can only use variables with names, that are lower e.g. *V2 can be calculated with the values from *VA-*VZ and *V1.

TIP

For a demo source of a user exit program look in source file APF3812/APISRC in member PNEXIT. The program will be called with **&Entrystep = *VAR**. You return the value for the variable in **&Rtnparm1**.

NOTE

The same exit program can be called several times from different places in the PDF File naming finishing definition. The field &Entrystep indicates from where it is called.

3. PDF File Name Composition

Select this option to state how the PDF file name is determined:

```

Create PDF Filename Composition                                PNM330D
Definition name . . . . : DEMO_MAN      Demo for manual
Type choices and then press Enter. Press F3 or F12 to exit.
PDF output path/file . . . /Invoices/*KEY1/Inv *VB.pdf_____>
                                Composition, *USEREXIT
Create directory . . . . . N            (Y=Yes, N=No)
Replace file method . . . G            Y=Always, N=Never, G=*Gen when dupl.
Available variables
Var.  Type      Description      Len  Info
*KEY1 Keydef.    Customer Numbers  4    Numeric, Allow blanks=N
*VA   SpoolVar   Customer name     40   Inputlen.: 40, Position (-)
*VB   SpoolVar   Invoice number     10   Inputlen.: 10, Position (-)
*VC   AutoNum    Global counter     6    *SYS, Len=6, Str=0, Incr=0, *FIXED
Bottom
F3=Exit  F4=Prompt  F5=Refresh  F9=Expand  F12=Cancel  F14=Test
```

In the top of the screen you state either the composition of the PDF file names to be created or *USEREXIT to let a user exit program determine the names of the PDF files. As a part of the path you can use the keys and variables, that you have already defined. They are all listed in the bottom of the screen.

If you specify ***USEREXIT** for the PDF file name(s) you should call a program similar to the source in file APF3812/APISRC and member PNMEXIT. The program will be called with &EntryStep = *NAME.

You can press **F4** to get the list of the defined variables to select from (when typing the path/file name), **F9** to get access to the full length available for the PDF file name composition or **F14** to test the composition with a specific spooled file and see what PDF file names it will create.

Other options are:

Create directory: Specify if you want InterForm400 to create the necessary directories or not.

Replace file method: Use 'Y' if you want to replace existing PDF files if found. 'N' will result in an error message if the file exists and 'G=*Gen' will append a number to the filename if it already exists. Note, that this number will be appended after e.g. '.pdf' as the **very** last of the file name.

5. Page selections and Document breaks

This works much like '5. Definition recipient-ID' for the E.mail/fax finishing definition. Refer to page **199** for more information.

Normally it is sufficient with just one sequence line without any Page selection criteria. You should however create one sequence line for each different layout - if the variables and/or keys moves depending on the layout of the *SCS spooled file. If you use more than one sequence line you should use the Page selection criteria.

As the document break definitions you need to state a place on the spooled file, that will trigger a break i.e. whenever this information changes a new PDF file will be created. This will normally be the positions of the key(s), but it does not necessarily need to be so.

After creating a sequence line you **must** remember to use option **8=Keys and variables**, to state where the variables and keys are placed for this selection of pages.

⚠ WARNING ⚠
DO remember to specify the position of all the keys and variables found in the spooled file through option '8=Keys and variables' ! If you forget the AFC job will halt with an error when you run the definition later.

6. Receipt ID Information

Through this option you can maintain passwords for the receivers of the PDF files - per key value. Below only the key, 'Customer number' has been defined.

```

Create Receipt ID PNM365D

Definition name . . . . . : DEMO_MAN
Description . . . . . : Demo for manual

Customer Number . . . _____

PDF User Password . . _____

```

👉 NOTE 👉
 The use of PDF passwords requires purchase of the PDF security module plus installation of certain OS/400 products and options. Refer to page **480** for details.

7. Closing User-Exit

Select this option to specify a program, that will be called right after each PDF file has been created. You will get this screen when selecting this option:

```

Change Closing User Exit Program PNM370D

Definition name . . . . . : DEMO_MAN
Description . . . . . : Demo for manual

Type choices and then press Enter. Press F3 or F12 to exit.

User exit program . *NONE_____ Name, *NONE
Library . . . . . *LIBL_____ Library, *LIBL

Exit fields variables
Parm 1 - 5 . . . . . _____ *KEY1-3, *VA-9
Parm 6 - 10 . . . . . _____

```

You can state your own user program, that will be called e.g. to update an index of the created PDF files. You can select up to 10 or 20 keys or variables, that will be transferred to the program. For an example of such a program (showing e.g. the expected parameters) look in the source members, PNMCLSEXIT (Format=01) and PNMCLSEXI2 (format=02) in source file APF3812/APISRC. The exit program will be called with &Entrystep = *CLS.

👉 **NOTE** 👉

Any program called by InterForm400 must be owned by QSECOFR. You can change the owner (if you have enough authority with the command: CHGOBJOWN).

💣 **WARNING** 💣

NEVER place any objects e.g. programs or output queues in the APF3812 library. Those objects will NOT be copied to the new release, when later doing a release update of InterForm400.

8. Encryption and Signature

This option works exactly like option 8 of the E-mail/fax finishing definition. Refer to page **203** for more information.

👉 **NOTE** 👉

Password protection and/or digital signature of the PDF file requires a purchase of the PDF security module for InterForm400. Refer to page **480** for more information.

9. PDF bookmark definition

If you decide, that the PDF file should include bookmarks, you can specify what bookmark definition to use here. If you want no bookmarks you can state *NONE. Refer to page **238** for more information about the PDF bookmarks.

When you are done defining the PDF file naming definition you can go on and insert it in production or test. You insert it in Auto Forms Control by inserting a function **N = Create PDF File**. Refer to page **152** for more information of how to do this.

Define Level Break Conditions for Finishing

The screen below appears automatically in the process of creating any finishing definition: This section is used for creating definitions for determination of the level break between recipient information. Or in other words, when to start insertion into a new envelope, when to staple the pages or create a new pdf-file, e-mail or fax.

```

Work with Finishing Recipient-ID                                     PRS320D

Definition name . . . . . : TESTDEF

Start with . . . . . _____

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt      Seqnbr.  Description
(No recipient ID definitions - F6 to create)

                                                                 End
F3=Exit      F5=Refresh      F6=Add      F12=Cancel
  
```

Press **F6** to create a new definition

More definitions can be created but is only relevant if the **Page Selection Criteria** field is used. Normally a Finishing definition will contain only one Recipient ID definition line.

```

Create Finishing Recipient-ID                                     PRS330D

Definition name . . . . . : TESTDEF

Sequence number . . . . .  1___

Description . . . . .      Customer number in Demo Spool___

Page selection criteria

      Print line   Position   Oper   Compare value
      _____   _____   _____
      _____   _____   _____
      _____   _____   _____

Find recipient ID in the following positions
      Print line   Position
      _13         _57 - _60
      _____   _____
      _____   _____
      _____   _____
      _____   _____
      _____   _____

F3=Exit                                               F12=Cancel
  
```

We enter 1 for the first Finishing Recipient-ID definition.

Page Selection Criteria:

The level break is made when a condition of one of the 3 Page Selection Criteria lines is true. If the condition of line one is not true, the second line will be checked etc. If non of the 3 lines are true the rest of the lines on this screen are ignored and the next Recipient ID sequence number is processed. Read more on page 212, 232.

Print Line: The print line in the spool entry to search.

Position: The column interval to search

Oper. The operator relating to the compare value.
The operators used are standard Query operators.

EQ Equal to compare value
NE Not equal to compare value
LT Less than compare value
LE Less than or equal to compare value
GT Greater than compare value
GE Greater than or equal to compare value

Compare value: The character string (case sensitive) or numeric value which the operator should compare with. The comparison is in reality done on hexadecimal values. This means that eg. the figure "1" which has EBCDIC value F1h is greater than the character "Z" which has EBCDIC value E9h.

Example 1, Level Break on Page Counter

The page selection criteria will primarily be used when the spool data contains numbered recipient pages, eg. runs of invoices where each new invoice in the spool entry indicates "page1".

By displaying the test spool entry we find a page count in Line 3 column 72.

```

                                DISPLAY SPOOLED FILE
File . . . . . : QPRINT                               Page/Line 1/3
Function . . . . : _____                          Columns 1 - 78
Search for . . . : _____
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...
                                                                1

Herring Marine Research
Seaweed Street 14
9000 Battleaxe
DK-Denmark
-----
Att: Martin Merman

                                                                1004/PH.30-04-97

Re. Your new MateSert/400 driver.
```

By stating the following information for the page selection criteria, we make a level break every time the page count is reset to 1.

Page selection criteria				
Print line	Position	Oper	Compare	value
__3	_72 - _72	EQ	1	_____
__	__ - __	__	__	_____
__	__ - __	__	__	_____

In the test spool entry you will discover that the two letters for Florence Flowers are numbered in succession. The above definition will therefore see it to that no level break occur between these two letters which means they will be inserted into the same envelope, or stapled together.

Go to section **Using the Finishing Definition with Auto Forms Control** in order to test the definition.

Find Recipient ID in the Following Positions

This feature will make a level break on recipient variations found in the spool entry.

These fields can be combined with the Page Selection Criteria but they are more likely to be used alone. If Page Selection Criteria is used, then one of the three criteria lines must be true in order for the recipient ID fields to be checked. The level break is made when one or more characters changes within one of the defined line and column intervals.

Print Line: The print line in the spool entry to monitor.

Position: The column interval to monitor

Example 2, Level Break on Change in Customer Info:

The most commonly used method will be to monitor a Customer ID in a certain position. A customer ID will most likely be printed on all pages for one recipient.

The following example monitors the customer ID in our test spool entry. That means if the Customer ID between two successive pages in the spool entry does not change these two pages will be inserted in the same envelope, or stapled together. The Customer ID is found in line **13** column **57** to **60**.

DISPLAY SPOOLED FILE	
File : QPRINT	Page/Line 1/13
Function _____	Columns 1 - 78
Search for . . . _____	
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...	1004/PH.30-04-99
Re. Your new MateSert/400 driver.	

The following definition should be made. Note that the Page selection criteria is left blank:

```

Page selection criteria

      Print line   Position   Oper   Compare value
      ---         --- - ---   ---
      ---         --- - ---   ---
      ---         --- - ---   ---

Find recipient ID in the following positions
      Print line   Position
      _13         _57 - _60
      ---         --- - ---
      ---         --- - ---
      ---         --- - ---
      ---         --- - ---
      ---         --- - ---

F3=Exit                                         F12=Cancel

```

This definition will cause the two pages for Florence Flowers to be inserted in one envelope, or stapled together.

In order to test the above definitions proceed with the next section.

Example 3, Level Break on Customer ID and Attention Person.

This example extends the previous sample to consider that several persons could exist for the same customer ID, and the letters therefore should be inserted in separate envelopes, or not stapled together.

The following example monitors two fields in our test spool entry. The Customer ID and the attention person. That means if there is no attention person or the attention person is the same, all pages will insert into the same envelope or be stapled together. The attention person in the test spool entry is found in line 11 column 13 to 30:

```

                                DISPLAY SPOOLED FILE
File . . . . . : QPRINT                               Page/Line 1/11
Function . . . . : _____                          Columns 1 - 78
Search for . . . : _____
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...
      Att: Martin Merman
                                           1004/PH.30-04-97
      Re. Your new MateSert/400 driver.

```

The following definition should be made. Note that the Page selection criteria is left blank:

```

Page selection criteria

      Print line   Position   Oper   Compare value
      ---         --- - ---   ---
      ---         --- - ---   ---
      ---         --- - ---   ---

Find recipient ID in the following positions
      Print line   Position
      _13         _57 - _60
      _11         _13 - _30
      ---         --- - ---
      ---         --- - ---
      ---         --- - ---
      ---         --- - ---

F3=Exit                                         F12=Cancel

```

This definition will cause the two pages for Florence Flowers to be inserted in two separate envelopes, or stapled separately, as they have different attention persons.

In order to test the above definitions proceed with the next section.

Using the Finishing Definition with Auto Forms Control

Prior to making the following definitions for Finishing control in Auto Forms Control, a Finishing Definition must exist.

Enter menu point **5. Auto Forms Control** on the main menu, and select **1. Functions Attached to output queues**. Either create a new AFC queue to be used as input queue for the PFE MailPrinter / Prinsenter or printer with Finishing equipment, or edit an existing definition. Please refer to the InterForm400® manual for additional information on general operation of Auto Forms Control.

Activate the Finishing pre-process definition

In the following we have created a new AFC queue called PFE_IN, and we define our first AFC definition line to be **C=Prepare for Finishing**. By entering a Form type we can limit the preparation to specific input spool entries, in this case spool files with Form type DEMO:

```

Update AFC-functions attached to output queues                                AFC305D
Queue:  PFE_IN                      Library:  QUSRSYS

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program

(No functions defined)

Seqnbr Function  Attributes of input file for which to execute the function
 1,0      C
           Form type . . . . . DEMO_____
           Save attribute . . . . . _
           Jobname . . . . . _____
           Spooled file name . . . . . _____
           Device file . . . . . _____
           Library . . . . . _____
           Program that opened file . . . . . _____
           Library . . . . . _____
F3=Exit          F13=Fold/Unfold                                F12=Cancel

```

This function will read a spool entry with Form type DEMO, and create a new spool entry with Form type PFEREADY and return it to the output queue PFE_IN..

```

Update AFC-functions attached to output queues                                AFC305D
Queue:  PFE_IN                      Library:  QUSRSYS

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program

(No functions defined)

Seqnbr Function
 1,0      C      Prepare for Finishing
           Finish definition name . . . . . PFEDEF1____
           Output queue for prepared print . . . . . PFE_IN____
           Library . . . . . QUSRSYS____
           Form type . . . . . PFEREADY____
F3=Exit          F4=Prompt                                F12=Cancel

```


Finishing

Definition name: Finishing Definition created with option **4. Finishing Definitions** on the Auto Forms Control menu.

Output queue: The Finishing pre-process will generate a *SCS spool entry. This spool entry will be formatted with Finishing preprocessing information (can be viewed from position 341 using DSPSPFLF). This spool entry should normally be printed to the same AFC input queue, in order to merge it with an overlay. Note, that sending this spool entry directly to the PFE MailPrinter / Prinserter or printer with Finishing equipment will have no effect.

Form type: The pre-processed spool entry should have a Form type defined which allows a following **1=Merge with overlay** line to create a PCL formatted output for the PFE MailPrinter / Prinserter or printer with Finishing equipment.

Merge with pre-processed Finishing spool entry

We can now merge the new spool entry with an overlay conditioned by the Formtype **PFEREADY** or by using an Overlay Selector:

```
Update AFC-functions attached to output queues                                AFC305D
Queue:  PFE_IN                      Library:  QUSRSYS
Seqnbr  Funct  Form type  Save Jobname  Filename  Device file  Program
0001    C      DEMO
Finish def: PFEDEF1 outq: PFE_IN      library: QUSRSYS form type

Seqnbr  Function  Attributes of input file for which to execute the function
2,0     1
Form type . . . . . PFEREADY__
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____
F3=Exit          F13=Fold/Unfold          F12=Cancel
```

```

Update AFC-functions attached to output queues                                AFC305D
Queue:   PFE_IN      Library:   QUSRSYS
Seqnbr  Funct  Form type  Save Jobname  Filename  Device file  Program
0001    C      DEMO
Finish def: PFEDEF1 outq: PFE_IN      library: QUSRSYS form type

Seqnbr  Function
2,0     1      Merge with overlay

Output queue for merged print .  *DEFAULT__
Library . . . . . _____
InterForm 400 printer type . . . _____
Interface . . . . . _____
Merge overprint lines . . . . . *NO_      *NO, *YES
Find overlay in form type table N      (Y N)

F3=Exit      F13=Fold/Unfold      F12=Cancel

```

Distribute E-mails with Auto Forms Control

When distributing spool files as PDF, an E-mail Finishing Definition first has to be executed. To do that you add a **C = Prepare for Finishing** function to the Auto Forms definitions of the relevant output queue. This screen is shown:

```

Seqnbr  Function  Attributes of input file for which to execute the function
1.0     C
Form type . . . . . DEMO_____
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____

```

Here you can insert conditions for executing the finishing definition. In this case we choose only to E-mail spool files with the form type **DEMO**. Press Enter.

```

Seqnbr  Function
1.0     C      Prepare for Finishing

Finish definition name . . . . . DEMO_____
Output queue for prepared print *INPUT_____
Library . . . . . _____
Form type . . . . . EMAIL_____

```

Above an E-mail Finishing definition is specified. An Auto Forms Control function **P = Send PDF E-mail** should be executed for the form type on the specified output queue. Press Enter to continue.

```

Seqnbr Function
 1.0      C      Prepare for Finishing

                Prepare for E-mail requires settings for
                print that will not be send.
                Output queue non E-mail print . *INPUT____
                Library . . . . . _____
                Form type . . . . . PRINT_____

```

On this screen it is specified what to do with spool file pages, that are not possible to send. One problem can be, that InterForm400 is not able to find an E-mail address for a key.

The final task is to insert the actual E-mail command in Auto Forms Control. You do that by inserting a function **P**. This option is shown on the AFC functions overview if you press F23=More options. Below we have entered a function P:

```

Seqnbr Function  Attributes of input file for which to execute the function
 2.0      P

                Form type . . . . . EMAIL_____
                Save attribute . . . . . _
                Jobname . . . . . _____
                Spooled file name . . . . . _____
                Device file . . . . . _____
                Library . . . . . _____
                Program that opened file . . . . . _____
                Library . . . . . _____

```

In this example we only want to E-mail spool files with the form type EMAIL. Press Enter to get the view below.

```

Seqnbr Function
 2.0      P      Send spooled file as PDF email

                Overlay name . . . . . IF400DEMO_
                File set . . . . . SAMPLE_____
                or overlay selector . . . . . _____
                Primary/Secondary set . . . . *PRI      *PRI, *SEC
                Merge overprint lines . . . . *NO_      *NO, *YES
                Save email . . . . . *NO_      *NO, *YES

```

Notice: As the Finishing definition is splitting up the original spool file, the P-function is executed for each of the splitted spool files. This is done in order to keep track of what E-mails that got though and which ones that did not. In this manner it is easier to resend a specific mail if necessary.

⚠ WARNING ⚠

*You have to make sure, that Auto Forms Control executes a Finishing Definition of type 5=E-mail for the spool file prior the function **P = Send PDF E-mail**. If you fail to do that the Auto Forms Control job will halt with an error: AFC7002 InterForm unable to send email from output queue <library>/<output queue> (C R I).*

! IMPORTANT !

*When defining a merge with overlay for a pre-processed PFE MailPrinter finishing definition, the overlay- or selector name entered must be for the contents of the envelope and **NOT** for the envelope itself.*

⚠ WARNING ⚠

*The Prinsserter are in reality HP PCL5e compatible printer types and the printertype **HP4** should always be used. The Interface type used in conjunction with the Prinsserter and PFE MailPrinter should **always** be **ASCII850**.*

 **WARNING** 

*The Finishing definitions will **not** work with copies. If more copies have been defined for the merge it will result in faulty insertions. (NOT valid for the PFE MailPrinter)*

 **TIP** 

Copy Management defined for the overlay is only supported for the overlay entered in the pop-up window when you defined your pre-process. You can, however, alternatively use the program PRSCOPY to generate the copies. Refer to page 153 for more information. (NOT valid for the PFE MailPrinter)

The Reformat finishing definition

In InterForm400 you are always limited by the page breaks of the original *SCS spooled files. You never able to move information from one page to another or to change the height of the page making it possible to print more information on the final output. BUT with the Reformat finishing definition things have changed.

The reformat definition makes it possible to change the page breaks of an *SCS spooled file. It is intended for *SCS spooled files, that contains documents for different customers with detail lines. The reformat will create a new *SCS spooled file with new page numbers within each document, rearrange text for each detail line (and following text lines) and e.g. even call a user exit program to include advanced calculations for each new detail line.

In order to create a new Reformat finishing definition you select this from the InterForm400 Main Menu:

'5. Work with Auto Forms Control'

'4. Finish Definitions'

Press F6=Add

State a name and description and select type: '07 = Reformat Spooled File'.

Then you will see this screen:

```
Work with reformat definition                                RFM300D
Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Type option, Press Enter.
1=Select

Opt  Definition
-   Head
-   User exit program
-   Detail lines
-   Totals
-   Footer

F3=Exit                                F12=Cancel
```

Below each of the elements are described:

Head

When you select this element the first screen will look like this:

```
Work with reformat definition                                RFM300D
Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Input head
Number of lines . . . . . 10__  1 - 200, *VAR
```

Here you can state how many of the first lines (including the blank lines) from the input spooled file, that are considered a part of the header i.e. that they are not detail lines. If you state e.g. 10, then all line 1-10 of the input spooled file is considered to be the header. If you specify *VAR this will part of the screen will change to this:

```

Work with reformat definition                                     RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Input head
Number of lines . . . . . *VAR

The last line of head is found as the first line, that has
startposition ___ length ___ = _____
                                or      = _____
                                or      = _____
                                or      = _____
+ 0 lines.

Output heads are to have ___ lines.

```

On the screen above you tell InterForm400 how to detect the last line of the input header. The number keyed in '**+ _ lines**' will be added to the line number where the condition above is met. So if the condition e.g. is found in line 5 and you have '3' in this place, then the first 8 lines are considered to be a header.

The number in '**Output heads are to have ___ lines.**' tells InterForm400 the minimum number of lines for the output header. However the number of lines in the output header can never be lower than number of lines in the header of the input spooled file.

Press Enter and you will come to this screen:

```

Work with reformat definition                                     RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Input head

Levelbreak is found in head

      line ___ startpos. ___ length ___
and line ___ startpos. ___ length ___
and line ___ startpos. ___ length ___

Page number within level is to be printed in output
line ___ position ___

Line-id is to be printed in all output lines in output
position ___

F3=Exit                                                         F12=Cancel

```

Each time there is a new customer InterForm400 will have to make a page break in the new spooled file. Above you state how InterForm400 can determine that. If the information found in the place pointed to by '**Levelbreak is found in head.**' changes, then InterForm400 will do a level break. So here you should point to a place where a document reference number is found (e.g. invoice number).

Next you should state a place, where the page number within each new document is to be placed. Finally you can choose where to print the **line-id** of each detail line in the reformatted output. The line-id is identification of each line that can be useful for making conditions in the overlay that you merge with later on.

User exit program

From the reformat finishing definition you can call a user exit program in order e.g. to extract certain information from the spooled file, transfer that to the program, where you e.g. calculate other values which then are placed back into the new spooled file.

When you select this option you will see a screen like this (if you press Enter a couple of times):

```
Work with reformat definition                                RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

User exit program . . . . . : _____ *NONE
Library . . . . . : _____ Name, *LIBL

Exit fields from 1st head in level to user exit program
Field-1  linenbr  __  position  __  length  __
Field-2  linenbr  __  position  __  length  __
Field-3  linenbr  __  position  __  length  __

Is user exit program to be called when processing 1st head
in level . . . . . : _____ *NO, *YES

Placing of return fields in output head
Field-1  linenbr  __  position  __
Field-2  linenbr  __  position  __
Field-3  linenbr  __  position  __
F3=Exit                                     F12=Cancel
```

On the top you can enter a user exit program. This program must be owned by QSECOFR (like all InterForm400 exit programs). On the middle of this screen you can specify if you want the reformat definition to call the program each time a new header is made or not. If you state *YES, then the up to 3 fields specified in the top of the screen will be transferred to the user exit program when called. The program can return up to 3 fields, that are placed as stated in the bottom of the screen above.

For an example of such a user exit program look in member **RFMEXIT** in source file **APF3812/APISRC**. This program must be owned by QSECOFR (like all user exit programs called by InterForm400).

Note, that the same program can be called when handling each detail line later. The parameter &CALLID will indicate if the program is called from a header or detail line.

⚠ WARNING ⚠
*Do **NOT** place any programs or other objects in the APF3812 library as these objects will not be copied over to the new version in case of an upgrade of InterForm400.*

Detail lines

Select this option and you will get to the screen below:

```

Work with reformat definition
RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Number of detail lines per output page

  1st page per level break . ____
  Following pages . . . . . ____

Maximum number of blank lines
between 2 detail lines . . ____

F3=Exit
F12=Cancel

```

You fill in the fields:

1st page per level break

This indicates how many detail lines, that there is room for on the first page for each document or customer (after a level break).

Following pages

The page header will be excluded from the second and following pages. That should make room for more detail lines. You type how many lines there are room for here.

Maximum number of blank lines between 2 detail lines

As a part of reformatting there might be some new blank lines within the detail lines. Here you can limit the number of the blank lines.

Press <Enter> and you will get a list of rule lines describing how the detail lines should be handled and build up. Type a new sequence number and press the <Field Exit> key to create a new line:

```

Work with reformat definition
RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Reformatting detail lines      Rule 02 All non empty detail lines
01  All non empty detail lines

Rule  Description
1.0  _____
     If    position . . . . . ____ 1-378
        length . . . . . ____ 1-30
        compare type . . . . . _ = > < N A U
        compare value . . . . . _____
        occurrence . . . . . _____ *ALL, *FIRST, *LAST
     Number of lines to handle . . ____ 1-99, *VAR
     Action . . . . . _____ *REFORMAT, *DELETE
     Line-ID code . . . . . _____
     Call user exit program . . . . ____ *NO, *YES
F3=Exit
F11=Delete  F12=Cancel

```

Here you first enter a condition to select only this specific type of detail line. This condition will only be considered for the lines after the header:

Position	The starting position of the text compare.
Length	The length of text to compare.
Compare type	The type of compare to do. Refer to page 67 for an explanation.
Compare value	The text, that should be compared with.
Occurrence	States which of the lines (fitting the condition), that should be selected: *FIRST will be used only for the first time this line is found after a level break and *LAST will be used for the last time only that this line is found within a level break.
Number of lines to handle	Here you state how many detail lines, that should be 'taken' from the original spooled file if the condition is true. All the lines from the original spooled file will be available for reformatting when progressing. If you use *VAR this line will get all the detail lines of the original spooled file until this or another condition is true.
Action	Select *REFORMAT if you want the text of the input detail line(s) on the output spooled file as well. Use *DELETE if this line (or lines) should not be visible on the output spooled file.
Line-ID code	A code for this kind of detail line. This will be inserted on the output spooled file e.g. to be used for conditioning in the overlay design. The position where this is placed is decided as described on page 222 .
Call user exit program	Tells InterForm400 if the user exit program should be called for this detail line. The program to call is defined as described on page 223 where you also can find additional information. If you activate this call this window will pop up:

```

Exit fields
  Detail exit field-1  Line __  position ___  length ___
  Detail exit field-2  Line __  position ___  length ___
  Detail exit field-3  Line __  position ___  length ___

Placing return fields
  Return field-1  Lineno. ___  position ___
  Return field-2  Lineno. ___  position ___
  Return field-3  Lineno. ___  position ___
F3=Exit                               F12=Cancel

```

Here you can specify the information, that you want to transfer from the spooled file onto the user program and where you want to place returned information. The line numbers are all relative to the line where the condition is met.

If you above have chosen ***REFORMAT** for the action to take you will see a list of lines describing how the output detail line(s) should look. You can insert 2 types of definition lines:

1 = Reformat input:

```

Seqnbr. Type  Input line  position  length  Output line  position
  1.0    1      ___        ___      ___      ___        ___

```

2 = Text constant:

Seqnbr.	Type	Text constant	Output line	position
2.0	2	_____	—	—

With these 2 types of lines you can decide how the input detail line(s) should be presented in the output spooled file.

WARNING

Plan how you want to structure the sequence of these lines as there is no tool for resequencing.

Totals

When you select this option you are asked if the print out has totals. If you answer *NO, then it is assumed, that the original spooled file has no totals and that no totals should be inserted in the new reformatted spooled file. Below is described what to go through if you select *YES.

The first screen looks like this:

```
Work with reformat definition                                RFM300D
Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Localization of totals
total lines starts . . . . __ 0 - 99
lines before the last occurrence
of the text . . . . . _____
or . . . . . _____
or . . . . . _____
or . . . . . _____
in position . . . . . _____
length . . . . . _____

F3=Exit                                                    F12=Cancel
```

InterForm400 will search for any of the texts you type in. You can tell how many lines before the 'hit', that should be considered to be a part of the total. If e.g. you search for the text 'Total' and there is a '*****' line just above this line, then you should enter '1' in '**total lines starts __ lines before the last occurrence**'.

Press Enter to proceed to the screen below:

```

Work with reformat definition
RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Placing of totals

Select one of the following options:

1. Just after the last detail line
2. Like 1, if there is space for all total lines, otherwise next page.
3. In foot

Option _

F3=Exit
F12=Cancel

```

On this screen you can decide how the total should be inserted:

1. Just after the last detail line

This choice will insert the totals just after the last detail line. If there is no room for all lines for the total, then the rest is inserted on the next page.

2. Like 1, if there is space for all total lines, otherwise next page.

This works like a 'block protect'. Transfers all the total lines onto the next page if necessary.

3. In foot

Prints the totals in the footer.

Press Enter to proceed to this screen:

```

Work with reformat definition
RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Extra total page

Extra total page is created, if number of output detail lines on the last
page is above a certain limit

Limit detail lines if last page is page 1 . . . . . __0
Limit detail lines if last page is >1 . . . . . __0

Total line-ID
If only 1 total page . . . . . ____
If 2 total pages, first total . . ____
If 2 total pages, extra total . . ____

F3=Exit
F12=Cancel

```

The header may be larger on page 1 for each document, so there might room for fewer detail lines on the first page than on the subsequent pages. You state here the number of detail lines that there are room for.

You can also state various line-ID's depending on if the total is spread across two pages or not:

- If only 1 total page** This denotes the line-ID to be inserted if the total is not spread across 2 pages.

- If 2 total pages, first total** The specifies the line-ID for the part of the total lines, that are placed on the page before the last - if the total lines are split across pages.

- If 2 total pages, extra total** States what line-ID to insert for the part of the total lines, that is placed on the last page - if the total lines are split across pages.

When you press Enter you will proceed to this screen:

```

                                Work with reformat definition                                RFM300D

Definition name . . . . . : DEMO_REFOR
Description . . . . . : Reformat the Demo spooled file

Reformatting totals

0001  1      01      050  060      1      50
0002  2      Total      1      40

Seqnbr. Type
  2.0  -          1 = Reformat input
                   2 = Text constant

F3=Exit                                F11=Delete                                F12=Cancel
```

Here you can edit and rearrange the total lines in the output spooled file. This works exactly as for the detail lines. Refer to page **225** for more information.

Footer

Here you key in the placement of the footer i.e. in which line number it starts in the original spooled file and how many of the footer lines, that you want to include in the new reformatted spooled file.

NOTE: The footer lines will in the output spooled file be placed between the header and the detail lines.

Insert reformatting in production

When you have defined your reformat finishing definition you go to Auto Forms Control and insert a function 'C = Prepare for Finishing' for the relevant output queue. Refer to page **148** for more information.

Sort Definitions

This function is used if pages in a spool entry for the same receiver ID are not consecutive, and there is a demand for them to be sorted this way.

The function should be used prior to an overlay merge or a prinserter or PFE MailPrinter pre-process.

Enter Menu point **5. Sort Definitions** on the menu **5. Work With Auto Forms Control**. The following screen will appear:

```
Work with Sort Definitions                                     SOR300D

Start with . . . . . _____

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt   Name      Description
(No Sort definitions - F6 to create)

F3=Exit          F5=Refresh          F6=Add          F12=Cancel      End
```

Press **F6** to create a new sorter definition.

One sorter definition is specific for one type of print job, and can be referred to by any number of queues defined in AutoFormsControl.

```
Update Sort Definition                                     SOR310D

Definition name . . . . . : PETER

Description . . . . . Sort IF400DEMO

Insert separator page before
start of new group . . . . *YES      *NO, *YES

Insert separator page if
break in sort field no . . 1_        1-6

F3=Exit          F12=Cancel
```

Definition name: This name will be referred to by the AFC function **D=Sort Spooled File** (hidden).

Insert Pages before start of new group: Stating *YES will produce an extra page in the sorted spool entry with the text SEPARATOR PAGE inserted between each sorted group within the resulting spool entry. The page will include the character string which met the sort criteria.

Insert separator page if break in

sort field no.: This option defines the detail level for insertion of the separator page, e.g. stating 3 will insert a separator page if one or more characters changes within any of the intervals defined in sort field number 1 to 3. The separator page will additionally list the contents of each sort field.

Pressing **Enter** will bring up the following screen:

```
Work with Sort Definition Details                                SOR320D

Definition name . . . . : PETER

Start with . . . . . _____

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt      Segnbr.  Description
(No sort definition details - F6 to create)

F3=Exit          F5=Refresh          F6=Add          F12=Cancel      End
```

Press **F6** to create a new definition.

More definitions can be created but is only relevant if the **Page Selection criteria** is used.

Create Sort Definition Details				SOR330D
Definition name	:	DEMO		
Sequence number	:	__1		
Description	:	Sort_by_Customer_ID_____		
Page selection criteria				
	Print line	Position	Oper	Compare value
	___	___ - ___	___	_____
	___	___ - ___	___	_____
	___	___ - ___	___	_____
Find sort fields in the following positions				
	Sort field no.	Print line	Position	Ascending/Descending
	1	___	___ - ___	- (A D)
	2	___	___ - ___	- (A D)
	3	___	___ - ___	- (A D)
	4	___	___ - ___	- (A D)
	5	___	___ - ___	- (A D)
	6	___	___ - ___	- (A D)
F3=Exit				F12=Cancel

Page Selection criteria

The page selection criteria should only be used if the same spool entry contains more than one page layout.

This could be the case if a spool entry contains invoices and credit notes, and the customer ID, intended for use as sort field, is placed in different line/column positions on the invoices than on the credit notes. In this case you should create two **Sort Definition Details**, where one compare with the text INVOICE and the other with CREDIT NOTE, and each has its own specification for the customer ID sort field.

If some of the invoices consisted of several pages of which only the first page indicate INVOICE, the successive pages will automatically follow the first page of the invoice. That means pages which are not recognized by any Page Selection criteria will in the final sort automatically succeed the last recognized page.

Print Line: The print line in the spool entry to search.

Position: The column interval to search

Oper. The boolean operator relating to the compare value.
The operators used are standard operators known from e.g. Query/400:

- EQ** Equal to compare value
- NE** Not equal to compare value
- LT** Less than compare value
- LE** Less than or equal to compare value
- GT** Greater than compare value
- GE** Greater than or equal to compare value

Compare value: The character string or numeric value which the operator should compare with. The comparison is in reality done on hexadecimal values. This means that e.g. the figure 1 which has EBCDIC value F1h is greater than the character Z which has EBCDIC value E9h.

Find sort fields in the following positions

The Sort fields indicate the detail level of the sort process. Pages will be sorted in the same order as the sort fields. Sort field no.1 is the most significant for the sort.

Print Line: The print line in the spool entry to search.

Position: The column interval to search.

**Ascending/
decending:** Select the way you want to order this sorting field. If you leave it blank it will default to ascending.

Examples Using Sort

The following makes use of the demo spool entry delivered with InterForm400®. You can print this from the menu **12. Service Functions** under the administration menu.

On all pages the Customer ID is always four digits found in line **13** position **57 - 60**:

```

                                DISPLAY SPOOL FILE
File . . . . . : QPRINT                      Page/Line 3/13
Function . . . . +1                          Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
                                1001/PH.30-04-97

Re. Your new InterMate/400 Forms Management System.
-----
Congratulations with your new InterMate/400 software.
InterMate/400 will enable you to print Electronic Forms and perform
advanced data remapping and copy management of you existing SCS
print data. InterMate/400 exploits the advanced features of
standard HP-PCL printers and is the chosen forms management
solution for several hundreds of organisations.
The following license code(s) will be needed to activate InterMate
400 permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.      No. of dev.      License Code
-----
200        P10             4449079         -                 F2 E7 20 AA
F35        P20             44B2031         2                 AA BB 01 23
E60        P30             44D3971         -                 1A BC DE 44
F3=Exit    F12=Cancel      F19=Left        F20=Right        F24=More keys

```

The distinction between MateSert/400 and InterMate/400 letters is the text “MateSert” or “InterMat” which can be located on each page in line **15** position **21 - 28**.

Note that we must compare the same number of characters, which is the reason why we check for “InterMat” (and not “InterMate”) in order to match the length of the word “MateSert”.

```

                                DISPLAY SPOOL FILE
File . . . . . : QPRINT                               Page/Line 3/15
Function . . . . +1                                   Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Re. Your new InterMate/400 Forms Management System.
-----
Congratulations with your new InterMate/400 software.
InterMate/400 will enable you to print Electronic Forms and perform
advanced data remapping and copy management of you existing SCS
print data. InterMate/400 exploits the advanced features of
standard HP-PCL printers and is the chosen forms management
solution for several hundreds of organisations.
The following license code(s) will be needed to activate InterMate
400 permanently to your AS/400 CPU(s):
Model      P-Group      Serial No.      No. of dev.      License Code
-----
200        P10              4449079         -                F2 E7 20 AA
F35        P20              44B2031         2                AA BB 01 23
E60        P30              44D3971         -                1A BC DE 44
F45        P20              44A1460         -                79 10 22 F1
F3=Exit    F12=Cancel      F19=Left       F20=Right       F24=More keys

```

Example 1. Sort by Type, “InterMate400” letters first:

A sort definition could monitor the field with the text “MateSert” or “InterMat”. The spool entry would then be sorted with all the InterMate/400 letters first followed by the MaterSert letters. InterMate/400 letters will appear before MateSert/400 letters in the resulting printout, as the sort is done alphabetically on the contents of the sort fields.

```

Find sort fields in the following positions
Sort field no.  Print line  Position  Ascending/Descending
1              _15       _21 - _28  A
2              _         _ - _      -

```

Example 2. Sort by Type, “MateSert/400” letters first:

It is not necessary to control the entire text “MateSert” or “InterMat”. As the search is done alphabetically the search could be made on column position **22** only. For InterForm letters position 22 contain the character **n** (second character of the word “InterMat”), and for MateSert/400 letters position 22 contain the character **a**. This means the sorted spool entry would have MateSert/400 letters before InterMate/400 letters. Note, that a separator page would then also only indicate **n** for InterMate/400 letters and **a** for MateSert/400 letters.

Find sort fields in the following positions			
Sort field no.	Print line	Position	Ascending/Descending
1	_15	_23 - _23	A
2	___	___ - ___	-

Example 3. Sort by Type and Customer ID:

To increase the detail level of the search we could have the groups of MateSert/400 and InterMate/400 letters sorted according to Customer ID. This would also be necessary if some of the letters consisted of more than 1 page, where page 2 and succeeding pages only indicate the customer ID, but not "MateSert" or "InterMat".

We add an extra sort definition, where we search for the customer ID:

Find sort fields in the following positions			
Sort field no.	Print line	Position	Ascending/Descending
1	_15	_21 - _28	A
2	_13	_57 - _60	A

Example 4. Sort by Customer ID and type:

Another approach could be to sort by customer ID's first and then by the type being "MateSert" or "InterMat". This is achieved by reversing the order of the sort fields from the previous example:

Find sort fields in the following positions			
Sort field no.	Print line	Position	Ascending/Descending
1	_13	_57 - _60	A
2	_15	_21 - _28	A

In an AFC definition we can activate the sort definition **SORTDEMO**, by using function **B**:

Update AFC-functions attached to output queues							AFC305D
Queue:	AFC_INPUT2	Library:	APF3812				
Seqnbr	Funcnt	Form type	Save	Jobname	Filename	Device file	Program
(No functions defined)							
Seqnbr	Function						
1,0	D	Sort Spooled File					
					Sort definition name	SORTDEMO__	
					Outque for sorted print	*INPUT__	
					Library	_____	
					Form type	SORTDONE__	
F3=Exit							F12=Cancel

This will cause the demo spool entry to have pages sorted into another SCS spool entry with form type **SORTDONE** is created and placed after the original spool entry in the same queue.

We can now merge the new spool entry with an overlay conditioned by the Form Type **SORTDONE** or by using an Overlay Selector:

```

Update AFC-functions attached to output queues                                AFC305D
Queue:  AFC_INPUT2      Library:  APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001      D      DEMO
Sort, def: SORTDEMO outq *DEFAULT &form type: SORTDONE

Seqnbr Function  Attributes of input file for which to execute the function
2,0      1
Form type . . . . . SORTDONE_
Save attribute . . . . . _
Jobname . . . . . _____
Spooled file name . . . . . _____
Device file . . . . . _____
Library . . . . . _____
Program that opened file . . . . . _____
Library . . . . . _____
F3=Exit      F13=Fold/Unfold      F12=Cancel

```

```

Update AFC-functions attached to output queues                                AFC305D
Queue:  AFC_INPUT2      Library:  APF3812

Seqnbr Funct  Form type  Save Jobname  Filename  Device file  Program
0001      D      DEMO
Sort, def: SORTDEMO outq *DEFAULT &form type: SORTDONE

Seqnbr Function
2,0      1      Merge with overlay

Output queue for merged print . *DEFAULT_
Library . . . . . _____
ArtForm 400 printer type . . . . _____
Interface . . . . . _____
Find overlay in form type table _ (Y N)

F3=Exit      F13=Fold/Unfold      F12=Cancel

```

The Sorted spool entry from example 4, including a definition of insertion of a separator page if break in sort field number 2 would look like this:

```
                                DISPLAY SPOOL FILE
File . . . . . : QPRINT                               Page/Line 1/1
Function . . . .                               Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...
** SEPERATOR PAGE **
1001
InterFor
  Florence Flowers
  Tulip Road 16
  4000 Marigold
  DK-Denmark
  -----
  Att: Wolly Weed
                                           1001/PH.30-04-97
  Re. Your new InterMate/400 Forms Management System.
  -----
  Congratulations with your new InterMate/400 software.
  InterMate/400 will enable you to print Electronic Forms and perform
  advanced data remapping and copy management of you existing SCS
  print data. InterMate/400 exploits the advanced features of
  F3=Exit      F12=Cancel    F19=Left    F20=Right    F24=More keys
```

☺ **TIP** ☺
You can use the sort selection criteria that is included on the separator page (in this example 1001 or InterForm400®) to have an overlay selector pick an overlay that prints the separator page to be with a special overlay or from another drawer, e.g. with coloured paper.

PDF File Bookmarks

From the InterForm400 main menu select **5. Work with Auto Forms Control** followed by **6. PDF bookmark definitions**. Here you can define how bookmarks should be inserted when you create a PDF file in InterForm400.

Note, that alternatively you can also include &&BMK commands in the *SCS spooled file you merge with to insert bookmarks. Refer to page **396** for more information.

NOTE

In order to get PDF output you need to purchase the PDF module or the classic package for InterForm400.

You can then later refer to a bookmark definition when you create a PDF file in InterForm400.

When you create a new bookmark definition you are presented with this screen:

```
                Create PDF Bookmark definition                                BMK310D
Bookmark definition name .   FIN_REPORT_
Description . . . . .   Bookmarks_for_financial_report_____
Display bookmarks at open.  1           0=No  1=Yes
```

Here you state a name for the bookmark definition, a description and select if the bookmarks should be displayed when the PDF file is opened or not.

When you press Enter/F3/F12 you will see this screen:

```
                Work with PDF Bookmark details                            BMK320D
Bookmark definition . :   BOOKMRK1
Position to . . . . .   ____ Sequence number
Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  7=Rename
Opt   Seqnbr.  Description
_     000      All pages

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

Here you can define one or more rules for when and how bookmarks should be inserted. Press F6 to add a new one:

```

Create PDF Bookmark details
BMK330D

Sequence number . . . . . 000

Description . . . . . _____

Type option, Press Enter.
1=Select

Opt   Definition
-     Page selection
-     Initial open level
-     Level-1
-     Level-2
-     Level-3
-     Level-4
-     Level-5
-     Level-6

F3=Exit  F12=Cancel

```

Page selection: If you want to use more than one rule (or sequence) for the bookmarks in one spooled file, you need to restrict the sequence to some of the pages only by specifying rules in 'Page selection'. Otherwise skip this part. Refer to page **212, 232** for details.

Initial open level: You can decide if the nested bookmarks should be expanded (and to what level) or not when opening the PDF file. If you use '0' or blank for this, then all levels are expanded. Any other value will expand all levels down to the specified number.

Level 1-6: Select one of these to specify the bookmarks at a certain level:

```

Change PDF Bookmark details
BMK330D

Sequence number . . . . . : 000

Description . . . . . All pages

Level-2

Field   Prefix           Print line  Position
 1     Zip:_____         __8        __8 - _11
 2     City:_____       __8        _13 - _40

Color           __5        F4=List

F3=Exit  F12=Cancel

```

Above we have defined the second level. The fields 1 and 2 will be concatenated to make the full text of the bookmark. So you can insert fixed text (prefix) followed by text from the spooled file page to define each field. You can use any colour for the bookmark. Define your own colours if necessary by use of option '10. Work with palette' from the InterForm400 administration menu. Refer to page **329** for more information of how to do that.

The information used from the spooled file will be inspected by the bookmark generator. Only when this information changes a new bookmark will be generated.

👉 **NOTE** 👉

Text for bookmarks must be placed in a fixed position on the page. If you want to search for a certain text and insert bookmarks if found you could consider to use the APF3812/CRTPBSPLF command to do copy the floating information into a fixed spot of a new *SCS spooled file before merging. This could be called from an AFC user exit program.

Getting familiar with PDF Bookmarks

In order to demonstrate how to insert PDF bookmarks we will go through the process necessary to insert these bookmarks when creating a PDF file based on the InterForm400 demo spooled file:



The idea is, that the first level contains information of the customer number. Each customer could have subsidiaries in different cities, so level 2 refers to each zipcode and city. Level 3 finally points out each contact person for each subsidiary. Refer to page 337 for information of the demo spooled file and how to create it.

From the InterForm400 main menu select **5. Work with Auto Forms Control** and **6. PDF bookmark definitions** followed by **F6=Create** to start creating a new PDF bookmark definition:

Create PDF Bookmark definition		BMK310D
Bookmark definition name .	DEMOSPOOL_	
Description	Bookmarks for the Demo Spooled File	
Display bookmarks at open.	1	0=No 1=Yes

Above we have stated a name and description for the definition and decided, that the bookmarks should be visible when opening the PDF file later. Press Enter to proceed. Here you will see a list of bookmark detail lines, that is empty. Press F6=Create to create a new sequence line:

```

Create PDF Bookmark details
BMK330D

Sequence number . . . . . 000

Description . . . . . All_pages_____

Type option, Press Enter.
1=Select

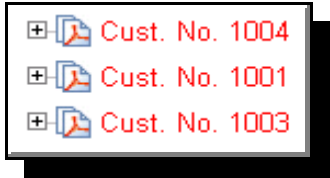
Opt  Definition
-    Page selection
-    Initial open level
-    Level-1
-    Level-2
-    Level-3
-    Level-4
-    Level-5
-    Level-6

F3=Exit  F12=Cancel

```

Through **Page selection** we could have inserted conditions so we could handle bookmark differently for some of the pages, but as this spooled file is the same for all pages, this will not be used here.

Initial open level tells to what degree the bookmarks should be expanded. Here we use '1' as we want this display when we open the PDF file:



The definitions for the individual levels are shown below:

```

Level-1

Field  Prefix          Print line  Position
1      Cust._No._____  _13        _57 - _60
2      _____         _         _ - _

Color          _3      F4=List

```

```

Level-2

Field  Prefix          Print line  Position
1      Zip_____      _8         _8 - 11
2      City_____      _8         _13 - 40

Color          _5      F4=List

```

Level-3			
Field	Prefix	Print line	Position
1	_____	_11	__8 - _35
2	_____	___	___ - ___
Color		_8	F4=List

When done defining the levels you just press Enter several times and the bookmark definition has been saved.

As the final thing we want to use the PDF Bookmark definition. You can do it in this manner:

- Create the demo spooled file as described on page **337**.
- With the same interactive job you go to a command line and type the command:

```
APF3812/MRGSPLFPDF KARTSET(SAMPLE) KLI CHE(IF400DEMO)
FILNVN(QPRINT) SPLNBR(*LAST) BMKDEF(DEMSP00L) OUTTYPE(*VIEW)
```

This will create a pdf file with the same name as your user ID in the APF3812/VIEW folder. If you have access to this folder from your PC and you have associated .PDF with Acrobat Reader it will show you the result automatically.

Go through the setup described in **Appendix L** if Acrobat Reader does not start or does not show the PDF file.

User Output Queue

This feature offers the possibility to move any spooled file to a user dependent output queue. It can be reached from the InterForm400 Main Menu by first selecting **5. Work with Auto Forms Control** and then **7. User output queue**.

```
Work with user output queues                                AFC315D

Position to . . . . . _____ User profile

Type options, press Enter.
  2=Change  3=Copy  4=Delete

Opt  User profile      Output queue      Library
-    KSE                HP5SI             QUSRSYS
-    PDC                PRT01            QUSRSYS
-    SR                 IMA7000          QUSRSYS

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

End
```

Here you state a preferred output queue for each user profile. You distribute spooled files depending on the spooled file owner by use of a **5 = Move Spooled File** line in AFC. Refer to page **145** for details.

Example: Distribute Spooled Files depending on Spooled File Owner

The table of **User Output Queues** above can e.g. be used for a task like this:

Several users use an application, that always prints to one output queue. However the users want the merged spooled files to be printed on the nearest printer.

To do that the users with their preferred printer should be added to the table above. Next you need to activate this in Auto Forms Control. This could be done like below:

1. Insert a **1=Merge** command e.g. conditioned on the formtype of the original spooled file which e.g. could be **DEMO**. The merged spooled file is to be created on the same AFC monitored output queue. The formtype of the new, merged spooled file could be **DISTRIBUTE**.
2. Insert a **5=Move** command in AFC depending on the resulting formtype (**DISTRIBUTE**) and move the spooled file to output queue ***USER**. If the owner does not exist in the list the Move is ignored, a **9=Exit** is performed (indicating an error) and the spooled file remains in the output queue

☺ **TIP** ☺

*Instead of merging before you move the spooled file you could also decide to move the *SCS spooled file to an AFC monitored queue (depending on the user profile, that owns the spooled file) and do the merge there.*

General Description of OSC (Output Schedule Control)

Output Schedule Control (OSC) is a sub-system in InterForm400® which main purpose is to optimize the daily mail procedures in an organisation and thereby reduce the postage costs significantly. The key element with this function is that rather than sending 10 envelopes to the same customer, all documents should be sent together.

OSC will handle multiple spool files, independently of document type and produce a new single spool file in *SCS format, sorted e.g. according to the recipient name.

OSC jobs works differently than Auto Forms Control jobs. OSC jobs are not running at all times. OSC jobs wake up at specific times of the week and will merge all spool files waiting at a specific output queue into one large SCS spool file. This new spool file can be sorted and distributed and then merged using Auto Forms Control. When all waiting spool files have been handled, the OSC job goes into 'sleep mode' again, and awaits the next 'wake up call'.

Output Schedule Control can help you print out in these situations:

1. You have large spool files to print. It is not necessary to print them out immediately after they are created. You want to (automatically) print them out during the night, when the printers are idle.
2. You are going to print out very large spool files and you want to automatically distribute the workload on several printers.
3. You have 2 or more spool files, that are to be distributed to the same customers. For easy and low cost distribution, you want to merge all the spool files to one and sort it, so pages for the same customer are collected and printed together.
4. You have the situation as described in example 3, but the customer information is placed on differently on the page depending on the type of spool file.
5. You want to use the solution described in example 3, but you are sending out letters to customers, and these letters have only customer information on the first page for each customer.

The setup of the primary functions of Output Schedule Control is managed by selecting menu option 6. from the main menu. The same menu can be entered directly by the program call:

CALL APF3812/OSCADM

The menu appears like this:

InterForm 400 - Output Schedule Control	System.....: INTER02
Select one of the following options:	Workstn ID...: IF400_PDC2
	User ID.....: POULD
1. Functions attached to Output Queues	
10. Start OSCCTL subsystem / server	
11. End OSCCTL subsystem and server	
12. Work with OSCCTL subsystem	
Option: __	
F3=Exit	F6=Display messages
	F12=Cancel

10. Start OSCCTL subsystem

Output Schedule Control is running as an ordinary AS/400 sub-system, and therefore has to be started as such. It is a good idea to let the sub-system start automatically at IPL. This is done by inserting the following command in your startup program:

```
STRSBS SBS(DAPF3812/OSCCTL) MONMSG CPF0000
```

Of course, you can always start the sub-system manually, by the command:

```
STRSBS APF3812/OSCCTL
```

11. End OSCCTL subsystem

Before making upgrades the OSCCTL subsystem should be ended.

This can be done in the menu or by the command:

```
ENDSBS SBS(OSCCTL) OPTION(*IMMED)
```

12. Work with Active Subsystem OSCCTL

This menu item is a shortcut to the command:

```
WRKACTJOB SBS(OSCCTL)
```

If the subsystem is started, it will look like this:

Opt	Subsystem/Job	User	Type	CPU %	Function	Status
	OSCCTL	QSYS	SBS	.0		DEQW
	OSCSERVER	AFCOPER	ASJ	.0	PGM-OSC500C	MSGW

Note that the status MSGW (message waiting) is normal, and does not indicate an error (as it usually does).

Describing the OSC definition lines

If you from the InterForm400® main menu choose **6. Work with Output Schedule Control** and then **1. Functions attached to Output Queues**, then the screen below is shown:

```

Work with OSC definitions                                OSC100D

Position to . . . . . _____ Output queue

Type options, press Enter.
 1=Run OSC   2=Change  3=Copy   4=Delete  5=Display  6=Print definition
12=Work with output queue  15=Hold output queue  16=Release output queue

Opt  Output que  Library  Description  Sts
___  AFC_INPUT2  APF3812  Merge several spoolfiles to one  RLS
___  BATCH       QUSRSYS   Batch printing.                  RLS

End

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel

```

Press **F6** to add a new OSC definition, enter the output queue to be monitored by OSC, a description of the job and press **Enter**.

Now this screen is presented:

```

Create OSC definition                                OSC300D

Output queue . . . . . : AFC_INPUT1
Library . . . . . : APF3812

Type options, press Enter.
 1=Select

Opt  Definition
-   Specify input spooled file priority
-   Specify placement of input spool file attributes at output
-   Define sort fields
-   Specify grouping and separator page
-   R Define resulting output queues
-   Specify automatic start scheduling
-   Specify automatic start options
-   R Specify output queue for processed spooled files
-   Specify job priority

F3=Exit  F12=Cancel

```

The 'R' (required) indicates the lines, which must be filled out before this OSC definition can be used.

The various definition lines does the following:

Specify input spooled file priority:

This definition line is only used for defining what spool file attributes to sort on, if no sorting fields are selected. Normally it is not necessary to fill this out.

Specify placement of input spool file attributes at output:

If you decide to sort on the spool file attributes in combination with text of each spool page (e.g. customer number), you can do this using this function. This places the attributes on each page.

Define sort fields:

Here you state where to find the sorting keys (e.g. customer number) on each page. You also refer to positions, where the attributes have been inserted. If all spool files have the sorting fields in the same positions, you only need one sequence line. If the placement of the sorting fields varies, it is necessary to have more sequence lines and to use the page selection criteria. For a description of the page selection criteria see page 212, 232.

Specify grouping and separator page:

Here you decide how many sorting fields, that should change in order for creating a new group. You can also specify to insert a separator page, when changing groups.

A group is dealt with as an undividable number of pages. If you choose to distribute the workload on several output queues a group will not be broken up.

Define resulting output queues:

Specifies on which output queue(s) to place the resulting SCS spool file including all the pages. You can decide, that OSC should balance the workload between several output queues. Using the workload factor. Note that groups defined above are kept together.

Specify automatic start scheduling:

Specifies weekdays and times, when the OSC job is to autostart and process all waiting spool files.

Specify automatic start options:

Specify whether or not to send a message when starting or/and when finished. It is also possible to decide to start or not to start the OSC job, if it could not be started at the scheduled time (e.g. because of an IPL).

Specify output queue for processed spooled files:

Specify an output queue for placing the incoming spool files or specify *DELETE for deleting them, when processed by OSC.

Specify job priority:

Specify the priority of the OSC job.

Principle of OSC (Output Schedule Control)

In short OSC merges all spool files into one and sorts the pages by spool file attributes and/or text on each spool page. This merge can be done at certain times of the week, and it can also be initiated by choosing option **1=Run OSC** from the OSC menu.

The merged SCS spool file can be distributed to one or more output queues, using a workload factor. These output queues should be monitored by Auto Forms Control and then merged. For this merge an overlay selector is recommended.

The incoming spool files can after the merge be either deleted or moved to another output queue.

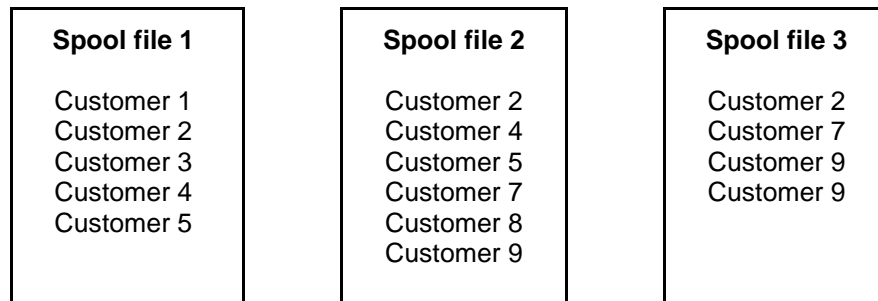
In the following example, the output queue controlled by OSC, has 3 spool files.

In output queue 01, **Spool file 1** has 5 pages (first page is for customer 1, next for customer 2 etc), the second spool file (**spool file 2**) has 6 pages and **spool file 3** has 4 pages.

We have defined that the resulting print job(1 spool file) should be shared by 2 printers, with a workload factor of 40% for output queue 02 and 60% for output queue 03. As we have 15 spool pages in total to process, the resulting two spool files 4 and 5 will be as per below:

Contents of a Output Queue being monitored by OSC:

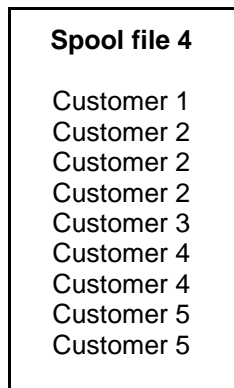
Output Queue 01



Contents in the OSC defined Resulting Output Queues:

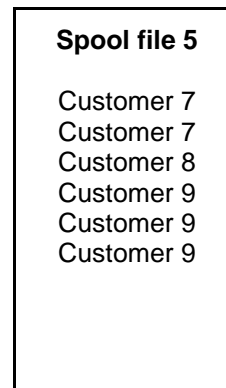
Output Queue 02

Workload 60%



Output Queue 03

Workload 40%



The resulting two spool files are now ready to be used as Input for Auto Forms Control.

Getting Familiar with OSC (Output Schedule Control)

When selecting option **1. Functions Attached to Output Queues** in the menu **6. Work with Output Schedule Control** on the main menu we get the screen below:

```
Work with OSC definitions OSC100D

Position to . . . . . Output queue

Type options, press Enter.
 1=Run OSC  2=Change  3=Copy  4=Delete  5=Display  6=Print definition
12=Work with output queue  15=Hold output queue  16=Release output queue

Opt  Output que  Library  Description  Sts
_2   OSC_OUTQ01  APF3812  Output Schedule Control DEMO definition  RLS

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel

End
```

Press **F6** to create a new OSC definition. When created press **F5** to have it updated in the above screen.

```
Create OSC definition OSC110D

Output queue . . . . . OSC_OUTQ01
Library . . . . . APF3812__

Description . . . . . Output Shedule Control DEMO definition
```

To update and change an OSC definition enter 2 in front of the OSC output queue. The following OSC definitions will appear. Enter 1 in front of the OSC entries you wish to change.

```
Change OSC definition OSC300D

Output queue . . . . . : OSC_OUTQ01
Library . . . . . : APF3812

Type options, press Enter.
 1=Select

Opt  Definition
 1  > Specify input spooled file priority
 _  > Specify placement of input spool file attributes at output
 _  > Define sort fields
 _  > Specify grouping and separator page
 _  > Define resulting output queues
 _  > Specify automatic start scheduling
 _  > Specify automatic start options
 _  > Specify output queue for processed spooled files
 _  > Specify job priority

F3=Exit  F12=Cancel
```

Specify input spooled file priority:

```

Specify input spooled file priority                                OSC300D

Output queue . . . . . :   OSC_OUTQ01
  Library . . . . . :     APF3812

Type choices, press Enter.

Input spooled file          Sorting-
Form type . . . . .        _10
Job name . . . . .         ___
Job number . . . . .        ___
Spooled file . . . . .      ___
Spool file no. . . . .     _20
Device file . . . . .       ___
  Library . . . . .         ___
Program that opened file .  ___
  Library . . . . .         ___

This sort sequence will be used for pages (defined at "Define sort fields")
having identical sort values. Lowest number have highest priority.

F3=Exit  F12=Cancel

```

In the above entry screen we define which sort values should be used and what priority they have. Above we have selected that the FORM TYPE of the document, have highest sort priority and following the SPOOL FILE NO. should be used.

Specify placement of input spool file attributes at output:

```

Specify placement of input spool file attributes at output      OSC300D

Output queue . . . . . :   OSC_OUTQ01
  Library . . . . . :     APF3812

Type choices, press Enter.

Input spooled file          - Insert into --
Form type . . . . .        _1      110
Job name . . . . .         ___      ___
Job number . . . . .        ___      ___

Spooled file . . . . .      ___      ___
Spool file no. . . . .     _1      120
Device file . . . . .       ___      ___
  Library . . . . .         ___      ___
Program that opened file .  ___      ___
  Library . . . . .         ___      ___

The same placement will be used for all pages.
Use a area that is blank for all pages in the input output queue.

F3=Exit  F12=Cancel

```

In the above entry screen we define where the sort criterias should be inserted in the spool files, that will be used in the OSC output queue.

⚠ WARNING ⚠
 The positions selected above must be positions where now other information will be stated. If the original spool data are in the same positions as specified above, they will be over written.

Define Sort Fields:

```

Work with OSC sort definitions                                OSC330D

Output queue . . . . . :   OSC_OUTQ01
Library . . . . . :       APF3812

Position to . . . . .      Sequence

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  7=Change sequence

Opt  Seqnbr.  Description
  2      1  Find inserted sort fields

End

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

```

Press F6 to create a new Sort Definition. Enter 2 in front of an existing sort definition to change.

```

Change OSC sort definition                                OSC335D

Output queue . . . . . :   OSC_OUTQ01
Library . . . . . :       APF3812

Sequence . . . . . :       1
Description . . . . . :    Find inserted sort fields

Page selection criteria
      Print line   Position   Oper   Compare value
      ___         ___ - ___   ___    _____
      ___         ___ - ___   ___    _____
      ___         ___ - ___   ___    _____

Find sort fields in the following positions
      Sort field no.  Print line  Position
      1              ___1         110 - 119
      2              ___1         120 - 129
      3              ___         ___ - ___
      4              ___         ___ - ___
      5              ___         ___ - ___
      6              ___         ___ - ___

F3=Exit  F12=Cancel

```

In the above entry screen we define in which positions OSC will find the SORT fields, which we previously defined. An extra feature is the **Page selection criteria**, where we can define which spool pages should be sorted, based on the spool data contents. For further information about the page selection criteria see page 212, 232.

Specify Grouping and separator page:

```
Specify grouping and separator page                                OSC300D

Output queue . . . . . :   OSC_OUTQ01
Library . . . . . :     APF3812

Type choices, press Enter.

Group by number of
sort fields . . . . . 1   1-6

Insert separator page before
start of new group . . . . Y   Y=Yes, N=No

A new group occurs when the content of one or more sort fields
(from sort field one to "Group by number of sort fields") changes.
All pages of a group will always be sent to same the output queue.

F3=Exit  F12=Cancel
```

A group is a number of successive pages having identical values in one or more sort fields. In the above entry screen specify how many sort values should be included in a group. Furthermore, specify if you wish a separator page between groups.

Define resulting output queues:

```
Work with OSC resulting output queues                            OSC350D

Output queue . . . . . :   AFC_INPUT1
Library . . . . . :     APF3812

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display

      ---- Destination ----  Workload
Opt  Output que  Library      factor
---  AFC_INPUT1  APF3812      40
---  AFC_INPUT2  APF3812      60

End

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

In the above entry screen we define one or more resulting output queues for OSC to send the resulting spool file. As the resulting spool file could be quite big, it is possible to define more output queues to share the resulting spool file. Furthermore, we can define which workload factor the resulting output queues should have. Above we have defined two resulting output queues to share the resulting OSC spool file. The workload have been set to be 40% for output queue AFC_INPUT1 and 60% for output queue AFC_INPUT2.

Specify automatic start scheduling:

```

Specify automatic start scheduling                                OSC300D

Output queue . . . . . :   OSC_OUTQ01
Library . . . . . :     APF3812

Type choices, press Enter.

Monday   Tuesday   Wed.day   Thursday   Friday   Saturday   Sunday
15:00    15:00    15:00    15:00    14:00    _____
_____-    _____    _____    _____    _____    _____
_____-    _____    _____    _____    _____    _____
_____-    _____    _____    _____    _____    _____
_____-    _____    _____    _____    _____    _____

F3=Exit   F12=Cancel   F20=Sort by time

```

In the above entry screen we can define a scheduled start time of each day of the week, if an automatic run of the OSC job is required. As an alternative to a scheduled start of a OSC job, the job could be started manually by the option 1. Run OSC in 1. Functions attached to output queues.

Specify automatic start options:

```

Specify automatic start options                                OSC300D

Output queue . . . . . :   OSC_OUTQ01
Library . . . . . :     APF3812

Type choices, press Enter.

Send message . . . . . 4
                                     1=Do not send message
                                     2=Before processing output queue
                                     3=After processing output queue
                                     4=Both before and after

Delayed auto start
option . . . . . 1
                                     1=Start job
                                     2=Send inquiry message
                                     3=Skip delayed jobs

Message queue . . . . . QSYSOPR____
Library . . . . . QSYS_____

Delayed auto start can occur if Output Schedule Control (OSC)
- or the entire system - is ended and later restarted.

F3=Exit   F12=Cancel

```

When the hour has come for OSC to start a OSC job, we can define some options, in connection with the OSC job. First we define when or if we wish to be notified about an OSC job. In addition we can define what should happen in the event that there has been taken back-up of the AS/400, IPL has been performed or any other reason for the OSC job not being able to run at the scheduled time. Finally we define where possible messages are to be sent.

Specify output queue for processed spooled files:

```
Specify output queue for processed spooled files                                OSC300D
Output queue . . . . . : OSC_OUTQ01
Library . . . . . : APF3812

Type choices, press Enter.

Output queue . . . . . ARCHIVE          Output queue, *DELETE
Library . . . . . APF3812

All input spooled files will be moved to the specified output queue,
or will be deleted if *DELETE is specified.

F3=Exit  F12=Cancel
```

When the OSC jobs have been executed we can define what should happen with the original spool files, taken from the OSC output queue. As per above entry screen, we can define if we wish to delete the spool files or we could enter an output queue for archiving purposes.

Specify job priority:

```
Specify job priority                                                            OSC300D
Output queue . . . . . : OSC_OUTQ01
Library . . . . . : APF3812

Type choices, press Enter.

Job priority (RUNPTY) . . 50  11-99

Form type . . . . . *OSC_____

F3=Exit  F12=Cancel
```

Above we enter the desired run priority of the OSC job, and the form type used for the merged spool files.

The OSC definition has now been completed and upon exit from the OSC definitions we will be asked to save the definition.

Now you only have to setup Auto Forms Control jobs to monitor the output queues AFC_INPUT1 and AFC_INPUT2.

Working with Joint Reports

Enter menu point **7. Work with Joint Reports** on the main menu.

1. Compose Joint Report

In this menu point you can compose a report from a number of overlays.

Work with report composition APF310D

Report name _____

F3 = Exit
F4 = Overview reports

Report name: The name of the report composition you wish to create/update. **Report name** may be up to 10 characters long. Position 1 must be a letter A-Z. No blanks or special characters are allowed in the name; only "_" (underscore) is permitted.

Select an existing composition or type in a name of the composition you want to create and press **Enter**.

If you want to copy a report composition from another report you can type in a name of the new report composition you want to copy to and press **Enter**. Press **F9** to enter a report composition to copy from and press **Enter**. If the report composition is not known, or if placed in another file-set press **F9** to get a list of file-sets. Select the file-set containing the report composition you want to copy from. Select the report composition you want to copy from and press **Enter**.

```

Work with report composition
APF310D

Report name      MONTH_REP

Description      Monthly Report_____

F3 = Exit
F9 = Copy from another report
F12 = Cancel

```

Description: A descriptive text for the report you wish to make. This text is used solely in connection with the displaying of a list of reports in this file-set.

Designing a Report Composition

```

Work with report composition
APF310D

Report name: MONTH_REP  Description:  Monthly Report

Seqnbr. Type              Overlay      Overlay description

Seqnbr. Type
  1,0  -
      1 = Empty overlay
      2 = Overlay with index
      3 = Overlay + spool entry

F3=Exit

```

Empty overlay: The reference to the overlay where all text is defined as part of the overlay (constants), and for which there is no input in the form of printed data. This definition is usually used for a **front page**.

Overlay with Index: A reference to the overlay which contains the text constants for the index page (one of the text constants is likely to be **Contents**). This definition also defines the formatting of the index text and numbering.

Overlay + spool entry: This is the reference to the overlay used with a spool entry which is being included in the report. Spool entries included in the report will each require a sequence line of this type.

1=Empty Overlay (front page)

Seqnbr.	Type	Description
1,0	1	Empty overlay
		Overlay name.....: _____ Name, F4=list
		Index text.....: _____
		Front page for monthly report_____
		Include in index.....: _ (Y N)
		Reset page numbering.....: _ (Y N)
		Drawer.....: _____ (*OVERLAY 1 2 3 4 6)
F4 = Prompt		

Overlay name: The overlay used for cover page to the report. This overlay should only consist of text constants.

Index text: A text for recognition of the front page in the **index** (optional)

Include in Index: Y Includes the above text in the index

Reset numbering: Reset continuous numbering. This is of no importance unless you have cover pages for other sections in the same report where you want the numbering to be reset.

Drawer: A specific drawer the paper for the cover page should be taken from. Default is ***OVERLAY** (specified in the **global settings** of the overlay)

2= Overlay with index

Seqnbr.	Type	Description
2,0	2	Index
		Overlay name _____ Name, F4=list
		From upper edge _____
		Indentation, text _____
		Indentation, page no. _____
		Rotation _____
		Font, text _____ F4=prompt
		Font, page no. _____ F4=Prompt
		Line spacing _____
		Overflow limit _____
		Drawer _____ (*OVERLAY 1 2 3 4 6)
F4 = Prompt		

Overlay name: The overlay used for the index page to the report. This overlay should only consist of text constants. (one of the text constants is likely to be "Table of Contents").

From upper edge: The vertical start position of the first index line in **Inches, pels** absolute to the upper edge of the page according to the rotation specified below

Indentation, text: The horizontal start position of the index lines in **Inches, pels** absolute to the left edge of the page according to the rotation specified below.

Indentation, page no.	The horizontal start position of the index page numbers in Inches, pels absolute to the left edge of the page according the rotation specified by the global settings for the Overlay .
Rotation:	Rotation of the index lines. Valid values are 000,090,180,270. Note that 180 and 270 rotation is only possible for interface type on IBM3812 and IBM3816.
Font, text	Font type for the index lines. Prompt by F4
Font, page no.	Font type for the page numbers. Prompt by F4
Line spacing:	Is dissolved in n/240 inch. For example 6 lines per inch corresponds to 40/240 inch.
Overflow limit	If there are more index lines in the table that can be contained within this limit, defined in Inches, pels from the upper edge of the page, the system will automatically continue on a new page.
Drawer:	A specific drawer the paper for the index page should be taken from. Default is *OVERLAY (specified in the global settings of the overlay)

3=Overlay + spool entry

Seqnbr.	Type	Description
3,0	3	Overlay + spool entry
		Overlay name.....: _____ Name, F4=list
		Index text.....: _____
		Profit Report_____
		Include in index.....: _ (Y N)
		Reset page numbering.....: _ (Y N)
		Drawer.....: _____ (*OVERLAY 1 2 3 4 6)
		Link name for APFLNK-command.....: _____
F4 = Prompt		

For each spool entry you intend to include in the report, there must exist a definition of which overlay should be used for this particular part of the report. The order of insertion of this sequence line in the report composition must therefore be in the same order as you wish the input overlay entries appear in the report.

Overlay name:	The overlay used for this spool entry to be included in the report.
Index text:	A text for recognition of this spool entry in the index (optional)
Include in Index:	Y Includes the above text in the index
Reset numbering:	Reset continuous numbering. Only state Y if you want to start each spool entry used in the report with page number 1
Drawer:	A specific drawer the paper for this spool entry should be taken from. Default is *OVERLAY (specified in the global settings of the overlay)

Link name: This field only have to be filled in if you want to use the **APFLNK** command for printing the report instead of doing it interactively from within the InterForm400® menus.

2. Test Print Report Overlays

With option **2. Test Print Report Overlays** you are able to make a test print of a report composition.

```
Print Joint Report                                     APF710D
Report name      _____
F3 = Exit
F4 = Overview report definitions
```

Report Name: Name of report composition in the file-set you have open. **F4** will prompt for overlay names.

If you type the name of an existing report composition and press **Enter** you will get a printout consisting of one page per overlay which is associated with this particular report name.

No data is merged with the overlays.

3. Test Print Report, 1 Page per Overlay

If you choose option **3. Test Print Report, 1 Page per Overlay** you will be able to make a printout of a report, in which only the first page of the individual printouts that constitute the report are printed.

Apart from the fact that only the first page associated with each overlay comes out, the program works in exactly the same way as option **1. Print Report**. Refer to the next section concerning operation.

4. Print Report

If you choose option **4. Print Report** you will be able to print out the report in its entirety.

```

Print Joint Report
APF710D

Report name      _____

Form type       A4_____

Copies          1   (1-99)

F3 = Exit
F4 = Overview report definitions

```

Report name: The name of the report you wish to print out. If you do not remember the name you can press **F4** to get a list of report names to choose from.

Form type: The Form type of the resulting printout. Default *STD

Copies: 1-99 (of the entire report)

Once you press **Enter**, the system begins to create the report.

For **each individual printout** in the report which requires input in form of a spool entry, you have to complete the following screen:

```

Print Joint Report
APF730D

Report name      Report description
MONTH_REP       Monthly report

Print-out type: 3
Overlay.....: PROFIT
Description...: Profit Report

Corresponding print-out is in spool entry

Job name        _____
User            _____
Job number      _____
File name       _____
Spool file no.  _____ (no. / *ONLY / *LAST)

Name of output queue to search if spooled file is unknown:

Output queue    _____
Library        _____

F3=Exit          F12=previous display      F16=print empty overlay

```

This screen shows which Overlay is being merged with the spool entry you fill in on the lower part of the screen.

Corresponding print-out is in spool entry: Spooled file attributes can be entered here.

If you do not know the identification, or perhaps find it too labourious to enter all information, you may instead specify the output queue to which the spool entry belongs. This is entered at the bottom of the screen. You can then fetch the information about the spool entry by selecting it with option 1:

```

Work with Output Queue

Queue:  PRTHP3          Library:  QUSRSYS

Type options, press Enter
  1=Select 2=Change 3=Hold 4=Delete 5=Display 6=Release 8=attributes

Opt  File          User          User Data    Sts   Pages  Copies  Form Type  Pty
--  -
_   QPRINT         INTERMATE    INVOICE      RDY    1      1      *STD      5
1   QPRINT         INTERMATE    PROFIT       RDY    5      1      *STD      5
_   QPRINT         INTERMATE    BALANCE      RDY    1      1      *STD      5

Parameters for option 2
===> _____
F3=exit  F11=View 2  F12=Previous  F21=Description  F24=More keys

```

- Output Queue:** The name of the output queue where the spool entry to be merged is placed
- Library:** The library of the above output queue. If left blank the library list will be used.
- F3** If you press **F3** you will return to the main menu. Actual printing is not performed until all spool entry specifications for this particular report have been made. This means that the use of **F3** somewhere in the process prevents anything from being written at all.
- F12** If you press **F12** the system returns to the preceding screen without any selection being made.

☺ **TIP** ☺

After a merge with an overlay, the spool attributes are saved in this screen for future test prints until the InterForm400® menus are left. If you want to repeat the printing of the report later, the system will suggest the same spool entries as first specified. All you have to do then is to enter your corrections

💣 **WARNING** 💣

It is not possible to export/import definitions for Joint Reports.

Administering InterForm400[®] Environment and Users

When the InterForm400[®] system is installed for the first time, the option Administering InterForm400[®] is open to everyone.

Once an administrator of the system has been appointed, this person is the only one who can select this option.

When you choose option 80 from the main menu you will enter a menu with the following contents:

```
InterForm 400 - ADMINISTRATION                               System.....: Inter01
                                                            Workstn ID...: Qpadev0003
                                                            User ID.....: Peter

Select one of the following options:
1. Appoint administrator
2. Configure InterForm 400

4. Work with InterForm 400 users
5. Work with file sets
6. Connect users with overlay file sets
7. Work with fonts
8. Work with images
9. Work with PCL-files
10. Work with palette
11. Work with paper control options
12. Service functions
20. Import Certificates
50. License Information
51. SwiftView Users
52. Work with Designer job overlay locks

Option: __

F3=Exit                F6=Display messages          F12=Cancel
```

The menu items 1 to 6 regards setup of the environment. Option '**20. Import Certificates**' is only shown if you run OS400 V5R1 or newer and can only be used if you have a license code for the PDF security module of InterForm400.

The options are described individually in the following paragraphs.

1. Appoint Administrator

When you choose the option 1. Appoint administrator on the administration menu, you get the following screen:

```
Appoint InterForm 400 Administrator                                APF100D
Choose a user to be administrator of the InterForm 400 system, or enter *ALL to
indicate that all users are given authority to the administration menu.

*ALL_____

F3=Exit
F12=Cancel
```

It may be wise to appoint a frequent user of the InterForm400® system to be administrator. You may also choose a person in your computer department.

Once you have specified an administrator, and exit the system, only the appointed administrator will be given access to the administration menu.

The administrator may later pass on the authority to another user or re-open the administration menu to everyone (*ALL).

2. Configure InterForm 400

When you choose option **2. Configure InterForm 400** on the administration menu, you get the following screen:

```
Configure InterForm 400                                     APF101D
                                                            1/7

Specify default output queue for users with no individual output queue.

Users may override value when using the system.

      Output queue  _____
      Library      _____

Specify default printer type
Printer type . . . _____ (IBM4019 IBM4029 IBM4039
                              HPII HPIID HPIIP HPIII HPIIID
                              HPIIP HP4 HP4D HP4_PJL HP4D_PJL
                              HP5C HP4500 HP4500D)
Interface          _____ (SYSTEM SYSTEM850 SYSTEM852 ASCII8
                              ASCII850 ASCII852 WORKSTN WS31N
                              WS347N WS348NIDA3X IDA5219 IDA812N)

Allow users to override standard printer type ?      Y (Y N)

F3=Exit                                             F12=Cancel
```

If you are only using one laser printer for manual merges (option 3 in the main menu), you can specify it here.

If you have more than one laser printer, you may wish to assign printers to users individually. This is done under Work with InterForm400® users.

The advantage of operating with standard output queues is, clearly, that users avoid having to select an actual output queue each time they enter the InterForm400® system.

The system supports a number of different printers. Besides the types mentioned in the above screen, the system supports all other laser printers which emulates an HP printer. If your printer is not mentioned, you should specify HPII in the field Printer type. Refer to page 374 for detailed information on supported printers.

You must also specify, how your printer is connected to the AS/400. See page 378 for detailed information on supported interfaces (protocol converters). Use **ASCII850** if in doubt.

If you have more than one printer type connected to AS/400, you should allow users to override the default printer type. Press Enter and the next screen is displayed.

```

Configure InterForm 400
APF101D
2/7

Specify default form type for the InterForm 400 system.

Users may override value when using the system.

Form type      *STD_____

Select paper size  4  1 = LETTER      5 = COM-10      A = LEDGER
                   2 = LEGAL        6 = MONARCH     B = A3
                   3 = EXECUTIVE    7 = C5          C = A5
                   4 = A4           8 = DL

Do you want to define paper size on the individual overlays      Y (Y N)

F3=Exit
F12=Cancel

```

The specified type of forms will be used throughout the system unless you state Y to allow individual paper size definitions for different overlays.

Note that the Paper size selection on the Design overlay menu (see screen with Global overlay settings on page 37) will only appear if Y has been stated in this screen. If N is inserted all overlays throughout the system will use the default paper size stated here.

```

Configure InterForm 400
APF101D
3/7

Number to be added to the macro numbers the system works with . . . ____0

The reason to add a number can be, that printers are equipped with
flash-simm cards, that does not correspond to the HP standard saying,
that a macro in the printers internal memory should be selected,
even if it has the same number as a macro in the flash-simm.

F3=Exit
F12=Cancel

```

The next screen is a possibility of defining an offset to the macros generated by InterForm400®.

InterForm400® will always load the overlay as a macro prior to the spool data for performance reasons. The macro ID can in some rare cases conflict with resident macros installed in the printer.

This default value of zero should normally not be touched.

```

Configure InterForm 400
APF101D
4/7

Do you want to use DDM to InterForm files
on other AS/400

Use DDM . . . . . _ (Y N)

F3=Exit
F12=Cancel

```

This screen will allow InterForm400® to copy overlays from an installed InterForm400® on another AS/400 using DDM (Distributed Data Management). When applying Yes to this option, the function key **F10** will be available from the design menu, when copying from another overlay (see page **36**)

```

Configure InterForm 400
APF101D
5/7

The Name that is used for this AS/400
under "Other computers" on PC's.

Networkname . . . . . QS4449079_____
Sharename . . . . . _____

Public authorisation to files that are created in the APF3812/VIEW folder.

1 0 = *EXCLUDE
1 1 = *ALL

F3=Exit
F12=Cancel

```

This screen is used to define the network name of the AS/400 when accessed by TCP/IP connected Windows PCs. This name is usually the AS/400 system name (e.g. QS4449079), but can be changed when configuring the Client Access TCP/IP connection. You can verify this name in the "Client Access Connections" on the PC. Note that all users using the InterForm400® PCL viewer function, must have the same system name configured in their Client Access TCP/IP connection.

This feature is used for the PCL and PDF viewer. Refer to page **26** for more information of the parameters above.

```

Configure InterForm 400
APF101D
6/7

Select primary language for:
1. The language of displays.
2. The language of the manual.

Language code . . . . GB

DE=Deutsch, DK=Dansk, ES=Espanoles, FR=Français, GB=English

F3=Exit
F12=Cancel

```

This menu sets the primary language for the InterForm400® menus. This can be overwritten for each individual user.

```

Configure InterForm 400
APF101D
7/7
Do you want to use the APF3812/STRWTRCHK program as validity checking program
for the STRPRTWTR and STRRMTWTR commands, to avoid a writer to be started with
FORMTYPE(*ALL) on one of the output queues defined in Auto-Forms-Control, and
if yes, what formtype has to replace *ALL when a writer is started on one of
these output queues.

Use APF3812/STRWTRCHK as a validity checker      N   (Y N)

Formtype to replace *ALL . . . . . _____

This option is especially useful, if you are using the same output queue
for both input to AFC-functions and for output to a printer, as a writer
never should be started with FORMTYPE(*ALL) on such an output queue.

F3=Exit
F12=Cancel

```

If you want Auto Forms Control to monitor output queues with printers attached, you now have the option to state a specific Form Type the writer should process only.

4. Work with InterForm400® Users

When you choose the option Work with InterForm400® users on the administration menu, you get the following screen:

```
Work with InterForm Users                                     APF220D

Position to . . . . . _____ User profile

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  9=File set access

Opt  User      Description
-   JEC        JEC
-   JENSP      Jens
-   PDC
-   PETER      Peter Hansen
-   POULD      Poul D Christiansen

End

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel
```

You can see other informations of the users by pressing F11-View2, and you can add/remove access to file sets with option **9=File set access**.

When adding a user profile by pressing F6 you will be prompted to enter language and printer information for the user:

```
Create InterForm user                                     APF102D

User profile . . . . . KSE_____

Language of user . . . . . GB          DE, DK, ES, FR, GB, ' '
Users output queue . . . . . PRT01____
  Library . . . . . QUSRSYS___

Printer type . . . . . HP4D_PJL__ (IBM4019 IBM4029 IBM4039 HP11 HPIID HPIIP
HPIII HPIIID HPIIIP HP4 HP4D HP4_PJL
HP4D_PJL HP5C HP4500 HP4500D
ZEBRA203 ZEBRA300)

Interface . . . . . ASCII850__ (SYSTEM SYSTEM850 SYSTEM852 ASCII8
ASCII850 ASCII852 WORKSTN, WS31NN
WS347N, WS348N IDA3X IDA5219 IDA812)

If output queue / printer type are left blank
then InterForm 400 system standard/default values will be used.

F3=Exit  F12=Cancel
```

The language of the user will affect the menus in InterForm400®. If left blank, the default language of the installation, as entered in **2. Configure InterForm 400**, will be used. (Refer to page 271)

It is not necessary to define an output queue, a printer type and an interface type. If left blank the definitions from **2.Configure InterForm 400** described on page 268 will be used. (Refer to page 378 for detailed information on printer types and interfaces.)

5. Work with file sets

The files in which overlay and report 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 in the system. This means, for example, that all overlays to be used in a particular report must be saved in the same file set as the report definition.

The program starts with the following screen:

```
Work with File sets APF410D

Position to . . . . . _____ File set

Type options, press Enter.
  2=Change  4=Delete  9=User access  12=Overlays in file set

Opt  File set  Description
___  A         Files for A
___  BALT      File Set Balt Test
___  BE        Be
___  BROCK     Brock
___  CARMEN    Rot file set
___  CERDO     Cerdo
___  COLOR     Test of color fileset
___  CONCORDE  Overlays for concorde print
___  DEMO      demo
___  EURO      Overlay for euro
___  EX        EX
___  FARBEN    Farbe druck
___  GARDEN    Garden

More...

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

You may now enter the name of the file-set you wish to create, update or delete.

Since the file-sets in the system are file members, they must meet the requirements to member names, i.e. the first character must be within the range A-Z. The succeeding characters can be A-Z, "_" (underscore), 0-9 or blanks, with the restriction that blanks may only appear at the end of the name.

If you press F6=Create, you get the following screen:

```
Create File set APF411D

File set name . . . : TST_____
Description . . . . . _____

Printer class . . . . _  1 = Black/White laser
                        2 = Color laser
                        3 = Label printer

Do you want to use duplex print          _ (Y N)
(only active for HP LaserJet IID, IIID, 4D and HP4500D)

F3=Exit F12=Cancel
```

If you have chosen a file set which already exists you may delete it or change the descriptive text associated with it. If you have chosen a new name you must also enter

text. The purpose of the text is primarily to ease the management for users with access to more than one file.

The Printer Class specifies the type of printers, which this file set should include overlays for. Depending on this selection, the menus and available functions will change throughout the program. Note that screen shots in this manual correspond to a selection of 1=Black/White.

Note: When choosing printer class 1 instead of 2, you are restricting the overlay definitions in this file set from using any colour resources e.g. colour images and selecting colours with the INK lines. Printer class 3 are used for file sets for Label printers e.g. Zebra printes.

Only if you answer **Y** to duplex, screens related to design of overlays will include queries about duplex (e.g. back page overlay).

6. Connect Users with Overlay File Sets

The system may contain any number of file sets. With this option you can specify which file sets the individual users may operate on.

The program starts with the following screen:

```
          Connect users with overlay and report file sets

A user can be connected with one or more specific file sets
Several users may be connected with the same file set.

User profile _____

F3=Exit          F4=List InterForm users          F12=Cancel
```

Enter the user profile of the user in question, and you will get this screen:

```
Connect users with overlay and report file sets

A user can be connected with one or more specific file sets
Several users may be connected with the same file set.

User profile PETER      Peter Hansen

This user is connected with the following file-sets:

Specify name of file-set to be connected with / disconnected from user:

_____

F3=Exit      F4 = List InterForm 400 file-sets      F12=Cancel
```

If the user had already been connected with one or more file-sets these would have appeared in the sub-file at the centre of the screen. However, in this case we are looking at a new user, and the sub-file is blank. Once you enter the name of an existing file-set, you will get the following screen:

```
Connect users with overlay and report file sets

A user can be connected with one or more specific file sets
Several users may be connected with the same file set.

User profile PETER      Peter Hansen

This user is connected with the following file sets:

Specify name of file-set to be connected with / disconnected from user:

      TEST      Peter Hansen's personal test file set
Connect file set with user (Y N)      -

F3=Exit      F12=Cancel
```

The text which now appears to the right of the file set name is the one that was specified when the file set was created.

Answer **Y** to confirm that the chosen file set should be connected with the user. The display changes as you can see here:

```
Connect users with overlay and report file sets

A user can be connected with one or more specific file sets
Several users may be connected with the same file set.

User profile PETER      Peter Hansen

This user is connected with the following file sets:

      TEST      Peter Hansen's personal test file set

Specify name of file set to be connected with / disconnected from user:

Connect _____ with user (Y N)      _

F3=Exit                                F12=Cancel
```

Press **F3** when all required file sets have been assigned.

Working with Fonts

InterForm400® exploits resident and down loaded PCL fonts of HP compatible printers independent of their attachment to the AS/400.

Intermate InterForm400® has a built-in conversion table between IBM font ID's, known from the IBM 3812 page printer, and the substituted "look-alike" PCL fonts of the HP II (PCL4), HP III (PCL5) and HP4 (PCL5e) compatible printers.

This means that the native font conversion tables of interfaces, the Client Access printer sessions, or other protocol converter functions, are NOT used for selection of fonts in the forms (overlays) or the spool entries being used for filling of the forms.

RESIDENT FONTS

Appendix F (refer to page **382**) displays a list of the emulated IBM font ID's which are selectable in InterForm400® as default.

Note, that font outlines might vary between the different printer models attached to your system, depending on their HP compatibility and their PCL emulation level.

It is therefore advisable to print a font reference on all the different printers in your AS/400 environment, and base your corporate standard on fonts that looks the same on all of your printers.

You can also define new font numbers based on typefaces known by the printers using option **1. Description of additional fonts**.

SOFT FONTS

Should you require to use fonts which are not currently available among the resident fonts of your printers, you can choose to import fonts to InterForm400® from your PC environment.

InterForm400® supports import of True Type Font files (TTF). These can be converted to a soft font by InterForm400®.

You need to install/create the soft font for each kind of possible output, that you want to use i.e. PCL, PDF and ZPL (for Zebra printers).

If you want to use barcodes for PCL output you will need to create a soft font for the barcode (in InterForm400). Barcode soft fonts are not necessary for PDF and Zebra output.

7. Work with Fonts

```
Work with Fonts FNT001D

Select one of the following options:

1. Description of additional fonts
2. Work with Soft Fonts for PCL
3. Auto download soft fonts

5. Create barcode soft font

7. Work with TrueType font for PDF

Work with ZEBRA fonts.
11. Description of ZEBRA fonts
12. Work with ZEBRA soft fonts
13. Work with fonts in ZEBRA flash memory
14. Substitution ZEBRA internal fonts
19. Initiate ZEBRA flash memory and reload fonts and images

Option: __

F3=Exit F6=Display messages F12=Cancel
```

Selecting option **7. Work with fonts** enables to you define new fonts, to work with soft fonts for PCL (including download to flash SIMM modules), to specify soft fonts to be automatic downloaded, to extract a soft font from a PC-print, to create a barcode soft font and to install a True Type Font for PDF.

1. Description of Additional Fonts

This function gives you the possibility of using all fonts available on HP-printers or compatibles.

```
Work with Fonts APF360D

Position to . . . . . ____ Font

Type options, press Enter.
 2=Change 3=Copy 4=Delete 5=Display 7=Assign new font number
 8=Display overlays referring to font

Opt  Font      Description
-   7001      Copy font
-   9901      Sample - Universe 7 pt
-   9902      Sample - Universe 8 pt
-   9903      Universe - 10 pt
-   9904      Sample - Universe 12 pt
-   9905      Sample - Universe bold 9 pt
-   9906      Universe - Sample 18 pt
-   9910      Sample - Universe 7 pt

End

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

Pressing F6 to add a new font brings up the following screen:

```

Create Font
APF370D

Font . . . . . 4400-9999

4400-4499 PDF417 barcode
4500-4599 EAN8/EAN13/UPC-A soft fonts
4600-4699 Code 39 soft fonts
4700-4799 Code 128 soft fonts
4800-4899 IDA bar codes
4900-4999 Interleaved 2 of 5 soft fonts
5000-9999 Other fonts

F3=Exit  F12=Cancel

```

Additional fonts must have a font ID in the interval 5000-9999, i.e. you can define up to 5100 fonts in addition to the standard fonts. (refer to page 382). The other areas are reserved for bar code soft fonts (refer to the Bar code section on page 293).

In order to define a new font, we could for instance enter 9990 and we would get the following screen:

```

Description additional fonts
APF360D

Font . . . . . 9990 Other fonts

Description . . . . . _____

Spacing . . . . . _ 0=Fixed, 1=Proportional
Pitch . . . . . _0,00 0,10-49,99
Height . . . . . __0,00 1,00-792,00
Style . . . . . 0 0=Upright 1=Italic 4=Condensed
5=Condensed italic
Stroke weight . . . . . 0_ (-7 - +7) 0=Medium <0=Light >0=Bold
Typeface . . . . . ____0 0-65535
Symbol set . . . . . _____ blank=standard

Override spacing . . . . . _____ blank=standard

F11 = Delete F4 = Prompt F12 = Cancel

```

The description text will appear on overviews of fonts (prompt with **F4**).

The following information for your specific font can be collected by printing out a font list from your printer. This is a facility of the HP printers, and is common for many other compatible printers also. Alternatively, you can consult your printers technical reference for information on the resident fonts.

Spacing: Indicates whether the font is mono spaced (fixed pitch) or proportional spaced.

0=monospaced 1=Proportional spaced

Pitch: This field is only of importance if you have chosen fixed spacing. Then enter e.g. 10,00 for 10 CPI. If you have chosen proportional spacing, just enter a value within the valid interval, as the width of the individual letters is relative to the height of the font.

Height: The height of a font is expressed in typographical points. A point is 1/72 of an inch. A font height of 1/3 of an inch therefore has to be specified as 24,00. The height of a font is slightly greater than the distance from the top of a capital letter to the bottom of e.g. the letter "g".

Style: Style has the following meaning:

0=Upright 1=*Italic*

Stroke weight: This describes the thickness of the characters:

0=Medium 3=**Bold**

Typeface: This field has to be filled in with an ID-number of the typeface to be used. There is a lot of possible typefaces (refer to the font list or the technical reference of the printer). Here the scalable typefaces of the HPIII (PCL5) are shown:

05 = CG Times Roman
52 = Univers (PCL5)
4148 = Univers (PCL5e)
16602 = Arial
16901 = Times New Roman

For other typefaces refer to page **386**.

Symbol Set: The symbolset of the font. Leaving it blank will use the symbolset selected for the interface type (e.g. ASCII850 or ASCII8). Entering a symbolset here is normally for selecting special symbol character sets.

Override spacing:

Here you can override the spacing for fixed width fonts. If you e.g. use a 10 CPI courier font and override to 5 then the 10 CPI font is written with a spacing of 5 CPI.

Note that changing the above parameters does not change the appearance of the font unless a font matching the changes can be found in the printer. Print out a font list from the printer's front panel to get an overview of available resident PCL fonts.

Example of Defining a Resident Printer font

We want to define a 70 point Univers Bold Italic for use in our overlay definitions. We know this font is available as a resident scalable font in HPIII compatible printers.

First we must print out a Font List from the printer's front panel. Refer to the User's Guide of your printer.

Univers Bold Italic is listed on a HPIII Font List with the following PCL Escape Sequence:

```
<Esc>(s1p__v1s3b4148T
```

If we break it up, we have the following information:

- 1p = Proportional (Spacing)
- ___v = Empty field for point size (Height)
- 1s = Italic (Style)
- 3b = Bold (Stroke Weight)
- 4148T = Univers (Typeface)
- "Blank" = Use the default

We now only need to define the font ID which will be used to select the font when designing forms. By pressing **F4** we will get a list of the font ID's between 5000 and 9999 which are already occupied.

In the following we have chosen font ID 7001 to represent our 70 point Univers font:

Description additional fonts		APF360D
Font	7001	Other fonts
Description	Univers Bold Italic	70 Point
Spacing	1	0=Fixed, 1=Proportional
Pitch	_0,10	0,10-49,99
Height	_70,00	1,00-792,00
Style	1	0=Upright 1=Italic 4=Condensed 5=Condensed italic
Stroke weight	3_	(-7 - +7) 0=Medium <0=Light >0=Bold
Typeface	_4148	0-65535
Symbol set	_____	blank=standard
Override spacing	_____	blank=standard

F11 = Delete F4 = Prompt F12 = Cancel

Now font 7001 and the description Univers Bold Italic 70 point will appear in the list of available fonts (prompted by **F4**) anywhere in the InterForm400® system where you can insert a font ID.

If you press **F4** in this menu you will get a list of the user defined fonts and bar codes only.

Printing "HELLO" with
Font 7001 will now
give this result:

HELLO

2. Work with soft fonts for PCL

This function gives you the possibility to work with soft fonts, create soft fonts from TTF files and to download soft fonts to printers.

```
Work with PCL Soft Fonts                                     FNT310D
Position to . . . . . _____ Font member name
Type options, press Enter.
  2=Change  4=Delete  5=Display  6=Print  8=Dsp. attributes  9=Download

Opt  Member      Font description
-    TTFFONT     TrueType TTFONT
-    BARCODE39   Code 39,  HPIII      7.69CPI  72.0 Heigh
-    BAR128      Code 128, Portrait  9.09CPI  72.0 Heigh
-    CODE128     Code 128, Portrait  9.09CPI  48.0 Heigh
-    CODE128_0   Code 128, Portrait  6.81CPI  42.48Heigh
-    CODE39      Code 39,  Portrait  5.76CPI  48.0 Heigh
-    EAN8_MICRO  EAN 8/13, UPC-A, PCL5 14.28CPI  41.76Heigh
-    EAN8JJ      EAN 8/13, UPC-A, Portrait 10.71CPI  79.68Heigh
-    FONT2501    Interleaved 2 of 5, HPIII 4.68CPI  32.4 Heigh
-    IF_OCRA     OCRA                PC-850
-    IF_OCRAEXT  OCR A Extended     PC-850
-    IF_OCRB     InterForm 400 - OCRB portrait
-    IF_OCRB_L   InterForm 400 - OCRB landscape

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

Here you can specify :

2=Change:

The description of a soft font can be changed.

4=Delete:

Delete a soft font. This will also delete the corresponding member from the apf3812/font file. Note that you cannot delete a soft font, if it is specified to be auto downloaded.

5=Display:

Displays a soft font. This will prompt you for what code page to use, and then open up the PCL Viewer, SwiftView on a PC showing a sample of the soft font. Note, that the current version of SwiftView does not support True Type Fonts.

6=Print:

Prints out a sample of the soft font. You are prompted for which code page, output queue and form type to use.

8=Dsp. Attributes:

Shows the attributes of the soft font e.g. pitch and height. For True Type Fonts it will also show you the type face used. The type face should be referred to, when creating font numbers using this soft font.

9=Download:

This function gives you the possibility of downloading soft fonts to HP-printers or printers emulating a HP-printer via AS/400 spool entries.

The following screen is shown:

```

Create spool entry to download of soft font                                FNT700D

Font member . . . . . _____
Font-id . . . . . (0001-9999)
Description: _____
Place into Flash Memory . . _ 0 = No
                               1 = HP Flash memory option
                               2 = Lexmark Flash memory option
                               3 = File system for HP5, HP4000 ..

F3=Exit      F4 = Prompt

```

Font member: Type the file member name from the APF3812/FONT file in the field Font member.

Font-id: Must be given a number in the interval 0001-9999. It is used to manage more than one soft font in the printer simultaneously. I.e. if you download a font with an ID that is already used by another down loaded font in the printer, it is replaced with the new font. Otherwise there are no restrictions to the id-number.

Description: The text you enter in this field is used as user data on the spool entry that is output from this program.

Place into flash memory: This feature works on any HP laser printer or Lexmark laser printer (4039 and Optra) equipped with an optional Flash SIMM module or Harddisk (contact your local printer supplier for further information). When using this method the font will not disappear when powering off the printer.

Output from this program is a spool entry with HOLD(*YES) and SAVE(*YES).

Every time you want to download the font to the printer, all you have to do is to release the spool entry. The font will then be available on the printer until the printer is switched off or cleared from the printer's operator panel, unless your printer is equipped with a flash card and Place Into Flash memory has been filled in.

It is important that the symbol set of the soft font matches the printer interface you are using. When using the SYSTEM, IDA3X, IDA5219, IDA812 and ASCII8 the symbol set has to be Roman-8. When using WORKSTN the symbol set must be PC-8, and when using the ASCII850 and SYSTEM850 the symbol set must be PC-850.

In order to select the soft font from an overlay it has to be described to the system in 1. Description of additional fonts (page 279).

Import a True Type Font

From the **Work with PCL Soft Fonts** menu you can also import a True Type Font uploaded from a PC to the APF3812 folder.

If you press **F6-Create**, you get this screen:

```

Install TrueType font to PCL from the folder APF3812          FNT431D
Document name . . . . . _____ F4=List

F3=Exit                                                    F12=Cancel

```

Now you can either specify the name of the uploaded TTF file or press **F4** to get an overview of all files in the APF3812 folder, and then select the TTF file.

Press Enter and this screen is presented:

```

Install TrueType font to PCL from the folder APF3812          FNT431D
Document name . . . . . : TTFFILE.TTF_
Font name . . . . . : True type file text
Font name PCL . . . . . File name_____
Symbol set . . . . . _      1=CodePage850 2=CodePage852 3=Baltic
                              4=CodePage858 5=Cyrillic 6=CyrilEuro
                              7=ISO8859/9 Latin-5 (Turkish)
                              8=ISO8859/7 Greek
Type Face . . . . . _____ (0 65535)
Member name in FONT file . _____ F4=List

F3=Exit                                                    F12=Cancel

```

Here you fill in the symbol set, a type face and a member name for the FONT file. Use 1=Codepage850 as default. Use 2=Codepage852 if you intend to use the font for Latin2 codepages and use 4=Codepage858 if you intend to use it for a western europe euro codepage.

⚠ WARNING ⚠
Note, that the type face specified should not be the same as any type face of the resident fonts on the printer. In order to avoid this, it is recommended to use type faces with the number 32768 or above.

Finally specify what to call the soft font. This is the same as the member name.

😊 TIP 😊
Use of an imported True Type Font requires that a font number with the same type face is created, and that the font file member corresponding to the font number is specified to be automatic downloaded.

File transfer HP SFP Font files from a PC

If you have HP PCL fonts in the DOS format *.SFP these can be file transferred to InterForm400® as they are.

The file on the AS/400 to receive the PC-file is: APF3812/FONT

The SFP file is stored as a file member in this file. The rules for the file transfer is the same as described in the previous section.

3. Auto download Soft Fonts

This menu enables you to create groups of HP compatible printers which should have ordinary soft fonts and bar code soft fonts downloaded automatically when the soft fonts are addressed in an overlay.

The printers are defined for auto download according to their AS/400 printer queue names.

The soft fonts will be downloaded as temporary fonts in the beginning of a spool entry and deleted after the job is printed.

It is recommended to keep the amount and size of downloaded fonts to a minimum in order to reduce the traffic on the network and the workload on the AS/400.

An alternative is to create spool entries containing the soft fonts to be downloaded manually e.g. in the morning when the printer is powered on (refer to the previous section 2. Download soft fonts). The fonts will then be downloaded as permanent soft fonts into the HP printer. The soft fonts will only be removed from the printer memory at power off, and on some printer models when switching between PCL and PostScript emulations. When downloading into Flash SIMM modules the font will stay resident also after power off, and emulation switching.

For each printer group you define a number of printer queues and a number of fonts to be downloaded automatically.

WARNING

The queue you define for automatic download must be the one with the physical printer device attached. I.e. when using Auto Forms Control the Auto download queue is the AFC output queue, not the AFC input queue.

Refer to section **Getting familiar with soft-fonts and barcodes** and page **301**, **Define auto download of fonts** for an example of how to define the underlying menus.

Please note this, when adding printers to a printer group: You can specify either of these values instead of an output queue:

***ALLPCL**: Download the soft fonts in a printer group (if used) to any printer or file (if merging to *OUTDOC with the command APF3812/APF3812). Use this if in doubt.

***OUTDOC**: Download the soft fonts in a printer group (if used) to all files, if merging to *OUTDOC with the command, APF3812/APF3812.

```

Work with auto download soft fonts                                     PGR300

Start with . . . . . _____

Type option, press Enter
  2=Change  3=Copy  4=Delete  6=Update output queue 8=Update fonts

Opt   Printer group  Description
-     *PDF           Output to PDF files
-     HP4           HP4 group (no Flash card)
-     HP4Flash      HP4 Flash Management

F3=exit      F5=Refresh      F6=Add      F12=Cancel

```

In order to select the soft font from an overlay, it has to be described to the system in **1. Description of additional fonts** (page 279).

If it is required to use True Type Fonts in PDF output, the TTF file has to be installed by using option **7. Install TrueType font for PDF**. Following you can specify, if a certain font number is used when creating PDF output, then a specific PDF soft font member should be used.

You add a new font to be used in PDF, by using option **8-Update fonts**. If you then press **F6** to add a new font, you get the screen below:

```

Add Auto download Soft Font                                         PGR332D

Printer group name . . . . : *PDF

Font number . . . . . _____ F4=List
Symbol set number . . . . -      1 = Western
                                   2 = Central European
                                   3 = Baltic
                                   4 = Turkish
                                   5 = Cyrillic
                                   6 = Greek
                                   7 = Arabic
                                   8 = Hebrew

Font member name 0° . . . _____ F4=List

When to embed font . . . . *ALLWAYS__ *ALLWAYS *PRI *SEC *NEVER

F3=Exit      F4=Prompt      F12=Cancel

```

The font number must have the same characteristics as the soft font (bold, italic, condensed, proportional/fixed). With '**When to embed font**' you can state when you want to download the font. ***PRI** will download the soft font only when you do a primary merge and ***SEC** will download the soft font only when you do a secondary merge.

In this manner you can include the soft font only in PDF files, where it is needed and save the space if the soft font is already installed on the PC's that are to open the PDF files.

☺ **TIP** ☺

Even though the same font member can not be used for both PCL and PDF output, you can associate one font number to a PCL font member and a PDF font member. Therefore if you install a TTF as a PCL font member and a PDF font member you can get the same output on both PDF and PCL using one font number.

5. Create barcode soft font

The support of barcodes is described on page 292.

7. Install True Type font for PDF

This option enables you to install a True Type Font to be used in PDF output.

```
Install TrueType font for PDF from the folder APF3812          FNT451D
Document name . . . . . : PDFFONT.TTF
Font name . . . . . : True Type Font for PDF
Member name PDF font file . _____ F4=List
F3=Exit                                                    F12=Cancel
```

First specify the document name to be installed i.e. the name of the TTF file in the APF3812 folder. Press F4 to see available documents. Select with option 1.

Enter a member name to contain the soft font. After pressing **Enter** the soft font can be referred to in option **3. Auto download soft fonts**, where you have to add the soft font and a connected font number to the printer group *PDF. The font number is created by using option **1. Description of additional fonts**.

☺ **TIP** ☺

*Even if you upload a bold and/or italic True Type Font you still have to specify bold and/or italic when defining font numbers using this soft font in **1. Description of additional fonts**.*

InterForm400® Predefined Soft Fonts

Besides the predefined fonts ID's which selects resident fonts in the printer, InterForm400® includes some pre-defined softfonts.

MICR Soft Font (Font ID 3998)

The MICR E-13B font is used for check printing in USA, and exist per definition only in one size.

The font include the decimal digits 0-9 plus four special characters. The fours characters will be printed when the following characters is included in the text:

A=Amount symbol
D=Dash symbol
O=On us symbol
T=Transit symbol

It is therefore predefined in InterForm400[®] and does not need to be generated.

It can be used immediately by Remap Window, a Tabulator and Text constant commands within the overlay design window by selection of font ID **3998**. The font will to the user function as a resident printer font.

InterForm400[®] will automatically add start and stop codes and check digits.

OCRA Soft Fonts

Two soft fonts, **IF_OCRA** and **IF_OCRAEXT** are distributed with InterForm400[®]. **IF_OCRA** is BMP based and **IF_OCRAEXT** is based on a True Type Font. **IF_OCRAEXT** contains some extra characters compared to **IF_OCRA**. Font number **19** is intended to be used with these soft fonts. Remember to specify (automatic) download the soft font in option 3 of the fonts menu.

OCRB Soft Font (Font ID 0003)

OCRB is predefined in InterForm400[®] with font ID 3, but the soft font is not automatically downloaded to the printer when selected. The font will need to be downloaded to the printer according to the description on page **287** (3. Auto Download Soft Fonts).

Two font members **IF_OCRB** and **IF_OCRB_L** represent the OCR-B in portrait and landscape. You will only need to download both fonts if you are using OCR-B in both portrait and landscape, and only for HPII (PCL4) compatible printers. HPIII (PCL5) printers will automatically rotate a soft font.

The selection field when adding the OCRB font to an Auto Font Download definition should for a HPIII or HP4 compatible printer always state font number 3:

```
Update Auto download Soft Font                                PGR332D

Printer group name . . . : ALLPCL

Font number . . . . . : 3          F4=List
Symbol set number . . . : 3          0=All symbol sets (barcodes only)
                                   1=Roman-8 2=PC-8 DM 3=CodePage850
                                   4=CodePage852 5=Baltic
                                   6=CodePage858 7=Cyrillic
                                   8=CylillicEuro
                                   9=ISO 8859/9 Latin-5 (Turkish)
                                   A=ISO 8859/7 Latin/Greek
                                   B=CentralEurope w/Euro

Font member name 0° . . . IF_OCRB___ F4=List
Font member name 90° . . . _____ F4=List

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

The selection of Symbol set should match the code page you are using.

The section **Getting Familiar with Soft-fonts and Barcodes** includes download of the OCRB font.

Barcode Support

When using a HP PCL compatible printer, the system can print bar codes.

If you are using an IDA converter (interface IDA3X, IDA5219 or IDA812) it is possible to use the bar code facilities of the protocol converter (refer to the manual delivered with the protocol converter).

In order not to lock up your installation on one particular interface type it is recommended to use a soft font, or to use the InterForm400's ability to create barcode soft fonts. InterForm400® currently support generation of the following barcodes in any size:

- Interleaved 2 of 5,
- Code 128
- Code 39
- Code 39 Extended
- EAN128
- Postnet
- EAN13
- EAN8
- PDF417
- UPC-A

The barcodes created by InterForm400® are automatically stored as members in the physical file **APF3812/FONT**.

When printing a bar code, it appears to be placed a little to the right of the specified location. It is because the start code is as wide as 2 digits and has the two thin lines that form the start code placed in the right side of the symbol.

You can select whether the soft font is to be used on a HP II (PCL4) or a HP III (PCL5) printer. A font for a HP II can be used on HP II, HP III, HP4 and all printers emulating a HP-printer. HP III fonts can only be used with HP III, HP4 and compatible printers. The advantage of using HP III fonts is the much faster download speed.

For HP III printer types (PCL5) it does not matter what you enter as orientation. The font can be used for all four orientations. When a font is used on a HP II, it can only be used in the orientation it is intended for.

If you want a number to appear below the bar code you must specify your overlay definition to read the number from the data with a 9=Remap Window and place it on the desired position.

Barcodes in PDF output

All the barcodes in InterForm400 are also supported for PDF output. Note however that there is a difference to the way that the barcodes for PDF are generated compared to PCL output:

The barcodes appearance in PCL output are based on the soft font only. The appearance in PDF output is based on the specifications in the used font number. Normally that will not be a problem, but if you manually have created the font number you should make sure, that the pitch and height of the font number are exactly the same as stated in the description of the barcode soft font.

Calculating barcode height

The height of the font is entered in dots (1/300 of an inch). The following relations will assist you when entering the barcode height in dots.

Inches and dots: 1 inch(240 pels) = 300 dots

Centimeters and dots: 1 cm(95 pels) = 118 dots

5. Create bar code soft font

Selecting option 5. Create bar code soft font will result in the following screen:

Create barcode Soft font	FNT000	
Select one of the following options:		
1. Code 39		
2. Code 128 / EAN 128		
3. Interleaved 2 of 5		
4. EAN8 / EAN13 / UPC-A		
Option: __		
F3=Exit	F6=Display messages	F12=Cancel

1. Code 39

This bar-code can consist of the alphanumeric characters 0-9, A-Z (Capital letters) and some special characters (e.g. * \$ / + - . %). You can define if a Checksum should be calculated and if unrecognized (or unprintable) characters should be replaced with blanks.

Extended code 39

The extended code 39 is a general purpose code which can code any ASCII character(any character you can enter from the keyboard by normal means). This code is double the size of the standard code 39, as it uses two code 39 characters for each of the 128 ASCII characters. To enable extended code 39, enter **YES** for **Full ASCII mode**.

2. Code 128 and EAN128

These barcodes can consist of all alphanumeric characters.

You are asked whether the barcode should be written as 'character set B only'. Normally InterForm400 will use character set A, B and C in order to compress the barcode as much as possible. However VERY few barcode scanners cannot read character set C (compressed numeric characters). For those scanners you should state 'Y'. Use 'N' for all other scanners in order to make the barcode as efficient as possible. For a description of character sets A,B and C refer to the documentation of your scanner.

If you need to insert the character **FNC1** in the Code128 barcode you should insert the character '|' (with the hexadecimal value **BB** in EBCDIC) in the text, that you convert into the barcode.

Refer to section **assigning font ID's to barcode soft fonts** page 295 for details on how to define whether the barcode should be printed as Code128 or EAN128.

3. Interleaved 2 of 5

This bar-code consists of the digits 0-9 only. There can be blanks before or after the digits if the figure contains an odd number of digits, the system will add a preceding zero. The system also adds start and stop codes before and after the number.

If you try to use Interleaved 2 of 5 with non-numeric data, the contents will be printed with IBM font-id 0011 (10 pitch courier).

NOTE

The Interleaved 2 of 5 barcode must consist of an even number of digits. If you activate the checksum digit, then InterForm400 might insert a '0' in front of the checksum digit, if necessary to have an even number of digits.

4. EAN8, EAN13 and UPC-A

When a character string contains 8 digits, it will be printed as EAN8. A character string of 13 digits will be printed with EAN13 and 12 digits will be printed as UPC-A.

Using these barcodes with a number of characters other than 8, 12 or 13 or with non-numeric data results in no barcode to be printed. This barcode also supports texts, that ends with '-' followed by 2 or 5 digits.

Postnet Barcode

The Postnet barcode exists, per definition, only in one size. It is therefore predefined in InterForm400® and does not need to be generated.

It can be used immediately by Remap Window, a Tabulator and Text constant commands within the overlay design window by selection of font ID **3999**. The font will to the user function as a resident printer font.

InterForm400® will automatically add start and stop codes and check digits.

Barcode PDF417

This is a two dimensional barcode widely used in e.g. the automotive industry. No soft font is used for this barcode, which means it is not required to auto download the font. The barcode is solely defined as a font number in the option **1. Description of additional fonts**. The font can only be used for the remap function in design overlay. When using a PDF417 barcode in overlay design, you will be prompted for the maximum width of the barcode.

When you create a PDF417 font number (range 4400-4499) you are prompted for these parameters (apart from the parameters specifying the actual size and security level):

Line separator

With this you can state if line breaks of the *SCS spooled file text should be ignored (specify ***NONE**) or what character should be included in the PDF417 barcode to represent the line breaks found.

(**Blank**, **CR** (=Carriage Return), **CRLF** (Carriage Return and Line Feed) and ***NONE** are the possible values).

Escape code character

This parameter has been included in order to make it possible to insert specific ASCII characters specified by the hexadecimal value. State a special character here and when this is found in the text to be printed as PDF417 barcode the next two characters are interpreted as the hexadecimal value for the ASCII character to be inserted instead. If you e.g. use ']' as the escape code character, the text 'j0A' will be printed as the ASCII character having the hexadecimal value <0A>. This option make it possible to print PDF417 barcodes for e.g. the GM-1724-A/B/C Label standard used in the automotive industry.

You use the PDF417 font number by remapping a window of text. When you specify a PDF417 font number you are prompted for a 'Maximum line width' and 'Maximum line height'. You are expected to specify only one of them. Normally you would probably use a **maximum line width** and let the height vary with the variable amount of characters to be converted, but a **maximum line height** has been added to meet requirements of the automotive industry.

Datamatrix barcodes

Datamatrix barcodes can be used for ZPL (Zebra) output from InterForm400. For more information refer to page 310.

MICR E-13B

This font is normally used for cheque printing. Just insert text or remap windows functions in the overlay using font number 3998.

Assigning Font ID's to Barcode Softfonts

When a barcode softfont has been generated it must be assigned as font ID, which can be used to access the barcode from **Remap Window**, **Tabulator** and **Text** constant commands in the overlay design window. Besides this they can be used in command lines of the type **&&TXT**.

You can define the soft font, font ID and autodownload in one step by selecting option '5. Create barcode soft font':

Create CODE-39 soft font		FNT403D
Font number	4646	4600-4699
Font height dots	300	30-1200
With thin line dots	4	3-13
Width broad line dots	10	6-39
Printer type	2	1=PCL4, 2=PCL5
Orientation	000	000, 090
FONT-file member name	*GEN	*GEN, Name
Auto download	Y	Y=Yes, N=No
F3=Exit		F12=Cancel
F4=Prompt		

This will create the soft font member **CODE39xxx**, where 'xxx' is a 'number' in the sequence 'AAA', 'AAB', 'AAC'...'ZZZ' (when using *GEN for the FONT member name). If activated the specification of autodownload is added to the first printer group and the output queue *ALLPCL is added to this printer group. If no PCL printer group is found InterForm400® will automatically create the printer group *PCL.

☺ **TIP** ☺

*If you want easy to see the connection between the font number and the font file member name, you can insert **'BARCOD'** followed by the font number for the FONT-file member name instead of *GEN. If you do not do this, then the **only** way to find out which soft font fits with what font number is through the table in Autodownload!*

Editing of font ID's for barcodes are done under **1. Description of additional fonts** in the **Work with Fonts** menu.

Example of editing a font ID for Code39 barcode

Code39 can be defined in the font ID interval 4600-4699.

Change Font		APF370D
Font	: 4622	Code 39 soft fonts
Description	Code 39	(2.75 CPI, 96.00 points)
Pitch	2.75	0.10-49.99
Height	96.00	1.00-792.00
Checksum	N	(Y N)
Replace unprintable with blank	N	(Y N)
Full ASCII mode	N	(Y N)
Print characters beneath bar code	N	(Y N)
F3=Exit F12=Cancel		

Downloading a Barcode Soft Font

A bar code is regarded as a PCL soft font, and has to be downloaded according to the description on page **283** (2. Download soft fonts) or page **287** (3. Auto Download Soft Fonts).

In order to select the barcode soft font from an overlay, it has to be described to the system on page **279** (1. Description of additional fonts)

The next section contains an example of downloading a barcode soft font.

Getting Familiar with Soft-fonts and Barcodes

This example will bring us through all the menu items under **7. Work With Fonts**.

At the end of this section we will have made the following:

1. Installed the TrueType Font ARIAL from the PC environment and stored it as a resource (soft font member).
2. Created a Code128 bar code. That includes a soft font, which is assigned to a font number and specified to download the soft font when used.
3. Created a font number (5001) to be used with the arial soft font.
4. Defined that the OCR-B soft font delivered with InterForm400® is to be downloaded to any printer queue automatically when the font number **3** is used in overlays, and defined that ARIAL soft font is to be downloaded whenever font number 5001 is used.

In order to get the exact result as described in the following it would require you to have a PCL5 compatible printer assigned to printer queue AFC_OUT1.

Step 1. Installing the Arial True Type Font

In the following we install the True Type Font directly from the APF3812 folder:

Note: This procedure is describing how to install a TTF file to be used for printing (PCL). If the TTF file is to be used for PDF output, the procedure is different (see page 289).

1. Upload the TTF file to the APF3812 folder.
2. From the InterForm400® main menu select option **80. Administering InterForm 400, 7. Work with fonts and 2. Work with Soft Fonts for PCL**. Press **F6=Create**.
6. This screen is presented:

Install TrueType font to PCL from the folder APF3812	FNT431D
Document name _____	F4=List
F3=Exit	F12=Cancel

You can either write the name of the TTF file to be installed or prompt with F4, to get a list of all files in the APF3812 folder. Select the TTF file here with option '1'. Press **Enter**.

7. A description is retrieved from the TTF file and displayed as the font name. Following you are prompted for the code page, Type Face number and what to call the font member.

```
Install TrueType font to PCL from the folder APF3812          FNT431D

Document name . . . . . : ARIAL.TTF
Font name . . . . . : Arial
Font name PCL . . . . . Arial
Code Page . . . . . 1          1=CodePage850 2=CodePage852
Type Face . . . . . 40000      (0 65535)
Member name in FONT file . ARIAL_____ F4=List

F3=Exit                                     F12=Cancel
```

A new type face number have to be entered for the font. Enter a number higher than 32767 in order to assure, that this will not conflict with any typefaces of the resident fonts. Enter a member name for the new soft font (**40000** is chosen). Press **Enter** and wait for the font member to be created (be patient). When finished you will return to the **Work with PCL soft fonts** menu. Press **F3** to go back to the **Work with fonts** menu.

Step 2. Creating the Code128 Barcode

- Select option '7. Work with fonts' in the InterForm400® administration menu and then select '5. Create bar code soft font'. We select **Code 128**.

Create CODE-128 soft font		FNT402D
Font number	4700	4700-4799
Font height dots	40	30-1200
Module width dots	3	3-13
Printer type	2	1=PCL4, 2=PCL5
Orientation	000	000, 090
FONT-file member name . . .	*GEN	*GEN, Name
Auto download	Y	Y=Yes, N=No
F3=Exit F4=Prompt F12=Cancel		

- We have now defined our bar code: The font number to use in design is 4700, the barcode is 40 dots high, with a narrow bar width of 3 dots. InterForm400® automatically creates a soft font called CODE128xxx, where 'xxx' is numbered in the sequence 'AAA'-'ZZZ'. This soft font will be downloaded and used when printing in font number 4700.
- After you have pressed Enter you can now edit the font number (4700) if needed. From the 'Work with fonts' menu select option '1. Description of additional fonts' and '2=Change' to edit the details of font number 4700:

Change Font		APF370D
Font	: 4700	Code 128 soft fonts
Description	Code 128	(9.09 CPI, 9.60 points)
Pitch	9.09	0.10-49.99
Height	9.60	1.00-792.00
Character set B only . . .	N	(Y N)
UCC/EAN-128	N	(Y N)
Notice: The use of UCC/EAN-128 is restricted by the regulations of The Uniform Council and EAN International.		
F3=Exit F12=Cancel		

Step 3. Create font ID for the Arial soft-font

8. Before we can use the arial font in an overlay we must describe the font to the system. We select option '7. Work with fonts' in the InterForm400® administration menu and then option '1. Description of additional fonts'. We will define a font number for our Arial font.
9. We enter **5001** and get the following screen:

Create Font		APF370D
Font	5001	Other fonts
Description	Arial 24 point Italic/Bold_____	
Spacing	1	0=Fixed, 1=Proportional
Pitch	_1.00	0.10-49.99
Height	_24.00	1.00-792.00
Style	1	0=Upright 1=Italic 4=Condensed 5=Condensed italic
Stroke weight	3	(-7 - +7) 0=Medium <0=Light >0=Bold
Typeface	33000	0-65535
Symbol set	_____	blank=standard
Override spacing	_____	blank=standard
F3=Exit F12=Cancel		

First we state the Font-ID 5001, which has the highest priority after the Symbol set which was defined as CodePage850 under step 4. Then we state proportional spacing, '1' for the Pitch (Pitch is not used for Proportional spaced fonts), 24 point Height, Italic style and Stroke weight bold (=3).

For the typeface we use any number in the interval 32769-65535. We select 33000 in this case.

Step 4. Define auto-download of fonts (Arial and OCRB)

Finally, we need to add download information for the Arial and OCRB fonts to our printer group.

10. We select option 7. Work with fonts in the InterForm400® administration menu and then option 3. Auto download soft font.

```

Work with auto download soft fonts                                PGR300

Start with . . . . .

Type option, press Enter
  2=Change  3=Copy  4=Delete  6=Update output queue 8=Update fonts

Opt      Printer group  Description
-        *PCL          Automatically created by auto download
-        *PDF          Output to PDF files

F3=exit      F5=Refresh      F6=Add      F12=Cancel

```

In this case the *PCL printer group was automatically created when we created the barcode earlier. If you do not have any other printer group than *PDF you must create one with 'F6-Add' and create a new printer group.

11. Enter 6=update output queues for the Printer group (*PCL):

```

Work with auto download soft fonts                                PGR300

Printer group name . . . : *PCL

Start with . . . . . _____

Type option, press Enter
  2=Change  4=Delete

Opt      Output queue  Library
-        *ALLPCL

F3=exit      F5=Refresh      F6=Add      F12=Cancel

```

Here we add output queue *ALLPCL if not already there.

Note, that you can specify either of the values below instead of a specific output queue:

***ALLPCL:** Download the soft fonts in this printer group (if used) to any printer or file (if merging to *OUTDOC with the command APF3812/APF3812)

***OUTDOC:** Download the soft fonts in this printer group (if used) to all files, if merging to *OUTDOC with the command, APF3812/APF3812.

12. Now we must specify which fonts should be down loaded automatically. In the screen Work with auto download soft fonts we select option '8=Update

fonts' for printer group *PCL and we press **F6** to add a download font to our printer group.

```

Add Auto download Soft Font                                     PGR332D

Printer group name . . . : *PCL

Font number . . . . . 5001          F4=List
Symbol set number . . . . 3          0=All symbol sets (barcodes only)
                                       1=Roman-8 2=PC-8 DM 3=CodePage850
                                       4=CodePage852 5=Baltic
                                       6=CodePage858 7=Cyrillic
                                       8=CylillicEuro
                                       9=ISO 8859/9 Latin-5 (Turkish)
                                       A=ISO 8859/7 Latin/Greek

Font member name 0° . . . ARIAL_____ F4=List
Font member name 90° . . . _____ F4=List

F3=Exit          F4=Prompt          F12=Cancel

```

Here we enter our Arial font ARIAL. Note that if the font is stored as a file member with Codepage850.

Note that it is not necessary to define the font in 90° as the PCL5 compatible printers will rotate the font. For PCL4 (HPII) compatible printers the font member name should be specified for both 0° and 90°.

Now we will define the OCRB font. This font is delivered with the system and IBM font number 3 is already reserved for these fonts, which means we do not have to describe this font to the system as we did with the Arial font in step 9.

13. Like in step 12 we press F6 to add a font.

```

Add Auto download Soft Font                                     PGR332D

Printer group name . . . : *PCL

Font number . . . . . 3          F4=List
Symbol set number . . . . 3          0=All symbol sets (barcodes only)
                                       1=Roman-8 2=PC-8 DM 3=CodePage850
                                       4=CodePage852 5=Baltic
                                       6=CodePage858 7=Cyrillic
                                       8=CylillicEuro
                                       9=ISO 8859/9 Latin-5 (Turkish)
                                       A=ISO 8859/7 Latin/Greek

Font member name 0° . . . IF_OCRB___ F4=List
Font member name 90° . . . _____ F4=List

F3=Exit          F4=Prompt          F12=Cancel

```

Note that the OCR-B font must have font number 3.

14. The barcode (font number 4700) was added automatically earlier and we will get the following updated screen:

```
Soft Fonts to be down loaded automatically PGR300

Printer group name . . . : *PCL

Start with . . . . . _____

Type option, Press Enter
  2=Update  4=Delete

Opt  Font number      Symbol set          Font member 0°   Font member 90°
-    0003             3 = CodePage850   IF_OCRB
-    4700             0 = All sym-set   CODE128AAA
-    5001             3 = CodePage850   ARIAL

F3=exit      F5=Refresh      F6=Add        F12=Cancel
```


Step 5. Testing the Barcodes in an Overlay

15. We can now try to create an overlay with text constants using the fonts 0003, 5001 and 4700. The following example is testing the OCRB font (font 3) and the barcode (font 4700) only. The spool entry used for testing will be the demo spool entry delivered with InterForm400® (Refer to section 1. **Create Demo Spool Entry** on how to print it. See page 337)
16. Enter 1. Design Overlay on the main menu, and type the name FONTTEST.

Design InterForm 400 overlay		APF300D
Overlay name	FONTTEST__	
Overlay text	_____	
Line spacing	040	in 1/240 of an inch (*INPUT, 1-720)
Rotation	000	(*INPUT, 0, 90, 180, 270)
Extra left margin positions	_0	(0-99)
Maximum number of print positions	378	(1-378)
Extra blank lines on top	_0	(0-99)
Font	0003	*INPUT, fontnumber F4=List
Extended page def.	N	(Y N)
Drawer / Papertype	*PRINTER	(*INPUT, *PRINTER, 1-256, Name) F4=List
Paper Size	0	F4=List
Copy management	N	(Y N)
Duplex print	N	(N=no S=short edge margin L=long edge margin)
Duplex margin	__0	in 1/240 of an inch (1-720)
Back page overlay	_____	Code for placement _ (B=back page F=front)
F3=Exit	F4=Prompt	F9=Copy from another overlay F12=Cancel
F13=Set view/print parameters	F14=PCL-view	

17. The only thing we change on this screen is the default font. We set this to OCRB (Font 3). This means the entire spool entry will be printed with OCRB.
18. Before we start defining the barcode we will make a printout of the overlay in OCRB. We press **F3** to exit to the **main menu**, and we enter menu **3**. **Merge spool entry with overlay:**

Merge Spooled File with Overlay		APF730D
Overlay name	TESTFONT__	
or Overlay Selector	_____	
Primary/Secondary set	_	1=Primary, 2=Secondary
Spooled file:		
Job name	_____	
User	_____	
Job number	_____	
File name	_____	
Spool file no.	_____	(no. / *ONLY / *LAST)
Code page	*INPUT	Number, *INPUT
Merge overprint lines	*NO	*NO, *YES
Form type	*STD	_____
Copies	_1	(1-255)
Drawer / Papertype	*PRINTER	(*PRINTER, *INPUT, *OVERLAY, 1-256, Name)
Name of output queue to search if spooled file is unknown:		
Output queue	AFC_INPUT1	
Library	APF3812__	
F3=Exit	F4=Prompt	F12=Cancel

TESTFONT is already filled in because it was the last overlay active in the design menu.

Now go to the lower part of the screen and fill in queue **AFC_INPUT1** and library **APF3812**. Here we will select the spool entry created by option 1. **Create demo spool entry page 337.**

We press **Enter** to look at entries in queue AFC_INPUT1:

```

                                Work with Output Queue

      Queue:  AFC_INPUT1      Library:  APF3812

Type option, Press Enter.
  1=Select  2=Change  3=Hold  4=Delete  5=Display  6=Release  8=Attributes

Opt  File      User      User Data  Sts  Pages  Copies  Form Type  Pty
  1  QPRINT    PETER    SMP001    HLD      2      1    DEMO      5

Parameters for option 2, 3 or command
===> _____
F3=Exit  F11=View 2  F12=Cancel  F21=Description  F24=More keys

```

We select the file with option 1 and press **Enter**

```

                                Merge Spooled File with Overlay                                APF730D

Overlay name          TESTFONT__
or Overlay Selector   _____
Primary/Secondary set  _  1=Primary, 2=Secondary
Spooled file:
  Job name            DSP010700_
  User                PETER_____
  Job number          073534
  File name           QPRINT_____
  Spool file no.     0005          (no. / *ONLY / *LAST)
Code page             *INPUT      Number, *INPUT
Merge overprint lines *NO          *NO, *YES
Form type             *STD_____
Copies                __1          (1-255)
Drawer / Papertype   *PRINTER    (*PRINTER, *INPUT, *OVERLAY, 1-256, Name)

Name of output queue to search if spooled file is unknown:

  Output queue . . . . _____
  Library . . . . . _____

F3=Exit                F4=Prompt                F12=Cancel

```

All the spool file attributes have now been inserted, and we can now press **Enter** to print the Overlay TESTFONT merged with this spool entry and we will automatically be returned to the **main menu**.

19. We now re-enter our overlay TESTFONT. Here we want to create a tabulator line for replacing the "Serial No" information as a barcode. But first we press **F18** to determine the column and line interval for the "Serial No information".

```

                                DISPLAY OUTPUT FILE
File . . . . . : QPRINT                                Page/Line 1/28
Function . . . . +1_____                            Columns 1 - 78
Search for . . . _____
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
Model      P-Group      Serial No.      No. of dev.      License Code
-----
F45        -            44A2971         1                81 20 01 3A
320        -            44A9032         3                3F 78 66 99
Should you have any questions regarding the driver, you are welcome
to call our technical support hotline on:
+45 43 26 02 99
Or download the latest documentation from the Internet on:
http://www.lcigroup.com/intermate
ftp://ftp.lcigroup.com/intermate
Regards
INTERMATE A/S
                                                    1

Florence Flowers
Tulip Road 16
4000 Marigold
                                                    END
F3=Exit      F12=Cancel      F19=Left      F20=Right      F24=More keys

```

Here we find the Serial numbers to be in position 30 to 36 in line 30 to 42.

20. We now create a tabulator:

```

                                Design InterForm 400 overlay                                APF300D
Overlay name: FONTTEST      Overlay text:

Seqnbr. Type  Overlay definition
0001      8    Tabulator lin.030-036 pos 30-042 left 3,000L font 4700

Seqnbr. Type
1,0      8    Tabulator
Input:      Line          _30 - _36
            Position      _30 - _42
Print:      From left edge _3,000 Adjustment L (U L C R N +)
            Font          4700      F4=List
Condition:  Position      ___ - ___
            Is > = < N    - _____
            Blank after  _ B = Blank condition after
F3=Exit      F4=Prompt      F18=DSPSPLF      F11=Delete      F12=Cancel

```

Here we define the characters which should be printed as barcode data, and define our barcode font.

21. Now exit the forms design window and make a printout using option 3. **Merge spool entry with overlay.** A part of the printout is illustrated in the following figure:

Model	P-Group	Serial No.	No. of dev.	License Code
F45	-		1	81 20 01 3A
320	-		3	3F 78 66 99

Work with Zebra fonts

Fonts and soft fonts which are created/installed for PCL or PDF output cannot be used for Zebra output. You need to create/install special (soft) fonts for zebra. The options below are reached through **7. Work with fonts**, which can be reached from the InterForm400 Administration Menu.

Note that the Zebra font menu options are only shown if you have defined a Zebra (=Label) file set in InterForm400.

You may notice, that the resident fonts on the Zebra printers are limited to 2 different typefaces (CG Triumvirate Bold Condensed and Dot Matrix).

👉 **NOTE** 👉
You can type text in several different codepages on one label. You can specify a specific codepage on a font number.

👉 **NOTE** 👉
Creation of ZPL output (for Zebra) requires the purchase of the ZPL module for InterForm400.

Autodownload of soft fonts for Zebra printers works differently than for PCL printers. Soft fonts for a font number are automatically downloaded unless the soft font is registered as already downloaded into the flash memory of the printer in **'13. Work with fonts in ZEBRA flash memory'**.

11. Description of Zebra fonts

```
Work with Zebra fonts ZEB360D

Position to . . . . . _____ Font

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  7=Rename

Opt      Font  Description
-        2000  CG Triumvirate  H= 10.00/W= 5.00
-        3001  Dot Matrix 11x7  H= 5 /W= 5
-        4450  PDF417 EC=1 Lsep=CR Esc=§ H=3 W=3
-        4545  EAN8 Narrow bar width=4 H=100.00
-        4600  CODE39 Width=4, H=100, YYYY
-        4700  CODE128 Width= 4 Height=100
-        4900  I2of5 Width=4 Height=100 Rel.=2.5

End

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

With this option you can define fonts used for Zebra printers in addition to the fonts, that are already known by the printers. For the standard fonts delivered with the printers see page **385**.

Press **F6=Create** to create a font or barcode:

```

Create ZEBRA font
ZEB370D

Font . . . . . _____ 2000-9999

2000-2999 CG Triumvirate Bold Condensed
3000-3999 Dot Matrix fonts
4400-4499 PDF417 barcode
4500-4599 EAN8 / EAN13 / UPC-A Barcode
4600-4699 Code 3 of 9 barcode
4700-4799 Code 128 barcode
4900-4999 Interleaved 2 of 5 barcode
5000-9999 Other fonts

F3=Exit  F12=Cancel

```

Note, that you cannot use any fonts already defined for PCL. You need to create fonts especially for Zebra printers. Below are descriptions that can help you understand the specifications of the fonts and barcodes:

CG Triumvirate

```

Change ZEBRA font
ZEB370D

Font . . . . . : 2000 CG Triumvirate Bold Condensed

Description . . . . . CG_Triumvirate__H=_10.00/W=_5.00

Height . . . . . _10.00 1.00-792.00
Relative width . . . . . 5.00 0.20-5.00

F3=Exit  F12=Cancel

```

Here you define the size of the font in Height, but you can even change the width of the font relatively to the standard width e.g. a relative width of 2 creates a font twice as wide as the standard font with the same height.

Dot matrix

```
Change ZEBRA font ZEB370D

Font . . . . . : 3001 Dot matrix font
Description . . . . . Dot Matrix 11x7 H= 5 /W= 5
Font source . . . . . : 2      1 = 9x5 dot matrix
                                2 = 11x7 dot matrix
                                3 = 18x10 dot matrix
                                4 = 26x13 dot matrix
                                5 = 60x40 dot matrix
                                6 = OCRA dot matrix
                                7 = OCRB dot matrix
Height factor . . . . . : 5    1-10
Width factor . . . . . : 5     1-10

F3=Exit  F12=Cancel
```

The height and width of dot matrix fonts can only be defined as a whole (integer) factor times the standard width/height.

Defining barcodes for Zebra printers

Barcodes for Zebra printers are defined as barcodes for PCL printers with these deviations:

- a) Barcodes are interpreted directly on the printers making soft fonts unnecessary for this purpose. You just specify a font number and use that for remap windows in overlay design. (Use option '11. Description of ZEBRA fonts' on the font menu).
- b) For most barcodes you are prompted for a barcode with in dots. This is to be specified for both Zebra203 (200 DPI = 200 Dots Per Inch) and Zebra300 (300 DPI). If you want a barcode to have the same width in both 200 DPI and 300 DPI you should define the width for Zebra203 to be 2/3 of the value for Zebra300. The width is measured in dots. See page **292**.

The Datamatrix barcode:

InterForm400 supports printing of the Datamatrix barcode for ZPL output only. Via the screen below you insert the setup of the barcode:

Create ZEBRA font		ZEB370D
Font	4344	Data Matrix Bar Code - ECC200
Description		Datamatrix_demo_barcode_____
Symbol element size in dots		
ZEBRA203	4__	(1-999)
ZEBRA300	6__	(1-999)
Columns to encode	__	(10-48) or Blank = Based on data length
Rows to encode	__	(10-48) or Blank = Based on data length
Line separator	_	1=A blank, 2=CR, 3=CRLF, 4=None
UCC/EAN	_	(Y N)
F3=Exit F12=Cancel		

Columns/Rows to encode

You can optionally insert a number of spooled file columns (positions) and/or rows (lines) to be used for the barcode. If inserted they must be an even number. In this manner you can fix the size of the barcode in the horizontal or vertical direction in this manner to a maximum value.

UCC/EAN

Like EAN128 it requires, that the data to be converted into the barcode fits with this standard.

For general descriptions of barcodes see page **293**.

Using soft fonts for printing on Zebra

When you create fonts in the range 5000-9999 this screen is shown:

```

                                Create ZEBRA font                                ZEB370D
Font . . . . . 5655  Other fonts
Description . . . . . Arial 12_____
Height . . . . . _12.00  1.00-792.00
Relative width . . . . . 1.00  0.20-5.00

Special EBCDIC codepage . . _____

Soft font member name per symbolset
Western . . . . . ARIAL_____
Central European . . . . _____
Baltic . . . . . _____
Turkish . . . . . _____
Cyrillic . . . . . _____
Greek . . . . . _____
Arabic . . . . . _____
Hebrew . . . . . _____
Special . . . . . _____

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

Height: The height of the font.

Relative width:
The relative width of the font i.e. 1 equals the standard width and 2 equals a font twice as wide as the standard font.

Special EBCDIC codepage: The EBCDIC codepage to use when printing using this font - if the default codepage is not to be used. In this manner you can print text in several different codepages on one label.

Soft font member:
Specify previously installed soft fonts for each symbolset, that you want to use.

NOTE
If you install and use a **fixed** soft font you may notice, that the font size should also be specified in height even though pitch or CPI would be the normal way to measure it.
Examples: A height of 10 equals a CPI of 12 and a height of 12 equals a CPI of 10.

12. Work with ZEBRA soft fonts

When you select this option all installed soft fonts for Zebra printers are shown:

```
Work with ZEBRA soft fonts                                     FNT461D

Position to . . . . . _____ Member name

Type options, press Enter.
  2=Change  4=Delete  5=Display  6=Print

Opt  Member      Symbolset      Description
-   FRUTBOCE    Central European  TrueType  Frutiger-Bold
-   FRUTBOWE    Western          TrueType  Frutiger-Bold
-   LOGOFONT    Special          TrueType  Company Logo

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

End
```

5=Display You can choose option **5=Display** to display a sample of the font in SwiftView (if installed). You are prompted for the codepage to use. State the codepage with preceding zeroes.

6=Print Some few characters in some soft fonts cannot be printed on a Zebra printer. To make sure, that an installed soft font can be used it is recommended always to do a test print before using the soft font in production.

Press **F6** to install a True Type Font file as a new soft font for Zebra:
(Make sure that you do not violate any copyrights when installing the font).

```
Install TrueType font to ZEBRA from the APF3812 folder      FNT465D

Document name . . . . . : FONT.TTF

Font name . . . . . : Font

Font name PCL . . . . . Font_____

Symbol set . . . . . 1          1 = Western
                                2 = Central European
                                3 = Baltic
                                4 = Turkish
                                5 = Cyrillic
                                6 = Greek
                                7 = Arabic
                                8 = Hebrew
                                9 = Special

Member name in FONT file . Font_____ F4=List

F3=Exit                                     F12=Cancel
```

When installing you are prompted for what symbol set to use. Use the symbol set, that you want to use this soft font for. If the font is a specially designed font including e.g. the company logo you should use **9 = Special**.

13. Work with fonts in ZEBRA flash memory

As opposed to PCL output the soft fonts used for Zebra output are always downloaded when used. You can however decide to download soft fonts or images into the printers flash memory.

InterForm400 use the table below to find out which soft fonts are already loaded in the flash memory of the printer and therefore does not need to be downloaded when used.

```

Work with fonts in Zebra flash memory                                     FNT481D

Position to . . . . . _____ Outq
                                   _____ Library
                                   _____ Fontmember

Type options, press Enter.
 4=Delete

Opt   Outq      Library   Fontmember   Flash drive
_     ZEBRA     QUSRSYS  COURIER     E

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

End

```

Download a soft font into flash memory

Press **F6=Create** to download a soft font into the flash memory of a Zebra printer:

```

Create spooled file with soft font download                             FNT482D

Outq . . . . . ZEBRA_____
Library . . . . . QUSRSYS___
Fontmember . . . . . ARIAL____ F4=List
Flash drive . . . . . E          (E, B)

-----
Output queue . . . . . ZEBRA_____
                                   QUSRSYS___
Form type . . . . . *STD_____
-----

F3=Exit  F4=Prompt  F12=Cancel

```

This will create an entry in the list above, that InterForm400 will use for remembering NOT to download this soft font when used on this output queue.

This will also create a spooled file on the specified queue (which should be the one, where the printer is attached). The spooled file name will be 'ZEBRAFONT' and the user data field of the spooled file will be named the same as the downloaded. This spooled file will do the actual install of the soft font in the flash memory as well as print a sample of the soft font.

Delete a soft font from flash memory

If you use option 4=Delete for an installed soft font you will be asked to confirm and to specify the form type of the spooled file, that will do the delete from the flash memory:

```
Confirm delete of fonts                                     FNT481D

Press Enter to confirm your choices for (4=Delete).
Press F3 or F12 to return to change your choices.

Opt   Outq
  4   ZEBRA

-----
|                                     |
|   Output queue . . . .   ZEBRA      |
|                                     |
|                                     |
|   Form type . . . . .   *STD_____ |
|                                     |
|   F3=Exit               F12=Cancel  |
|                                     |
|-----|
F3=Exit  F12=Cancel                                     End
```

The entry of this soft font in the list above will be removed and a spooled file will be generated on the assigned output queue. This spooled file has the name 'DLTZEBFONT' and a user data field containing the flash drive and the soft font that will be deleted.

😊 TIP 😊

See description of option '19. Initiate ZEBRA flash memory and reload fonts and images' if there is not enough space in the flash memory.

14. Substitution ZEBRA internal fonts

The resident fonts of the Zebra printers only support Western codepages. However in order to be able to print other codepages (and use the internal fonts when possible) InterForm400 provides with the option to specify to substitute the resident font with a previously installed soft font for each code page:


```

Initiate ZEBRA flash memory and reload fonts and images      ZRL300D

Output queue . . . . . ZEBRA____
Library . . . . . QUSRSYS____

Flash drive . . . . . E          (E, B)

Form type . . . . . *STD____

F3=Exit                                                    F12=Cancel

```

State the output queue where the printer is attached, the flash memory drive and the form type to use for the spooled file, that will execute this function. The spooled file will have the name 'ZEBRAFLASH' and user data field 'INZ-RELOAD' - with status *RDY.

When the printer is done, it will print samples of all installed soft fonts and a list of all resources in the flash memory, including how much memory they take up, and the amount of memory that are free.

⚠ WARNING ⚠
When you press Enter on the screen above you will NOT be asked to confirm. So please make sure, that you have all the resources installed before pressing Enter.

8. Work with images

Images can be imported from the AS/400 folder system.

The following image standards are supported for black and white images:

- TIFF format Rev. 4.0 non-compressed or with data compression Scheme-2.
- TIFF Huffman Compressed
- TIFF format CCITT T.6 (fax group 4)
- MOD:CA including black and white image tags (If the MOD:CA file includes more images only the first image will be used)
- LZW compression
- Grey images

These formats are available with most scanners.

Colour images must be in standard windows BMP format - in colour. Sharp B/W BMP images can only be inserted with the &&IMG *PATHBMP command. (JPG images can be inserted in the PDF output, but only by using the &&IMG command in the spool file - see page **392**).

When selecting option 8. from the Administration menu the following screen appears.

```
Work with images                                IMG001D

Select one of the following options:

1. Work with black/white images
2. Work with color images

Work with Zebra images
11. Work with ZEBRA images
12. Work with images in ZEBRA flash memory

19. Initiate ZEBRA flash memory and reload fonts and images

Option: __

F3=Exit                                F6=Display messages                                F12=Cancel
```

From here you can select either if you want to work with or import black/white or color Images.

If you want to use images for Zebra output these images should be imported specifically for Zebra in option **11. Work with ZEBRA images**.

Working with black and white images

Selecting option 1. Work with black and white images the following screen will appear.

```
Work with Images                                     IMG360D

Start with . . _____

Select option. Press Enter.
  2=Change description 3=Copy 4=Delete 5=View 6=Print
  8=Display attributes 9=Convert to PCL5
Opt  Name          Description
-   Image_1       Image no. 1 for InterForm
-   Image_2       Image no. 2 for InterForm
-   Image_3       Image no. 3 for InterForm
-   Image_4       Image no. 4 for InterForm
-   Image_5       Image no. 5 for InterForm

End

F3=Exit      F5=Refresh      F8=Read from Folder      F12=Cancel
```

Note that using **5=view** requires the PCL Viewer to be installed.

☺ TIP ☺

Converting images to PCL5 format is not necessary in order to use the image from within an overlay, but performance will increase when using converted images. If necessary reverse the image when importing instead of reversing it in overlay design - it will increase performance.

Importing black and white images.

Pressing **F8**, from the Work with Images will bring the Read image from Folder screen.

```
Read Image from the APF3812 Folder                 IMG370D

Start with . . _____

Select option. Press Enter.
  1=Read without conversion  2=Read with conversion to PCL5

Opt  File name      Size in bytes      Date/Time changed
-   CEB2SW_5.TIF    19.802            2003.02.21 - 20:47:25
-   PP.TIF          10.335            2003.02.22 - 09:23:28
-   PRO1.TIF        21.079            2003.02.11 - 11:32:03

End

F3=Exit      F5=Refresh      F8=All file types      F12=Cancel
```


Select the TIFF file you want to read into InterForm400® and specify the member into which you want to add the image, and which is referred to in an overlay definition. If you select an image with grey tones you will see a screen like this:

```

Load Image from Folder APF3812                                IMG375D
Document name . . . . . : 171170.TIF
File type . . . . . : TIFF Palette color compression 32773
Width . . . . . : 400
Height . . . . . : 300

Output image name . . . I171170___
Description . . . . . Image_171170_-_in_double_size
Magnitude factor . . . . 2 1, 2, 3, 4, 6, 8

F3=Exit                F4=Prompt                F12=Cancel

```

InterForm400 will show you the size of the image in dots (300 equals an inch). If you intend to print the image larger it is a very good idea to enlarge it here. If you do so the grey areas will be presented as fine as possible in the final output.

The **magnitude factor** states how many times you want to enlarge the image. Using '2' will double the size.

Working with color images

From the "**Work with images**" menu you select option 2, if you want to work with color images.

```

Work with color images                                BMP100D
Position to . . . . . Image name
Type options, press Enter.
 2=Change  3=Copy  4=Delete  5=Display  6=Print  8=Display information
12=Work with colors in image

Opt  Image name  Description                               Status
_   Color_1    InterForm Color image 1
_   Color_2    InterForm Color image 2
_   Color_3    InterForm Color image 3

End

F3=Exit  F5=Refresh  F6=Load BMP-file  F11=View 2  F12=Cancel

```

Note that using **5=view** requires the PCL Viewer to be installed.

Import color images

To load a new BMP image from the AS/400 folder system press **F6**. Type in an image name to be used in InterForm400® and a description of same. In the field From PC-file press **F4** to retrieve a list of available BMP files. Select with option 1.

Load BMP-file		BMP200D
Image name	Color_9__	
Description	Color image no. 9 for InterForm_____	
From PC-file	Color9_____	Filename without .BMP
Finish	1	1=Matte 2=Glossy
Render	1	1=Contone 2=Device-best dither 3=Smooth contone 4=Basic contone
Color treatment	1	1=Standard RGB 2=Vivid colors
F3=Exit F4=List F12=Cancel		

Enter your selection of image details regarding **Finish**, **Render** and **Color treatment**.

☺ **TIP** ☺
You can use the TIFTOMBR command (see page 422) to import multiple TIFF files from e.g. the APF3812 folder.

Work with Zebra images

Images that you want to use for Zebra printers must be installed for Zebra (using option **11. Work with Zebra images**). You cannot use images installed for PCL or PDF output.

NOTE

Creation of ZPL output (for Zebra) requires the purchase of the ZPL module for InterForm400.

11. Work with ZEBRA images

```
Work with Zebra images                                     ZIM350D

Position to . . . . . _____ Image name

Type options, press Enter.
  2=Change description  3=Copy   4=Delete  5=Display  6=Print
  8=Display attributes

Opt  Image name  Description
-    LOGO        Company Logo
-    NEWLOGO     New Company Logo

                                                    End

F3=Exit  F5=Refresh  F8=Read from Folder  F12=Cancel
```

You can install TIFF images in the formats noted on page **319**. TIFF images can only be installed from the shared APF3812 folder.

NOTE

Even though you can specify up to 10 characters for the installed image name you should restrict the name to max. 7 characters if you plan to download the image into the flash memory of a Zebra printer.

12. Work with images in ZEBRA flash memory

```
Work with images in Zebra flash memory                                ZIM391D

Position to . . . . . _____ Outq
                               _____ Library
                               _____ Image member

Type options, press Enter.
 4=Delete

Opt   Outq      Library   Image member  Orientation  Flash drive
-     ZEBRA     QUSRSYS  LOGO          E             E
-     ZEBRA     QUSRSYS  LOGO          N             E
-     ZEBRA     QUSRSYS  LOGO          S             E
-     ZEBRA     QUSRSYS  LOGO          W             E

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

End
```

With this feature you can download images onto the flash memory of a Zebra printer. Only images with names consisting of up to 7 characters can be loaded into the flash memory. When you add an image to this list a spooled file is created, that will do the load of the image. This spooled file will also print out the downloaded image with the specified rotation.

Rotation can be **N**, **E**, **W** or **S** for North, East, West and South. These equal rotations 000, 270, 090 and 180 degrees (in the same order).

19. Initiate ZEBRA flash memory and reload fonts and images

This option will work exactly as option 19 (with the same name) on the **7. Work with Fonts** menu. Refer to page 316 for more information.

9. Work with PCL Files

The InterForm400® system features a possibility to import PCL-files from a PC by the following methods:

- From a PCL spooled file (*USERASCII) on an AS/400 output queue.
- PCL print file placed in folder APF3812 using Client Access Shared Folder.

The PCL-file can be created in any PC-Product capable of delivering an output for a HP page printer (PCL4, 5 or 5e compatible). The following are examples of products which have been tested:

- MS Windows 3.xx/95 Write
- MS Windows 3.xx/95 Paintbrush
- Word Perfect (DOS and Windows)
- MS-Word (DOS and Windows)
- MS-Publisher
- Aldus PageMaker
- CorelDraw
- Forms Designer Professional
- JetForm V3.0 and V4.0

It is recommended to work with applications making use of PCL drawing, text commands etc. instead of just creating a large PCL bit image. The PCL driver must correspond to the AS/400 attached printer intended for using the overlay.

We recommend to use an original HP driver even though your printer is another brand. Non-HP drivers sometimes include native commands, which will appear in the print out on genuine HP printers or other HP compatible printers.

No matter how many pages the PC-print consist of only the first page is stored. This is due to the fact that the PC-print is intended to be a part of an overlay for use on only one page.

The program cleans the PC-print for unwanted control codes, such as form feed, tray selections and printer reset.

When the PC-print has been read into a member in the PCL-file, it can be used in design of an overlay when selecting overlay element F=PCL file.

When selecting option **9. Work With PCL Files** on the InterForm400® administration menu, you will get the following screen:

```

Work with PCL-files PCL001D

Select one of the following options:

1. Work with B/W PCL-files
2. Work with color PCL-files

Option: _

F3=Exit F6=Display messages F12=Cancel

```

The menus for black/white and color files appear identical, but InterForm400® needs to operate with the two file types separately.

Selecting e.g. **1. Work with B/W PCL-Files** will bring up the following screen:

```

Work with PCL-files PCL100D

Position to . . . . . PCL-file

Type options, press Enter.
  2=Change  4=Delete  5=Display  7=Rename  8=Display information

Opt  PCL-file  Description  Size
_    CEBIT    Cebit 2003 logo  24.576

F3=Exit  F5=Refresh  F6=Load PCL-file  F12=Cancel
End

```

Note that using **5=view** requires the PCL Viewer to be installed.

Import PCL file

Press **F6** to load a PCL file into InterForm400®

```
Load PCL-file PCL110D
PCL-file . . . . . _____
Description . . . . . _____
Load from . . . . . -          1=PC-file in folder APF3812
                               2=Output queue
F3=Exit  F12=Cancel
```

Enter the member name into which you want to add the PCL file, and which is referred to in an overlay definition.

Enter whether you want to read the PCL file from a spool file or from the folder system. In both cases a HP-PCL driver have been used to format the overlay created in a PC application.

If reading from the folder APF3812, the PCL driver should be configured to print to a file. Either directly into the folder APF3812, or to the local hard drive and copied to the folder. If reading from output queue the PCL driver must be defined to print on a local printer on the AS/400 through Client Access.

When PCL-File and Load From is defined, the selection for the PC file will appear. If selecting read from the folder APF3812, you will be able to use **F4** to list available files

```
Load PCL-file PCL110D
PCL-file . . . . . : PH
Description . . . . . : _____
Load from . . . . . : 1          1=PC-file in folder APF3812
                               2=Output queue
From PC-file . . . . . _____
F3=Exit  F4=List  F12=Cancel
```

☺ **TIP** ☺

You can use the PCLTOMBR command to import multiple B/W PCL files from e.g. the APF3812 folder.

10. Work with palette

Change the definition of the colors.

This option is designed for optimizing the color palette for your color printer.

Work with palette				PAL100D		
Position to	Color nbr					
Type options, press Enter.						
2=Change						
Opt	Color nbr	Description	Red	Green	Blue	
-	1	Black	0	0	0	
-	2	Grey	128	128	128	
-	3	Red	255	0	0	
-	4	Green	0	255	0	
-	5	Blue	0	0	255	
-	6	Yellow	255	255	0	
-	7	Orange	255	128	64	
-	8	Brown	128	64	0	
-	9		0	0	0	
-	10		0	0	0	
-	11		0	0	0	
-	12		0	0	0	
-	13		0	0	0	
F3=Exit F5=Refresh F10=Print palette F12=Cancel					More...	
Start of list.						

It is recommended to print out the color palette on your color printer as a reference.

The predefined 8 colors are fixed and cannot be changed.

Adding a new color is done by entering 2 in front of a vacant color number. Enter the RGB combination and press Enter. The new color definition will now be available for selection in the INK settings when working with overlays. Consequently text, frames and shading can be printed in the new defined color.

11. Work with paper control options

1. Paper type to PCL-drawer conversion

Some few (old) printers does not support the possibility to select the drawer by paper type. For these few printers this function has been added, that enables the user to map all of the standard paper types to a PCL drawer number for each printer.

For a description of how to set this up for the main part of your printers refer to page **376** for more information.

```
Paper type to PCL-drawer conversion                                PAP300D

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt  Outq      Library
-    HPII      QUSRSYS
-    PRT01     QUSRSYS

                                                                End

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

Press F6=Create to add a new output queue (with a printer attached):

```
Create Data                                                        PAP305D

Output queue . . . . . HPII____
Library . . . . . QUSRSYS__

PCL drawer for PLAIN . . . . . __2
PCL drawer for PREPRINTD . . . . . __3
PCL drawer for LTRHEAD . . . . . __2
PCL drawer for TRNSPRNCY . . . . . __2
PCL drawer for PREPUNCHD . . . . . __4
PCL drawer for LABELS . . . . . __2
PCL drawer for BOND . . . . . __2
PCL drawer for RECYCLED . . . . . __2
PCL drawer for COLOR . . . . . __2
PCL drawer for CARDSTOCK . . . . . __2

F3=Exit  F12=Cancel
```

Here you can specify what drawer number each of the standard paper types should be translated into. Note, that the paper types maybe are translated into your native language on the printer display.

2. Output Sorter Bin Support

This function is used in departmental printing environments with the following purposes:

- Several users share the same printer, and want their print output in a specific output tray depending on the User name.
- Printing of jobs where an output tray should be selected depending on the overlay chosen for the job.
- Combinations of the above

This option has been tested and approved with the standard sorter units available for HP5Si and the Lexmark Optra series.

Defining an Output Sorter Bin for a User

Enter Menu point **11. Output Sorter Definitions** on the Administration menu. The following screen will appear:

```
Work with Output Sorters

Start with . . . . .

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt   Outq      Library  Sorter type  Default bin

(No output sorters defined - Press F6 for add)

F3=Exit           F5=Refresh       F6=Add           F12=Cancel      End
```

Press **F6** to add a new Output sorter definition.

One output sorter definition corresponds to one output queue. Additional output sorter definitions must be defined for each additional output queue with a capable printer attached.

```

Create                               Output Sorter Definition

Output queue . . . . . PRT02
  Library . . . . . QUSRSYS

Sorter type . . . . . HP5SI
Default output bin . . . . . 1

F3=Exit                               F12=Cancel

```

Output Queue: The output queue holding the HP5Si or Lexmark Optra printer.

Sorter Type: Not yet inspected.
Any value entered for Sorter type will default to HP5Si. This type can be used for both HP5si and the Lexmark Optra series.

Default output bin: This bin will be used for any User or Overlay which does not match any criteria defined in **Output Sorter Details**. A bin number from 1 to 11 can be defined for a HP5Si.

- Bin 1: The standard face-down bin.
- Bin 2: The standard face-up bin, which is only selectable if the sorter unit is not installed.
- Bin 3: The upper face-up bin of the sorter unit.
- Bin 4-11: The 8 face-down bins of the sorter unit.

When pressing **Enter** the following screen will appear:

```

                               Work with Output Sorter Details

Output queue . . . . . : PRT02
  Library . . . . . : QUSRSYS

Start with . . . . .

Type option, Press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt  Overlay  Pri/Sec  User profile  Binno.

(No output sorter details - Press F6 for create)

F3=Exit          F5=Refresh          F6=Add          F12=Cancel      End

```

Press **F6** to add Sorter details to you Sorter definition.

You can add additional **Sorter Detail** lines for each User profile and/or each overlay which should result in addressing of a particular sorter bin:

```

Create                               Output Sorter Details

Output queue . . . . . : PRT02
Library . . . . . : QUSRSYS

Overlay name . . . . . _____
Primary/Secondary . . . . . _      1=Primary  2=Secondary
User profile . . . . . QSECOFR___

Output bin number . . . . . 4__

F3=Exit                               F12=Cancel

```

Overlay name: Type a name of an overlay which should result in printing to a bin defined in **Output bin number**. If a user profile has been entered also, the bin will only be addressed if both **Overlay name** and **User profile** match.

Primary/Secondary: If Copy Management has been defined for the Overlay this option will decide if only the Primary or the Secondary set of copies will result in printing to a specific sorter bin. As you normally do a primary merge you should state '1' when using an overlay name.

WARNING
If Primary/Secondary is left blank the overlay is not checked!

User Profile: The AS/400 user profile which should result in printing to a bin defined in **Output bin number**. If an overlay name has been entered, the bin will only be addressed if both **Overlay name** and **User profile** match.

Output bin number: A bin number from 1 to 11 can be defined for a HP5Si.

Bin 1:	The standard face-down bin.
Bin 2:	The standard face-up bin, which is only selectable if the sorter unit is not installed.
Bin 3:	The upper face-up bin of the sorter unit.
Bin 4-11:	The 8 face-down bins of the sorter unit.

The following example illustrate a situation where all letters, using overlay IF400DEMO, printed to queue PRT02 are printed to output bin 8, except when printed by PETER which will result in printing to bin 9. All other print jobs submitted by PETER will be printed to bin 4. Any print job submitted by other users and with other overlays will be printed to the **Default output bin** defined for this Sorter definition.

Work with Output Sorter Details

Output queue : **PRT02**
Library : QUSRSYS

Start with

Type option, Press Enter.
2=Change 3=Copy 4>Delete 5=Display

Opt	Overlay	Pri/Sec	User profile	Binno.
-	IF400DEMO	1	PETER	009
-	IF400DEMO	1		008
-			PETER	004

F3=Exit F5=Refresh F6=Add F12=Cancel End

20. Import Certificates

Refer to page **481** for details of how to import certificates to be used for digital signatures in PDF files.

Service Functions

The service functions are accessed by selecting option **12** on the administration menu:

Service Functions	APF900D	
Select one of the following options:		
1. Create Demo Spool Entry		
5. Display all displayable characters		
6. Save spooled file to the folder APF3812		
7. Print Saved file to the folder APF3812		
8. Print Resource X-reference		
9. Journal menu		
21. Export of InterForm 400 resources		
22. Import of InterForm 400 resources		
40. Install/upgrade InterWord 400		
50. Apply PTF from folder APF3812		
60. Install SwiftView at drive C:		
70. Install InterForm Designer on your PC		
80. Prepare server to support InterForm Designer		
Option: __		
F3=Exit	F6=Display messages	F12=Cancel

1. Create Demo Spool Entry

If you want to study the Auto Forms Control sample delivered with this program, this option will create a spool entry in a format which could have been the output from a common AS/400 application.

Create Demo Spooled File	SMP001D
This program will print a demo spooled file in the APF3812/AFC_INPUT1 outq. The printout is intended for being merged with the IF400DEMO overlay from the file-set SAMPLE.	
If the AUTO_FORM subsystem is started, the merge operation is carried out automatically by Auto Forms Control.	
Output from the merge operation will be placed in the APF3812/AFC_OUT1 outq, from where it can be printed on a HPIII or similar PCL5 printer.	
Before the AUTO_FORM subsystem is started for the first time, you must call the APF3812/AFCINSTALL program. The subsystem is then started with this command: STRSBS APF3812/AUTO_FORM	
Press Enter to create the printout	
F3=Exit	F12=Cancel

You can create the same spool entry several times, which gives you the possibility to experiment with different attributes for the spool entries (SAVE=*YES/*NO, formtype change etc.)

5. Display All Displayable Characters

This option is meant as a tool to solve problems with character set mappings.

By making a print screen of this screen you can verify if the displayable characters will appear the same in print.

```
Displayable characters

First hex char -> 01456789ABCDEF   First hex char -> 01456789ABCDEF
      0   &-|@°µçæå\0             8   çìÇÌñqy¼HQY8
      1   é/ÉajüfAJ+1             9   ñßÑ`irz¼IRZ9
      2   âêÂËbks¥BK$2           A   #øø:«ª;¬-¹²³
Second hex  -> 3   äëÄËclt·CLT3   Second hex  -> B   .Á,Æ»°¿|ôúÔÛ
char        4   àèÀÈdmu@DMU4     char        C   *<*&øð{Ð`ö~ÖÛ
      5   áíÁÍenv$ENV5           D   ( )_ 'ý,Ý" òùÒÛ
      6   âîÃÏfow¶FOW6          E   ;+; >=þ[ Þ´ óúÓÚ
      7   }i$Ïgpx¼GPX7          F   !^?"±]@×øÿō

F3=Exit                                     F12=Cancel
```

6. Save spooled file to the folder APF3812

This function provides a possibility to save a spool file to a folder. The file can then be attached to an E-mail and send to the support engineer or forms designer. The file can be restored with menu **7. Print Saved Spooled File from the folder APF3812**, and can be used to define re-mapping in overlays or to solve support issues.

```
Save spooled file to the folder APF3812

Spooled file:
Job name      _____
User         _____
Job number   _____
File name    _____
Spool file no. _____ (no. / *ONLY / *LAST)

Name of output queue to search if spooled file is unknown:

Output queue . . . . _____
Library . . . . . _____

F3=Exit                                     F12=Cancel
```

Fill in the output queue name where the spool file resides and select with option 1. The spool file details will automatically be filled in. Following enter a name for the file.

7. Print Saved Spooled File from the folder APF3812

This function provides a possibility to restore a spool file from a folder, which has originally been saved through menu **6. Save spooled File to the folder APF3812.**

Reprint Spooled File from the APF3812 Folder

Document name _____

F3=Exit F4=Prompt F12=Cancel

8. Print Resource X-reference

When selecting this option InterForm400 will create a spooled file containing all resource cross references in InterForm400. The spooled file will be created on the output queue of the current job. You can steer where it will be created e.g. by going to a command line and execute the command:

CHGJOB OUTQ(<outq name>)

- prior to selection of this option. The CHGJOB command will change the default outq for the current job.

You can also find the spooled file after execution (if it has not been printed out) if you from the same job execute the command:

WRKJOB OPTION(*SPLF)

This will list spooled files created by the current job.

The cross reference list will list the following:

For all images, colors, PCL files, fonts etc. it will list in which lines in which overlays in what file sets the resource is used.

If font numbers are used in overlay headers or extended page definitions, then these will also be listed as ***OVLHD** and ***EXTPAG** in the 'used in' column.

All overlays are listed. If there is a reference to the overlay by use of an If..Then, you will see a line with ***CONDOVL** stating the overlay and line number that refers to this overlay through an if..then line. Overlays referring to the overlay with function 'S=Suboverlay' are listed with ***SUBOVL**.

Information inserted in autodownload will also be listed. Here you will be able to see what soft font is downloaded with what font number and in which printer group(s) this is defined.

It will also list all user exit programs referenced, and list each place where they are referenced.

9. Work with Journaling

The *import function* (see page 343) and the graphical designer (see page 461) of InterForm400® requires journaling active for some files in the APF3812 library. We recommend that you keep the default journal APFJRN in the InterForm400® library APF3812. If you wish to use an existing journal, type in the name and library of the journal. If you do not want to use a journal leave these fields blank.

Notice: In order to undo changes made by the *import function* the journal receivers has to be on the system at the time of the undo.

Journal menu	JRN001D	
Select one of the following options:		
1. Start journaling files in InterForm library APF3812		
2. End journaling files in InterForm library APF3812		
3. Delete journal and receivers in InterForm library APF3812		
Option: _		
F3=Exit	F6=Display messages	F12=Cancel

21. Export of InterForm400 resources

This option is to enable users in distributing InterForm400® resources i.e. by tape, SNDDST or E-mail. By using the Export function, resources are copied from InterForm400® to a so called Export library. The Export – and Import libraries can be considered as being temporary libraries, as the resources copied to and from these 2 libraries, usually are relevant only for a certain distribution.

The libraries can be deleted when the distribution is completed.

Use option **1. Create empty export library APFEXPORT**, to create an empty import library.

```
Work with export of InterForm 400 Resources                                EXPORTD
                                                                              System.....: INTER02
                                                                              Version.....: 2002.M01

Select one of the following:

    1. Create empty export library APFEXPORT
    2. Copy resources to export library
    3. Work with resources in export library
    4. Work with distributions
    5. Delete all resources from export library (except distributions)
    6. Delete export library APFEXPORT (including all distributions)

    8. Display resources in export library

Option
====> _

F3=Exit                                F6=Display messages                F12=Cancel
```

Copy resources to export library.

This option gives you the possibility to:
'1. Copy all the resources' created in InterForm400 to the export library, '2. Copy selected resources only' or '3. Copy the resources used in already copied overlays' to export the resources referred to in the overlays already marked for export.

```
Copy InterForm 400 resources to export library                            EXPORTD

Select one of the following resource types:

    1. Overlay definitions
    2. Font definitions
    3. Soft fonts
    4. Images
    5. PCL-files
    6. Selector definitions
    7. Split definitions
    8. Sort definitions
    9. Finishing definitions
    10. AFC definitions
    11. Form type table
    12. Palette colors
    21. ZEBRA fonts
    22. ZEBRA soft fonts
    23. ZEBRA images
```

If you select option 2 you can copy selected InterForm400® resources to export like shown above.

Note that when entering a specific overlay, only the definitions of the overlay are copied. Any images, PCL-files, fonts etc. which the overlay definitions is referring to, has to be copied separately (e.g. by use of option 3).

WARNING
If you use option '3. Copy the resources used in already copied overlays' the necessary soft fonts will NOT be included. You need to copy them for export manually.

Work with resources in export library

When all selections have been made, you can verify that all relevant resources have been copied to the export library, by using option **3. Work with resources in export library**, in the export menu.

Work with distribution

This option is used to create a distribution file.

```

Work with Distributions                                     EXP600D

Type options, press Enter.
 1=Send savefile   4=Delete savefile and PC-file   5=Display savefile
 9=Save to tape   11=Create PC-file in folder APF3812

Opt  Distribution  Description                               Status
___  EXPORT.001   Export of overlay IF400DEMO                            *BOTH

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

End

```

In this screen you will have an overview of existing distributions made. Use F6 to create a new distribution.

```

Create Distribution                                     EXP610D

Type choices, press Enter.

Suffix . . . . . ___
Description . . . . . _____

Create . . . . . _           1=Savefile only
                             2=Savefile and PC-file

Notice:
When you create a distribution all the current resources in the export-
library are copied to a savefile named EXPORT.xxx, where xxx is the suffix.
If you create a document (a PC-file) based on a distribution, it will be
placed in the folder APF3812, having the same name and content as the savefile

The content of a distribution can not be changed later.

F3=Exit  F12=Cancel

```

You have the possibility of choosing conversion to a save-file only or both a save-file and a PC-file. The suffix you enter is a way for you to separate the distribution from other already created distributions. After you have entered the details for a particular distribution, a save file will be created in the APFEXPORT library and optionally, a PC-file will be added to the APF3812 folder.

You can now locate the export PC-file in the APF3812 folder with file name "export.xxx". This file can be send by e-mail, to your consultant or to another InterForm400® site..

NOTE

It is possible to operate with more than one export/import library at a time. Refer to Appendix P on page 477 for more information.

22. Import of InterForm400 Resources

Use this option to import InterForm400® resources.

Select option **1. Create empty APFIMPORT import library**, to create an empty import library.

```
Work with import of InterForm 400 resources                                IMPORTD
                                                                              System.....: INTER02
                                                                              Version.....: 2002.M01

Select one of the following:

    1. Create empty APFIMPORT import library
    2. Receive distribution into import library
    3. Work with resources in import library
    4. Move resources to production library
    5. Delete the APFIMPORT import library

    8. Start journaling
    9. Work with changes

Option
===> 1

F3=Exit                                F6=Display messages                                F12=Cancel
```

After the import library has been created, use option 2, to receive the distribution into the library.

Select the required method for receiving the distribution.

Work with resources in import library

Upon having received the relevant InterForm400® resources, you will be able to see the various resources in the import library, by using option **3. Work with resources in import library**

Before transferring the resources in the import library to the production library, you **MUST** start Journaling. This gives you the possibility of undoing the import.

Note that if a resource i.e. a overlay called INVOICE is imported, and a overlay also called INVOICE already exists, this will be overwritten without further notice.

Journaling can be started by the option **8. Journaling** in the Import menu.

If you should regret an Import to the production library, use the option **9. Work with changes**. Here you can also see and roll back any change of overlays uploaded from the InterForm400® graphical designer (Listed with function: ***PC-SAVE**).

Receive Distribution into Import Library		IMPORTD
Select one of the following:		
<ol style="list-style-type: none"> 1. Receive distribution from tape 2. Receive distribution from network file 3. Receive distribution from PC-file in the APF3812 folder 4. Receive distribution from save file. 		
Option		
====> _		
F3=Exit	F6=Display messages	F12=Cancel

Transfer resources to the production library

Work with import of InterForm 400 resources		IMPORTD
Distribution	: EXPORT.001	System.....: INTER02
From system	: INTER02	Version.....: 2002.M01
From version	: 2002.M01	
From user	: POULD	
Description	: Export of Overlay IF400DEMO	
Select one of the following:		
<ol style="list-style-type: none"> 1. Create empty APFIMPORT import library 2. Receive distribution into import library 3. Work with resources in import library 4. Move resources to production library 5. Delete the APFIMPORT import library 8. Start journaling 9. Work with changes 		
Option		
====> _		
F3=Exit	F6=Display messages	F12=Cancel

Entering the Import menu after having received the distribution file into the import library, the details of the distribution file will be stated in the top of the Import menu.

Selecting option **4. Move resources to production library** will give you an overview of the resources ready to be moved to the production library.


```

Confirm move of all resources to production library                                IMP820D

Press F10 to move all resources to production.
Press F3 or F12 to cancel.

Resource                                Type      Notice
SAMPLE/IF400DEMO                        *OVERLAY  Exists
SAMPLE/RULER                              *OVERLAY  Exists

                                                                                               End

F3=Exit   F10=Move all resources to production   F12=Cancel

```

This screen will inform you if the overlays being moved to the production library, already exists. In this case you might want to rename the overlays.

As mentioned before accepting the move of resources will cause existing resources with the same name to be overwritten.

Renaming resources to be moved to the production folder could be done under function **3. Working with resources in import library.**

In this example, we have chosen to work with overlay definitions.

```

Work with File-sets in Import Library                                          IMP412D

Position to . . . . .                               File-set

Type options, press Enter.
  1=Move to production   4=Delete   7=Rename file-set
 12=Work with overlays in file-set

Opt  File-set      Description                                Notice
12  SAMPLE      InterForm 400 Samples                        Exists

                                                                                               End

F3=Exit   F12=Cancel

```

Note: Renaming e.g. file sets that already exists (using option **7. Rename file set**) will prevent file sets from being overwritten. Notice, however, that the users must be connected to the new file sets, in order to use the overlays imported.

Option **9. Work with changes** on the Import menu enables you to take advantage of the fact, that every import requires journaling of InterForm400® files. Using this option you can e.g. regret the last import (*IMPORT) or changes done in the graphical designer (*PC-SAVE) and roll the InterForm400® back to the state prior to the import. (Use e.g. option **1=Rebuild to status before change** on the Work with changes menu.

40. Install/upgrade InterWord 400

This option can be used for installing or upgrading InterWord400™. This is done by installing a PTF, which must be placed in the APF3812 folder.

You are prompted for what PTF you want to install like option 50. **Apply PTF from folder APF3812**. Enter the PTF number, that you want to install, press Enter and this screen below is shown. Press F10 to confirm the install or upgrade of InterWord400™.

```
Apply PTF from folder APF3812                                PTF100D

PTF number . . . . . :    2010

Press F10 to install this PTF, or
press F3 or F12 to cancel.

PTF description . . . . :    Install InterWord version 2.30.

This PTF installs product InterWord 400.

Library DCA400 will be created during installation of this PTF.

To enter InterWord issue the following command:
GO DCA400/INTERWORD

See InterWord 400 manual for more information.

F3=Exit                                F10=Install PTF                                F12=Cancel
```

50. Apply PTF from folder APF3812

```
Apply PTF from folder APF3812                                PTF100D

Enter PTF-number . . . . . _____

F3=Exit                                F12=Cancel
```

With this option you can load InterForm400® PTF's from the folder system. These PTF's can be used to correct minor problems that will not result in new releases. Enter the PTF number you have received and copied into the folder APF3812. I.e. if the file was named APF0015.PTF type 0015.

60. Install Swiftview at drive C:

With this option library APF3812 is created on a PC's C-drive and the Sview.exe file is copied from AS/400 folder QDLS/APF3812 to the created C:\APF3812.

See further information about the PCL-viewer, SwiftView on page 430.

70. Install InterForm Designer on your PC

This installs the InterForm400[®] graphical designer on the **C:** drive of the PC. See page **461** for the installation procedure of the graphical designer.

80. Prepare server to support InterForm Designer

This option starts the servers necessary for running the graphical designer. Refer to page **461** for more information.

How to create PDF files

InterForm400® is capable of creating PDF output. This can be done using the CL-command, APF3812/MRGSPLFPDF - Merge Spool File PDF. This command merges a spool file with an overlay or overlay selector like a normal PCL merge.

Note: You can also create PDF files with the **PDF File naming finishing definition**. Refer to page **206** for more information about this function.

NOTE
In order to get PDF output you need to purchase the PDF module for InterForm400.

When prompting the command (with F4), all parameters can be seen when pressing F9.

```

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

InterForm 400 file set . . . . . > KARTSET      _____  Character value
Overlay name . . . . . KLICHE      _____  Character value
or Overlay Selector name . . . . . SELNAM      _____  Character value
Primary/Secondary set . . . . . VRSION      *PRI      *PRI, *SEC
Spooled file . . . . . FILNVN      *NONE_____  Name, *NONE
Job name . . . . . JOB      *_____  Name, *
  User . . . . . _____  Name
  Job number . . . . . _____  000000-999999
Spooled file number . . . . . SPLNBR      *ONLY_     Number, *ONLY, *LAST
Code page . . . . . CODPAG      *INPUT     Number, *INPUT
Color support . . . . . COLORSUP      *YES       *YES, *NO
Bookmark definition name . . . . . BMKDEF      *NONE_____  Name, *NONE
Signature Certificate . . . . . CERTIFIC      *NONE_____  Name, *NONE
Output type . . . . . OUTTYPE      *STMF_     *STMF, *EMAIL, *VIEW

More...

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

```

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

To stream file . . . . . TOSTMP      _____

Filenamng definition name . . . . . NAMEDEF      *NONE_____  Name, *NONE
Replace stream file . . . . . REPLACE      *NO_____  *NAMEDEF, *NO, *YES
To attachment . . . . . TOATTACH      _____

More...

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

To e-mail address: TOADR _____

Name *NONE_____

Subject SUBJECT *NONE_____

More...

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

Message MSG NONE_____

—

End of line escape character . . MSGESCCHR *NONE *NONE, //, /%, /&

Bottom

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

From e-mail address: FROMADR *CURRENT_____

Name _____

Save e-mail SAVE *NO_ *NO, *YES

Bottom

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

CC e-mail address: CC _____

Name *NONE _____

More...

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

BCC e-mail address: BCC _____

Name *NONE _____

Encrypt PDF file	ENCRYPT	*NO_	*NO, *YES
Owner Password	OWNERPWD	_____	
—			
User Password	USERPWD	_____	
—			
User Access Limitations	LIMITS	*NONE_	*NONE, *NOPRINT, *NOCOPY...
	+ for more values	_____	

Bottom

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

Merge spooled file and overlay (MRGSPLFPDF)

Type choices, press Enter.

Additional Parameters

Primary target device PRITGTDEV *PRT *PRT, *DSP

Bottom

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

Special parameters for this command include:

- COLORSUP** Specify if the PDF output is to be B/W or color.
- BMKDEF** If wanted you can refer to a bookmark definition and get bookmarks in the created PDF file. See on page **238** how you create a bookmark definition. This value can also be determined by a used PDF file name definition - refer to the description of the **NAMEDEF** parameter.
- CERTIFIC** You can digitally sign the PDF file with this reference. For description of digital signatures refer to page **480** for more information. This value can also be determined by a used PDF file name definition - refer to the description of the **NAMEDEF** parameter.
- OUTTYPE** Specify ***EMAIL** for creating an E-mail with the PDF file as an attached file, ***STMF** to create a PDF stream file in IFS or ***VIEW** to view the result directly in Acrobat Reader (if associated with '.PDF').
- TOSTMF** When creating a PDF file using the ***STMF** option on the **OUTTYPE** parameter, you state where to place it and what to call it on the **TOSTMF** parameter. E.g. if you state: /QDLS/APF3812/DEMO.PDF you create a file called DEMO.PDF in the APF3812 folder. Use ***NAMEDEF** to refer to the path and file name stated in the PDF file naming definition stated in **NAMEDEF**. Remember that files, that are digitally signed cannot be created in QDLS.
- NAMEDEF** If you insert a PDF file naming definition and use **TOSTMF(*NAMEDEF)** then the information in the PDF file naming definition will be used for the bookmark definition (**BMKDEF**), Signature certificate (**CERTIFIC**) and encryption (**ENCRYPT**, **OWNERPWD**, **USERPWD** and **LIMITS**) unless these parameters have the value ***NONE** or have a specific value other than blank.
- REPLACE** States if the PDF file created is allowed to replace an existing PDF file. ***NAMEDEF** refers to the REPLACE value of the PDF file naming definition stated in the NAMEDEF parameter.
- TOATTACH** If you are creating an E-mail, the **TOATTACH** parameter states what to call the attached file.
- FROMADR** Specify the e-mail address and name of the user, who is the sender of the e-mail. ***CURRENT** will retrieve the information from directory entry of the user running the current job.
- ENCRYPT** States if you want to encrypt the PDF file.
- OWNERPWD** States the owner password of the PDF file. Requires that the **ENCRYPT** parameter is ***YES**. When you open the file with this password all is allowed. This is the same as 'Master password' in the PDF file naming and E-mail finishing definitions.
- USERPWD** The user password can be used to open an encrypted PDF file with the limitations specified in the **LIMITS** parameter
- LIMITS** This specifies the limitations of the access to the PDF file when a user opens the PDF file (with the USERPWD password). Possible values are: ***NOPRINT**, ***NOCOPY** and ***NOEDIT**. Details for each value can be found on page **204**.
- PRITGTDEV** The primary target device for the PDF file.

👉 **NOTE** 👉

Password protection and/or digital signature of the PDF file requires a purchase of the PDF security module for InterForm400.

The **subject** and **message** is used for the e-mail. The **End of line escape character** parameter states which characters are to be interpreted as an end-of-line code in the message field (used only for e-mails).

Resources that can be used for PDF output

If you want to insert images, you can insert **TIFF** images (B/W images) converted to PCL5 or **BMP** images (color images) in the overlay. You can also insert **JPEG** images from IFS. But note, that you can only insert JPEG images by inserting **&&IMG *COLOR** commands in the merged spool file (see page 392.).

Design elements entered in overlay design e.g. frames, lines, shadings etc. are also supported for PDF output.

PCL files and **can not** be used for PDF output (They are ignored if included in the overlay).

Fonts used in PDF output

When referring to specific type faces which e.g. normally could be printer resident type faces, the type faces are converted as follows:

Proportional Type faces (fonts) like 52, 4148, 4168, 16602, 24580 and 24607 are printed as Arial.

Proportional Type faces (fonts) like 5, 4101, 4113, 4197, 16901, 24591, 24623, 24703 and 25093 are printed as Times New Roman.

Courier is used for all fonts with fixed width.

If you want to use other type faces, you have to install the font as a True Type Font (TTF). See page **289**.

IFS directories used by MRGSPLFPDF

When using the MRGSPLFPDF command, a directory called APF3812Mail is created in IFS. Inside the APF3812Mail directory another 3 directories are created:

APF3812Mail/Log

If you specify SAVE(*YES) in order to save the e-mail, the e-mail will be saved as an Outlook mail in this directory.

APF3812Mail/MergeLog

In earlier versions of InterForm400® a copy of each created PDF file was saved in this directory. It is a good idea to clean up this directory.

APF3812Mail/OutBox

This directory holds the e-mails, that can not be sent, if e.g. the Mail Server Framework is not started. This can be started with the command: STRMSF.

APF3812Mail/PDFtemp

Directory for temporary work files used when creating PDF files. Used files are automatically deleted.

Refer to page **459** for information of how to enable SMTP on the AS/400.

Appendix A - Installation

System Requirements

Your AS/400 system must run at least OS/400 version 4 release 4 modification 0 or newer. Note, that from the next year version i.e. the 2006 versions only OS400 V5R1M0 or newer will be supported.

Disk space required for InterForm400 is 500 Mb not including additional modules (e.g. InterWord400, Interfax400..).

If you intend to use the InterForm400® Graphical Designer it is required that the OS/400 is version 4 release 5 modification 0 or newer. (See page **461** for details on the Graphical Designer).

The printers which are used with the InterForm400® system should be configured as 3812 model 1 (non-IPDS). Auto-configuration will, on most protocol converters for HP printers or compatibles, result in a 5219 device definition. This will bring some limitations to the system, and if the protocol converter can not be configured to report to the AS/400 as a 3812 device it is recommended to make the device description manually (see page **367**) and disable auto-configuration on the system.

Only exception to the rule about configuring as a 3812 is when the printer port of a 3197 display station is used. In this case the configuration should be for a 4214.

First Time Installation

The system is delivered on CD-ROM.

It is recommended that you follow the steps described in the **Getting Started** section on page 21.

License Codes

The license code can be entered through the menu **50. License Information** in the InterForm400® **Administration menu**.

To supply you with a license code you need to provide the **serial number**, the **model** of your iSeries and feature code (DSPSYSVAL QPRCFEAT)..

This information can be displayed in menu **50. License Information** in the InterForm400® **Administration menu**:

```

License Information for InterForm 400                                LIC320D

InterForm 400 version . . . : 2006.M01
Model / Feature . . . . . : 270 22A2
Serial number . . . . . : 65BD1BB
Operating system . . . . . : V5R2M000

Type choices and then press Enter. Press F3 or F12 to exit.

InterForm 400 license code . _____

Module          Type      Subtype  Expirydate
*Classic        *Demo   *Full
*PDF-Security  *Demo   *Full
*InterWord      *Demo   *Full
*E-boks         *Demo   *Full
*SwiftView      0

```

Bottom

F3=Exit F5=Refresh F12=Cancel F16=Save

Enclose a printout of this screen when ordering a production code, or write the first five lines of information on your purchase order. Enter or paste the license code into this screen and press Enter (once) and then F16 to save it.

InterForm400 can run a permanent code and a temporary code simultaneously: When the temporary code runs out InterForm400 will fall back to the permanent code.
 Press **F17** to change the field for the license code to easier paste a new code.
 Press **F22** to display the current licence code(s) used.
 Press **F23** to clear a license code entered earlier. When you press **F23** you enter e.g. 'test' or 'prod' as the license code type.

⚠ WARNING ⚠
 After you have entered a license code you should not press **F5=Refresh** before you have saved the license code with **F16=Save**. If you do you will clear the license code.

Release Update

⚠ WARNING ⚠
 If your current InterForm400® is configured as a light version (the text **LIGHT version** will be displayed in the heading of the InterForm400® main menu) the AFC-definitions AFC_INPUT1 and AFC_INPUT2 will be preserved.
 If your current InterForm400® configured as a **test or production version** (the text **LIGHT version** is not displayed in the heading of the InterForm400 main menu) the AFC-definitions AFC_INPUT1 and AFC_INPUT2 will be **overwritten** by the default definitions of the InterForm400® demo.

Insert the InterForm400® CD into the iSeries and enter the following on a command line:

LODRUN DEV(Device)

Where Device is the name of the Device containing the media. (If you are using the systems default CD-ROM drive you can use *OPT instead of the Device-parameter.

InterForm400® first tests if any user exit programs called by InterForm400® are not owned by QSECOFR (They must be owned by QSECOFR because of security). If any such programs are called from the current InterForm400® installation they are listed below: (You will not see the screen, if all is OK).

```

System . . : INTER03
*****
*                               Security changes required                               *
*                               *                                                       *
* Owner of all InterForm exit programs must be changed to QSECOFR                    *
*                               *                                                       *
* Press F10 to change owner to QSECOFR.                                           *
* Press F3 or F12 to cancel.                                                       *
*                               *                                                       *
*****

Program      Library      Description
TEST_AUT     KSE          Sample source for a AFC function-8 program

Bottom

F3=Exit   F10=Change owner to QSECOFR   F12=Cancel

```

You must confirm the change of object owner for all the programs with F10 before the installation proceeds.

You are then prompted to choose your preferred language for the installation:

```

InterForm 400 version 2006.M01                                INTER02
DE: Wählen Sie bitte eine Sprache aus, während verwendet zu werden installieren
    Eingabetaste --> Weiter
DK: Vælg sprog for instruktioner under denne installation.
    Tryk på Enter for at fortsætte.
ES: Seleccione por favor un lenguaje para ser utilizado durante instalán.
    Pulse Intro para continuar.
FR: Veuillez choisir la langue à utiliser pendant l'installation.
    Appuyez sur ENTREE pour continuer.
GB: Please select a language to be used during install.
    Press Enter to continue.
PT: Favor selecionar uma língua a ser usada durante a instalação.
    Aperte Enter para continuar.
GB DE=Deutsch, DK=Dansk, ES=Espanöles, FR=Français, GB=English, PT=Português
F3=Exit   F12=Cancel

```

The Installation will automatically detect if a version of InterForm400® is on the system, and if so, the following screen will be displayed:

```
INS0104                      InterForm 400 version 2006M01                      INTER02

A previous version of InterForm 400 is currently installed.

Current version . . . . . : 2003M04

Library . . . . . : APF3812

Press Enter to continue.
```

Following you will be prompted for entry of the InterForm400® license code - unless your machine is a known machine by the installation program, then it will know the license code and just proceed. If you enter a code here it will be validated. You can also leave it blank, but then you cannot use InterForm400 before a valid code has been entered.

```
INS0125                      InterForm 400 version 2006.M01                      INTER02

Type license information, press Enter.

InterForm 400 license code  _____

Notice:
License type and code must match.
InterForm 400 cannot be used before a valid license code is entered.

F3=Exit  F12=Cancel
```

In the following screen you can set the preferred language used in InterForm400. The language can be changed later if needed. This is done by option 2 at the *Administration menu* to change the global settings for InterForm400® or use option 4 to select language for specific InterForm400® users.

Note: InterForm400® CL commands like MRGSPLPDF, APFEDTPRT etc. will be installed in the language chosen here, and can not be changed unless a re-installation is made.

```

INS0121                                InterForm 400 version 2006M01                                INTER02

Select primary language, press Enter.

Primary language . . . . . GB    DE=Deutsch, DK=Dansk, ES=Españoles,
                                FR=Français, GB=English, PT=Português

Current value . . . . . :    GB

Primary language is used for:
1. The language of commands.
2. The language of displays.
3. The language of the manual.

Notice:
Language of commands can only be selected during install.
Primary language can be changed at the administration menu option 2.

```

It is recommend to use the journal APFJRN in library APF3812.
This journal will be created during install, if used.

If you select another journal, then this journal must already exist.

```

INS0122                                InterForm 400 version 2006M01                                INTER02

Select journal, press Enter.

Journal . . . . . APFJRN
Library . . . . . APF3812

Current journal . . . . . :    APFJRN
Library . . . . . APF3812

If a journal is selected, changes are recorded to a journal receiver.

It is recommend to use the journal APFJRN in library APF3812.
This journal will be created during install, if used.

If you select a journal in a other library this journal must already exist.

```

Since the installation is an *upgrade* you have the possibility to chose the Installation Method.

The Installation Method lets you decide if you want a warning before the installation ends the subsystem AUTO_FORM and renames the existing APF3812 library to APF3812OLD. The InterForm400™ system can be used as normal until this takes place and thus reducing down time.

Select option 1 if no users will need InterForm400® until the installation is complete. Select option 2 if InterForm400® is in use while the upgrade is taking place. Then inform the InterForm400® users to leave InterForm400® before pressing F10 to continue when the *Confirm update of InterForm* screen appears.


```

INS0123                      InterForm 400 version 2006M01                      INTER02

Select installation method, press Enter.

Installation method . . . . . 2      1=Rename without warning
                                      2=Rename with warning

During install the library APF3812 will be reanmed APF3812OLD.
For method 2 a display will be shown before the library is renamed and
subsystem AUTO_FORM will be ended.

F3=Exit  F12=Cancel

```

Select whether to start subsystem AUTO_FORM automatically when installation is complete.

```

INS0124                      InterForm 400 version 2006M01                      INTER02

Select AFC subsystem start option, press Enter.

Start AFC . . . . . 1      1=Start subsystem
                                      2=Do not start subsystem

Select whether to start subsystem AUTO_FORM automatically when
installation is complete.

F3=Exit  F12=Cancel

```

If you selected option 2 for *Installation Method* the following screen will be shown when InterForm400® is ready to complete the release update. Press F10 when you are ready to complete the installation

Press F10 to begin the upgrade

```

INS0129                      InterForm 400 version 2006.M01                      INTER02

Start installation with selected options.

Device . . . . . : OPT01
  Category . . . . . : *OPT
CISC/RISC . . . . . : *RISC
License type . . . . . : *Test
Licensed modules . . . . . :

Primary language . . . . . GB
Journal . . . . . APFJRN
  Library . . . . . APF3812
Installation method . . . . . 1=Rename without warning
Start AFC . . . . . 1=Start subsystem
Current version . . . . . : 2003.M525
Library . . . . . : APF3812

Press F10 to install.

F3=Exit  F10=Start installation  F12=Cancel

```

Note: If you had any spooled files in any output queues in the library APF3812 before the update took place these spooled files will now reside in output queues in library APF3812OLD having the same name as the original output queues.

You should keep the old InterForm400® library (APF3812OLD) on the system until you are sure that you have tested that everything operates to your satisfaction with the new version of InterForm400®.

Upgrade remote sites

You can upgrade InterForm400® on another AS/400 from your local machine as follows:

On the local machine restore the library APF3812NEW:.

Restoring from the CD-ROM drive:

```
RSTLIB SAVLIB(APF3812NEW) DEV(OPT01) OPTFILE(APFRISC)
```

Distribute the library to the remote AS/400's and execute the following command from the command line :

```
APF3812NEW/APF3812NEW
```

WARNING

*The command **APF3812NEW** will delete all overlays in file-set **SAMPLE** and copy new sample overlays into this file-set. If you have created overlays in file-set **SAMPLE** you should copy them to another file-set prior to the following. Also changes made to AFC-definitions in AFC-job/queue **AFC_INPUT1** will be overwritten by the default definitions of the InterForm400® demo.*

WARNING

*Do not place any user objects like output queues or programs in the APF3812 library. They will **not** be copied to the new APF3812 library as a part of the upgrade.*

Relations to Other Applications

The InterForm400® system is developed for co-existence with other applications. Note the following:

- The InterForm400® system does not change the library-list, and it is not necessary to have the library APF3812 in the library list.
- You should not place any objects in the APF3812 library as this library is exchanged when upgrading InterForm400®. (Only InterForm400® resources are copied to the new APF3812 library).
- The InterForm400® system does not change local data areas.
- If the InterForm400® system is called from another system the system does not SIGN OFF, instead it returns to the calling program (APF3812/APFMENU is not the initial program of the user)
- If InterForm400® is running as a group job, the InterForm400® main menu will show that you can suspend the InterForm400® system by pressing the ATTN-button.
- The system may create files in library QTEMP.
- An abnormal termination will never harm the InterForm400® system.

Performance

Printing

InterForm400® generates very compact PCL code.

You will notice that using large images can increase the time to download the merged spool files to printers.

If printing multiple pages the system makes extensive use of PCL macros, which are stored in the printer and called for all pages in the spool entry. If a paper jam occurs, and the printer loose its resources, the macros will be placed in the printer again as the spool entry is released again.

When using imported PC forms (PCL files, see page 325) it will be the application producing the PCL file which is decisive for the size. Imported PCL files will also be loaded as PCL macros as described above.

Processing

It is difficult to calculate the exact processor time consumption of the system.

In general the most process demanding operations of the system is to calculate right adjustment of proportional spaced fonts, and complex conditional search routines.

Adding overlay elements like frames, lines, images and PCL files requires a minimum of processing.

☺ **TIP** ☺

If the printer is PCL5 capable (most are nowadays) then create only barcode soft fonts for PCL5 (instead of PCL4). They will print out quicker.

☺ **TIP** ☺

When importing TIF images then convert the file to PCL5. It will print out quicker and can then also be used for PDF output. If the imported image needs to be reversed, then reverse when importing it instead of reversing it in overlay design.

Appendix B - Attaching Printers to the iSeries

This chapter provides information on how to configure the physical attachment of HP compatible Laser printers to your AS/400 network.

Note: Below it is proposed to change the system value, QAUTOCFG. This change may cause problems in certain rare setups. **Remember always to have the approval of your AS/400 responsible before changing any system value.**

Attachment Methods

Most modern laser printers are designed for operation with an MS-Windows platform and is equipped with a Parallel Centronics port. Most of these printers understands HP-PCL5 which is an ASCII based print language. In order for the printer to operate on the AS/400 a physical and logical protocol conversion must be used.

The attachment of printers can be made by any of the following methods:

- ! Twinax to Centronics protocol converter (5219/3812 SCS compatible)
- ! Printer port of a 5250 Terminal
- ! Printer port of a PC with AS/400 printer session capabilities (ASCII transparency compatible)
- ! Internal or external LAN Print Server supporting TCP/IP LPD, TN5250E or Lexlink (Lexlink connection is not explained in this manual)
- ! Other attachment which can print through a server receiving ASCII print data from the AS/400.

InterForm400[®] contains an EBCDIC to ASCII conversion program. When using the interface types ASCII850 and ASCII8 in InterForm400[®] this protocol conversion program is used for spool data as well. The following sections describe attachment of printers using the interface types ASCII850 and ASCII8.

Attaching through a Twinax Protocol Converter

The printer can be attached through any protocol converter emulating an IBM SCS printer and which understands the ASCII transparency SCS command (03h). This command is a standard feature according to the 5250 attachment standard, and should be supported by most interfaces emulating 5219 or 3812.

The interface should preferably be configured to the system as 3812 model 1 SCS Printer device. If another SCS device description (eg. 4214) is specified enabling host print transform will allow ASCII transparency to be sent to this device as well. Refer to section **Attaching through a 5250 Terminal**.

System Configuration by Auto Configuration

The easiest way to create the device description for the protocol converter is using Auto Configuration.

1. Enable Auto Configuration with the following CL command.

```
CHGSYSVAL SYSVAL(QAUTOCFG) VALUE(' 1')
```

2. An available Twinax device address (0-6) should be provided by the system administrator. Follow the instructions of your protocol converter in order to alter this switch setting.
3. Attach the protocol converter to the Twinax network and power it on. After a while a printer device and an output queue is created on the system. The name of the device and the queue will be identical and will normally have a notation like "PRT05" or "PRT010305". Type the following command and scroll to locate the new printer device:

WRKDEVD *PRT

4. The device will indicate the text "Created by auto configuration". Use option 5 to display the device description. Verify that the device type is 3812. If it indicates 5219 then proceed with section **Changing device description from 5219 to 3812**.
5. If the device indicates a 3812 model 1 you just need to start the printer writer:

STRPRTWR PRTXXX

6. Go to section **Print font reference** list for testing the connection
7. Note that if Auto Configuration is enabled on the AS/400 the protocol converter might change the device description back to 5219 the next time it is powered ON. Disable auto configuration to prevent this problem:

CHGSYSVAL SYSVAL(QAUTOCFG) VALUE(' 0')

Configuring a Printer Device Manually

The following describes how to create a new device without the use of Auto Configuration.

1. The following information for the device must be provided by the system administrator: **Port Number** (0-7), the **Switch setting** (0-6) and the **Attached controller** (CTL0x).
2. Make sure Auto configuration is disabled by the following CL command.

CHGSYSVAL SYSVAL(QAUTOCFG) VALUE(' 0')

3. Follow the instructions of your protocol converter in order to set the Twinax address switch setting (0-6).
4. Attach the protocol converter to the Twinax network and power it ON.
5. The following CL command will create a new device description called PRTXXX for a 3812 model 1 on port 2 switch setting 3 and controller CTL01.

**CRTDEVPRT DEVD(PRTXXX) DEVCLS(*LCL) TYPE(3812)
MODEL(1) PORT(2) SWTSET(3) CTL(CTL01) FONT(11)**

If you are not able to fit the entire command on the command line, you can prompt the command CRTDEVPRT with **F4** and fill in the rest.

6. Vary on the device with the following command

VRYCFG CFGOBJ(PRTXXX) CFGTYPE(*DEV) STATUS(*ON)

7. Start the printer writer with the following command:

STRPRTWTR DEV(PRTXXX)

- Note that if Auto Configuration is enabled on the AS/400 the protocol converter might change the device description back to 5219 the next time it is powered ON. Disable auto configuration to prevent this problem:
CHGSYSVAL SYSVAL(QAUTOCFG) VALUE(' 0')

Changing Device Description from 5219 to 3812

In order to change a device description it is necessary to delete the device description for the Twinax attached printer emulating 5219, and create a new description for a 3812 model 1. In the following we assume the name of the device to be **PRTXXX**.

- First you must determine the controller number, the port number and the device address of the existing 5219 device. The following CL command will display the existing device description:

DSPDEVD PRTXXX

```

                                     Display Device Description
                                     INTER01
                                     16.01.01 09.27.57
Device description . . . . . : PRTXXX
Option . . . . . : *BASIC
Category of device . . . . . : *PRT

Device Class . . . . . : *LCL
Device type . . . . . : 5219
Device model . . . . . : D2
Advanced function printing . . . . . : *NO
Port number . . . . . : 2
Switch setting . . . . . : 3
Online at IPL . . . . . : *YES
Attached controller . . . . . : CTL01
Font:
  Identifier . . . . . : 011
  Point size . . . . . : *NONE
Form feed . . . . . : *AUTOCUT

Press Enter to continue

F3=Exit   F11=Display keywords   F12=Cancel
```

Make a note of the **Port Number** (2), the **Switch setting** (3) and the **Attached controller** (CTL01).

- In order to make changes or delete the device description you must end the printer writer PRTXXX. The following command will end the writer immediately:

ENDWTR WTR(PRTXXX) OPTION(*IMMED)

- Now you must vary off the device by the following command:

VRYCFG CFGOBJ(PRTXXX) CFGTYPE(*DEV) STATUS(*OFF)

- You are now able to delete the 5219 device description by this command:

DLTDEVD DEVD(PRTXXX)

- Continue from step 5 in the previous section, but use the controller number, port and address settings from the old device description:

Attaching through a TCP/IP Raw Socket (Port 9100/3700)

Some LAN Print Servers from e.g. HP, Lexmark, Kyocera and IBM offer the possibility of attaching through a raw TCP/IP socket, which enables the host to communicate bidirectionally with the printer using HP P.J.L. Support for this print method was introduced with OS/400 V3R2 and V4R1. The advantage of this method compared to standard LPD printing, is that the host receives status reply from the printer.

1. The following information for the device must be provided by the system administrator: **IP address** and **Port Number** (most print servers uses port 9100 as raw socket (HP, Lexmark and Kyocera), while IBM Print Servers uses port 3700 or 2501. Consult the user manual of your IBM printer for correct port no..
2. The following CL command will create a new device description called PRTXXX for a 3812 model 1 on port 9100 and IP address: 222.2.1.235.

```
CRTDEVPRT DEVD(PRTXXX) DEVCLS(*LAN) TYPE(3812)
MODEL(1) LANATTACH(*IP) PORT(9100) FONT(11)
FORMFEED(*AUTOCUT) PARITY(*NONE) STOPBITS(1)
TRANSFORM(*YES) MFRTYPMDL (*HP4 )
RMFLCNAME(' 222. 2. 1. 235' ) SYSDRVPGM(*HPPJLDRV)
PRTERMSG(*INFO)
```

If you are not able to fit the entire command on the command line, you can prompt the command CRTDEVPRT with **F4** and fill in the rest.

☺ **TIP** ☺

*It is a good idea (but not necessary) to specify **PRTERMSG(*INFO)**. This value will make the printer job automatically recover from a message if possible. if e.g. the printer runs out of paper the printer job halts with an error. When you add paper the printer job will detect this and 'reply' to the message automatically.*

See a list of some of the possible port numbers at this site:

http://www-912.ibm.com/s_dir/slkbase.nsf/1ac66549a21402188625680b0002037e/94e73364f979e388862569030071c398?OpenDocument&ExpandSection=3&Highlight=0,printing,port,number#_Section

3. Vary on the device with the following command

```
VRYCFG CFGOBJ(PRTXXX) CFGTYPE(*DEV) STATUS(*ON)
```

13. Start the printer writer with the following command:

```
STRPRTWTR DEV(PRTXXX)
```

Attaching through a 5250 Terminal

A 5250 terminal with a printer port is in reality working as a Twinax protocol converter. The printer session has a dedicated device address which corresponds to a printer device description on the AS/400. You should therefore follow the instructions in section **Attaching through a Twinax protocol converter**.

The requirement to the printer session of a 5250 terminal is that it understands ASCII transparency. This is supported by terminals such as IBM 3197, IBM 3477 and IBM 3487. Other brands like Memorex Telex will in most cases also work. Consult the documentation of the terminal or your agent for further information.

In most cases the terminal will emulate either a 5219 or 3812 SCS printer. Some may only provide a 4214 emulation which will require Host print transform to be enabled on the system in order for ASCII transparency to be transmitted.

In case the printer session of your terminal configures as eg. a 4214 you should perform the following steps to enable Host Print Transform for the device. Note that Host Print Transform can be enabled for any SCS printer device description including 5219 and 3812.

InterForm400[®] makes the protocol transformation itself which means IBM Host Print Transform will only be interpreting the ASCII transparency command, thereby preventing Host Print Transform to consume processor power.

Enabling Host Print Transform on an existing Printer Device Description

This procedure will work for any existing SCS printer device description:

1. In order to make changes to the device description you must end the printer writer PRTXXX. The following command will end the writer immediately:

```
ENDWTR WTR(PRTXXX) OPTION(*IMMED)
```

2. Now you must vary off the device by the following command:

```
VRYCFG CFGOBJ(PRTXXX) CFGTYPE(*DEV) STATUS(*OFF)
```

3. The following CL command will enable host print transform:

```
CHGDEVPRT DEVD(PRTXXX) TRANSFORM(*YES) MFRTYPMDL(*HP4)
```

Note that the choice of manufacturer/model (MFRTYPMDL) is indifferent for InterForm400[®] as it controls the protocol conversion itself. Only printing not controlled by InterForm400[®] will be formatted by Host Print Transform. For this type of printing the choice of manufacturer/model should be *HP4

4. You can now vary on the device

```
VRYCFG CFGOBJ(PRTXXX) CFGTYPE(*DEV) STATUS(*ON)
```

5. Start the printer writer again by the following command:

```
STRPRTWTR DEV(PRTXXX)
```

Attaching through a PC Printer Port

If your PC emulates a 5250 Twinax terminal through a Twinax adapter card you should consult your documentation for setting up a Printer session. Refer to the section **Attaching through a 5250 Terminal** for configuring the printer session to the AS/400.

Client Access/400 for Windows 95/NT

The following steps will take you through how to configure a printer emulation on a PC with Client Access for Windows 95/NT.

1. First, ensure the PC printer, most likely on LPT1, is configured and recognized by Windows. At the Windows desktop, select My Computer, and select Printers. If the printer is not defined, select Add Printer and follow the wizard instructions.
2. From the Client Access folder, select Accessories and then select Start/Configure Session. At the Configure PC5250 screen, select an AS/400 system and enter a printer

name in the Workstation ID field. This definition is the same as for a 5250 SNA printer emulation sessions and is saved in the [5250] section of the user's workstation profile, as are SNA connections. Under Type of emulation, click the Printer option and then click the Setup button.

3. At the PC5250 Printer Emulation Setup screen, specify the message queue and library where print messages should be sent. The default is QSYSOPR. Select Transform Print Data and Printer model HP Laserjet III.
4. A host session is started. The Session panel is displayed with an overlying printer status panel whose title bar contains the AS/400 system name and the printer ID. If you didn't specify an ID at the Configure PC5250 panel, the AS/400 automatically creates a printer device (if the AS/400's system value QAUTOVRT is not set to 0) and its name is displayed. Select Printer Setup from the Session panel's File menu.
5. At the Printer Setup screen, check that the correct PC-attached printer is highlighted as the default printer. You can ignore the Setup button. It takes you to a panel that lets you define additional printing information such as paper size and orientation and number of drawers. The AS/400 can override much of this information. Click OK.
6. Back at the Session panel, select Save As from the File menu. At the Save WorkStation Profile as screen, enter the printer ID in the File Name field and select the folder in which you want to store the printer emulation profile. The file name should have a .WS extension. Click OK. You will be asked whether you want an icon and in what folder it should be placed. I suggest that you say Yes to the icon and the location recommendation.

Attaching through a TCP/IP LPD Printer Server (Remote Writer)

A TCP/IP LPD Printer Server exists in form of interface boxes, integrated Printer interfaces, Spool Servers and Workstation Daemons.

No device description is used when printing by use of a remote writer. The TCP/IP address of the Printer Server is defined directly in the output queue definition.

You can create or change an existing output queue to define an output queue to send print to an LPD Printer Server.

Creating or Changing an Output Queue for TCP/IP LPD Printing

The following presuppose that TCP/IP has been configured and started on the AS/400:

1. In case a printing program is already assigned for the queue use the following command to end it:

```
ENDWTR WTR(PRTXXX) OPTION(*IMMED)
```

2. Enter the following command to change the queue:

```
CHGOUTQ OUTQ(QUSRSYS/PRTXXX) and press F4
```

(For creating a new queue just replace CHG with CRT.)

3. Now fill in the following fields:

Remote System **RMISYS(*INTNETADR)**

Remote Printer Queue **RMPRTQ(PR1)**

(Insert the required port name for the queue. Some manufacturers require a specific name for the LPD queue in order to allow binary

transfer, and others will automatically default to binary transfer if a random name is entered. Consult the manual for your Printer Server, or try with eg. PR1).

Examples: Use 'raw1' for the HP JetDirect, and 'lp' for ZebraNet PrintServer.

See a list of some of the possible queue names at this site:

<http://www->

912.ibm.com/s_dir/slkbase.nsf/1ac66549a21402188625680b0002037e/b49aa3cf3ce97d0d862565c2007d4393?OpenDocument&Highlight=0,printing,port,number

Writers to autostart	AUTOSTRWTR(1)
Connection Type	CNNTYPE(*IP)
Destination Type	DESTTYPE(*OTHER)
Transform SCS to ASCII	TRANSFORM*YES

(This value could be *NO if the queue should only be used for print controlled by InterForm400®)

Manufac. type & model	MFRTYPMDL(*HP4)
----------------------------------	------------------------

(This value is not important if you are only printing through InterForm400® as InterForm400® makes the protocol conversion)

Internet Address	INTNETADR(' 222. 5. 1. 235')
-------------------------	--------------------------------------

(The IP address of your Printer Server. Consult your system administrator)

Destination options	DESTOPT(' XAIX')
----------------------------	---------------------------

(This will support e.g. the number of copies specified on the spool file.)

4. You can verify the connection to the printer using PING from an AS/400 command line:

```
PING RMFSYS(' 222. 5. 1. 235' )
```

5. Creating and changing a queue for printing LPR will automatically create and start a printing program on the AS/400. Alternatively the printing program can be started with the following command:

```
STRRMWTR OUTQ(QUSRSYS/PRTXXX)
```

☺ **TIP** ☺

When setting up printing for a Zebra printer it is recommended to use a remote writer (or attach through a PC printer port) in order to avoid the printer job ending abnormally.

Attaching through a TN5250E Print Client

TN5250E print clients exist incorporated in print server devices, and as software in relation to terminal programs like Client Access version 3R2.

Intermate A/S produces external and internal print servers that connects to the AS/400 via TN5250E. Please refer to the User's Guide for details on how to configure such a device.

Testing the Connection

In order to test if the connection is working you can print the InterForm400® font list. If this list prints properly, the connection is working. Compare the list with the list in the back of this manual.

Note that the font list should be printed directly to the output queue where the printer is connected. The AUTO_FORM sub-system does not need to be active. If you have other HP III or HP4 compatible printers in your network you could try printing the font reference to these printers as well.

Trouble Shooting

Missing printout:

Printer Writers:

1. Check that the printer is varied on:

```
WRKCFGSTS CFGTYPE(*DEV) CFGD(PRT*)
```

2. Check if the writer is started or if messages are waiting (not for LAN attached printers). Reply to any message regarding forms type with I=Ignore.

```
WRKWTR PRT*
```

3. Check for messages on the queue:

```
WRKOUTQ QUSRSYS/PRTXXX
```

Remote Writers:

1. Check if a printing program is assigned to the queue by pressing F20. If not start the printing program with the following command:

```
STRRMWTR QUSRSYS/PRTXXX
```

2. For TCP/IP attached printers only. If the print job hangs in the queue with status **SND** check that the IP address setting and LPD port name defined for the output queue corresponds to the Printer Server.

Appendix C - Printer Types

The InterForm400® system can be used in connection to the following printer types:

- IBM4019, IBM4029, IBM4039
- IBM4216 model 010 (prim. data stream)
- HP LaserJet II, IID, IIP
- HP LaserJet III, IIID, IIIP, IIISi
- HP LaserJet 4, 4+, 4Si, 4V, 5, 5Si, 4000, 8000
- HP LaserJet 6
- HP Color LaserJet, HP4500
- Lexmark Optra Series
- Kyocera FS series
- + other HP PCL4/PCL5/PCL5e/PCL5c compatible printers.

Some differences exist between the function sets of various printers. You could experience differences in the printout according to the printer being used. Consult your printer distributor for information.

The definitions for an overlay is the same regardless of the defined printer type. Differences will not show until the final printout. You will therefore be able to use the same overlay on several printer types.

Black and white printer types

☺ TIP ☺

If your printer supports PJL you should use a PJL printer type in InterForm400. Using this kind of printer type will enable you to use page range (print only a part of) on the merged PCL spooled file - if you change the spooled file from the APF3812/APFWRKOUTQ command.

- IBM4019:** The printer should be set to native mode (PPDS). The system will when printing automatically change mode to PCL4 (HP11) and set the mode back to PPDS when finished. The general limitations for this printer are the same as described for **HP11**. If the printer is default set to PCL4 you should use the **HP11** definition.
- IBM4029:** This type is intended for 4029 printers with PCL5 (HP111) option. The printer should be set to native mode (PPDS). The system will when printing automatically change mode to PCL5 and set the mode back to PPDS when finished. If the 4029 has not been upgraded to PCL5 you should select the IBM4019 type. If the printer is default set to PCL5 you should use the **HP111** definition.
- IBM4039:** PCL5e compatible. However, the first models could have some funny PCL interpretations. We hope we have compensated for them all, and recommend using the HP4 and HP4D drivers.
- IBM4216:** Model 010 in its primary data stream. Same functionality and limitations as for IBM4019 (and HP11)
- HP11:** For HP11 and PCL4 compatible printers. These and other PCL4 compatible printers have no possibilities of printing diagonal lines, which means that lines defined as line type 4 (line in free format) will be ignored when printing.

You will have no possibility of printing text with different rotation on the same page either. Text constants with a different rotation than the rotation defined for the contents of the overlay will be ignored. On the same printer types printing white text on black background (reverse printing line type **7=ink**) will be ignored.

- HPIID:** As above but with duplex support.
On back page overlays HP/GL-2 files will be ignored.
- HPIIP:** As for HPII. Special for this definition is that a frame with pattern 80 can be used for blanking out text when printed on top of the text.
- HPIII:** For HPIII, and compatible PCL5 printers.
- HPIIID:** For HPIIID and HPIIISi and compatible PCL5 duplex printers.
On back page overlays frames will have sharp corners even if they are specified to be round, due to a limitations of having HPGL included in PCL macros.
Any HP/GL-2 command will be ignored on back page overlays including Diagonal lines (line type 4=line).
- HPIIIP:** As for HPIII.
- HP4:** For HP4, HP5 and HP6 and compatible PCL5e printers (e.g. Lexmark Optra, and the Kyocera FS series). Note that some printers, such as OptraE are not preset to PCL, and therefore needs a PJJ command to switch to PCL. In these cases the setting HP4_PJJ must be used.
- HP4_PJJ:** Same as HP4, but using PJJ (Printer Job Control) language e.g. to set resolution to 600 dpi. Note that the use of PJJ can in some cases delete downloaded resources. **Use this PJJ printer type to be able to be able to use page range on the merged spooled file - see tip above.**
- HP4D:** For HP4Si, HP5Si and compatible PCL5e duplex printers. Note that some printers, such as OptraE are not preset to PCL, and therefore needs a PJJ command to switch to PCL. In these cases the setting HP4D_PJJ must be used.
- HP4D_PJJ:** Same as HP4, but using PJJ (Printer Job Control) language e.g. to set resolution to 600 dpi. Note that the use of PJJ can in some cases delete downloaded resources. **Use this PJJ printer type to be able to be able to use page range on the merged spooled file - see tip above.**

Color printer types

- HP5C:** For HP5 Colour Laserjet and compatible color laser printers.
- HP4500:** For the HP4500 Laser Color Printer.
- HP4500D:** As for HP4500, with Duplex support.

Zebra printer types

- ZEBRA203:** To be used for 200DPI Zebra printers
- ZEBRA300:** Intended for 300DPI Zebra printers

Cassette Mapping (Drawers)

Selecting the drawer on an overlay can be done either by specifying a **drawer number** (*INPUT, *PRINTER, 1-255) or a **paper type**. Whenever possible it is recommended to select the drawer by use of the **paper type** as described below.

Selecting drawer by drawer number

When selecting a drawer in **Design InterForm400® Overlay** in the InterForm400® system, you should be aware of the differences between various printer types. InterForm400® will know from your specification of printer type which emulation the output should be formatted to but will not know which optional paper feeders etc. are installed on the printer.

For HP and other PCL compatible printers, the code specified in e.g. the field **Drawer** on the design menu will be used as value for the HP **Paper Source PCL** command **ESC&I n H**. You should refer to the user's guide delivered with your printer to verify which paper source is used for each value of "n".

For HP and other PCL compatible printers we have some more possibilities. The following is the standard definitions for the value of **n** and for the value stated for **Drawer** in the InterForm400® system, when printing on HP 5Si compatible printers:

- 1 - Tray 2 (upper drawer)
- 2 - Manual feed (tray 1, right side tray)
- 3 - Manual envelope feed (tray 1. Right tray)
- 4 - Tray 3 (lower drawer)
- 5 - High Capacity Input (HCI), first tray
- 6 - Optional envelope feeder.
- 7 - Autoselect
- 8 - Tray 1 (right side tray)
- 20-39 - High Capacity Input (HCI) trays 2-21

Select Drawer using Paper Type

It is advisable to use paper types for controlling drawer selection for each printer. The advantages when comparing to the traditional setup (where a drawer number is specified on the overlay design instead of a paper type) are:

- **The same overlay can be used for printing on printers with totally different drawer setup.** The paper type (and not the drawer number) on the overlay will be sent to the printer, where the paper type is translated into a drawer number depending on the setup of the printer.
- It is possible to move a merged spooled file intended for a printer with one drawer setup to another printer with a totally different drawer setup.

The requirements for selecting drawer on the printer using the paper type:

- The printer needs to support the possibility to select the drawer by the paper type instead of the drawer number.
- You need to manually make sure, that all of your printers have the same paper type setup so that the correct drawers are selected e.g. drawers with 'PREPRINTED' paper type should always contain preprinted paper with the company logo.

These are the standard paper types known by printers:

PLAIN

PREPRINTD
LTRHEAD
TRANSPRNCY
PREPUNCHD
LABELS
BOND
RECYCLED
COLOR
CARDSTOCK

Note, that these names may be translated into your native language on your printers, but InterForm400® will still select the same correct paper type.

Refer to page **38** for a description of how to put this into production. Refer to page **331** for information of how to select drawers on printers not supporting paper type.

Appendix D - Interfaces (Protocol Converters)

Note, that it is recommended always to use ASCII850 as the interface in InterForm400® as this will work in the majority of setups/printers.

- ClientAccess (PC-support)
- Parallel output from 3197 display station
- Parallel output from 3477 display station
- Parallel output from 348n display station
- IDA3X, IDA5219 and IDA812 protocol converters
- All INTERMATE 5250 interfaces
- + other 5219 compatible 5250 interfaces
- TokenRing 4033 (OS/400 V3R1) using LexLink protocol.
- Any TCP/IP LPD compatible LAN print server (OS/400 V3R1)
- TCP/IP Raw Socket LAN print servers supporting bi-directional P/L communication.

As a guideline the printer device should be configured on the AS/400 as a 3812 model 1 printer type (non-IPDS). The exception is attachment via a 3197 display station. This should be configured on the AS/400 as a 4214 printer (see also **System requirements**).

SYSTEM: A printer type setting valid for e.g. Intermate Twinax interfaces. This selection translates overlay text into Roman8 ASCII code, and implies that the protocol converter is configured for conversion of EBCDIC into ASCII Roman8.

SYSTEM850 The recommended printer type setting valid for e.g. Intermate Twinax interfaces. This selection translates overlay text into PC850 ASCII code, and implies that the protocol converter is configured for conversion of EBCDIC into ASCII PC850. Note, that if the attributes of a spool file indicate code page 870 (Eastern Europe) System852 will automatically be selected for conversion of this spool file.

SYSTEM852 Same as above, but for Latin2 character set (Eastern Europe).

ASCIIR8 Transforms EBCDIC data into transparent PCL Roman8 *ASCII data. The protocol conversion language is determined automatically from the system code page (SYSVAL(QCHRID))

ASCII850 Transforms EBCDIC data into transparent PCL PC-850 *ASCII data. The protocol conversion language is determined automatically from the system code page (SYSVAL(QCHRID)). Note, that if the attributes of a spool file indicate code page 870 (Eastern Europe) ASCII852 will automatically be selected for conversion of this spool file.

ASCII852 Same as above, but for Latin2 character set (Eastern Europe). You can also use ASCII850 for Latin2 characters set.

☺ **TIP** ☺

ASCIIR8 or **ASCII850** should be used if you encounter any problems with the code conversion table of your interface. This selection will convert all data to *ASCII before they are sent to the printer transparently. This method may require slightly more CPU power from the AS/400, and you will not be able to view or determine the number of pages of the spooled print job after it has been merged with an overlay. On the other hand this method gives the greatest insurance that the character conversions are made correctly on any form of printer attachment.

☺ **TIP** ☺

ASCII850 should be used, if you want to view the merged spool file using SwiftView.

WORKSTN: Used for the Client Access (PC-support) printer session. (Note that the Rumba printer session can not be used with the InterForm400® system). This selection will imply the Printer Conversion table to work with the HP ASCII symbol set PC-8. When using IBM Client Access a print function table that matches the attached printer (e.g. HPLASERD.PFT) should be used.

WS31N, WS347N

and **WS348N:** Optimized for the printer port on 31nn (e.g. IBM 3197), 317n (e.g. IBM 3477) and 348n (e.g. IBM 3487) compatible terminals. When attaching the printer to a 3197 display station, the setup on the display station should be for a 4214 with character set 850.

When attaching to a 3477 display station, the setup should be for a 5219 with character set Multilingual.

IDA3X: An IDA3X/400 external Twinax protocol converter.

IDA5219: When a HPIID has a built-in I-data protocol converter.

IDA812: Used when a HPIIID or HPIISi is equipped with an IDA812 interface.

Appendix E - Codepage Support

InterForm400® makes a complete protocol conversion of EBCDIC/SCS data to ASCII/PCL data.

This requires the National Code Page ID of the system to be known as well as the available ASCII codepage in the PCL Printer.

InterForm400® determines the System Code page from the system value QCHRID and makes an EBCDIC to ASCII conversion on basis of this.

The supported national languages are listed in the table below which also indicates the resulting ASCII symbol set.

Country	EBCDIC Codepage	EURO codepage	ASCII Symbol Set
USA/Canada	037	1140	850
Canadian French	260	1140	850
Austria/Germany	273	1141	850
Belgium	274	1148	850
Brazil	275	1140	850
Denmark/Norway	277	1142	850
Finland/Sweden	278	1143	850
Italy	280	1144	850
Japan-English	281	n.a.	850
Portugal	282	1140	850
Spanish-Speaking	284	1145	850
United Kingdom	285	1146	850
France	297	1147	850
Greece	875		
Latin	870	n.a.	852
Iceland	871	1149	850
Cyrillic (Russia)	1025/880	1154	
Turkey	1026		
Latvia	1112	1148	850
Lithuania	1112	1148	850

Appendix F - Font-ID Information

This appendix lists the standard fonts shipped with InterForm400 for both PCL/PDF and Zebra printers. Also a list showing typefaces of the most used resident fonts of PCL printers is included.

IBM 3812 font-ID Information

The system uses the IBM font ID's to select fonts.

This font list will include the standard IBM 3812 font set (3 to 2103). If printed on a PCL printer the fonts will be emulated by the selection of PCL printer type (refer to page 120, 268 and **374**).

The most complete emulation is obtained by selecting the **HP4** or **HP4D** printer types.

The available font definitions can be prompted by **F4** from different locations in the system and will include the fonts defined under option **Description of additional fonts** in the menu **Work with Fonts** (see page **279**)

Note that the extra fonts (e.g. 9903), predefined for use in the sample described in the **Getting Started** section on page **21**, has been added to the prompted list. These fonts are not available on standard IBM SNA printers (such as 3812, 4028, 3916 and 3116) but only on HP/III and HP4 compatible printers.

Note that your printer may contain a number of native resident fonts, which are most likely not described in the **AS/400 Guide to Programming for Printing from IBM**. These fonts therefore have to be declared to the system under **Description of additional fonts** (page **279**) in order to have them listed on the font list generated by the InterForm400® system and in the list prompted by **F4** (displayed on page **38**)

IBM Compatible Font List

Font Name	CPI	Font-ID
OCRB	10	3
Orator	10	5
Courier10	10	11
Prestige Pica	10	12
Artisan 10	10	11
Courier Italic 10	10	18
Pica	10	12
Orator Bold	10	38
Gothic Bold 10	10	39
Gothic Text 10	10	40
Roman Text 10	10	41
Serif Text 10	10	42
<i>Serif Italic 10</i>	10	43
Courier Bold 10	10	46
Gothic Text 12	12	66
<i>Gothic Italic 12</i>	12	68
Gothic Bold 12	12	69
Serif Text 12	12	70
<i>Serif Italic 12</i>	12	71
Serif Bold 12	12	72
<i>Script</i>	12	84
Courier 12	12	85
Prestige Elite	12	86
Letter Gothic 12	12	87
<i>Light Italic 12</i>	12	112
Letter Gothic Bold	12	110
Prestige Elite Bold	12	111
Prestige Elite Italic	12	112
<i>Boldface Italic</i>	PS	155
Modern	PS	175
Boldface	PS	159
Essay	PS	160

<i>Essay Italic</i>	PS	162
Essay Bold	PS	163
Essay Light	PS	173
Document	PS	175
Gothic Text 13	13	204
Prestige 15	15	230
Courier 15	15	230
Serif Text 15	15	229
Gothic Text 15	15	230
Courier 5	5	244
Courier Bold 5	5	245
Courier 17	17	252
Courier Bold 17	17	253
Courier 17 (sub/super)	17	254
Gothic Text 20	20	281
<small>Gothic Text 27</small>	27	290
Sonoran-Serif 8-pt Roman Medium	typ	751
Sonoran-Serif 10-pt Roman Medium	typ	1051
<i>Sonoran-Serif 10-pt Italic Bold</i>	typ	1053
<i>Sonoran-Serif 10-pt Italic Medium</i>	typ	1056
Sonoran-Serif 12-pt Roman Medium	typ	1351
Sonoran-Serif 16-pt Roma Bold	typ	1653
Sonoran-Serif 24-pt	typ	2103

Shipped Zebra Fonts

These fonts are known by the Zebra printers and the font definitions are shipped with InterForm400®:

Font number	Description
6	Triumvirate 6 pt
7	Triumvirate 7 pt
8	Triumvirate 8 pt
9	Triumvirate 9 pt
10	Triumvirate 10 pt
11	Triumvirate 11 pt
12	Triumvirate 12 pt
13	Triumvirate 13 pt
14	Triumvirate 14 pt
15	Triumvirate 15 pt
16	Triumvirate 16 pt
17	Triumvirate 17 pt
18	Triumvirate 18 pt
20	Triumvirate 20 pt
22	Triumvirate 22 pt
24	Triumvirate 24 pt
28	Triumvirate 28 pt
30	Triumvirate 30 pt
36	Triumvirate 36 pt
48	Triumvirate 48 pt
72	Triumvirate 72 pt
1001	Matrix 9 x 5 dots
1002	Matrix 11 x 7 dots
1003	Matrix 18 x 10 dots
1004	Matrix 26 x 13 dots
1005	Matrix 60 x 40 dots
1006	OCR- A
1007	OCR- B

Typefaces known by PCL-Printers

PCL printers normally have several resident fonts. Below a few possible resident fonts and the most likely typeface number are listed.

Font Description	Typeface number
Albertus	4362
Antique Olive	4168
Arial	16602
CG Omega	4113
CG Times	4101
Clarendon Cond	4140
Coronet	4116
Courier	4099
Garamond	4197
Letter Gothic	4102
Marigold	4297
Symbol (Συμβολ)	16686
Times New Roman	16901
Univers	4148
Windings (☛☘☙☚☛☙☛)	6826 / 31402

 **NOTE** 

Italic/Bold/Normal/Condensed may not be supported for some of the typefaces.

 **WARNING** 

*Not all typefaces are supported on all PCL printers and the actual typeface number **can** vary depending on printer model. Print out a font list on your printers to make sure, that this coincides with the mapping of your printers if in doubt.*

 **TIP** 

*If you want to use a font/typeface, that is known by only some of your printers you could consider to install a TTF file with the same font and auto download it to the printers missing the font. Refer to page **284** and **289**.*

Appendix G - Limitations of the Light Version

The following are rules given for the Light version:

1. Spool entries for manual merge can only be selected from the queues named **AFC_INPUT1** and **AFC_INPUT2**.
2. The program will support only two sets of AFC print queues. These queues are named **AFC_INPUT1**, **AFC_OUT1**, **AFC_INPUT2** and **AFC_OUT2**. The queues can be mixed (e.g. **AFC_INPUT1** -> **AFC_OUT2**), and input from e.g. **AFC_INPUT1** can, by the existing AFC functions, be split up to print merged data to both **AFC_OUT1** and **AFC_OUT2**.
3. The queues **AFC_INPUT1** and **AFC_OUT1** is the set of queues installed according to the **Getting Started** section. These queues can of course be used in production also, but care should be taken when calling the program **AFCINSTALL** as all definitions in the AFC definition **AFC_INPUT1** will be overwritten by the sample definitions.
4. All 4 queues must be placed in the library **APF3812**. Therefore, in the screen shown when choosing **F6=add** under **1.Functions attached to output queues**, the Library field will not be displayed.
5. Make sure the Light code is entered in the old version before making a Release Update (**APFRELU**PD). (make sure the Main Menu indicate **Light** before you rename the **APF3812** library to **APF3812OLD**). If the light code is not entered prior to the update, the AFC definitions in the AFC job/queue **AFC_INPUT1** in the new version will **not** be updated with your AFC definitions from library **APF3812OLD**.
6. When running a Release Update, existing AFC definitions, other than **AFC_INPUT1** and **AFC_INPUT2**, will be updated as well, even though the Light code has been entered prior to the Release Update. However, it is the customers responsibility to change the Output queue and the **AUTO_FORM** job names of these AFC job/queues to either **AFC_INPUT1** or **AFC_INPUT2**, or to set Auto-start = N for the **AUTO_FORM** jobs.
7. Attempts to start AFC jobs with other names than **AFC_INPUT1** or **AFC_INPUT2** will result in error conditions. It is the customers responsibility not to start AFC jobs with other names (avoid by setting Auto-start job = N).
8. Attempts to start the AFC jobs **AFC_INPUT1** or **AFC_INPUT2** (updated by a Release Update) with AFC definitions containing other queue names than **AFC_INPUT1/2** or **AFC_OUT1/2**, will result in error conditions. It is the customers responsibility not to change the names.
9. Output queues (updated by a Release Update) defined under **2. Forms Type Table** must be either **AFC_OUT1** or **AFC_OUT2**. It is the customers responsibility to correct existing definitions.
10. Function **5=Move Spooled File** in Auto Forms Control is NOT supported in the light version.
11. The CL Command **APF3812** does not work in the light version.
12. A light code must be entered with Type L. Following example enters code **163451a6** as a light code:

APF3812/APFSECUR CODE(163451A6) TYPE(L)

13. No PDF and e-mail support.

Conditions for new features will be added as they are being implemented.

Appendix H - Commands in Spooled Files

The system contains a command interpreter. This means you have a possibility of inserting command lines as a part of the print out.

When InterForm400® identifies a command line, the system will execute the command instead of just printing it.

A command line is a line, where the first two positions contain a command specification.

The command recognition characters '&&' are normally used. A special command can change these characters into something else.

The requirement for the commands in the spool file to take effect is that the spool file is merged with an InterForm400 overlay e.g. in Auto Forms Control. The overlay used for the merge, do not need to contain any format definitions, i.e. the line spacing, font selection, rotation etc. can be set to *INPUT.

INPEL is an abbreviation of Inches and Pels, and must be written with preceding zeros e.g. 03120 indicates 3½ inch.

NOTE

The only command line supported for PDF output is &&IMG. Refer to page 392.

Command line Overview :

Command	Position	Contents	Description
BOX	1 - 2	&&'	Draws a frame of which the upper and lower borders are defined relatively to the top edge of the paper, and the left and right borders are defined relatively to left edge of the paper. IN indicates measurement in inches. PEL indicates measurement in Pels. Leading zeros must be filled in. If a distance is stated without a leading sign the distance is calculated relative to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current line. If position 39-54 is filled in, the frame will be repeated as many times as stated in position 52-54.
	3 - 5	·BOX'	
	6 - 6	sign (+/-) top border	
	7 - 11	upper border distance to edge INPEL	
	12 - 12	sign (+/-) left border	
	13 - 17	left border distance to edge INPEL	
	18 - 18	sign (+/-) right border	
	19 - 23	right side distance to edge INPEL	
	24 - 24	sign (+/-) bottom border	
	25 - 29	distance bottom border to edge INPEL	
	31 - 33	line width PPP (0-31)	
	35 - 35	round/sharp corners (R S)	
	37 - 38	pattern for filling	
	39 - 39	sign (+/-) move right	
	40 - 44	move right INPEL	
45 - 45	sign (+/-) move down		
46 - 50	move down INPEL		
52 - 54	number of moves		

Command	Position	Contents	Description
VAN	1 - 2 3 - 5 6 - 6 7 - 11 12 - 12 13 - 17 18 - 18 19 - 23 25 - 27 28 - 28 29 - 33 34 - 34 35 - 39 41 - 43	&&' ∟VAN' sign (+/-) distance to paper top edge distance to top edge INPEL sign (+/-) left end point distance left end point to left paper edge INPEL sign (+/-) right end point distance right end point to left paper edge INPEL line width PPP (0-31) sign (+/-) move right move right INPEL sign (+/-) move down move down INPEL number of moves	Draws a horizontal line. The line is horizontal to the paper rotation, regardless of rotation of the contents. IN indicates measurement in inches. PEL indicates measurement in Pels. Leading zeros must be filled in. If a distance is stated without a leading sign the distance is calculated relatively to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current line. If position 28-43 is filled in, the line will be repeated as many times as stated in position 41-43.
LOD	1 - 2 3 - 5 6 - 6 7 - 11 12 - 12 13 - 17 18 - 18 19 - 23 25 - 27 28 - 28 29 - 33 34 - 34 35 - 39 41 - 43	&&' ∟OD' sign (+/-) distance to top end point distance top end point to top paper edge INPEL sign (+/-) distance to left paper edge distance to left paper edge INPEL sign (+/-) bottom end point distance bottom end point to top paper edge INPEL line width PPP (0-31) sign (+/-) move right move right INPEL sign (+/-) move down move down INPEL number of moves	Draws a vertical line. The line is vertical to the paper rotation, regardless of rotation of the contents. IN indicates measurement in inches. PEL indicates measurement in Pels. Leading zeros must be filled in. If a distance is stated without a leading sign the distance is calculated relative to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current line. If position 28-43 is filled in, the line will be repeated as many times as stated in position 41-43
LIN	1 - 2 3 - 5 6 - 6 7 - 11 12 - 12 13 - 17 18 - 18 19 - 23 24 - 24 25 - 29 31 - 33 35 - 35 36 - 36 37 - 41 42 - 42 43 - 47 49 - 51	&&' ∟LIN' <u>1. Point</u> sign (+/-) distance top edge distance to paper top edge INPEL sign (+/-) distance left edge distance to left paper edge INPEL <u>2. Point</u> sign (+/-) distance top edge distance to paper top edge INPEL sign (+/-) distance left edge distance to left paper edge INPEL line width PPP (0-31) round/sharp ends (R S) sign (+/-) move right move right INPEL sign (+/-) move down move down INPEL number of moves	Draws a line between 2 points. The line is oriented to the paper rotation, regardless of rotation of the contents. IN indicates measurement in inches. PEL indicates measurement in Pels.. Leading zeros must be filled in. If a distance is stated without a leading sign the distance is calculated relatively to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current print line. If position 36-51 is filled in, the line will be repeated as many times as stated in position 49-51.

Command	Position	Contents	Description
TXT	1 - 2 3 - 5 6 - 6 7 - 11 12 - 12 13 - 17 19 - 21 23 - 26 28 -198	&& <TXT' sign (+/-) distance top edge distance to paper top edge INPEL sign (+/-) distance left edge distance to left paper edge INPEL rotation font text for print	Prints a text line, for which the appearance is independent of the normal text lines in the data stream.
IMG	1 - 2 3 - 5 7 - 16 17 18 - 22 23 24 - 28 30 - 32 34 36 - 45 47 - 56	&& <IMG' image name sign (+/-) distance to top edge distance to paper top edge INPEL sign (+/-) distance to left edge distance to left paper edge INPEL resolution (600 300 150 100 075) <R' = reverse image file name library (36-56 is only used if the image is located in another file than APF3812/IMAGE) If 7-16 is '*PATHTIF' a TIF file is looked for in the (IFS) path in position 36-98. If 7-16 is '*PATH' or '*PATHBMP' a B/W BMP file is looked for in position 36-98.	Prints an image with the same rotation as the paper rotation. If a distance is stated without a leading sign the distance is calculated relatively to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current print line. If no resolution is stated, the image will be printed with 300 dpi. *PATHTIF is also supported for PDF output - but only for compressed TIF files. *PATH is also supported for PDF output. The BMP file must be sharp Black/white i.e. no grey.
IMG *COLOR	1 - 2 3 - 5 7 - 16 17 18 - 22 23 24 - 28 30 - 32 34 - 36 ----- 38 - 47 - or - 38 - 100	'&& IMG *COLOR sign (+/-) distance to top edge distance to paper top edge INPEL sign (+/-) distance to left edge distance to paper left edge INPEL resolution horizontal resolution vertical color image name /IFS JPEG file	This image extension (*COLOR) makes it possible to insert color BMP or JPEG images in PDF output. This is ignored when specifying COLORSUPP(*NO). JPEG images can <u>only</u> be inserted in PDF output and they need to be formatted for 16 mill. colors. BMP color image name or JPEG/GIF file in IFS (include the slash "/") GIF images can <u>only</u> be inserted in PCL output

NOTE

Note, that if you place two images at the exact same position, then only the first will be printed. If you place a color image and then a black and white image at the same position, then only the color image will be printed when merging with color support, and the black and white image is printed for black and white output.

Command	Position	Contents	Description
OVL	1 - 2 3 - 5 7 - 16 17 18 - 22 23 24 - 28	&&' <OVL' overlay name sign (+/-) distance top edge distance to paper top edge INPEL sign (+/-) distance left edge distance to left paper edge INPEL	Prints an overlay containing the definitions listed in an overlay created in InterForm400®.
FNT	1 - 2 3 - 5 7 - 10	&&' <FNT' font-id	Changes the font type for the rest of the page.
PPL	1 - 2 3 - 5 7 - 9	&&' <PPL' points per line	Changes the line density for the remaining text lines on the page.
ESC	1 - 2 3 - 5 7 - 8	&&' <ESC' new command recognition character string	Changes the command recognition character string from &&'.
GL2	1 - 2 3 - 5 7 - 16 17 18 - 22 23 24 - 28 30 - 34 35 - 39	&&' <GL2' plot name (member in APF3812/GL2) sign (+/-) distance to top edge distance to paper top edge INPEL sign (+/-) distance to left edge distance to left paper edge INPEL hight INPEL width INPEL	Prints a HP-GL/2 plot with the same rotation as the paper rotation, i.e. which edge is regarded as the upper edge is of no importance. If a distance is stated without a leading sign the distance is calculated relatively to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current print line. If hight or width are not stated the plot can reach the lower right edge. The GL2 command only works on PCL5 printers (e.g. HP III and HP4).

Command	Position	Contents	Description
PCL	1 - 2 3 - 5 7 - 16 17 18 - 22 23 24 - 28 36 - 45 47 - 56	&&' <PCL' PCL-file name sign (+/-) distance to top edge distance to paper top edge INPEL sign (+/-) distance to left edge distance to left paper edge INPEL file name library (36-56 is only used if the PCL date is located in another file than APF3812/PCL) If 7-16 is '*PATH' a PCL file is looked for in the (IFS) path in position 36-	Prints a PCL-file with the same rotation as the paper rotation, i.e. which edge is regarded as the upper edge is of no importance. If a distance is stated without a leading sign the distance is calculated relatively to the paper edge. If a sign (+/-) is stated, the distance will be calculated according to the base line of the current print line. PCL-files can not be used on IBM 3812 and 3816 printers.
SKU	1 - 2 3 - 5 6	&&' <SKU' tray number	Used for control of paper trays. The command must be stated in line number 1 of the print file. On IBM3812 and IBM3816: 1=top paper tray 2=bottom paper tray On other printers: 1=top paper tray 2>manual feed 3>manual envelope feed 4=bottom paper tray 6=envelope feeder When duplexing this command will cause forced front page.
HPM	1 - 2 3 - 5 7 - 10	&&' <HPM' macro number 00000-32767	Executes an HP-macro. The macro must be down loaded to the printer prior to this command call. In order to avoid mixing of the internal use of macros in the InterForm400® system, it is recommended to define macro numbers larger than 09999.
INK	1 - 2 3 - 5 6 - 6 8 - 8	&&' <INK' Foreground color: B=black, W=white, U=unchanged, 1-7=HP raster Background color: B=black, W=white, U=unchanged, 1-7=HP raster WARNING: This command will change the ink of any text being printed after this command has been issued. Print sequence considerations: The sequence of printing command lines versus normal text lines and constants in the overlay cannot be predicted. Only a sequence of command lines in succession can be guaranteed to be printed in the specified sequence.	Changes the ink of any preceding text being printed. Example of valid use of &&INK: &&INK B W &&TXT ... &&BLA ... &&BLO ... &&BLO... &&INK W B TIP: To avoid any problems you should always reset foreground ink to black and the background ink to white immediately after having used any special ink in your command lines.

Command	Position	Contents	Description
BLA	1 - 2 3 - 5 6 - 6 7 - 11 12 - 12 13 - 17 19 - 21 23 - 26 28-32 34-36 38-40 42-44 45-48 50-52 53-56 58-60 61-64 66-68 69-72 74-76 77-80 82-84 85-88 90-92 93-96 98-100 101-104 106-108 109-112 114-116 117-120 122-124 125-128	<p>&&' &BLA'</p> <p>sign (+/-) distance top edge distance to paper top edge INPEL sign (+/-) distance left edge distance to left paper edge rotation font</p> <p>Maximum line width of lines in the block INPEL when being printed. Spacing between lines (PEL) Percentage of line width to cause right-margin-adjustment.If printing a line in the block (using normal spacing) would exceed this percentage (of the block width), spaces between words will be increased in size to cause the line of text to occupy the entire line.</p> <p>Escape sequence 01 Escape function 01 Escape sequence 02 Escape function 02 Escape sequence 03 Escape function 03 Escape sequence 04 Escape function 04 Escape sequence 05 Escape function 05 Escape sequence 06 Escape function 06 Escape sequence 07 Escape function 07 Escape sequence 08 Escape function 08 Escape sequence 09 Escape function 09 Escape sequence 10 Escape function 10 Escape sequence 11 Escape function 11</p> <p>Escape function 1-11 defines the function of an escape sequenc. The following functions are supported</p> <p>Function Description UL Start underlining text. ENUL End underlining text. - Syllable hyphen. A '-' is inserted only if a part of the word (the part before syllable hyphen) can fit the line width. Then the rest of the word are moved to the next line. NL New line forces the following text to begin at the next line. HLUP Half line up/superscript. HLDW Half line down/subscript. ENHL End half line up/down NORM End underlining, ends half line up/down and set font to font specified in the &&BLA command (font number) Change to APF-font number.</p>	<p>(BLA = Block attributes) Sets the attributes for any preceding block-commands (See BLO). These attributes will be used for any BLO-commands until another BLA is issued.</p> <p>Escape sequences and functions are used together. Sequence 01 are used in conjunction with function 01 and so on.</p> <p>Escape sequence 1-11 defines the allowed escape sequences in the text of the &&BLO-commands. An escape sequence can consist of 1 to 3 characters.</p>
BLO	1 - 2 3 - 5 7 - 198	<p>&&' &BLO'</p> <p>Text to be printed (incl. any esc. sequences)</p>	<p>BLO = Block Adds a line of text to the block</p> <p>The line of text will be included with other &&BLO-commands and wrapped to fit the line width specified in the &&BLA-command. A &&BLA-command must precede any %%BLO command.</p>

Command	Position	Contents	Description
BMK	1-2 3-5 7 9 11-13 15 17 18-22 24-103	'&& 'BMK' Bookmark level code 0-6 Code telling if bookmark on higher level should be open to start with: 0=Closed, 1=Open Colour number. Non numeric will be interpreted as black. Code for focus. 0= Show page. 1=Show specific place on the page specified by Y-coordinate. sign (+/-) distance top edge. Blank is absolute, +/- is relative to place of the command. Y-Coordinate: Absolute/relative distance from the top of the page. Insert as inches and pels: IIPPP with preceding zeroes. Bookmark text	Inserts bookmark in PDF output files. If there is no lines with bookmark level code = 0 the bookmarks will be shown automatically when opening the PDF file. If there are more than one line with level=0 the last one will be used. Level=0 lines outside the pagerange will be ignored. Level 1 to 6 must be written in order and holes in this order are allowed. Refer to page 238 for another way to insert PDF bookmarks.
CPY	1-2 3-5 7-11	'&& 'CPY' Number of copies	Inserts additional copies of each pages. This works until the end of the spooled file or until another &&CPY command overrides it.
URI	1-2 3-5 6 7-11 12 13-17 19-21 23-26 28-378	'&& 'URI' Sign (+/-) distance top edge Distance to paper top edge INPEL Sign (+/-) distance left edge Distance to left paper edge INPEL Rotation Font Link (Optionally followed by <Space> and text to be shown in the PDF file)	INPEL is an abbreviation for 2 chars defining inches and 3 for pels. Use preceding zeroes. The web-address to link to followed by one or more spaces. If additional text is found after the spaces this text will be shown in the PDF file for this link.

☺ **TIP** ☺

*Insert the text below in the *SCS spooled file to insert a link in the resulting PDF file to www.intermate.com with the text 'company' appearing in the PDF file:*

```
&&URI 03000 02120 000 0011 www.intermate.com company
```

The link will appear 3 inches from the top and 2½ inches from the left on the PDF file.

Example of using Escape Commands in the Data Stream

Using the Edit Print Command **APF3812/APFEDTPRT** in InterForm400[®] below example has been created, based on the Demo Spool Entry in InterForm400[®].

In the example below we have made use of the escape commands for Font, Frames, images, and Block formatting.

- Furthermore we have created 2 additional fonts in InterForm400[®]:
- Font ID 7510 = New Times Roman 10 (Typeface 16901)
- Font ID 7610 = New Times Roman 10 BOLD (Typeface 16901)

When you have finished editing the spool file, according to the below, press **F3** to exit and press **Enter** to create the revised spool entry.

```
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
1

&&FNT 0066
&&BOX 00160 00120 03100 02040 005 R B
    Herring Marine Research
    Seaweed Street 14
    9000 Battleaxe
    DK-Denmark
    -----
    Att: Martin Merman
&&IMG DEMOIMAGE 01080 05058 300
                                                                1004/PH.13-09-99
&&BLA 03100 02120 000 7510 03180 040 080 /ULUL /BO7610 /NONORM /NLNL
&&BLO Re. Your new MateSert/400 driver./NL
&&BLO -----
&&BLO
&&BLO Congratulations with your new /BOMateSert/400/NO driver.
&&BLO You are now able to fully exploit the features of your Inserter
&&BLO in relation to your AS/400 applications. In fact this letter has
&&BLO been printed and inserted by /BOMateSert/400/NO.
&&BLO
&&BLO
&&BLO
&&BLO The following license code(s) will be needed to activate the driver
&&BLO permanently to your /BOAS/400/NO CPU(s):
&&BLO
&&BLO Model        P-Group     Serial No.  No. of dev.  License Code/NL
&&BLO -----/NL
&&BLO F45          -           44A2971    1            81 20 01 3A /NL
&&BLO 320          -           44A9032    3            3F 78 66 99 /NL
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO Should you have any questions regarding the driver, you are welcome
&&BLO to call our technical support hotline on:
&&BLO
&&BLO /UL+45 72 26 04 00/NO
&&BLO
&&BLO
&&BLO Or download the latest documentation from the Internet on:
&&BLO
&&BLO /BOhttp://www.intermate.com/NO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO
&&BLO Regards/NL
&&BLO INTERMATE A/S
```

As mentioned before in this chapter, a Merge with overlay has to be made in order for the

Escape sequences in the spool file to take effect.

Create a similar overlay as defined below, and call this overlay in a AFC definition.

Design InterForm 400 overlay		APF300D
Overlay name	NOOVERLAY	
Overlay text	Escape sequences in datastream	
Line spacing	040	in 1/240 of an inch (*INPUT, 1-720)
Rotation	*INPUT	(*INPUT, 0, 90, 180, 270)
Extra left margin positions	_0	(0-99)
Maximum number of print positions	378	(1-378)
Extra blank lines on top	0	(0-99)
Font	*INPUT	*INPUT, fontnumber F4=List
Extended page def.	N	(Y N)
Drawer / Papertype	5	(*INPUT, *PRINTER, 1-255, Name) F4=List
Paper Size	4	F4=List
Pages per side		
Copy management	N	(Y N)
F3=Exit F4=Prompt F11=Delete this overlay F12=Cancel		
F13=Set view/print parameters F14=PCL-view F18=DSPSPLF F19=DSPPFM		

The resulting PCL-file from the merge, will look as per below. Notice that the &&-commands are not printed. Furthermore you will see the effect of the BLOCK defined spool lines, which are formatted according to the total width length of the BLOCK. Unless a NL (New Line) is inserted, blank lines will be ignored and the spool text from each line will be reorganised according to block width and consequently a full justification will be obtained. (Equal left and right margin).

Herring Marine Research
Seaweed Street 14
9000 Battlease
DK-Denmark

Att: Martin Merman

inter mate

1004/PH.13-09-99

Re. Your new MateSert/400 driver.

Congratulations with your new **MateSert/400** driver. You are now able to fully exploit the features of your Inserter in relation to your AS/400 applications. In fact this letter has been printed and inserted by **MateSert/400**.

The following license code(s) will be needed to activate the driver permanently to your **AS/400** CPU(s):

Model P-Group Serial No. No. of dev. License Code

F45 - 44A2971 1 81 20 01 3A
320 - 44A9032 3 3F 78 66 99

Should you have any questions regarding the driver, you are welcome to call our technical support hotline on:

+45 72 26 04 00

Or download the latest documentation from the Internet on:

<http://www.intermate.com>

Regards
INTERMATE A/S

Appendix I - InterForm400® CL Commands

NetServer Commands

The Add Netserver File Share Command

The **APF3812/ADDFILSHR** command can be used for sharing objects on the AS/400. It can e.g. be used for sharing the QDLS as below:

```
                                Add NetServer File Share (ADDFILSHR)

Type choices, press Enter.

Share name . . . . . > QDLS_____ Name
Object . . . . . > /QDLS_____
_____
Text 'description' . . . . . QDLS_____
_____
Data authorities . . . . . *RW          *R, *RW
Maximum users . . . . . *NOMAX_____ Number, *NOMAX
```

The Add NetServer Printer share Command

With the **APF3812/ADDPRTSHR** command you can share a printer on the AS/400.

```
                                Add NetServer Printer share (ADDPRTSHR)

Type choices, press Enter.

Share name . . . . . _____ Name
Output queue . . . . . _____ Name
  Library . . . . . *LIBL_____ Name, *LIBL
Text 'description' . . . . . *OUTQ_____
_____
Printer driver . . . . . 'HP LaserJet III'_____
Spooled file type . . . . . *USERASCII *USERASCII, *AFP, *SCS
```

The printer driver is default 'HP LaserJet III' and describes a printer driver to use when installing this printer on e.g. a PC.

The Change Netserver Attributes Command

The **APF3812/CHGNETSVRA** command can change the netserver name and domain of the AS/400.

Related commands: DSPNETSVRA, STRNETSVR, ENDNETSVR and the netserver share commands: ADDFILSHR, ADDPRTSHR and RMVNETSHR.

The Display Netserver Attributes Command

The **APF3812/DSPNETSVRA** command displays the netserver name and domain name used for the AS/400. This can be used when configuring the netserver.


```
Display NetServer Attributes

Server name . . . . . : QS4449079
Domain name . . . . . : WORKGROUP
Text . . . . . : Os/400
```

The End Netserver Command

The **APF3812/ENDNETSVR** command ends the netserver on the AS/400.

The Remove NetServer share Command

The **APF3812/RMVNETSHR** command can be used to remove a share of an object, that previously has been added either by use of Operations Navigator or ADDFILSHR or ADDPRTSHR.

The Start Netserver Command

The **APF3812/STRNETSVR** command can be used to start the Netserver on the AS/400 - without the use of Operations Navigator.

Save/Restore and Export/Import Commands

The Export Chart Command

Chart resources can not be exported and imported in the usual way through the menus. The **APF3812/EXPCHT** can however save resources for a chart e.g. in the APFEXPORT library, which then can be saved as a save file or as a PC file using the normal export procedure.

This command is used in conjunction with the **APF3812/IMPCHT** command

When exporting and importing charts the following must be noted:

- Charts can only be exported by the APF3812/EXPCHT command.
- Charts can not be renamed or deleted (from the export library), when they are exported.
- Charts are not shown when viewing the resources in the export/import libraries.
- Charts can only be imported using the APF3812/IMPCHT command.
- Charts can be imported several times from the APFIMPORT library.
- The rebuild/journal function can not be used for charts.

Prior to execution of the command, it is required, that the APFEXPORT library has been created. See how on page 341.

The Import Chart Command

The APF3812/IMPCHT command is used for importing charts from the APFIMPORT library. Previously the chart have to be exported using the APF3812/EXPCHT command.

When importing it can be specified, wether or not an existing chart can be overwritten. Important notes are stated below the description of the APF3812/EXPCHT command at page 401.

Prior to this command you have to import resources into the APFIMPORT library. See how on page 343.

The Restore Library from Folder Command

The command **APF3812/RSTLIBFLR** command is intended to be used for support purposes to restore a complete library from a folder, originally saved with the command **APF3812/SAVLIB2FLR**.

```
Restore Library from Folder (RSTLIBFLR)

Type choices, press Enter.

Library . . . . . SAVLIB      _____ Name
Fra folder . . . . . FROMFLR  _____

-----
Fra dokument . . . . . FROMDOC  _____ Character value
Option . . . . . OPTION      _____ *ALL, *NEW, *OLD, *FREE
Database member option . . . . . MBROPT  _____ *MATCH, *ALL, *NEW, *OLD
Allow object differences . . . . . ALWOBJDIF  _____ *NONE, *ALL
Restore to library . . . . . RSTLIB  _____ name, *SAVLIB

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

The Save Library to Folder Command

The command **APF3812/SAVLIB2FLR** command is intended to be used for support purposes to save a complete library to a folder. The file created in the folder can then be sent as an attachment to an E-mail. The saved file can be restored with the command **APF3812/RSTLIBFLR**.

```

Save Library into Folder (SAVLIB2FLR)

Type choices, press Enter.

Library . . . . . LIB _____ Name
To folder . . . . . TOFLR _____

-----
To document . . . . . TODOC _____ Character value
Replace document . . . . . REPLACE _____ *NO
Target release . . . . . TGTRLS _____ *CURRENT

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

```

Joint Report Commands

The Clear Link to Joint Report Command

The **APF3812/APFCLRLNK** command is intended to be included in your CL-programs. It helps you to remove unwanted links between a report and spool entries, that previous has been linked by the **APF3812/APFLNK** command.

```

Clear link to joint report (APFCLRLNK)

Type choices, press Enter.

InterForm 400 file set . . . . . KARTSET _____ Character value
Report name . . . . . RAPNVN _____ Character value

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

```

The Link Joint Report Command

The command **APF3812/APFLNK** is intended to be included in your CL-program. Normally you would use it together with the **APFRPT** command.

Before you can use the **APFRPT** command to print out a joint report, you must establish a link between the individual printouts in the report and spool entry. For this you use the

APFLNK command which contains the following parameters:

```
Link spooled file to joint rep (APFLNK)

Type choices, press Enter.

InterForm 400 file set . . . . . KARTSET _____ Character value
Report name . . . . . RAPNVN _____ Character value
Link name . . . . . LNKNVN _____ Character value
Spooled file . . . . . FILNVN _____ Name, *NONE
Job name . . . . . JOB _____ Name, *
  User . . . . . _____ Name
  Job number . . . . . _____ 000000-999999
Spooled file number . . . . . SPLNBR _____ Number, *ONLY, *LAST

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

The Print Joint Report Command

The **APF3812/APFRPT** command is intended to be included in your CL-programs. It provides you with the facility to print out a complete joint report as an integrated part of your application, instead of having to use the print facility behind option 7 on the InterForm400® system main menu.

```
Print joint report (APFRPT)

Type choices, press Enter.

InterForm 400 file set . . . . . KARTSET _____ Character value
Report name . . . . . RAPNVN _____ Character value
If missing link to spool . . . . . NOLINK _____ *CANCEL, *BYPASS, *TOMKLCHE
If link to unknown spool entry NOSPOOL _____ *CANCEL, *BYPASS, *TOMKLCHE
Output queue . . . . . OUTQ _____ Name, *JOB
  Library . . . . . _____ Name, *LIBL
Form type . . . . . FORMTYPE _____ Character value, *STD
Copies . . . . . COPIES _____ 01-99
Printer type . . . . . PRRTYP _____ IBM3812, IBM3816, IBM4019...
Interface . . . . . INTERF _____ SYSTEM, SYSTEM850, ASCIIR8...

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

AFC and OSC Commands

The End Auto Forms Control Job Command

The **APF3812/ENDAFJCJOB** command can be used for ending a specific Auto Forms Control job. The job can either be stopped immediately or controlled. This command can be used in conjunction with the **APF3812/STRAFCJOB** command.

The Start Auto Forms Control Job Command

The **APF3812/STRAFCJOB** command can be used for starting one specific Auto Forms Control job. Using this command it is e.g. possible to schedule a CL-program calling this command in order to start merging and printing at a giving time.

Remember, in order for the job to become active, it is necessary that the AUTO_FORM subsystem is active. Refer to page 133.

The Start OSC Job Command

The **APF3812/STROSCJOB** command is equivalent to choosing option 1 = Run OSC for a specific output queue, on the **Work with OSC definitions** screen (see page 252).

Remember, that in order for the job to become active it is necessary, that the OSCCTL subsystem is active. Refer to page 246.

Utilities relevant for AFC Exit programs

The Transform *AFPDS print Command

The **APF3812/AFPTOASCII** command converts AFPDS spool files to ASCII spool files.

This command operates in the same manner as function 3 = Transform AFPDS to *USERASCII in Auto Forms Control. Description and limitations can be seen at page 144.

Note, if you want to make use of this function, and the AFPDS spool files are using resource libraries not listed in the system library list, then the job description, APF3812/AUTO_FORM must be changed in order to include these libraries in the library list.

The APF3812 Overlay Merge Command

The command **APF3812/APF3812** is intended to be included in CL-programs, so a spool entry created in a program, can be merged with an overlay within a job.

The command contains the following parameters: (Press F9 to display all the parameters - including OUTDOC, OUTFLR and REPLACE.)

```

Merge spooled file and overlay (APF3812)

Type choices, press Enter.

InterForm 400 file set . . . . . KARTSET _____ Character value
Overlay name . . . . . Kliche _____ Character value
or Overlay Selector name . . . . . SELNAM _____ Character value
Primary/Secondary set . . . . . VRSION _____ *PRI, *SEC
Spooled file . . . . . FILNVN _____ Name, *NONE
Job name . . . . . JOB _____ Name, *
  User . . . . . _____ Name
  Job number . . . . . _____ 000000-999999
Spooled file number . . . . . SPLNBR _____ Number, *ONLY, *LAST
Code page . . . . . CODPAG _____ Number, *INPUT
Output queue . . . . . OUTQ _____ Name, *JOB, *INPUT
  Library . . . . . _____ Name, *LIBL
Form type . . . . . FORMTYPE _____ Character value, *STD,
Copies . . . . . COPIES _____ 01-255, *INPUT
Printer type . . . . . PRRTYP _____ IBM4019, IBM4029,
Interface . . . . . INTERF _____ SYSTEM, SYSTEM850..
Output spooled file name . . . . . SPLFNAME _____ Name, *INPUT
Drawer . . . . . DRAWER _____ *PRINTER, *INPUT,
Seperator drawer . . . . . SEPDRAWER _____ *NONE, 1, 2, 3, 4, 5, 6,
User data . . . . . USRDTA _____ Character value, *INPUT,
Hold output spooled file . . . . . HOLD _____ *NO, *YES
Save output spooled file . . . . . SAVE _____ *NO, *YES
Output . . . . . OUTPUT _____ *PRINT, *VIEWER, *OUTDOC
Output document . . . . . OUTDOC _____ Character value
Output folder . . . . . OUTFLR _____

Replace document . . . . . REPLACE *NO_ *NO, YES
Bottom
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

The **OUTPUT** parameter is used to select what kind of output you want:

- *PRINT** Using this value, the output is a merge PCL spool file. The file is placed in the output queue specified in the OUTQ parameter.
- *VIEWER** This will merge and open Swiftview to display the result. (Should only be used in an interactive job).
- *OUTDOC** This value requires, the OUTDOC, OUTFLR and REPLACE parameters to be filled out. A PCL file (name defined in OUTDOC) will be created in the folder defined in OUTFLR.

The Copy CPI Spooled File Command

When you press F19-DSPPFM in overlay design you can see the temporary file: QTEMP/APF3812P. With the command **APF3812/CPYCPISPLF** you can create another file with the same contents. It is mainly intended for spooled files with variable CPI. The CPI of the spooled file is placed in position 199-201.

The Page Builder Spooled File Command

Software developers can update a copy of an existing SCS spooled file by using the InterForm400® PageBuilder feature.

The Page Builder feature is invoked by entering the Create PageBuilder Spooled File command (**APF3812/CRTPBSPLF**).

Prior to using the PageBuilder feature, a PageBuilder program must be created. This

program must be specified for the PAGBLDPGM parameter on the CRTPBSPLF command.

Description of the Create PageBuilder Spooled File command, CRTPBSPLF

```

Create PageBuild Spooled File (CRTPBSPLF)

Type choices, press Enter.

PageBuilder program . . . . . PAGBLDPGM      _____      Name
Library . . . . .                               _____      Name
Data parameter definition:      DTAPARM      -
Find 'string' . . . . .                               _____      Value, *PAGE, *ANY
String length . . . . .                               *STR__          1-256, *STR
Return length . . . . .                               *STRLEN         1-256, *STRLEN
Minimum line . . . . .                               _____          1-255
Maximum line . . . . .                               _____          1-255
Minimum starting position . . . . .                   _____          1-378
Maximum starting position . . . . .                   _____          1-378
      + for more values
Spooled file . . . . . FILE                    _____      Name
Job name . . . . . JOB                        *_____      Name, *
User . . . . .                               _____      Name
Number . . . . .                               _____          000000-999999
Spooled file number . . . . . SPLNBR           *LAST_          1-9999, *ONLY, *LAST
Application ID parameter . . . . . APPIDPARM    _____

-----
Output queue . . . . . OUTQ                    *INPUT_____      Name, *INPUT
Library . . . . .                               _____          Name, *LIBL
Form type . . . . . FORMTYPE                  *INPUT_____      Character value
Output spooled file name . . . . . SPLFNAME    *INPUT_____      Name, *INPUT

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

```

- First the CRTPBSPLF command calls the PageBuilder program (specified by the PAGBLDPGM keyword) with parameter 1 = 'STR'.
- Then the CRTPBSPLF command reads all pages from the input spooled file specified by the FILE, JOB and SPLNBR keywords.
- For every page in the spooled file the PageBuilder program is called having parameter 1 = 'PAG' and parameter DATA01-DATA10 equal to the data found on the active page according to the values for the DTAPARM keyword - unless you use ***PAGE** then the contents of the current page is transferred in an array 378 char wide by 255.
- The PageBuilder program now updates parameters (DATA01-DATA10) according to program logic - or the array if you use ***PAGE**.
- The CRTPBSPLF command creates a new page in a new SCS spooled file with the updated values (DATA01-DATA10).
- After processing all pages your PageBuilder program is called once more having parameter 1='END'

The parameters of the command are these:

PAGBLDPGM The PageBuilder program that the command is to call for each page.

DTAPARM Use this to define each of parameters DATA01-DATA10. Insert a '+' in the first or last line to insert and define another DATA field. Each of the DATA fields are defined like this:

Find 'string':

Type in e.g. *PAGE to transfer the contents of whole spooled file page to the page builder program without the use of DATA01-DATA10. Use of *ANY tells that you do not want to search after any specific text. Other values are interpreted as a string to search for in each spooled file page.

NOTE

If you use *PAGE for Find string, the rest of the fields for DTAPARM are ignored.

String length:

The length of the string to search for/compare with in 'Find string'. Use of *STR indicates that you want to use the length of the that string.

Return length:

The number of characters to insert in the spooled file from the DATAxx, that is returned from the page builder program.

Minimum/maximum line:

The interval of lines in the spooled file to search for the string. If you know what line you want to use just specify this for both.

Minimum/maximum starting position:

The interval of positions to search in the spooled file for the 'Find string'.

Pass data from position:

You can pass some spooled file data from the line where the string of text is found onto the page builder program (in DATAxx). Here you state the starting position of this text. Use *STRPOS to use the position where 'Find string' text is found.

Pass data length:

Works like the previous field. This just determines the length of the spooled file data to move to the page builder program.

FILE	Spooled file name of the *SCS spooled file to operate on.
JOB	Job name, user profile and job number of the spooled file.
SPLNBR	Spooled file number.
APPIDPARM	Application ID parameter. This is transfered onto the page builder program as a parameter. This can be useful if you e.g. want to call the same pagebuilder program from different uses of the CRTPBSPLF command.
OUTQ	The output queue where the new and changed spooled file will be created. *INPUT will make the command create the new spooled file on the same output queue as the original spooled file.
FORMTYPE	The formtype of the new, changed spooled file.
SPLFNAME	The name of the new spooled file.

Example:

```
CRTPBSPLF  PAGBLDPGM(LIB1/BPSAMP)
           DTAPARM(('INVOICE NO' 10 10 1 80 51 51) (*ANY 9 9 11 11 12
```



```

12))
FILE(QSYSPRT)
JOB(*)
SPLNBR(*LAST)
APPIDPARM('MY ID')
OUTQ(DIAG)

```

This will process the last QSYSPRT spooled file for the current job, calling the program BPSAMP in library LIB1 for every page in this spooled file.

Keyword DTAPARM describes where to find the values for parameters DATA01-DATA10 (see PageBuilder program parameters below) which are passed to program BPSAMP.

('INVOICE NO' 10 10 1 80 51 51) = specification of DATA01.
Value will be 'INVOICE NO' (or blank if not found in line 1-80 position 51).
Length = 10 characters.
Length = 10 characters, when returned from the program BPSAMP,

(*ANY 9 9 11 11 12 12) = specification of DATA02.
*ANY indicate *whatever found* (in line 11 position 12).
Pass 9 characters to program BPSAMP
Return 9 characters from program BPSAMP.

NOTE

The DATA01-DATA10 parameters can be used for searching for a specific text in the spooled file. Note however that they return/find only the **FIRST** occurrence on the page.

PageBuilder program parameters

Parameter #	Length	Usage	Description
1	3	I	CRTPBSPLF call option STR, PAG or END
2	64	I	Value from the APPIDPARM keyword
3	256	I/O	DATA01 (input from spool file - DTAPARM)
4	256	I/O	DATA02 (input from spool file - DTAPARM)
.....	256	....	....
12	256	I/O	DATA10 (input from spool file - DTAPARM)

For examples of sources for a Page Builder Program see member **PAGBLDPGM** and **PAGBLDPGM2** in source file APF3812/APISRC. **PAGBLDPGM2** illustrates how to use the *PAGE option.

The Convert PCL Spooled File Command

The **APF3812/CVTPCLSPLF** command converts a PCL spool file to a SCS spool file. This command has been created mainly for converting J.D. Edwards OneWorld spool files to SCS, making it possible to merge the spool file in InterForm400®.

```

Convert PCL Spooled File (CVTPCLSPLF)

Type choices, press Enter.

Spooled file . . . . . FILE _____ Name
Job name . . . . . JOB * _____ Name, *

  User . . . . . _____ Name
  Number . . . . . _____ 000000-999999
Spooled file number . . . . . SPLNBR *LAST_ 1-9999, *ONLY,.
PCL command subset . . . . . PCLSUBSET 001 001
PCL application . . . . . PCAPPL *ANY_*ANY, *ONEWORLD,
Output queue . . . . . OUTQ *INPUT_*Name, *INPUT

  Library . . . . . _____ Name, *LIBL

Form type . . . . . FORMTYPE *INPUT_*Character value
User data . . . . . USRDTA *INPUT_*Character value
Save output spooled file . . . . . SAVE *INPUT_*INPUT, *YES,
*NO
Code page . . . . . CODPAG *INPUT_*INPUT, *SYSVAL,
Input page width . . . . . INPWID *DFT_*1-28, *DFT, *A4,

Maximum page length . . . . . OUTPAGLEN 255_*10-255
Maximum page width . . . . . OUTPAGWID 360_*80-360

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

```

The Merge Spooled File PDF Command

This command, **APF3812/MRGSPLFPDF** can be used for creating PDF files containing the result of a merge in InterForm400®. This PDF file can even be e-mailed as an attached file, directly from your AS/400. See more information at page 349.

NOTE
In order to get PDF output you need to purchase the PDF module for InterForm400.

The Merge Spooled File ZPL Command

The Merge Spooled File ZPL Command, **APF3812/MRGSPLFZPL** can be used e.g. to merge into a Zebra spooled file from an Auto Forms Control user exit program. This command is the Zebra printer equivalent to the commands APF3812/APF3812 and APF3812/MRGSPLFPDF. For details of the parameters see the APF3812/APF3812 command at page 405. Only additional parameters compared to the **APF3812/APF3812** command are these:

Print mode (PRINTMODE):

- *TEAROFF** mean that you will manually tear of the labels.
- *REWIND** can be used for rewinding all printed labels onto another roll. This requires special hardware installed.
- *PEELOFF** will print only one label at a time waiting for the current label to be peeled off. (This also requires additional hardware).
- *CUTTER** (requires hardware cutter) normally cuts the media for each print job unless you use ***CONTINUOUS** - then ***CUTTER** will cut out each label.

Labels / Continuous (MEDIATRACK):

Select ***LABELS** if the media contains of separate labels.

select ***CONTINUOUS** if the media is not separated into labels (in this case you would probably select ***CUTTER** for the **print mode** parameter).

Media type (MEDIATYPE):

Select ***TRANSFER** if you use a non heat sensitive media otherwise use ***THERMAL**.

NOTE
Creation of ZPL output from InterForm400 requires the purchase of the ZPL module for InterForm400.

The Print ASCII File Command

The **APF3812/PRTASCF** command prints a ASCII file to an output queue as a SCS spool file. The ASCII file must be placed in IFS. The contents of the ASCII file must be **PRTCTL(*FCFC)**, which means the first character of each line is a control code for the printer. E.g. a '1' in position 1 is specifying, that this line is to be printed as the first line of a new page. All other lines must have a blank in this position.

This command can substitute the OS/400 commands: **PRTASCSTMF** and **CVTPCLSPLF**. The input for **CVTPCLSPLF** and **PRTASCF** have to be symbol set **ISO-8859-1** (Latin 1).

The Split Spooled File Command

The command **APF3812/SPLITSPLF** makes it possible to split an ***SCS** spooled file without Auto Forms Control. You only identify the spooled file and an InterForm400 split definition:

```
Split Spooled File (SPLITSPLF)

Type choices, press Enter.

Split definition . . . . SPLITDEF _____ Name
Job Name . . . . . JOB _____ Name, *
  User Name . . . . . _____ Name
  Job Number . . . . . _____ 000000-999999
Spooled File Name . . . FILE _____ Name
Spooled File Number . . SPLNBR *LAST 1-999999, *ONLY, *LAST

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

Split definitions will normally be executed through a function **B** in Auto Forms Control. Refer to page **148** and **173** for more information.

Spooled File Inspector (SFI)

The purpose of this feature is, that InterForm400® can look for a special string in a spool file and change the form type of the spool file depending on whether the string was found or not. This can be done without any programming.

To maintain SFI definitions use the **APF3812/WRKSFID** command. (See Sample SFI definition below). To use/run an SFI definition, enter a line in an Auto Forms Control definition using function 8 (Call Program), and specify program RUNSFI and library APF3812. (See Description of the RUNSFI program below).

Create SFI definition		SFI110D
SFI definition	DEMO_____	
Description	My_test_____	
Search text	Total_errors__0__	
Page	*LAST_	*ANY, *FIRST, *LAST
Print line	1__ -_72	
Position	2__ -_18	
New form type		
If text found	*SAME	Form type, *SAME
- If not found	ERROR	Form type, *SAME

When AFC invokes the RUNSFI program, it will look for a SFI definition having the same name as the form type of the spooled file. (I.e. if the form type of your spooled file is DEMO, the SFI definition named DEMO will be used).

The RUNSFI program then scans the spooled file for the search text string specified in the SFI definition (within the specified page-, line- and position-limits).

If the text string was found, the form type of the spooled file will be changed to the value specified in the 'New form type If text found' field. Likewise the form type will be changed to the value specified in the '- If not found' field if the text string wasn't found. Finally the RUNSFI program will hold and release the spooled file - in order to let AFC process the spooled file with the new form type - unless the value for New form type is *SAME, then the spooled file will not be held and released.

Note:

If a SFI definition with the name of the spooled file's form type doesn't exist - no action will be performed. All comparisons in SFI are case sensitive - including the SFI definition / form type comparison.

The Zip Stream File(s) Command

The APF3812/ZIP command can be used for zipping (compressing) stream files in IFS or folders (QDLS).

```

                                ZIP stream file(s) (ZIP)

Type choices, press Enter.

Archive path . . . . . ARCHIVE      _____
Create / Add to archive . . . . . CREATE      *CREATE *CREATE, *ADD
Current directory . . . . . CURDIR      _____
From stream file . . . . . FROMSTMF      _____

Work dir, if FROMSTMF is /QDLS  WORKDIR      _____

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

```

Archive path This is the path and name of the archive (the zipped file). This must have the extension '.zip'.

Create / Add This specifies if you want to add files to the archive. If you select *CREATE the file will be replaced if it already archived.

Current directory This directory will be added in front of the path stated in 'From stream file'. This command:

```

APF3812/ZIP ARCHIVE(' /ZIPDIR/ARCH1.ZIP' ) +
CURDIR(' /MYDIR' ) FROMSTMF(' /STATEMENT/*' )

```

This will zip all files in the directory '/MYDIR/STATEMENT' and in the archive the files will be named '/STATEMENT/file.ext'.

From stream file This is the path and name of the file(s) to be zipped. If you are zipping file(s) in the folder system (QDLS) this can only hold the file name, the path should be stated in 'current directory'. Generic names can be used e.g. '*' and 'A*.*'.

Work directory If you want to archive files placed in the folder system (QDLS) you need to state a work directory. InterForm400® will create a temporary subdirectory in the work directory called ZIP_nnnnnn, where nnnnnn is the jobnumber, which is removed before the command ends.

Other Utility Commands

The Edit Print Command

The **APF3812/APFEDTPRT** command makes it possible to edit a spool entry before merging with an overlay.

```

Copy and edit print (APFEDTPRT)

Type choices, press Enter.

Input spool file . . . . . FILNVN   *SELECT   Name, *SELECT
Input output queue . . . . . FROMOUTQ  _____ Name
  Library . . . . . _____ Name, *LIBL
Output queue for edited print . TOOUTQ  _____ Name
  Library . . . . . _____ Name, *LIBL

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

```

State the output from where you want to select the spooled file to be edited and on what output queue you want to create the edited spooled file. After selecting the spooled file with '1' you enter an editor (SEU) where you can change the contents as you please. When done with the editing just press F3 and press Enter on the next screen to confirm the changes.

The edited spooled file is cut off to the width of 132 characters. However you can extend the 132 as the maximum width to 198 if you override the QPRINT printer file before calling this command:

OVRPRTF FILE(QPRINT) PAGESIZE(255 198) OVRFLW(255)

⚠ WARNING ⚠
The OVRPRTF will override the qprint printer file for the current job. Subsequent use of this printer file (in the same job) may be influenced by this override. To avoid any problems caused by this override you can e.g. sign off and sign on again.

The APF Work Output Queue Command

The command **APF3812/APFWRKOUTQ** looks and acts like the WRKOUTQ command, except that this command opens up a Swiftview window on the PC, if a spool file containing PCL codes is displayed with option 5. Two other things differs from the standard OS/400 WRKOUTQ:

- If you have used a PJJ printer type in InterForm400 when you did the merge, you can actually change **PAGERANGE** on the merged PCL spooled file, if you change this attribute through option 2 on this command. In this manner you can print only a part of the merged spooled file. Note however, that the full spooled file will be downloaded to the printer even though only a part will be printed. (This requires, that the printer is PJJ compatible).
- If you select option **1=Send** for a spooled file you will get this screen:

```

Output Queue
APFOUTQD
Queue: AFC_INPUT2 Library: APF381_A04 Status: RLS
Type options, press Enter.
-----
Send spooled file
Select one of the following options:
1. Send Network Spooled File
2. Send PDF E-mail
Option: _
F3=Exit F12=Cancel
-----
ase 7=Messages
s Form Type Pty
DEMO 5
1001 5
1003 5
1004 5
End
====>
F3=Exit F4=Prompt F5=Refresh F9=Retrieve F11=View 2 F12=Cancel
F17=Top F18=Bottom F20=Writers F21=Description F22=Printers

```

So if the spooled file is *SCS you can use option 2 to merge the spooled file with an overlay and send the merged PDF file as an attachment in an e-mail. In this manner you can send the e-mail interactively.

The Display Black/White image Command

The command, **APF3812/DSPBWIMG** can be used for graphically viewing a black and white TIFF image using SwiftView.

If the image has been imported to InterForm400® via option 8. Work with Images in the Administration Menu, only the parameters IMAGE and RESOLUTION has to be filled out (then the TIFF image is a member in the APF3812/IMAGE file).

If the image is not placed in the APF3812/IMAGE file, this image can be viewed by stating *FILE as the IMAGE parameter and the file and member name as the FILE and MBR parameters.

```

Display Black/White image (DSPBWIMG)
Type choices, press Enter.
Image . . . . . > IMAGE *FILE_____ Name, *FILE
Resolution . . . . . RESOLUTION 300 75, 100, 150, 200,
File . . . . . FILE _____ Name
Library . . . . . *LIBL_____ Name,
*LIBL,*CURLIB;
Member . . . . . MBR _____ Name
Bottom
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Encrypt InterForm400 PDF File

With this command (APF3812/ENCIFPDF) you can take an existing InterForm400 PDF file and copy it to another encrypted PDF file. You can add an owner password, which will enable any function and a user password, that will open the PDF file with the restrictions stated under 'User Access Limitations'.

It is possible to encrypt some PDF files, that have not been created by InterForm400, but it cannot be guaranteed, that all pdf files can be encrypted in this manner.

NOTE

Password protection/encryption and/or digital signature of the PDF file requires a purchase of the PDF security module for InterForm400.

```
Encrypt InterForm PDF File (ENCIFPDF)

Type choices, press Enter.

Input PDF File . . . . . FROMPDF      _____
Output PDF File . . . . . TOPDF       _____
Replace stream file . . . . . REPLACE  *NO_      *NO, *YES
Owner Password . . . . . OWNERPWD     _____
User Password . . . . . USERPWD      _____
User Access Limitations . . . . . LIMITS *NONE_____ *NONE, *NOPRINT, *NOCOPY,
+ for more values                    _____ *NOEDIT
                                     _____

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

Note, that the input PDF file cannot be the same as the output PDF file.

The HP Macro Command

The command **APF3812/HPMACRO** is intended to be included in your CL-programs or activated from the command line. This command can only be used in relation to HP printers and compatibles.

The command gives you the possibility of down loading an overlay in the printer, where it is stored as a macro, which can either be printed automatically on every succeeding page or activated on macro calls in your print data.

This command is very useful if you want to create an overlay that should be activated on all pages printed from the printer, and when printing word processing documents containing advanced features such as Justification, super/sub script, fonts etc.

The macro can then be activated from a word processing document (e.g. Office DisplayWrite 400) by inserting a command in the header or the footer text in the document (e.g. on an Intermate interface you could enter the text **/1B&f999y3X** in a header text to add the overlay defined as MACRO-ID **999** to the printout).

You can also have the macro called as a sub-overlay from an overlay definition. This is done by the **?=if...then** command (see page 67). The overlay name entered in the If...then sentence should be **MACROXXXXX** where the XXXXX denotes the HP Macro ID entered

into the HPMACRO command.

```

Download overlay as a HP-macro (HPMACRO)

Type choices, press Enter.

InterForm 400 file set . . . . . KARTSET      _____ Character value
Overlay name . . . . . KLICHE                _____ Character value
Printer type . . . . . PRRTYP                _____ IBM4019, IBM4029, IBM4039...
Interface . . . . . INTERF                  _____ SYSTEM, SYSTEM850, ASCIIR8...
Macro-id (0 32767) . . . . . MACROID        _____ 0-32767
Automatic on every page . . . . . AUTOMATIC  _____ *NO *YES
Place into Flash Memory . . . . . FLASHMEM   _____ *NO *HP4 *IBM4039
Output queue . . . . . OUTQ                 _____ Name, *JOB
  Library . . . . .                          _____ Name, *LIBL
Form type . . . . . FORMTYPE                _____ Character value

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

```

- KARTSET:** Defines the name of the file-set, in which you have defined the overlay you wish to download as an HP macro.
- KLICHE:** Is the name of the overlay you wish to download.
- PRRTYP:** States the printer type you wish to use. If you are using another printer type than the ones listed in PRRTYP you should select HPII. Refer to page 374 for further information on the printer types.
- INTERF:** Defines how the printer is connected to the AS/400 system. Refer to page 378 and 268 for further information on the interface types.
- MACROID:** An HP macro must be given an ID in the interval 0-32767. The printer can store a number of different macros. If a macro is down loaded with the same macro ID as one already resident in the printer, the new macro definition will override the old one. If you choose to work with several macros in the printer simultaneously you should number the macros unambiguously.
- AUTOMATIC:** This parameter defines if the macro should be executed on all pages (*YES) or only when called from a macro definition incorporated in the print data (*NO).
- FLASHMEM:** This parameter indicates if the macro should be stored in e.g. the optional Flash SIMM module on a printer. Valid values are:
- *No = Only downloaded to the memory of the printer.
 - *HP4 = Store in HP Flash SIMM.
- OUTQ:** Here the output queue for the final printout is stated. The macro will be transformed into a spool-entry with the filename MACRONnnnnn, where nnnnn is the macro ID. The description of the spool entry will be the name of the overlay.
- FORMTYPE:** This is the forms type you want the macro to have when placed as a spool-entry on the output queue defined by OUTQ.

The output will be placed in the output queue with status **HOLD(*YES)** and **SAVE(*YES)**.

When you wish to download the macro you only have to release the spool entry.

The Import InterForm400 Resources Command

With this command you can import InterForm400 resources directly into production (into the APF3812 library) without a lot of menu selections:

```
Import InterForm resources (IMPAPFRSC)

Type choices, press Enter.

Save file . . . . . SAVF          _____ Name
Library . . . . .          *LIBL_____ Name, *LIBL, *CURLIB
Transfer to production . . . . . TFRPROD *YES___ *YES, *NO, *PROMPT
Display errors . . . . . DSPERR   *YES      *YES, *NO

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

Refer to page 477 for more information of this command.

The PCL-file from folder to Member Command

The **APF3812/PCLTOMBR** command can be used for inserting one or several PCL files (from a folder) into a physical file as members. The PCL files can be specified as generic or *ALL.

```
PCL-file from folder to member (PCLTOMBR)

Type choices, press Enter.

From folder . . . . . FROMFLR          _____
From PC-file name . . . . . DOCNAM      _____ Char, generic*,
From PC-file extension . . . . . EXTENSION _____ Char, generic*,
To physical file . . . . . OUTFILE      _____ Name
Library . . . . .          *LIBL_____ Name, *LIBL
Member prefix . . . . . PREFIX         _____ A - Z , *NONE
Add extension to member name . . MBREXT *NO___ *NO, *YES
Delete PC-file after copying . . DLTDOC *NO___ *NO, *YES

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

A member prefix can be specified (A-Z or *NONE). If the prefix is a letter, the member name of the PCL files will then be the name of the PC file preceded by this character.

Note, that in order to be able to use the PCL files when designing overlays, the PC files

have to be placed as members in the APF3812/PCL file (for Black and white) or the APF3812/PCLCOL file (for colour files).

PCL files not placed in PCL and PCLCOL can only be used by inserting &&-commands in the spool file.

TIF files can be inserted with a similar command, as seen at page 422.

The Print PCL-member Command

This command can be used in conjunction with PCL files, that are already installed in InterForm400. With this command you can print such an installed black/white PCL file:

```

Print PCL-member (PRTPCLMBR)

Type choices, press Enter.

Member . . . . . MEMBER      _____  Name
Rotation . . . . . ROTATION  0__      0, 90, 180, 270
Top offset . . . . . TOPOFFSET 0__      -1200-1200
Left offset . . . . . LEFTOFFSET 0__      -1200-1200
Output queue . . . . . OUTQ    *JOB_____  Name, *JOB
Library . . . . .           _____  Name, *LIBL
Form type . . . . . FORMTYPE  *STD_____  Character value, *STD
Paper Size . . . . . SIZE     *A4_____  *LETTER,*LEGAL,*LEDGGER
Copies . . . . . COPIES      1__      1-255
Output spooled file name . . SPLFNAME *MEMBER_____  Name, *MEMBER
Drawer . . . . . DRAWER      *PRINTER__  1-255, *PRINTER
User data . . . . . USRDTA   *MEMBER_____  Character value, *MEMBER
Hold output spooled file . . HOLD   *NO_      *NO, *YES
Save output spooled file . . SAVE   *NO_      *NO, *YES

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

```

(After installation and preparation the installed B/W PCL files are saved as members in the PCL file in InterForm400). The unit used for displacement is dots measured in 300 dots per inch. A negative value for an offset will move the PCL file up/left compared to the original. Remember, that any top margin is removed from the PCL as a part of the install in InterForm400.

The Print TIFF File Command

Use the command, APF3812/PRTTIFF to print TIFF file placed in the IFS. The TIFF file must be black/white and in a format supported by InterForm400. Refer to page 319 for a list of the supported TIFF formats.

```

Print TIFF file (PRTTIFF)

Type choices, press Enter.

From IFS path name . . . PATH _____

Output queue . . . . . OUTQ      *JOB_____   Name, *JOB
Library . . . . .                _____   Name, *LIBL
Form type . . . . . FORMTYPE     *STD_____   Character value, *STD
Paper Size . . . . . SIZE        *A4_____   *LETTER, *LEGAL, *LEDGGER...
Copies . . . . . COPIES         1_____   1-255
Drawer . . . . . DRAWER         *PRINTER     1-256, *PRINTER
Rotation . . . . . ROTATION     *AUTO        *AUTO, 0, 90, 180, 270
Resolution . . . . . RESOLUTION *AUTO        *AUTO, 75, 100, 150, 200...

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

```

The Print X-Ref List Command

The command APF3812/PRTXREF prints a list of all InterForm400 resources and lists any reference to each resource including the autownload specifications. Refer to page **339** for more information of this list. The command has no parameters - it prints to the default output queue of the job.

The Send Mail Command

The **APF3812/SNDMAIL** command can be used for sending an E-mail from the AS/400 with up to 30 attached files of your choice, but it does not support an InterForm400® merge in the same manner as APF3812/MRGSPLFPDF.

Note, that this command has the parameter: Confirmation of delivery (CFMDEL). With this you will get a confirmation e-mail when the receiver opens the e-mail. Note however, that this confirmation does not work with e.g. Notes.

The Work Mail addresses Command

The APF3812/WRKMAILADR command enables the possibility to give access to maintenance of E-mail addresses without entering the InterForm400® menus. These addresses are used in combination with the E-mail finishing function - see page **201**.

The command should be called with a parameter, MAILTASK, that identifies the E-mail finishing definition to work with.

The Work with Profile Jobs Command

The APF3812/WRKPRFJOB command can be used to list all active jobs for a specific user profile. This command will also display all server jobs serving this user profile. Server jobs are used for the Graphical Designer and this command can be used for ending all jobs for a user profile is necessary. This is the list shown (if e.g. you have the graphical designer running for this user profile):

```

Work with Job
WRKPRFJO

Position to . . . . . _____ Job name

Type options, press Enter.
  5=Work with

Opt Job name      User      Job number
-  QGYSERVER     QUSER    029983
-  QNPSESVS     QUSER    029837
-  QNPSESVS     QUSER    029972
-  QPADEV000B   KSE      029982
-  QRWTSRVR     QUSER    029849
-  QZHQSSRV     QUSER    029843
-  QZRCSRVS     QUSER    029956

End

F3=Exit  F5=Refresh  F12=Cancel

```

Use option '5' to work with a job and then option 41 to end the job if wanted. If you want to release a lock of overlay in InterForm400 you can also do that in InterForm400 by selecting option '80. Administering InterForm 400' followed by '52. Work with Designer job overlay locks' and ending the job locking the relevant overlay.

Work with Stream File Locks

With this command (APF3812/WRKSTMFLCK) you can list which jobs, that has a lock on a certain file in the IFS. You state the path as the only parameter. Here you can see any job, that locks the object:

```

Work with Stream File Locks
WRKSTMFL

Position to . . . . . _____ Job name

Type options, press Enter.
  5=Work with job

Opt Job name      User      Job number
-  QZLSFILE     QUSER    074244

End

F3=Exit  F5=Refresh  F12=Cancel

```

From this screen you can select to work with the job that has the lock e.g. in order to end it. Be sure, that you are not causing a problem by ending the job - it might be doing something important...

The TIF-file from folder to member Command

The APF3812/TIFTOMBR command can be used for inserting one or several TIF files (from a folder) as members in a physical file. The TIF files can be specified as generic or *ALL.

```

TIF-file from folder to member (TIFTOMBR)

Type choices, press Enter.

From folder . . . . . FROMFLR _____
From PC-file name . . . . . DOCNAM _____ Char, generic*,
From PC-file extension . . . . . EXTENSION _____ Char, generic*,
To physical file . . . . . OUTFILE _____ Name
Library . . . . . *LIBL_____ Name, *LIBL
Member prefix . . . . . PREFIX _____ A - Z , *NONE
Add extension to member name . . MBREXT *NO__ *NO, *YES
Delete PC-file after copying . . DLTDOC *NO__ *NO, *YES

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

```

A member prefix can be specified (A-Z or *NONE). If the prefix is a letter, then the member name of the TIF files will be the name of the PC file preceded by this character.

Note, that in order for being able to use the TIF files when designing, the PC files have to be placed as members in the APF3812/IMAGE file.

TIF files not placed in IMAGE can only be used by inserting &&-commands in the spool file.

PCL files can be inserted with a similar command, as seen on page 418.

Appendix J - Merging overlays with OV/400 and InterWord400™ print jobs

If the system should operate on print jobs from **OfficeVision/400**, you should be aware that some specific word processing features will disappear from the print job during merge with an InterForm400® overlay.

The features in question are **sub-script**, **super-script**, **font changes** and **justification** (bold and underline might work depending on the method used in the document). The reason is that OS/400 does not allow these attributes with the **Copy spool file** function, which is one of the basic operations of the InterForm400® system. OS/400 will report a message if such unsupported attributes are found in the spool entries when the **Copy spool file** operation is carried out.

There are, however, two ways to avoid using the Copy spool file operation and still add overlays to complex office print jobs.

1. Merging with OfficeVision jobs with limited overlay features

Merge in Auto Forms Control or 3. Merge spool entry with overlay are used as normal, but the overlay must not include any of the following elements:

- Tabulators
- Remap Window
- If-then statements
- Copy management
- Extended page definition

Besides this, the Interface must be ASCII850 or ASCII852 and Finishing functions are not allowed. In addition the main overlay definitions **Line Spacing**, **Rotation**, **Font** and **Drawer** should all be set to ***INPUT**.

InterForm400® will add the overlay and make conversions of the advanced word processing features of the Office Spool file (SCS/DCA). If however just one of the above restrictions are not obeyed the spool file will be regarded as a normal SCS spool entry, and the advanced features will be ignored.

2. Downloading the overlay as a macro

The overlay should be downloaded as a HP macro and the command APF3812/HPMACRO (see page **402**, **416**) should be used to create the spool entries containing the HP macro. The macro can then be called directly from the document by inserting a call command in the header or footer text.

Note that this method neither uses **Auto Forms Control** nor the interactive merge with option **3. Merge spool entry with overlay**.

3. PDF files cannot be created when merging with OV/400 or InterWord400™ spooled files.

Appendix K - Forms Server for non-AS/400 environments

InterForm400® can act as a Forms Server for other environments, such as WindowsNT, UNIX, Novell etc.

For instance it is possible with Client Access to create a printer in Windows, which directs print jobs either as PCL (datatype *ASCII) or print jobs which has been converted to SCS (datatype *SCS) to an AS/400 attached printer. The latter function was originally designed for printing PC print jobs on twinax printers, but can be used as input for InterForm400® to print electronic forms.

Adding Overlays to *SCS PC Print Jobs (PC Mail Merge)

This function is a popular way of doing large mailings with advanced graphics. For example the normal situation when merging database records with a graphical MS-Word document is, that each page in the resulting output will have all graphics included. This takes long time to process on both the PC and the printer, it requires lots of hard disk space and not least, it generates a lot of network traffic.

With InterForm400®, you can load the form document as an overlay and send the data records as a simple SCS print job to a queue monitored by InterForm400®. This is an extremely effective way of making large mailings.

The following is a short description of the procedure for setting up the environment in Windows9x/NT with Client Access:

1. In Windows Click Start, Printer and Click the "Add Printer" icon. The same printer should be used as input to InterForm400®. Tag "Network Printer" and click Continue, Locate your AS/400 under the "Client Access network" and chose a printer on the AS/400.

Note: If no printers are displayed (if all printers are defined as remote writers), or if you do not have a printer available on the AS/400 to use as input queue to Auto Forms Control, you must create a "dummy" writer. This automatically creates an output queue, which you can use as input queue to AutoFormsControl:

```
CRTDEVPRT DEVD(LAN_FSP) DEVCLS(*VRT) TYPE(3812)  
MODEL(1) FONT(11) ONLINE(*NO)
```

The printer installation wizard will now ask you to select a driver for the printer. Select an older twinax printer type like an IBM 5256 or IBM 4214. Now finalise the add printer wizard.

2. Create a simple forms document in e.g. MS-Word to merge the data into. This forms document should be without any formatting. It should contain nothing but the fields where the data from the data source are inserted. Now merge the data source with this forms document, and send the merged document to the printer created in step 1. The spool file would look like this on the AS/400:

```

                                DISPLAY SPOOL FILE
File . . . . . : QPRINT                               Page/Line 1/800
Function . . . . .                               Columns 1 - 78
Search for . . .
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
  Florence Flowers
  Tulip Road 16
  4000 Marigold
  DK-Denmark
-----
  Att: Susan Sunflower
  Forrest Friends Inc.
  Oak Street 88
  4000 Marigold
  DK-Denmark
-----
  Att: Archie Acorn
  Herring Marine Research
  Seaweed Street 14
  9000 Battleaxe
  DK-Denmark
-----
  Att: Martin Merman
F3=Exit      F12=Cancel    F19=Left    F20=Right    F24=More keys

```

3. Create the forms document in e.g. MS-Word , which you want to use as mail letter, but do not include any codes for position of merge records (address field). Now create an InterForm400® overlay including this document. Refer to section **Importing PCL Overlay from PC Print File page 325**, on how to import the document as an overlay in InterForm400®.
4. Locate the spool file from step 2 on the AS/400, and use it to insert remap lines in the overlay created in step 3.
5. You can now either make a manual merge of the overlay with the forms document and the spool file, or you can activate Auto Forms Control on the queue for which you created the printer in step 1.

Adding overlays to *ASCII PC printjobs (PCL)

InterForm400® only requires the spool entry to be of data type *ASCII, and the input data to be PCL4, PCL5 or PCL5e (Including PCL color commands). InterForm400® will add an overlay to the print job while maintaining the formatting of the document. Therefore the following overlay command lines will be ignored:

- Tabulators
- Remap Window
- If-then statements
- Copy management
- Extended page definition

InterForm400® will also ignore all global settings of the overlay (used for pre-formatting variable spool data) except for the ROTATION. When defining *INPUT for ROTATION InterForm400® will detect the PCL orientation command in the spool file, and print the overlay with the same orientation.

Merging of overlays and data can be done by either the APF3812 CL command, interactively with 3. Merge spool entry with overlay, or by Auto Forms Control.

The overlay selected for merge in InterForm400® will be applied to all pages in the PCL (*ASCII) spool entry. Should you require another overlay to be applied to specific pages in the PCL spool entry, you can insert the text string **"##overlayname"** in the document. InterForm400® will pick this overlay instead of the one defined in the merge definition, but

will pick it from the same file set. Note that the string “##overlayname” must be written in the document with a font that is resident in the printer (e.g. Courier).

In order to avoid the overlay to be added to certain pages in the overlay, you must create an empty overlay (eg. with the name “blank”), and insert the text “##blank” on all pages which should be printed without overlay. Alternatively, you can define the merge on the AS/400 to use the overlay “blank”, which means all pages in the spool entry which do not specifically have an overlay call (##overlayname) will be printed without overlay.

Defining a Virtual printer in Client Access:

In Windows Click Start, Printer and Click the “Add Printer” icon. The same printer should be used as input to InterForm400®. Tag “Network Printer” and click Continue, Locate your AS/400 under the “Client Access network” and chose a printer on the AS/400.

Note: If no printers are displayed (if all printers are defined as remote writers), or if you do not have a printer available on the AS/400 to use as input queue to Auto Forms Control you must create a “dummy” writer. This automatically creates an output queue, which you can use as input queue to Auto Forms Control:

```
CRTDEVPRT DEVD(DUMMY) DEVCLS(*VRT) TYPE(3812) MODEL(1)
FONT(11) ONLINE(*NO)
```

The printer installation wizard will now ask you to select a driver for the printer. Select a PCL driver that corresponds to the PCL emulation supported by the laser printer connected to the AS/400.

 **WARNING** 

*Note that the each page in the *ASCII spool entry must not exceed 80kb. If you receive an error because of this, you should try to remove elements, especially graphics, in order to stay within this limit.*

 **TIP** 

You can convert a ASCII file in IFS into a SCS spool file by using the command APF3812/PRTASCF. See page 411.

Appendix L - PDF and PCL Viewing

The PCL Viewer SwiftView included with InterForm400® will view PCL spool files with data type *ASCII containing PCL4, PCL5 and PCL5e data. This is a true WYSIWYG feature, which is unique for verifying results of forms design, and to view the contents of spool files in the AS/400 output queues, that has been merged with InterForm400® overlays.

NOTE

For easy design of your overlays you can also install a graphical designer on your PC. Refer to page **461** for more details.

NOTE

In order to get PDF output you need to purchase the PDF module for InterForm400.

PDF viewing:

If you have Acrobat Reader (or another PDF file viewer) installed on your PC you can also choose to use this program to view the PDF result of a merge. This requires:

1. That this program (e.g. Acrobat Reader) is associated with the extension **.PDF** on the PC. (Try to double click on a PDF file on your PC. It should open up the PDF file viewer and display the file).
2. That the PC can 'reach' the qdls/apf3812/view folder on the AS/400 - follow the steps as indicated for PCL viewing.
3. That the Netserver is running and the name is registered as described for PCL viewing below.
4. **IMPORTANT:** The PDF viewing option is limited for users, that has a user profile with **max. 8 characters**.

Refer to page **42** for how to activate the PDF view.

PCL viewing:

SwiftView exploits the Client Access connection to a Windows PC, and is currently integrated with the menus **1. Design Overlay**, and **10. Work with actual output queue**.

The command for **10. Work with actual output queue** is:

APF3812/APFWRKOUTQ

SwiftView licenses:

WARNING

When InterForm400® is running in test mode you can setup an unlimited number of users to use SwiftView. 1 SwiftView license is included with InterForm400® free of charge. Additional licenses can be ordered from your local InterForm400® dealer. The minimum licenses to order is 5. You will receive the license in form of a code, which matches the serial number of your AS/400. Refer to page 356 for more information on ordering and entering license code.

Requirements for running SwiftView:

1. You must connect to the AS/400 via TCP/IP from a Windows 95/98/NT with Client Access or other 5250 emulator supporting both STRPCO and the STRPCCMD

commands.

- The user must have full authorisation over the folder \\system\QDLS\APF3812\VIEW. You can grant these rights with the command:

```
CHGDLOAUT DLO(VIEW) FLR(APF3812) USRAUT((*PUBLIC *CHANGE))
```

- The user must be added to the system directory. You can add a user to the system directory with the following command:

```
ADDIRE USRID(KURT SYSTEM) USRD('Jensen, Kurt') USER(KURT)
```

- The system name defined in the InterForm400® administration menu **2. Configure InterForm 400** (see page **26**), must correspond to the system name shown with the command APF3812/DSPNETSVRA or use the IP-address of the iSeries (AS/400).
- Port number 445 must be open in any firewall the PC may access the iSeries through.

Setting up a SwiftView user.

- Use option 70. Install SwiftView at drive C:, located in 12. Service Functions, to create a directory on the users PC's C drive called C:\APF3812, and copy the program **SVIEW.EXE** from the folder \\system\QDLS\APF3812\VIEW into this directory on the PC.
- If InterForm400® is running in test mode, **F14** in menu **1. Design overlays** and option **5=display** in menu **10. Work with actual output queue** will now activate PCL viewing. (See page 40 for more information on using **F14**),

If InterForm400® is running in production mode, you will only have permission to one license. If a code is installed for activating more SwiftView licenses, the user profiles activating the viewer will automatically be assigned to the group of users for access to SwiftView (The administration menu point **51. Swiftview users**).

If all licenses are already occupied, every new user will be informed about this, when trying to activate the viewer. In this case, either order the needed number of SwiftView licenses, or replace an existing user profile in menu **51. SwiftView users**, with the user profile that needs access to PCL viewing.

Setting up Client Access Express, enabling PCL-viewing

- Share the folder system as QDLS with this command:

```
APF3812/ADDFILSHR SHARE(QDLS) OBJ('/QDLS') TEXT(QDLS)
```

☺ TIP ☺

It is not necessary to share the complete QDLS. You can also choose to share either APF3812 or APF3812/VIEW. However if you choose that you need to state the sharename in option '2. Configure InterForm400' of the InterForm400 Administration Menu as described on page 27.

- Use the command:

```
APF3812/DSPNETSVRA
```

- to display the NetServer Name and Domain of the AS/400. The Netserver name is the name, that you should use for your AS/400 when configuring Client Access Express.

WARNING

The NetServer Name should not be the same as the AS/400 System name. The system name can be displayed with the command, DSPNETA. If the names are identical you could change the Netserver name with the command, APF3812/CHGNETSVRA.

3. Start the NetServer with the command:

APF3812/STRNETSVR

4. The person that should be able to view, must have full authorisation over the folder \\system\qdl\apf3812\view. You can grant these rights with the command:
CHGDLOAUT DLO(VIEW) FLR(APF3812) USRAUT((*PUBLIC *CHANGE))

NOTE

When viewing graphically (PCL or PDF) a file will be created in the APF3812/VIEW folder, that others can access/view. To avoid that you can specify, that the PUBLIC authority of these temporary files should be *EXCLUDE. Refer to page 27 for more information.

5. The user must be added to the system directory. You can add a user to the system directory with the following command:

ADDIRE USRID(KURT SYSTEM) USRD(' Jensen, Kurt') USER(KURT)

6. Create a new AS/400 connection in Client Access stating the new AS/400 server name.

7. Start up a new session and change the new network name to Qxxxxxxx under option 2. Setup default output queue and printer type, in 80. Administration Menu.

8. If you are running Client Access Express, you should also make sure to start the Netserver on the AS/400. This can be done with the command: STRHOSTSVR SERVER(*ALL). You should also make sure to use the AS/400 system name (on the PC and in InterForm400[®], that you can find using the Explorer and opening the **Other Computers** folder.

9. Boot your PC and connect to the new server name Qsxxxxxxx via the Operations navigator.

10. If you are running Window95/98 is it necessary to have to same User-ID and password on the PC as on the AS/400.

TIP

You can choose to map a Network drive to QDLS from Explorer on your PC: Choose 'Tools' and 'Map Network drive..' and '\\<Netserver name>\QDLS' as the folder. This is helpful later when moving resources to/from the shared APF3812 folder.

When configuring Netserver and share these commands could be very helpful:
(All are placed in library, APF3812)

NetServer commands:

DSPNETSVRA	Display NetServer Attributes
CHGNETSVRA	Change NetServer Attributes
STRNETSVR	Start NetServer
ENDNETSVR	End NetServer

NetServer share commands:

ADDFILSHR	Add NetServer File Share
ADDPRTSHR	Add NetServer Printer Share
RMVNETSHR	Remove NetServer Share

Troubleshooting problems using SwiftView:

If you receive an error when starting up SwiftView (using e.g. F14), you might get some help here.

When using the full Client Access the AS400 system name used on the PC can be found, by choosing Start, Programs, IBM AS400 Client Access, AS400 Connections. Additional information for Client Access Express can be found below.

Problem: When pressing F14 from the design screen a DOS window opens and shuts very quickly.

Solution: Install SwiftView as described above in the first paragraph of Setting up a SwiftView user. Make sure, that the APF3812 folder is created at the C-drive of the PC AND that the file SVIEW.EXE has been copied to that folder. If the folder and file has not been copied make sure, that you are authorized to the VIEW folder (see requirement 5), and that the AS400 system name in InterForm400® is the same as used on the PC (see requirement 5) and then try installing SwiftView again.

Problem: When starting up SwiftView, you get a small window with the message:

Unusual file access failure, check NDGDEBUG \\as400\QDLS\APF3812\VIEW\user.

Solution: Make sure, that the AS400 system name set up in InterForm400® is the same as used on the PC (see requirement 5 above). If the AS/400 is not found on the same network and not on the DNS server, you might need to add the AS/400 to the HOSTS file on the PC like described below.

Problem: When starting up SwiftView, you get a small window with the message:

Access to the file is not permitted \\as400\QDLS\APF3812\VIEW\user.

Solution1: You are not authorized to the APF3812/VIEW folder. Do as described in requirement 3 as above. You will also get this error message if your User ID and password on the PC does not fit with the User ID and password of the AS/400.

Solution2: The problem may also be, that the user profile is not added to the system directory. It can be added as described in step 4 above (ADDDIRE).

Problem: When trying to access QDLS through a mapped network drive on the PC and you get this error message:

'An error occurred while connecting <Drive>: to \\<ServerName>\QDLS.
Microsoft Windows Network: The local device name is already in use.
This connection cannot be restored.'

Solution: Use the same User ID and password on both the PC and AS/400 or map a network drive to QDLS using the AS/400 user ID and password (possible in Windows XP).

Problem: The PC cannot 'see' the AS/400 NetServer Name through a search of the Network Neighbourhood and can because of that not access QDLS.

Solution: Make sure, that the NetServer is started on the AS/400 and you are using the NetServer name - not the System Name of the AS/400 (APF3812/DSPNETSVRA). If the AS/400 is placed in another Network it might be necessary to add the AS/400 NetServer name to the HOSTS file on the PC. You can also just use the IP address as the Netserver name in InterForm400 configuration.

☺ **TIP** ☺

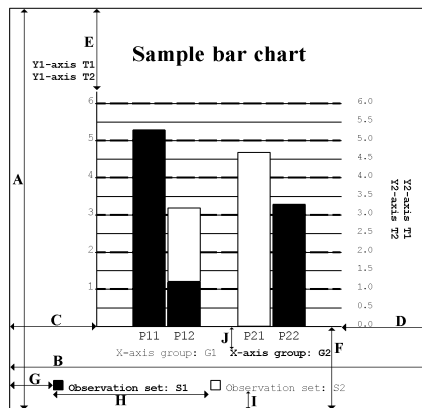
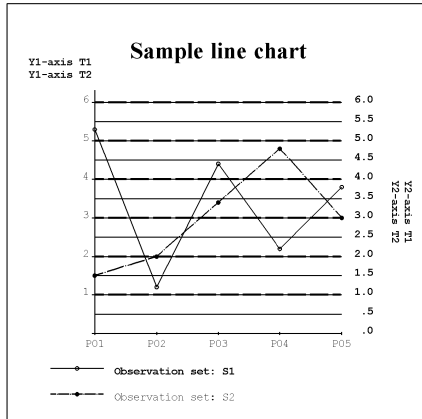
Interface ASCII850 should be chosen to be able to view a merged spool file.

Appendix M - InterForm400 charts

InterForm400 supports the following two types of charts:

- Bar charts and
- Line charts

Samples are seen below:



- A Chart height
- B Chart width
- C Chart margin, left
- D Chart margin, right
- E Chart margin, top
- F Chart margin, bottom
- G Legend margin
- H Legend width
- I Legend spacing
- J Displacement of group texts

You can define both types of charts by using the *Work with Charts* (WRKCHT) command.

By using the WRKCHT command you can define the complete layout of your charts including data to be presented in the charts.

To print a chart enter the &&CHT command inside your spooled file.

The &&CHT command also enables you to do the following while printing:

- Change the layout of your chart
- Change the data to be presented in the charts
- Create a chart without using the WRKCHT command.

Note: Charts can only be printed out using the following interfaces: **ASCII8**, **ASCII850** or **ASCII852** and only combined with the **HP4** printer type (HP/GL-2 code is generated).

The Work with Charts command, WRKCHT

When using the Work with Charts command, **APF3812/WRKCHT**, the following display is shown:

```
Work with Chart definitions                                     CHA100D
Position to . . . . . _____ Chart
Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  6=Print chart

Opt  Chart      Description
-    DEMOSALES  Demo of Bar chart
-    SAMPLEBAR  Sample bar chart
-    SAMPLELINE  Sample line chart

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel      End
```

Pressing F11 will result in an alternative display as seen below, where the size of the charts is displayed. Status is *PARTIAL if the setup of the chart is not complete.

Pressing F11 again will alternate between the two displays.

```
Work with Chart definitions                                     CHA100D
Position to . . . . . _____ Chart
Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  6=Print chart

Opt  Chart      Type      Chart heig  Chart widt  Status
-    DEMOSALES  *BAR      4,000      4,000
-    SAMPLEBAR  *BAR      4,000      4,000
-    SAMPLELINE *LINE     7,000      7,000  *PARTIAL

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel      End
```

If a chart is complete, it is possible to printout the chart using option **6. Print chart**. The chart will be printed out on the default output queue for the current job.

Press F6 to create a new chart:

```
                Create Chart definition                                CHA110D
Chart . . . . . _____
Type . . . . . _____ *BAR, *LINE
Description . . . . . _____

F3=Exit  F12=Cancel
```

Chart: The name of the chart, which is been created.
Type: Write ***BAR** for a Bar chart and ***LINE** for a Line chart.
Description: Description of chart (not printed).

After entering the parameters above and pressing Enter, the 'Create Chart definition' display is shown:

```
                Create Chart definition                                CHA300D
Chart . . . . . : MYBAR
Type . . . . . : *BAR

Type options, press Enter.
  1=Select

Opt  Definition
-   R Define general layout
-   Define layout of the X-axis
-   R Define X-axis points
-   R Define layout of the Y1-axis
-   Define layout of the Y2-axis
-   R Define observations

F3=Exit  F12=Cancel
```

Note: **R** indicates required information.

Enter '**1**' next to the definition you want to create or change.

When finished editing the chart, press **F3** to exit and save the chart definition.

Define general layout

When selecting '*Define general layout*' the display below is shown. Here it is possible to set up parameters, that describe the general layout of the chart.

```
Define general layout                                     CHA300D
Chart . . . . . : MYBAR
Type . . . . . : *BAR

Type choices, press Enter.

Chart header . . . . . _____
Chart header font . . . . . _____

Chart header font color . . . . . _____
Chart height . . . . . _____ Inches.pels
Chart width . . . . . _____ Inches.pels
Chart margin, left . . . . . _____ Inches.pels
Chart margin, right . . . . . _____ Inches.pels
Chart margin, top . . . . . _____ Inches.pels
Chart margin, bottom . . . . . _____ Inches.pels
Frame line width . . . . . _____ Dots
Frame line color . . . . . _____
Legend margin . . . . . _____ Inches.pels
Legend width . . . . . _____ Inches.pels
Legend spacing . . . . . _____ Pels

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

- Chart header:** The header of the chart.
- Chart header font:** Font used for the header text (prompt with F4).
- Chart header font color:** Color used for the header text (prompt with F4).
- Chart height/width:** Height and width of the frame in which the chart is printed.
- Chart margins:** The distances from the chart to the frame.
- Frame line width/color:** The line width (in dots) and color of the frame.
- Legend margin:** Distance from left edge of the frame to the text of the first observation set.
- Legend width:** Distance between text of the various observation sets.
- Legend spacing:** Distance from bottom edge of the frame to the text of the observation sets.

Define layout of the X-axis

When defining the layout of the X-axis, it is possible to define the layout of the axis it self, but also direction and displacement of the text belonging to the X-axis groups, if used.

Define layout of the X-axis		CHA300D
Chart	:	SAMPLELINE
Type	:	*LINE
Type choices, press Enter.		
X-axis line width	__	Dots
X-axis line color	___	
X-axis text direction . . .	-	1=Right, 2=Up, 3=Down
Displacement, grp texts .	_____	Inches.pels
Bar width in %	_20	1-100
F3=Exit F4=Prompt F12=Cancel		

- X-axis line width/color:** Specifying the width and color of the X-axis of the chart.
- X-axis text direction:** The direction and rotation of the text for the X-axis: Right means horizontal text. Up or down means vertical text (going up or down).
- Displacement, grp. texts:** Distance from bottom edge of the chart to the text of the X-axis groups.
- Bar width in %:** Width of bars. The is measured in percentage of the maximum width.

Define X-axis points and X-axis groups

When selecting *Define X-axis points* you get the screen below, which overviews the existing X-axis groups:

```

Work with X-axis groups                                     CHX100D

Chart . . . . . : MYBAR
Type . . . . . : *BAR

Position to . . . . . Seq number

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display
  7=Assign new seq nbr to x-axis grp  12=Work with X-axis points

Opt  Seq number  ID  Text
  _   10      MON  Month

End

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

It is possible to change, copy and display the X-axis groups, it is also possible to change sequence numbers and to work with X-axis points for the specific group.

Pressing F6 for creating a new X-axis group will display this:

```

Create X-axis group                                       CHX110D

Chart . . . . . : MYBAR
Type . . . . . : *BAR

Seq number . . . . . ____
X-axis group ID . . . . . ____
Text . . . . . _____
Text font . . . . . ____
Text font color . . . . . ____

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

- Seq number:** Specify a sequence number. This will decide the order of the groups.
- X-axis group ID:** ID of the specific X-axis group.
- Text:** Text used to specify group on print out. (Printed below chart).
- Text font/color:** Font and color of the text above.

The position of the text is based upon the legend fields on the 'General Layout' display and the layout of the x-axis.

Using option 12 it is possible to change sequence numbers and to work with X-axis points for the specific group as seen below.

Work with X-axis points

You can assign X-axis points to an existing X-axis group, by using option **12=Work with X-axis points** in front of the group as described above.

In the example above, where we have created a group called Month, we might add 12 X-axis points for that group, marking the 12 months of the year.

```
Work with X-axis points                                     CHX200D

Chart . . . . . : SAMPLELINE
Type . . . . . : *LINE
X-axis group ID . . . . : G1

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display
  7=Assign new seq nbr to X-axis point

Opt  Seq number  ID  Text                                     Spc

(No X-axis points to display)

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

If you press **F6=Create** to create a new X-axis point the following is displayed:

```
Create X-axis group                                       CHX110D

Chart . . . . . : MYBAR
Type . . . . . : *BAR

Seq number . . . . . __1

X-axis group ID . . . . . __A
Text . . . . . Jan._____
Text font . . . . . __11
Text font color . . . . . __1
Relative spacing . . . . . _60

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

- | | |
|--------------------------|--|
| Seq number: | Sequence number which decides the order of the axis points. |
| X-axis point ID: | ID of the X-axis point for this specific X-axis group. This ID must be unique i.e. no other X-axis point can have the same ID – not even in other X-axis groups. |
| Text: | Text below the chart to mark this point. |
| Text font/color: | Font and color of the text. |
| Relative spacing: | Specifies the spacing in pels between the bars (only used for bar charts). |

Define layout of the Y1 (and Y2)-axis

InterForm400® offers the possibility to define two Y-axis'. This can be used for printing graphs on the same chart with two different units of measure.

Choose this option from the chart definition display, and the following is displayed:

Define layout of the Y1-axis		CHA300D
Chart	: MYBAR	
Type	: *BAR	
Type choices, press Enter.		
Text 1	Number of installations	_____
Text 2	_____	_____
Text font	__11	
Text font color	__1	
Text direction	1	1=Right, 2=Up, 3=Down
Line width	_2	Dots
Line color	__1	
Minimum	_____0.00000	
Increment	_____1.00000	
Maximum	_____10.00000	
Edit word	' _____ '	
Values font	__11	
Values font color	__1	
Grid line type	9	1-9
Grid line width	_2	Dots
Grid line color	__1	
F3=Exit F4=Prompt F12=Cancel		

- Text1:** First line of text for the Y1-axis.
Text2: Second line of text for the Y1-axis.
Text font/color: Font and color for the text fields above.
Text direction: Specifying the direction and rotation of the text for the Y1-axis text:
 Right means horizontal text. Up or down means vertical text (going up or down).
Line width: Width of the Y1-axis in dots.
Minimum: Specifies the smallest value for the Y1-axis.
Increment: Specifies the difference between the Y1-grid lines (measured in Y1-units).
Maximum: Specifies the maximum value for the Y1-axis.
Edit word: Defines placement of commas, punctuation and minus sign. The value is written like ' , .-' (apostrophes must be included).
Values font/color: Defines the font and color used for writing the values on the Y1-axis.
Grid line type: The type or pattern of the grid line. The type number corresponds to the pattern as follows:

- 1: ' _____ '
- 2: ' _____ '
- 3: ' _____ '
- 4: ' _____ '
- 5: ' _____ '
- 6: ' _____ '
- 7: ' _____ '
- 8: ' _____ '
- 9: ' _____ '

Grid line width/color: Defines the width and color of the grid line.

Define observation set

When selecting **Define observations** from the **Create chart definition** menu, the following will be displayed:

```
Work with Observation sets                                CHS100D

Chart . . . . . : MYBAR
Type . . . . . : *BAR

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display
  7=Assign new seq nbr to observation set  12=Work with sample observations

Opt  Seq number  Obs set  Text

(No Observation sets to display)

                                                    End

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

Here it is possible to work with existing observation sets. It is also possible to create a new observation set using **F6=Create**, which will result in the display below.

For charts with type *BAR the entry screen looks as follows:

```
Create Observation set                                CHS110D

Chart . . . . . : MYBAR
Type . . . . . : *BAR

Seq number . . . . .  ___

Observation set . . . . .  ___

Text . . . . .  _____

Text font . . . . .  ___

Text font color . . . . .  ___

Use Y1/Y2-axis . . . . .  _      1=Y1, 2=Y2
Line type . . . . .  _      1-9
Line width . . . . .  ___      Dots

Color . . . . .  ___

Pattern . . . . .  _      0-8
Pattern color . . . . .  ___

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

For charts with type *LINE the screen looks like this:

Change Observation set		CHS110D
Chart	:	SAMPLELINE
Type	:	*LINE
Seq number	:	___
Observation set	:	___
Text	:	_____
Text font	:	___
Text font color	:	___
Use Y1/Y2-axis	:	- 1=Y1, 2=Y2
Line type	:	- 1-9
Line width	:	___ Dots
Point marker	:	- C, C1-C8
Color	:	___
F3=Exit F4=Prompt F12=Cancel		

- Seq number:** The sequence number of this observation set. The sequence number is used for in which sequence this observation set is shown in relation to other observation sets.
- Observation set:** Name of this observation set.
- Text:** Description of the observation set. Printed below the chart.
- Text font/color:** Font and color used for the text above.
- Use Y1/Y2-axis:** Links the observation set to either the Y1- or Y2-axis.
- Line type:** For charts with the type *LINE this decides the type of line representing this observation set. The various types can be seen above under '*Define layout of the Y1(and Y2)-axis*'. The types used for grid lines are the same as these types.
- Line width:** Define the width of the line representing this observation set.
- Color** Color used for the line representing this observation set.
- Pattern:** Define the pattern inside the bars representing this observation set.
- | Pattern | Description |
|---------|--------------|
| 0 | 100% white |
| 1 | 2% shading |
| 2 | 10% shading |
| 3 | 20% shading |
| 4 | 35% shading |
| 5 | 55% shading |
| 6 | 80% shading |
| 7 | 99% shading |
| 8 | 100% shading |
- Pattern color:** Color filling for the bars.
- Point marker:** For charts with type *LINE this decides the form of the points representing this observation set.

Marker	Description
Blank	No point
C	Point 0 % filled
C1	Point 2 % filled
C2	Point 10 % filled
C3	Point 20 % filled
C4	Point 35 % filled
C5	Point 55 % filled
C6	Point 80 % filled
C7	Point 99 % filled
C8	Point 100 % filled

When you press **Enter**, you will return to **Work with Observation sets**. Now it is possible to appoint values to this observation set. Select option **12=Work with sample observations**, and this will be displayed:

```

Work with Sample observations                                     CHS200D
Chart . . . . . : SAMPLELINE
Type . . . . . : *LINE
Observation set . . . . : S1          Demo

Enter values, press Enter.

ID  Value          Text          Dec
P01 _____ Jan.
P02 _____ Feb.
P03 _____ Mar.
P04 _____ Apr.
P05 _____ May
P06 _____ Jun.
P07 _____ Jul.
P08 _____ Aug.
P09 _____ Sep.
P10 _____ Okt.
P11 _____ Nov.
P12 _____ Dec.

End

F3=Exit  F5=Refresh  F12=Cancel

```

Prior to this an X-axis group has been created. In this case the group includes the ID's P01-P12 with the text, 'Jan.'- 'Dec.'. The **Work with sample observations** has value fields for all X-axis points no matter what -axis group they belong to.

Now we have been through all states of creating a chart. If you have done this, you can now view and print out the chart in the following ways:

If you have **Swiftview** installed, you are able to view the chart by pressing **F5** (Display chart), from the chart definition display.

You can print out the chart using option 6 from the **Work with Chart definitions**.

You can print out the chart when merging with a spool file, if the spool file has either the **&&CHA01 PRCH** or **&&CHA01 PRCM** command inside. See descriptions of the **&&CHA** commands below.

The &&CHA Chart commands

General format of the &&CHA commands

From	To	Description
1	5	&&CHA
6	7	Format version
9	18	Chart name
20	23	Function ID
25	Dep.	Function data

General description of the &&CHA commands

Chart naming:

To create an internally defined chart the first command issued must be the CRIC command. Internally defined charts are completely defined using the &&CHA commands in a spool file.

An *externally defined* chart is defined using the WRKCHT command before printing. First time you issue a &&CHA command for an *externally defined* chart, all parts of the chart definition - **except the sample data** - are automatically loaded. (To load the sample data use the LOEC command).

Internally defined chart names must begin with an asterisk (*) character as appose to *externally defined* charts, which **can not** begin with the asterisk character.

To reload an *externally defined* chart use the LOEC command.

Command examples

To print the Samplebar chart two inches down and two inches from the left margin print:

```
&&CHA01 SAMPLEBAR PRSM 02000 02000 000
```

To print the Samplebar chart with the following data:

```
Observation set, S1:      Observation set, S2:
G11 = 1.2                 G11 = 3.1
G12 = 2.4                 G22 = 1.5
G21 = 1.4
G22 = 2.2
```

Print:

```
&&CHA01 SAMPLEBAR OSDA S1 G11 1.20000 G12 2.40000 G21
1.40000 G22 2.20000
&&CHA01 SAMPLEBAR OSDA S2 G11 3.10000 G22 1.50000
&&CHA01 SAMPLEBAR PRCH
```

To print an internally defined bar chart:

```
&&CHA01 *INT1 CRIC ... (Create internal chart)
&&CHA01 *INT1 GNLO ... (General layout)
&&CHA02 *INT1 GNLO ... (General layout)
&&CHA01 *INT1 XALO ... (Define X-axis layout)
&&CHA01 *INT1 Y1LO ... (Define Y1-axis layout)
&&CHA01 *INT1 Y1LO ... (Define Y1-axis layout)
&&CHA01 *INT1 XGLO ... (Define X-axis group layout)
&&CHA01 *INT1 XPLO ... (Define X-axis point - 1. point)
```

&&CHA01 *INT1 XPLO ... (Define X-axis point - 2. point)
 &&CHA01 *INT1 OSLO ... (Define observation set layout)
 &&CHA01 *INT1 OSDA ... (Add data)
 &&CHA01 *INT1 PRCH ... (Print chart)

Create/delete internal chart commands

Create internal chart (CRIC 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'CRIC'
25	34	*BAR or *LINE
Description: Creates a new internal chart definition.		

Delete internal chart (DLIC 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'DLIC'
Description: Deletes an internal chart definition.		

Load commands

Load external chart (LOEC 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'LOEC'
25	34	Load sample data for observation set ID / *NONE / *ALL
Description: Loads (or reloads) a chart definition.		

General layout commands

Define general layout (GNLO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'GNLO'
25	74	Chart header / *BLANK
76	79	Chart header font
81	83	Chart header font color
85	89	Chart height INPEL
91	95	Chart width INPEL
97	101	Chart margin, left INPEL
103	107	Chart margin, right INPEL
109	113	Chart margin, top INPEL
115	119	Chart margin, bottom INPEL
121	122	Frame line width in points
124	126	Frame line color
Description: Describes general layout of chart		

Define general layout (GNLO 02):

From	To	Description
1	5	'&&CHA'
6	7	'02'
9	18	Chart name
20	23	'GNLO'
25	29	Legend margin INPEL
31	35	Legend width INPEL
37	39	Legend spacing in pels
Description: Describes general layout of chart.		

X-axis commands

Define X-axis layout (XALO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'XALO'
25	26	X-axis line width in points
28	30	X-axis line color
32	32	X-axis text direction
34	38	Displacement, group texts
40	42	Bar width in % *1
Note: *1 For *BAR charts only.		
Description: Describes layout of the X-axis.		

Y1-/Y2-axis commands

Define Y1-axis/Y2-axis layout (Y1LO 01/Y2LO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'Y1LO'/'Y2LO'
25	74	Text 1 / *BLANK
76	125	Text 2 / *BLANK
Description: Describes layout of the Y1- or Y2-axis.		

Y1-/Y2-axis commands continued

Define Y1-axis/Y2-axis layout (Y1LO 02/Y2LO 02):

From	To	Description
1	5	'&&CHA'
6	7	'02'
9	18	Chart name
20	23	'Y1LO'/'Y2LO'
25	28	Text font
30	32	Text font color
34	34	Text direction
36	37	Line width in points
39	41	Line color
43	50	Minimum (Integer part)
51	51	Minimum (Decimal point)
52	56	Minimum (Decimals)
57	57	Sign minimum (- indicates negative value)
59	66	Increment (Integer part)
67	67	Increment (Decimal point)
68	72	Increment (Decimals)
74	81	Maximum (Integer part)
82	82	Maximum (Decimal point)
83	87	Maximum (Decimals)
88	88	Sign maximum (- indicates negative value)
90	109	Edit word (including '-s)
111	114	Values font
116	118	Values font color
120	120	Grid line type
122	123	Grid line width in points
125	127	Grid line color
<p>Description: Describes layout of the Y1- or Y2-axis.</p>		

X-axis group commands

Add/change X-axis group layout (XGLO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'XGLO'
25	27	X-axis group ID
29	31	Copy definition from X-axis group ID
33	82	Text / *BLANK
84	87	Text font
89	91	Text font color
Description: Adds or changes the layout of a X-axis group.		

Delete X-axis group (DLXG 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'DLXG'
25	27	X-axis group ID
Description: Deletes a X-axis group.		

X-axis point commands

Add/change X-axis point layout (XPLO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'XPLO'
25	27	X-axis group ID *1
29	31	X-axis point ID
33	35	Copy definition from X-axis point ID
37	86	Text / *BLANK
88	91	Text font
93	95	Text font color
97	99	Relative spacing
Note: *1 Required for new X-axis points.		
Description: Adds or changes the layout of an X-axis point.		

Delete X-axis point (DLXP 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'DLXP'
25	27	X-axis point ID
Description: Deletes an X-axis point.		

Observation set commands

Add/change observation set layout (OSLO 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'OSLO'
25	27	Observation set ID
29	31	Copy definition from observation set ID
33	82	Text / *BLANK
84	87	Text font
89	91	Text font color
93	93	Use Y1/Y2-axis
95	95	Line type
97	98	Line width in points
100	101	Point marker *1
103	105	Color
107	107	Pattern *2
109	111	Pattern color *2
Notes: *1 *LINE charts only *2 *BAR charts only		
Description: Adds or changes the layout of an observation set.		

Delete observation set (DLOS 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'DLOS'
25	34	Observation set ID / *ALL
Description: Deletes an observation set.		

Observation set commands continued

Clear observation set data (CLOS 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'CLOS'
25	34	Observation set ID / *ALL
Description: Clears a single or all observation sets.		

Data commands

Add/change data by ID (OSDA 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'OSDA'
25	27	Observation set ID
29	31	Observation ID 1
33	40	Value 1 (Integer part)
42	46	Value 1 (Decimals)
47	47	Sign Value 1 (- indicates negative value)
49	51	Observation ID 2
53	60	Value 2 (Integer part)
62	66	Value 2 (Decimals)
67	67	Sign Value 2 (- indicates negative value)
69	71	Observation ID 3
73	80	Value 3 (Integer part)
82	86	Value 3 (Decimals)
87	87	Sign Value 3 (- indicates negative value)
89	91	Observation ID 4
93	100	Value 4 (Integer part)
102	106	Value 4 (Decimals)
107	107	Sign Value 4 (- indicates negative value)
109	111	Observation ID 5
113	120	Value 5 (Integer part)
122	126	Value 5 (Decimals)
127	127	Sign Value 5 (- indicates negative value)
Description: Adds or changes data in an observation set by observation ID.		

Print chart commands

Print **sample** chart (PRSM 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'PRSM'
25	25	Sign (+/-) distance top edge
26	30	Distance to paper top edge INPEL
32	32	Sign (+/-) distance left edge
33	37	Distance to paper left edge INPEL
39	41	Rotation
Description: Prints a sample chart.		

Print chart (PRCH 01):

From	To	Description
1	5	'&&CHA'
6	7	'01'
9	18	Chart name
20	23	'PRCH'
25	25	Sign (+/-) distance top edge
26	30	Distance to paper top edge INPEL
32	32	Sign (+/-) distance left edge
33	37	Distance to paper left edge INPEL
39	41	Rotation
Description: Prints a chart.		

☺ **TIP** ☺

The &&CHA commands in a spool file are interpreted when the spool file is merged with an overlay.

Appendix N - Sending E-mails from the AS/400

NOTE
 In order to get PDF output you need to purchase the PDF module for InterForm400.

InterForm400® can be used for sending email using the OS/400 SMTP feature. To email spooled files as attached PDF-files do one of the following:

1) Sending a complete, merged spooled file as an attached PDF file in an E-mail. For that purpose you would probably use the **APF3812/MRGSPLFPDF** command. Refer to page **349** and **410** for more information.

2) Send a complete spooled file having a program-generated front page.
 The Spooled file must have PAGERANGE(2 n), where n=Any number or ***END**.

The e-mail front page must include lines with each of these keywords in any sequence:

- Pos 20-30 = Keyword: FROMADR,
- FROMNAME
- TOADR
- TONAME
- SUBJECT
- ATTACH
- MSG (up to 10 lines can be used).

Positions from 31 to 286 are used for the value of each keyword - except MSG. For MSG the text must be placed from position 31 to 106.

This is an example of a front page:

```
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
To e-mail adr . . : TOADR      kse@intermate.com
Name . . . . . : TONAME      Kim Egekjaer
Subject . . . . : SUBJECT     This is the e-mail subject
E-mail text . . : MSG         Up to 10 lines of e-mail text. This is line 1
                               Second MSG line
PDF-file name . . : ATTACH     demo.pdf
From e-mail adr. : FROMADR     kse@intermate.com
Name . . . . . : FROMNAME     Name of e-mail sender
```

The spooled file should trigger a function **P=Send spooled file as PDF email** in Auto Forms Control and the merged spooled file will then be sent as an attached PDF file.
 Refer to page **152** for more information.

3) Splitting the spooled file into parts for e.g. each customer, inserting e.g. information from the spooled file into the subject or contents of the E-mail or even into the name of the attached PDF file. This is done by use of an E-mail finishing definition. Refer to page **195** for more information.

Setup of SMTP

The created E-mails can be sent out from the AS/400 either directly from the AS/400 or through a mail server. These are the commands, that you

should use:

- 1) CFGTCP - Option 10. Work with TCP/IP host table entries
- Insert IP-address and Hostname of the mail server - if used.
- 2) CHGTCPDMN
- Insert the IP-addresses of Domain Name Servers at INTNETADR
- 3) Add possible unknown routes to the mail server
CFGTCP - Option 2. Work with TCP/IP routes
- 4) CHGSMTPA, press F4 to prompt
- Insert *YES to AUTOSTART SMTP server after IPL.
- Insert "HOSTNAME" of mail server at "MAILROUTER" - if used. If you want to mail directly from the AS/400 you should specify *NONE for the MAILROUTER.
- Insert *YES as "FIREWALL" if the AS/400 is not able to send directly through a firewall. The firewall parameter is ignored if you use *NONE for the MAILROUTER.
- 5) CHGPOPA
*NO at AUTOSTART, MSGSPLIT = *NOMAX or limit of mail server.
- 6) STRMSF
- Starts the Mail Server Framework.
- 7) STRTCPSVR *SMTP
- Starts the SMTP server on the AS/400

The commands STRMSF and STRTCPSVR should be called from the IPL Startup program of the AS/400.

More information can be found on the IBM web-pages:

<http://publib.boulder.ibm.com/pubs/html/as400/v5r1/ic2924/index.htm>
(Click on **Networking**, **TCP/IP** and **E-mail**.)

and

http://www-912.ibm.com/s_dir/slkbase.NSF/0cf528a492c9b4a886%2025680b0002037f/34879f5e413aa5cd8625697b0053f36a?OpenDocument&Highlight=0,SNDDST,%2520SNADS

Combining SMTP and Domino/400 on the same machine

If you are already running Domino on the same iSeries as the one where you have InterForm400 installed there will be a problem sending via SMTP unless you e.g. bind the OS400 SMTP to another IP-address than used for Domino.

An IBM Technical Document describing how to do that can be found via this link:

http://www-912.ibm.com/s_dir/slkbase.NSF/1ac66549a21402188625680b0002037e/b8a7f2a25678830686256c1c0052e8fa

(Document number 27850433)

Appendix O - Graphical Designer: Install and use

From InterForm400® an unlimited number of graphical designers can be installed. Below is a description of the requirements and how to install and use the designer.

Requirements for the Graphical Designer

Requirements for the iSeries (AS/400):

- The iSeries must run at least OS400 V4R5M0 and these services must be active:
STRTCPSVR SERVER(*DDM)
STRHOSTSVR SERVER(*DTAQ)
STRHOSTSVR SERVER(*NETPRT)
STRHOSTSVR SERVER(*RMTCMD)
STRHOSTSVR SERVER(*SIGNON)
STRHOSTSVR SERVER(*SVRMAP)
(Or just use **STRHOSTSVR SERVER(*ALL)** to start all host servers). Select option '**80. Prepare server to support InterForm Designer**' on the InterForm400 **Service menu** to start all necessary servers.
- InterForm400® version 2003M01 or newer must be installed and journaling of InterForm400® files must be started. (Refer to page **340**).
- Execute the command: DSPNETA. Find the text/parameter 'DDM request access'. This should normally be *OBJAUT, it can also refer to a user program, but if it is *REJECT the DDM server will not work. Change the value if necessary with the command:

```
CHGNETA DDMACC(*OBJAUT)
```

Requirements for the PC:

- The PC must be running Windows 98 or newer.
- The PC must be connected to the iSeries via TCP/IP
- Minimum 128 Mb RAM is required
- JAVA Runtime Environment version 1.4 or later must be installed. (version 5.0 is recommended and thus shipped with InterForm400).
- The InterForm400® graphical designer must be installed.

Requirements for the network:

If you access the iSeries through a firewall, be sure that these port numbers are not blocked:

Host Server	Port number
*CENTRAL	8470
*DATABASE	8471

*DTAQ	8472
*FILE	8473
*NETPRT	8474
*RMTCMD	8475
*SIGNON	8476
*SVRMAP	449

TCP-server	Port number
*DDM	446

Apart from that this port number must be open in order for to be able to activate Swiftview:

Service	Port number
Microsoft-DS	445

Limitations of the Graphical Designer

- Barcodes are not displayed correctly. Only an image looking like a barcode (in about the same size) is shown.
- PCL files included are not shown in the graphical designer. Only a frame indicating the PCL file is shown.

If you want to see the actual output you can activate Acrobat Reader or SwiftView from the graphical designer to see the exact result (after saving the design). (SwiftView will display the PCL files).

Installing the Graphical Designer

Installing JAVA Environment

Before installing the graphical designer you need to install JAVA Runtime Environment (if not already installed). The Java Runtime Environment can be installed in these manners:

- 1) From the InterForm400 **menus** by selecting '80. Administering InterForm 400', '12. Service functions', '70. Install InterForm Designer on your PC' and '2. Launch JAVA Runtime Environment (JRE) setup program':
- 2) From the iSeries **IFS** by downloading and then run the file:
/APF3812Home/Designer/jre-1_5_0-windows-i585.exe
- 3) You can **download** the installation file from the web-site:

<http://java.sun.com/j2se/1.5.0/download.jsp>
Select the Windows installation (JRE).

You need to restart your PC to complete the installation.

Installing and setting up the InterForm400® Graphical Designer

You install the graphical designer from InterForm400® by entering InterForm400 with the command **APF3812/APFMENU** and selecting '80. Administering InterForm 400', '12. Service functions' and '70. Install InterForm Designer on your PC'.

If this installation fails you can also find the installation file for the graphical designer in the IFS: /APF3812Home/Designer/. Find the directory with the highest number and download the .exe file to your PC and double click on the file.

Starting the Graphical Designer

If you have chosen to install a shortcut or Quick launch during install you can click on that to start up the graphical designer. The icon looks like this:



You can also start up the graphical designer by selecting 'Start', 'Programs', 'InterForm', 'InterForm Design' and 'InterForm Design'.

You will be presented with this screen:

The image shows a login dialog box titled 'InterForm Design'. It contains three input fields: 'Username' with the value 'kse', 'Password' with a masked value '*****', and 'AS/400 Server' with the value 'qs65bd1bb'. At the bottom, there are two buttons: 'Login' and 'Cancel'.

State your user profile, password and the Netserver name or IP-address of the iSeries, that you run InterForm400® on and click on 'Login'. Wait about 10 seconds (depending on the PC and the iSeries) and the graphical designer will start up.

If you are not a registered user of InterForm400 or if you do not have access to any file sets in InterForm400 you will be refused access with the error 'Lost connection to the host' followed by another message indicating the exact problem.

If you are not a registered user of InterForm400 you can do that as described on page **272**. You can get access to file sets by using option '9=File set access' in the same screen.

Start designing an overlay

When the InterForm Graphical Designer starts up you will see a window with this heading:

The job number in the heading refers to the job number of the corresponding job with the name QZRCSRVS in subsystem QUSRWRK on the iSeries. Use the command 'APF3812/WRKPRFJOB' to display all jobs used by a specific user profile -including server jobs. Refer to page 420 for more information of this command.

Now you have these opportunities:

Create a new overlay

To create a new overlay for **PCL** and/or **PDF** output you can either press the icon looking like this:



- Or select 'File' and 'New overlay'.

If you want to create a new overlay for Zebra (**ZPL**) output you press this icon:



Edit an existing overlay

To edit an existing overlay you can either select this icon in the left side:



- Or select 'File' and 'Open'.

Then you will see a list of the file sets, that you have access to. Open the file set and select the overlay to edit.

If another already has opened the overlay you will get the error message 'Locked by another user'. To see exactly which job it is you need to try to edit the same overlay through the green screen. If it is a graphical designer job (that is inactive) you can end that job from the InterForm400 menus if you select '80. Administering InterForm 400' followed by '52. Work with Designer job overlay locks'.

Open a Spooled File

If you want to design the overlay for a specific kind of spooled file you can see the spooled file with the overlay if you select this icon on the right side of the screen header:



- or select 'File' and 'Open Spool File'.

You will then see a list of all the output queues that contains spooled files. The output queues are sorted by library name followed by output queue name.

Settings and tools for the design

Before you start the actual design you want to setup the graphical designer.

Changing the displayed size

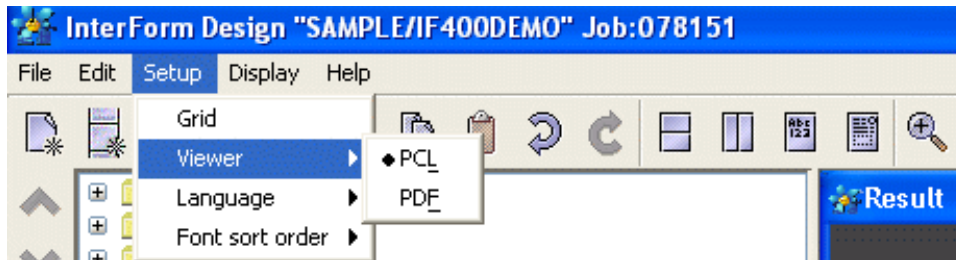
You can zoom in or out by selecting 'Display' and 'Zoom In', 'Zoom Out' or 'Size' or by use of the icons looking like magnifying glasses. You can also click on either of these 4 icons to select how you want to divide the screen between the result and input view:



You can even also drag in the corners of the spool- and result-view to change the size and position of these windows. Finally you can also drag the vertical line, that marks the border between to element listing and the views to extend or reduce the space available for the views.

Previewing the result in Acrobat reader or SwiftView

If you select 'Setup' and 'Viewer' you can select how you would like to view the merged result. Select PCL to use SwiftView and PDF to use the application associated with the '.PDF' extension on your PC - most likely Acrobat Reader.



To view the current result press this icon:

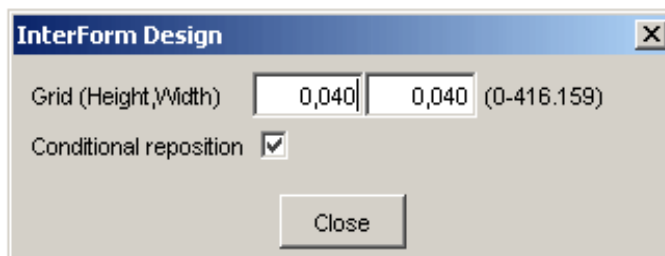


Other Design preferences

Use of Grid

As default the graphical designer has a grid activated, which is 40 pels by 40 pels (6 lines per inch). When the grid is activated the cursor will snap to the grid, making it easier to align design elements.

Change the size of the grid by selecting 'Setup' and 'Grid':



Activate 'Conditional repositioning' to reposition the grid when designing conditioned suboverlays.



Press this icon to (temporarily) disable the grid and place elements freely without the cursor is snapping to the grid.

Designing for colour or B/W (For laser/pdf overlays only)



You can shift between looking at the B/W output or colour output by pressing this icon in the upper toolbar.

This will affect what you see in the graphical design and when you preview the result in SwiftView and Acrobat Reader.

Designing for 203 or 300 DPI (For Zebra overlays only)



The printed ZPL result depends on if you run a 203 or 300 dpi printer. Click this icon to change the resolution view, so that it fits that of the printer.

Debugging the design



Press this icon to disable a design element. This can be used e.g. to solve problems with conditions, that does not execute as you thought.

Disabling/enabling the spooled file



Press this icon to (temporarily) disconnect/connect the spooled file and view the overlay without any spooled file text.

Flipping through the pages of the spooled file

On the right side of the tool bar you will see this:



This can be used for flipping through the pages of the merged spooled file and e.g. looking at the merged result page by page. You can drag in the pointer, press the arrows to flip through the spooled file or type a specific page number, that you want to look at.

The tool bar changes its function:

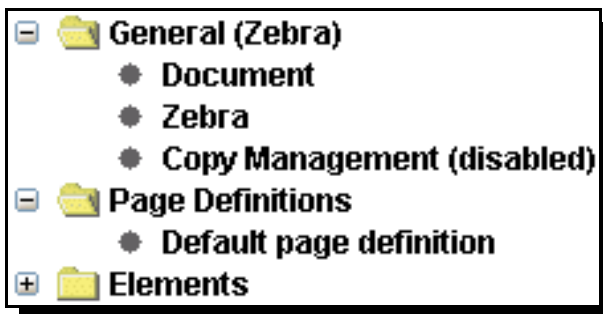
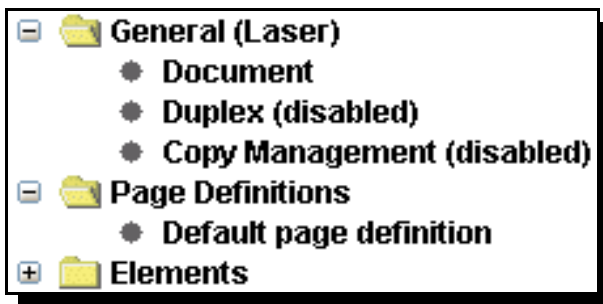
- If you activate **copy management** you can use this to see each of the resulting copies. P1 denotes e.g. the first primary copy/version of the output.
- If you use an **If..Then** line and you transfer 1 or more lines onto the conditioned overlay, then you can press the 'Conditional' tab in the input view. When looking at the conditional tab you can use this to flip through the places where this condition is true on the current page. The conditional tab will show you the lines transferred to the conditioned overlay. This function is very handy when remapping the spooled file text in the conditioned overlay.

Decide the sort key for the font listing

Select 'Setup' followed by 'Font sort order' to decide in what order you want to have the available fonts sorted when listed. You can choose to either list the fonts by the font number (default) or by the font description (name).

Designing the overlay

Open up the 'General' folder to view the general settings for the overlay, that you are designing:



The options within does the following:
(In dept information of these options can be found on page 37.)

Document Displays the file set and overlay name. You can change the description of the overlay, size and orientation of the paper, multi-up (Pages per side) and margins (number of lines and/or characters to move the spooled file down or right). Here you also specify the size of the label for ZPL output.

Duplex Activate duplex if needed. (Not available for ZPL output).

Zebra Sets specific Zebra (ZPL) parameters: Printing speed and relative temperature.

Copy Management Here you can activate or change the attributes of Copy Management. Refer to page **46** for more information.

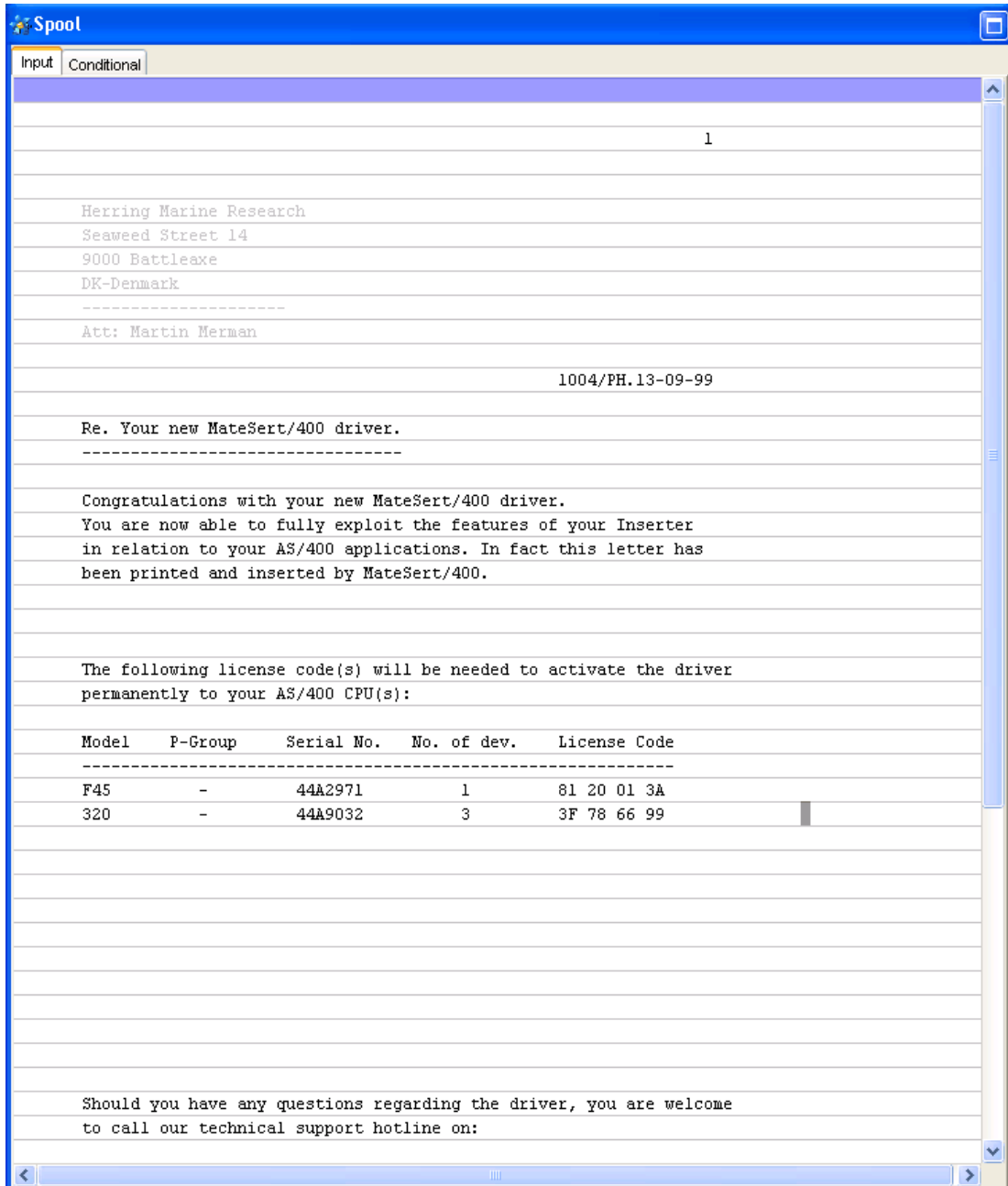
Page definitions refers to Extended Page definitions. Open up this folder and insert new lines by use of the this icon:



For more information of extended page definition refer to page **45**.

The spool view

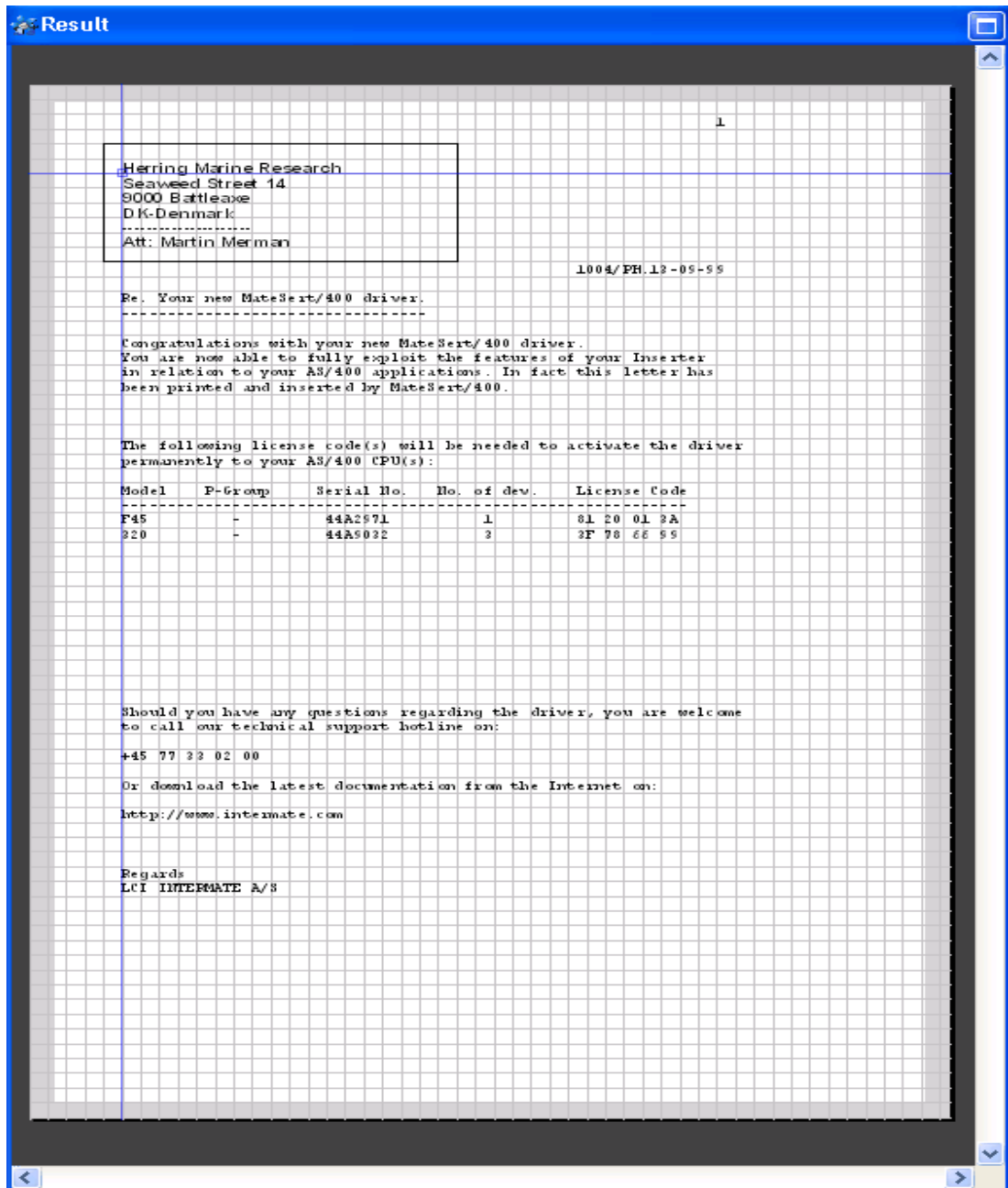
When you design, you can view the original spooled file and the resulting spooled file on the right. Select the **'Spool'** view to see the original spooled file. Text, that has already been remapped or tabulated will be shown in grey:



If the mouse pointer is placed in the spool view the current position is shown in the bottom to the right. If you mark a conditional element the **'Conditional'** tab will light up - making it possible to view the lines transferred to the specific overlay by activating this tab. You can use the conditional tab to define tabulators and remap windows in the conditioned overlay.

The Result view

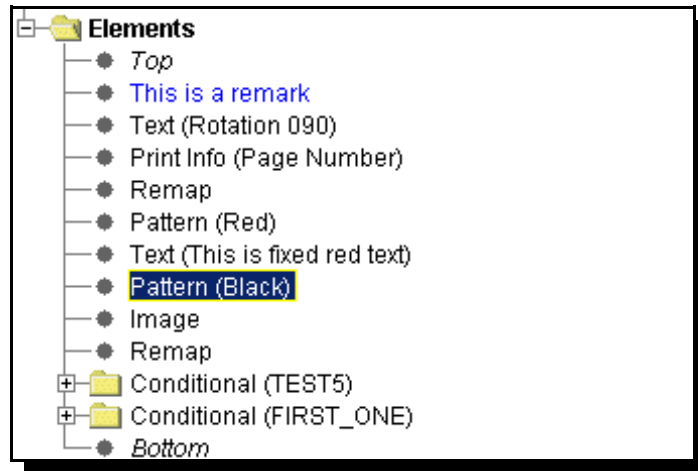
The result view looks like this:



You can mark an element and drag it to the position you want. The current position of the mouse pointer is shown in the bottom in inches and pels.

Inserting design elements

To start editing or adding design elements for an overlay you need to open the 'Elements' folder of the overlay:



Press this icon to move the marked element upwards in the list. In the screen above it would move 'Pattern (Black)' above the Text command.



Press this icon to move the marked element downwards in the list.



Deletes the marked design element. You can also just mark an element and press the <Delete> key.

Design elements can also be moved by simply 'dragging' (with left mouse key) the element to the new position. You can also use the normal clipboard option cut/copy/paste to change the elements as well as 'undo' and 'redo' the last changes.

All elements are placed between 'Top' and 'Bottom'. Activate the position between 'Top' and 'Bottom', where you want to insert the element. The new element will be placed after this position. After activating an element you need to place it on the result view on the right.

Here are the elements you can insert:



Insert a Text line. Refer to page **57** for more information. Rotate text 30 degrees' will rotate the text additional 30 degrees if activated and open up the possibility to outline the text.



Print Info. Refer to page **58** for more details..



Inserts an imported TIF/BMP image in the design. This image must have previously have been imported in InterForm400®.



Line. Inserts a line. (Same as type 4=Line - refer to page 56)



Inserts a frame. Refer to page 54.



Tabulator. Mark first the area of text on the input view, that you want to tabulate and then mark the place where it should be printed. Refer to page 61 for more information.



Remap window. Mark the window of text, that you want to remap in the input view and where to place it in the result view. See page 63 for more information.



If..Then. Mark the area for the condition in the input view. On the If..Then option you will see these icons next to the conditioned suboverlay:



Insert an existing overlay as the overlay to call for this condition



Clear the reference to the suboverlay - does not delete the actual suboverlay.



Creates a new suboverlay to be called by the If..Then.



When you have selected a conditioned overlay you can edit it by pressing this icon. When remapping spooled file contents in a conditioned overlay you should use the 'Conditional view' instead of 'Input view'. When finished editing this return to the main overlay by selecting 'File' and 'Close current overlay' or by pressing this icon in the toolbar:



Note the '**Remap condition parameters**' in the bottom. '**Until another is true**' is default disabled and the number of spooled files lines transferred to the conditioned overlay is **0**. Refer to page 67 for more information of the **?=If..Then** function.



Suboverlay. Inserts an unconditioned suboverlay. Refer to page 72 for more information.



Patterns. (Same as type 7=Ink in green screen design.) See page 59 for more details.



Inserts a PCL file in the design. Note: PCL files are not displayed in the graphical designer. You can press this icon: to view the correct result in SwiftView. See page 70 for more information.





Inserts a HP-GL/2 file in the design. HP-GL/2 files are not displayed in the graphical designer. Refer to page **71** for more information.



Inserts a comment. Comments are shown in blue in the graphical designer. Refer to page **72** for more information.

When you have finished the design you need to upload/save onto the InterForm400 databases on your iSeries (AS/400). You can do that in these manners:



Save the current overlay



Select this icon to close the current overlay. The designer will then ask if you want to save the current design (you are not offered the possibility to save as a different name). This is the same as 'File' and 'Close current overlay'.

- Or select 'File' and 'Save' / 'Save As'.

Local save in the designer

If you lose the contact with the iSeries, you will get the message 'Lost connection to host' and the designer will end. But do not worry: A backup of your overlay is on your PC and you reload that design when you restart the designer (after regaining contact to the iSeries). In that case the designer will start up with the message 'Found previous unsaved overlay'.

Movement of elements in the result view

When you want to move an element you can do either of these things:

- Move the mouse pointer to the element in the result view. The element lights up in green. Click left or right mouse button to select the element. Now you can drag (by holding the button down) the element to the new position. Note, that the element snaps to the grid making it easy to align more elements
- Find the element on the list on the right and type in the new position in inches and pels.
- Mark an element with the mouse and now you can use the arrow keys on the keyboard to move the element. The element will move 10 pels (1/24 of an inch) each time you press an arrow key. Combine the arrow keys with <Ctrl> to move 80 pels (1/3 of an inch) at a time or combine the arrow keys with <Shift> to move the elements just 1 pel at a time. Note, that this movement is independent of the grid.

WARNING

If you move a group while the grid is active all the elements of the group will snap to the grid.

Grouping and ungrouping elements

You can group several elements in order to reposition them all in one process. Note, that you can only create one, current group. You can group elements together in the following manners:

- By holding down the <Ctrl> key and marking each element in the element listing to the left of the screen.
- By holding down the <Ctrl> key and marking each element in the result window.
- By first making sure, that no element is selected by e.g. clicking in an area in the result window, where no element is found and then holding down a mouse button and dragging a red frame around the elements you want to select. After you have selected elements in this manner you can still hold down the <Ctrl> key and mark additional elements as described above.

While you have grouped several elements you can change the font for all the elements at one time by selecting the common font in the lower left corner of the designer.

You can ungroup the elements in these manners:

- By holding down the <Ctrl> key and clicking on an element you will remove this element from the group.
- By clicking anywhere in the result window (without holding down <Ctrl>) all the elements will be removed from the group.

Appendix P - Import/Export extension

This Appendix describes the following extensions to InterForm 400 import/export functions:

- The multiple export libraries feature.
- Description of the Import InterForm400 Resources (IMPAPFRSC) command.

Multiple Export Libraries (MEL) feature

Description

By default InterForm 400 only allows you to export resources to a library named APFEXPORT. The purpose of the MEL feature is to allow developers to export resources to other libraries as well.

Activation/deactivation

To activate MEL you create a data area (of any type) named APFEXPORT in library APF3812. To deactivate MEL simply delete the data area APF3812/APFEXPORT.

Usage

When MEL is activated the F10=Select export library command key will be enabled and option **6.Delete export library APFEXPORT** will be removed from the InterForm 400 export menu.

At the InterForm400 export menu press F10 and overwrite APFEXPORT with another name (in the Export library field) to select another library to be used for export. All options at the InterForm400 export menu will now work on objects in this library.

Once you use option **1. Create export library with empty files** all necessary InterForm400 work files (and a data area named EXPORTLIB) will be created in the specified library. Note: If the library does not exist it will be created.

👉 **NOTE** 👉

IMPORTANT: Libraries created using option **1. Create export library with empty files** at the InterForm400 export menu **CAN NOT** be used after a release upgrade of InterForm 400.

The Import InterForm Ressources (IMPAPFRSC) command

The purpose of the IMPAPFRSC is to import InterForm 400 resources without any (or with very limited) user intervention.

The APF3812/IMPAPFRSC command:

```
Import InterForm resources (IMPAPFRSC)

Type choices, press Enter.

Save file . . . . . SAVF          _____ Name
Library . . . . .          *LIBL_____ Name, *LIBL, *CURLIB
```

Transfer to production	TFRPROD	*YES___	*YES, *NO, *PROMPT
Display errors	DSPERR	*YES	*YES, *NO

Restrictions:

This command can only run from an interactive job.

Parameters:

- SAVF** This is required. Specifies the qualified name of the save file to be used to restore the resources. The name of the save file can be qualified by one of the following library values:
- *LIBL:** All libraries in the job's library list are searched until the first match is found.
 - *CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.
 - Library-name:** Specify the name of the library to be searched.

Optional Parameters:

- TFRPROD** Specifies whether resources are transferred to production in InterForm400:
- *YES:** Copy resources to the import library APFIMPORT and then transfer all resources to production (the InterForm400 system).
 - *PROMPT:** Copy resources to the import library APFIMPORT and then prompt the user whether to transfer all resources to production (the InterForm400 system).
 - *NO:** Only import resources to the import library APFIMPORT.
- DSPERR** Specifies whether any errors are displayed when running the IMPAPFRSC command:
- *YES:** Display errors.
 - *NO:** Do not display errors.

Examples

Example 1: Copy all resources from the CUSTINVLIB/EXPORT.INV save file to the import library APFIMPORT and then transfer all resources to production (the InterForm400 system):

```
IMPAPFRSC SAVF(CUSTINVLIB/EXPORT. INV)
```

Example 2: Copy all resources from the CUSTINVLIB/EXPORT.INV save file to the import library APFIMPORT and then prompt the user whether to transfer all resources to production (the InterForm400 system):

```
IMPAPFRSC SAVF(CUSTINVLIB/EXPORT. INV) TFRPROD(*PROMPT)
```

Example 3: Copy all resources from the CUSTINVLIB/EXPORT.INV save file to the import library APFIMPORT and then transfer all resources to production (the InterForm400 system). In case of an error no display is shown:

```
IMPAPFRSC SAVF(CUSTINVLIB/EXPORT. INV) DSPERR(*NO)
```

Escape messages:

CPF9801 Object &2 in library &1 not found.

CPF9810 Library &1 not found.

APF9801 Error code &1 loading InterForm400 resources.

Possible error codes for message APF9801:

Error code	Description
IMP0001	The InterForm APFIMPORT library can not be used.
IMP0002	The InterForm import library APFIMPORT is in use.
IMP0003	The InterForm import library APFIMPDEST already exists.
IMP0004	Error installing the InterForm import library APFIMPORT.
IMP0005	Error installing the InterForm import library APFIMPDEST.
IMP0006	One or more InterForm resources was not transferred to production.

Sample scenario of using MEL and the IMPAPFRSC command

Two developer teams at the same AS/400 are using InterForm400 to enhance printouts:

- TEAM A are designing a French invoice named INV003 in the file set FRINV for customer A
- TEAM B are designing a Danish credit note named CRE002 in the file set DKINV for customer B.

Then TEAM A and TEAM B both need to distribute their overlays to the customers:

- First TEAM A creates a library named TEAMA and export the overlay INV003 from file set FRINV.
- Then TEAM A creates a distribution (a save file) named EXPORT.INV in library TEAMA
- At the same time TEAM B creates a library named TEAMB and export the overlay CRE002 from file set DKINV and creates a distribution (a save file) named EXPORT.CRE in library TEAMB.

The TEAMA/EXPORT.INV save file can now be sent to customer A, and the TEAMB/EXPORT.CRE save file can now be sent to customer B.

Restoring the savefile TEAMA/EXPORT.INV at customer A's site and running the APFIMPRSC command will import the INV003 overlay to customer A's system.

Likewise:

Restoring the savefile TEAMB/EXPORT.CRE at customer B's site and running the APFIMPRSC command will import the CRE002 overlay to customer B's system.

The CL program to restore the overlay at customer A's site might look like this:

```
PGM
RSTLIB LIB(TEAMA) DEV(TAP01)
APF3812/IMPAPFRSC SAVF(TEAMA/EXPORT. INV)
ENDPGM
```

Appendix Q: The PDF Security module

The PDF Security module of InterForm400 is installed with InterForm400 and can be enabled if you insert the correct license code.

It opens up for the possibility to:

- Encrypt PDF files created by InterForm400
- Encrypt already existing PDF files (created by InterForm400) with the command APF3812/ENCIFPDF.
- Password protect PDF files created earlier by InterForm400
- Password protect the new PDF files (when created)
- Digitally sign the created PDF files

This is possible for all ways of creating PDF file in InterForm400 except through option '**3. Merge spool entry with overlay**' of the InterForm400 Main Menu.

You mainly encrypt the PDF file in order to prevent a third party from reading confidential information and you digitally sign a PDF file (with a certificate) so that the receiver can be certain, that you have created the file and that it has not been altered by anyone else.

An example of how to encrypt a PDF file and/or sign the file with a certificate can be found on page **203**.

Requirements for the PDF security module

Apart from the PDF security module these requirements must also be met before you can encrypt and digitally sign the PDF files in InterForm400:

- You need to run InterForm400 version **2004M01** or newer.
- The OS/400 version must be at least **V5R1**
- You must have installed this on your iSeries:
Product: **5722SS1** Option: **35** 'OS/400 - Cryptographic Service Provider'.
Product **5722SS1** Option **34** 'Digital Certificate Manager' is also required for **V5R3**.
These options are delivered with the standard OS400 CD-roms
- You must have installed this on your iSeries:
Product: **5722AC3 *BASE** 'Crypto Access Provider 128-bit for AS/400'
This product can be ordered from IBM - for free.
- You must have installed this on your iSeries:
Product: **5722JV1** Option: **6** 'Java Development Kit (JDK) 1.4'
- If you are running OS400 V5R2 you need this PTF: **SI10101** for product **5722SS1**
- In order to be able to open encrypted or digitally signed PDF files you need to run **Acrobat Reader version 5** or newer on the PC.
- PDF files, that are digitally signed **cannot** be created in the folder system (within QDLS). **NOTE:** After including a signature in a PDF file the current job cannot create any PDF files within QDLS.

WARNING

When you recover a system that includes Cryptographic Access Provider (5769AC1), (5769AC2), or (5769AC3); the Cryptographic Access Provider product fails when you use it. You must reinstall Cryptographic Access Provider after completing the recovery process in order to use it.

NOTE

If you try to generate PDF files in QDLS with signatures or if you try to generate PDF file in QDLS after using signatures in the current job you will receive the error message: **CPE3524 Function not allowed.** (Function is not allowed in a job that is running with multiple threads).

Technical details

The **PDF Encryption** used is:

Standard PDF Encryption 1.4 (Version 2, Revision 3)
128 bit RC4 encryption
MD5 Hash Algorithm

The security of the PDF files when encrypting them in InterForm400 is using the most secure encryption that is supported by Acrobat Reader at the moment (Acrobat Reader version 6.0). It cannot be guaranteed, that this encryption cannot be broken or disabled. Intermate A/S cannot be held responsible for any such security problems.

The **PDF Signature** inserted in the PDF files is:

Standard Adobe.PPKMS signature handler
PKCS#7 Signature Format encapsulation

The **certificates**, that you can use must be:

PKCS#12 w/ x.509 certificate

Refer to page **481** for description of how to install a certificate in InterForm400.

Details of how you can encrypt or insert a digital signature can be found on the pages below.

In combination with:

- The **APF3812/MRGSPLFPDF** command: Refer to page **349**.
- The **PDF file naming** finishing definition: Refer to page **211**.
- The **E-mail finishing** definition: Refer to page **203**.
- The **Encrypt** InterForm400 PDF file command Refer to page **416**.

20. Import Certificates

If you have bought the PDF security module of InterForm400 you can add digital signatures to PDF files. Refer to page **480** for more information of this module.

In order to get a certificate you should contact your local provider of certificates. After the

certificate has been installed on your PC you can export it so it can be installed on other machines. Make sure, that you export the certificate as a PKCS#12 with x.509 certificate.

Select this option and you will see a list of the installed certificates:

```

Work with Certificates                                CER200D

Position to . . . . . _____ Certificate

Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display

Opt Certificate Description                               Valid to   Cert. type

(No Certificates to display)

                                                                 End

F3=Exit  F5=Refresh  F6=Create  F11=View 2  F12=Cancel

```

Press F6=Create to add a new certificate and you will see the screen below:

☺ **TIP** ☺

*If you get the error: 'Program import not found' after pressing **F6=Create** and you run OS400 V5R2 you should make sure, that you have PTF SI10101 (or superseding PTF e.g. SI13932) for product 5722SS1 installed.*

```

Create Certificate                                    CER302D

Type choices, press Enter

Certificate File Information
Certificate . . . . . KSE_____
Description . . . . . Certificate for Kim Egekjaer__
Path . . . . . /KSE/_____ >
Filename . . . . . KSE.PKCS12_____ >
Cert. alias . . . . . _____ >
Password . . . . . _____

Certificate Behaviour Information
Cert. type . . . . . *COMP                *COMP, *ORG, *PERS
Cert. authority . . . . . *PUBLIC_____ *PUBLIC, user profile
Active period . . . . . 01/01/05   12/31/05
Secure from move . . . . . Y                (Y=Yes, N=No)

Imported Certificate Information
Cert. usage . . . . . :
Valid period . . . . . : 01/01/01   01/01/01

F3=Exit  F5=Refresh  F9=Expand  F12=Cancel

```

The fields on the screen have these functions:

Certificate The name of the certificate when it has been imported. This is what you want to name it in InterForm400.

Description	A description of what/who this certificate is for.
Path	The path to the certificate file (in the IFS - not in QDLS) that you are importing. The path must end with '/' as this is concatenated with the file name.
File name	The name of the file in the IFS containing the certificate.
Cert. alias	The alias of the certificate if the file contains more than one certificate.
Password	The password used when you exported the certificate. The password is hidden on this display.
Cert. authority	States where this certificate can be used. *PUBLIC means it can be used for all spooled files. If you state a user profile only spooled files owned by this user can have this certificate attached.
Active period	The period where this certificate is intended to be used. This can later be extended to the validity period of the certificate. This option is so you will get a warning when the active period is running out.

A change of '**Cert. authority**' or '**Active period**' after import require that the password for the certificate is re-entered.

Secure from move

Tells InterForm400 if the imported certificate is to follow the APF3812 library. If you say 'Y' the certificate will be encrypted with the serial number of the iSeries and must be reinstalled if you move the InterForm400 installation to another machine in the future.

If you use 'N' the certificate will be encrypted but will follow the InterForm400 installation i.e. if you restore the APF3812 library on another machine the certificate will still run. For maximum security 'Y' is recommended.

The data under '**Imported Certificate Information**' is updated automatically after the import and use of the certificate.

Recommendations related to JAVA Performance

Below are some recommendations for setup of your iSeries / i5 that you can consider if the JAVA performance is not satisfactory. These changes could be considered if it takes too long to add certificates or to encrypt pdf files.

WARNING

None of the changes below should be done without the acceptance of the person(s) responsible for the iSeries / i5 as these changes can generally affect the performance of the iSeries / i5.

NOTE

Intermate A/S or InterForm A/S cannot be held responsible for any problems directly or indirectly related with the recommended changes below.

MAXACT for the *BASE pool

You could increase this value to reduce tread transitions into the ineligible state.

OS/400 System values

These are the system values you could consider to change to get better JAVA performance on your iSeries:

QACTJOB (Initial number of active jobs)
Increase this (from default of 20) to 400.

QADLACTJ (Additional number of active jobs)
Increase this (from default of 10) to 50.

QADLTOTJ (Additional number of total jobs)
Increase this (from default of 10) to 50.

QMAXACTLVL (Maximum activity level of system)
Ensure, that this is *NOMAX (*NOMAX is default).

QPRCMLTTSK (Processor multi-tasking)
Make sure, that this is set to '1' (on) ('1' is default).

QTOTJOB (Total number of jobs)
Increase to 1000 (35 is default).

OS/400 Subsystem settings

Increase the number of **QSQSRVR** initial jobs. The value should be the number of expected concurrent transactions plus jobs for the application server. The default value is 5 - used for native JDBC. An increased number increases overhead slightly. Make sure, that the maximum number of uses is 200 (default).

Use this command to change the number of initial jobs:
CHGPJE SBSD(QSYS/QSYSWRK) PGM(QSYS/QSQSRVR)

Increase the number of **QZDASOINIT** jobs. Same rules as for QSQSRVR. The default value is 1 - for toolbox JDBC.

Use this command to change the number of initial jobs:
CHGPJE SBSD(QSYS/QSERVER) PGM(QIWS/QZDASOINIT)

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