WinPrint

# Printing InterForm400 output on any windows connected printer

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# Introduction to WinPrint

WinPrint is a charged module for InterForm400. The WinPrint client is installed on a PC running Windows and in this way InterForm400 can print (from the System i) onto any printer that is installed on this PC.

InterForm400 (which runs solely on the System i) comes with its own 'printer drivers' making it possible to print in PCL (HP Printer Command Language), ZPL (Zebra Printer Language) and even IPL (Intermec Printer Language).

Using our own printer data streams makes it possible to create very efficient print out and in this way InterForm400 itself can fully decide exactly what commands to send to the printer and in this way make use of printer specific features. The downside is, that InterForm400 can only print to printers that understands one of the printer languages mentioned above.

There are printers, that understands neither of the printer languages mentioned above (e.g. some label printers), so it is unfortunately not possible to print from InterForm400 to such printers - unless you use WinPrint. With WinPrint you can print on as good as any printer - if you can just get a windows driver for it.

## Installing the WinPrint Client

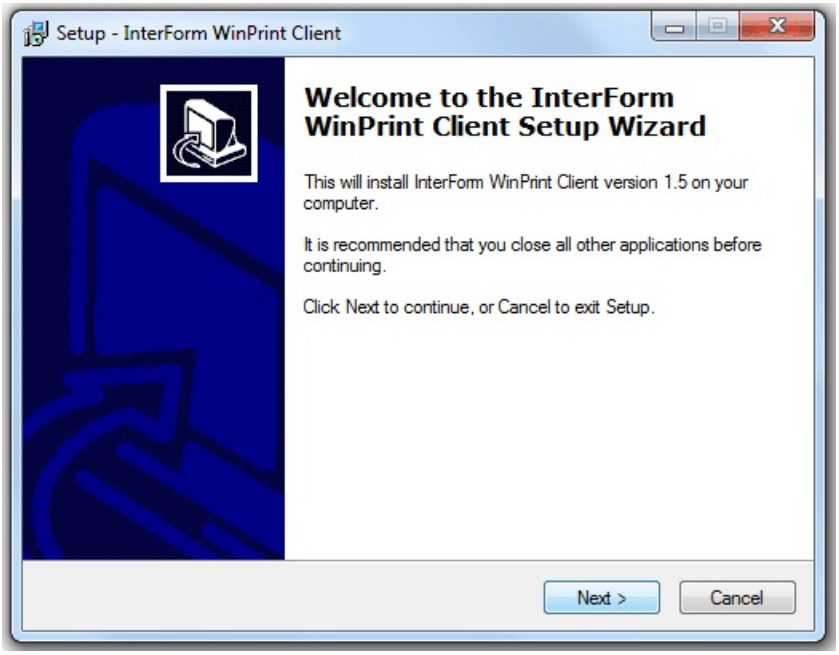
A vital part of the WinPrint module is the WinPrint Client. This client application is installed on one or more Windows PC's, so that InterForm400 is able to 'see' the relevant printers on these PC's.

An unlimited number of WinPrint Clients can be installed. As prerequisite for the WinPrint client is **Java Runtime Environment (JRE)** on the PC. A JRE installation file comes with InterForm400 and can be downloaded from the IFS via:
/APF3812Home/Designer/jre-6u5-windows-i586-p-s.exe

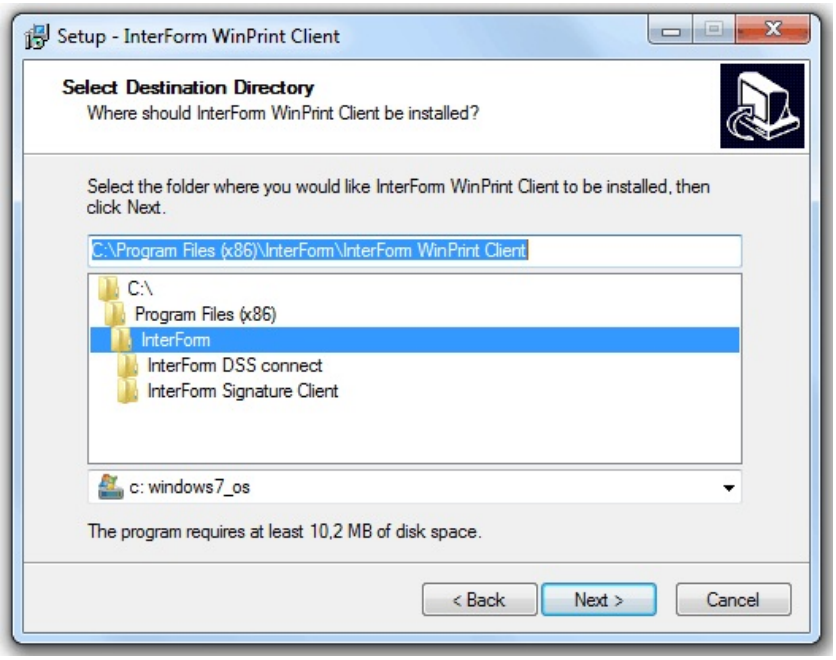
- or you can download the latest version from here:
http://www.java.com/en/download/index.jsp

The setup file for the WinPrint client can be downloaded from the IFS in:
/APF3812Home/InterForm WinPrint Client/Setup InterForm WinPrint Client.exe

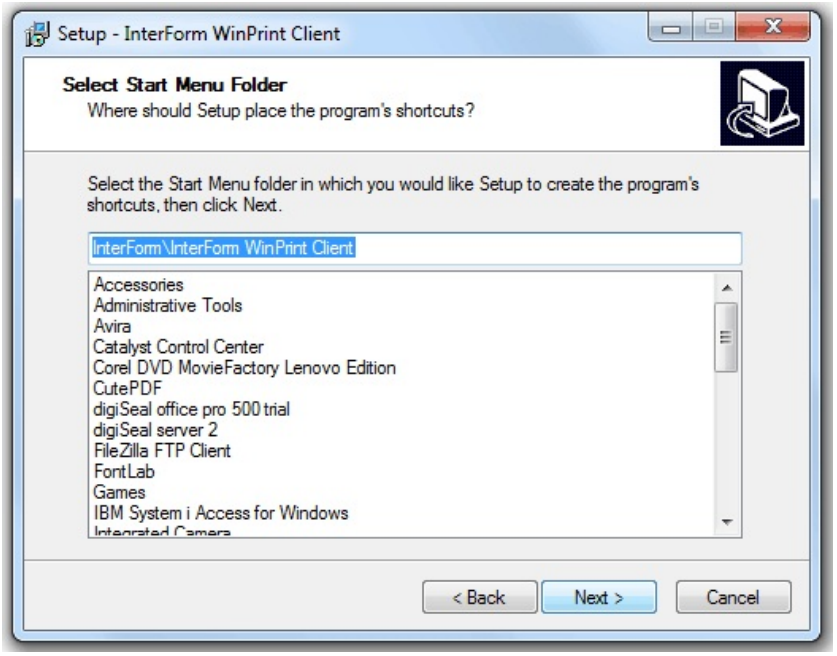
After downloading it from the IFS and running it locally you will see the windows below:



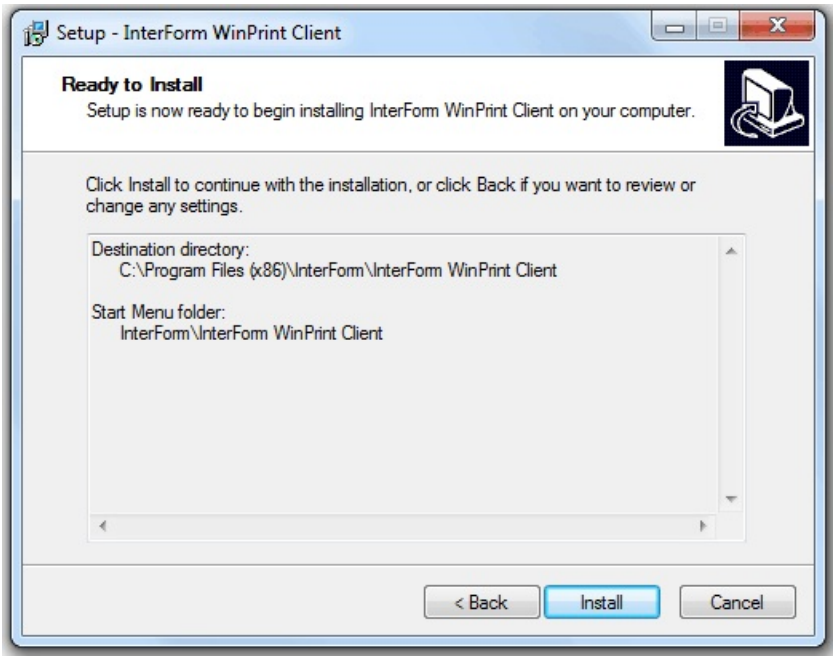

Click ‘Next’ and you will see this:




In the screen above the default path for installation is suggested. You can change it if needed. Click ‘Next’ and you will see this screen:



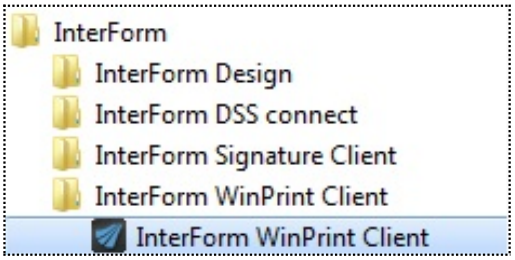

In this screen you can setup the Start Menu folder to use for the WinPrint Client. Click 'Next' to proceed:



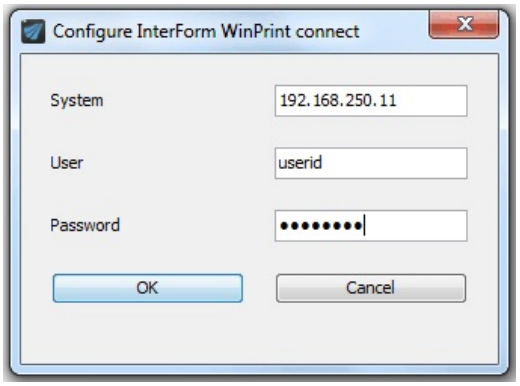

Here you click 'Install' to install the WinPrint client as indicated.

# Starting up the WinPrint Client

You start up the WinPrint Client (if you have used the default start menu folder) by selecting 'Programs', 'InterForm', 'InterForm WinPrint Client' and 'InterForm WinPrint Client' in Windows:

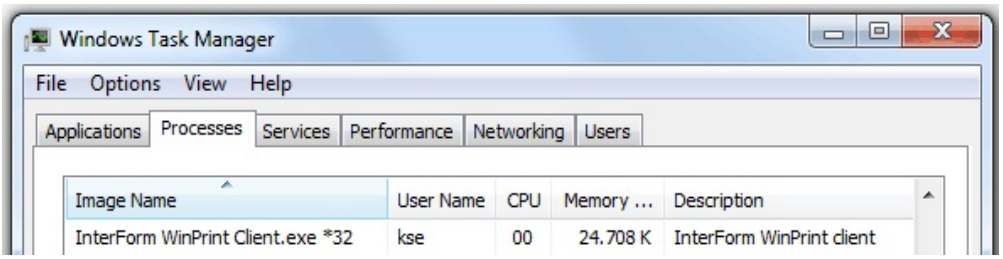



When running the WinPrint Client for the first time you will be asked for the IP-address (or host name) of the System i, your user ID and password to this machine:




(The password will not be saved on the PC).

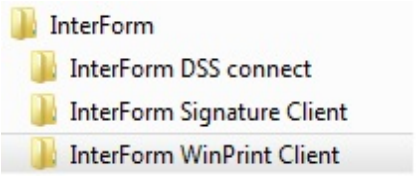
After signing on to the System i, the WinPrint Client is not seen directly in the task bar, but is listed as an active process:

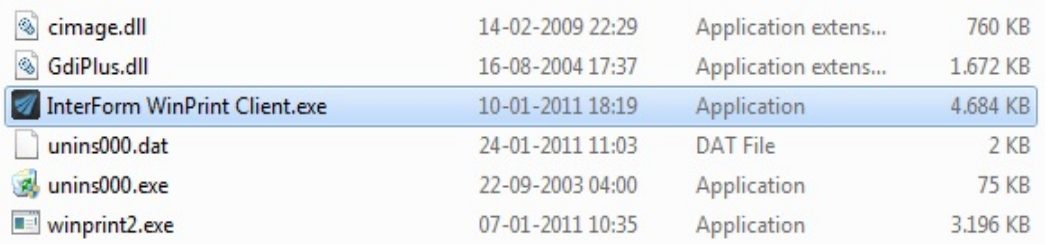



# Starting the WinPrint Client Automatically

If you want to startup the WinPrint Client automatically during startup of the Windows PC, then you can do that by copying a shortcut into the startup folder. You do that in this way:

First find the InterForm WinPrint Client exe file. It is found in the destination directory you selected during the install:

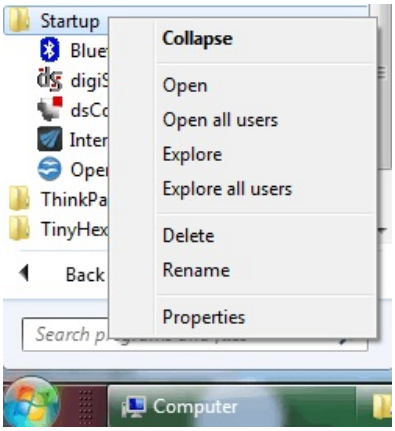



Now right click on the 'InterForm WinPrint Client.exe' file and create a shortcut for this file. Right click on the short cut and chose 'cut'.

Finally you need to copy the shortcut to the startup folder. You can e.g. do that in this manner in Windows 7:

Select the Windows Start icon, 'All Programs' and right click on the 'Startup' folder:




Here you select either 'Explore' or 'Explore all users' depending if you want to startup the client for the current user or for all. After you have made your choice you paste in the shortcut created above.

# Starting up the WinPrint subsystem

You need to start the WINPRINT subsystem on the System i before the WinPrint Clients can communicate with the host.

You can start the WINPRINT subsystem in these manners:

## 1. Via the Menu

From the InterForm400 Main Menu you select ‘80. Administering InterForm 400' followed by option ‘30. WinPrint administration’:

```
WinPrint administration                              System.......: PMK11
                                                     Workstn ID...: QPADEV000B
Subsystem....: WINPRINT                                 CCSID ....: 00278
   Library...:   APF3812                             User ID......: KSE


Select one of the following options:

 1. Work with Windows PC's



 5. Display WinPrint queues

10. Start the WINPRINT subsystem
11. End the WINPRINT subsystem
12. Work with the WINPRINT subsystem

Option:



F3=Exit                    F6=Display messages             F12=Cancel
```

Here you can start the subsystem via option ‘10. Start the WINPRINT subsystem’.

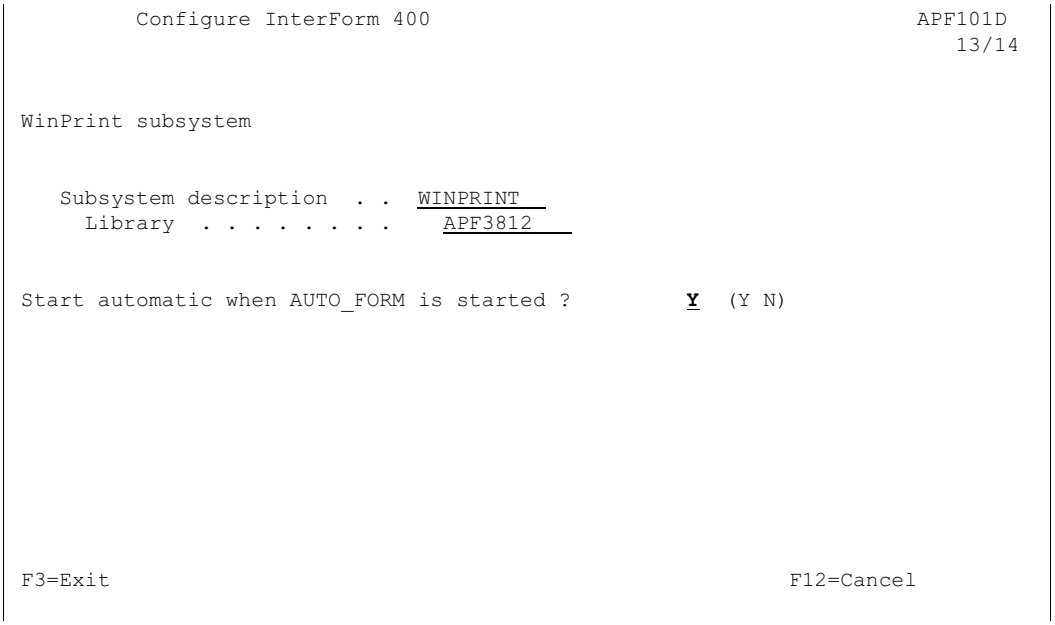
## 2. With the AUTO_FORM subsystem

You can make the WINPRINT subsystem start when the AUTO_FORM subsystem starts (AUTO_FORM is the subsystem, where Auto Forms Control jobs of InterForm400 are running).

In order to do that you select this in InterForm400:

70. Configuration and licences
2. Configure InterForm 400

Now press Enter until you get to this screen:




Here you can change the name and library of the subsystem and also chose to start the subsystem whenever the AUTO_FORM subsystem is started.

## 3. Via a command

You can start the WINPRINT subsystem with this command:

STRSBS SBSD(APF3812/WINPRINT)

If you include the command in the IPL startup program you should also include a MONMSG command after this - just in case if the command should fail.

# Configuring WinPrint

As default WinPrint will communicate on the LAN via port number 44556. If you want to use a different port number you can change it as described below. You will of course need to change the port number for both the System i and any WinPrint Clients that are already installed.

## Changing the port number on the System i

If you want to change the port number, you will first need to end the WINPRINT subsystem before changing the port number.

You can change the port number that the host is using by going into InterForm400 with the command: APF3812/APFMENU and select option '70. Configuration and licences' followed by option '4. Configure WinPrint':

```
         Configure WinPrint                                        WIC400D

WinPrint subsystem . . . :   WINPRINT
  Library  . . . . . . . :     APF3812

Port . . . . . . . . . . .   44556   10000-65535

F3=Exit    F12=Cancel
```

Here you can change the port number if needed. After the change you should of course start the WINPRINT subsystem again.

## Changing configuration on the WinPrint Client

If you want to change the port number or other parameters of the WinPrint Client you will need to edit the settings.xml file. The file is found in:

C:\users\<my-userID>\.InterFormWinPrint\

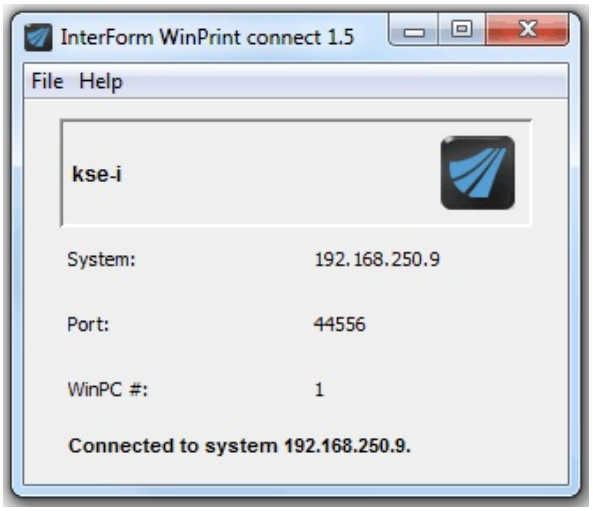
The file can e.g.be edited via Notepad and contains this information:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!DOCTYPE properties SYSTEM "http://java.sun.com/dtd/properties.dtd">
<properties>
<entry key="winPCID">ERGE9Q4F3HDFYME96Q8T11D72R13Z5TM</entry>
<entry key="port">44556</entry>
<entry key="user">kse</entry>
<entry key="system">192.168.250.11</entry>
<entry key="winPCseq">1</entry>
</properties>
```

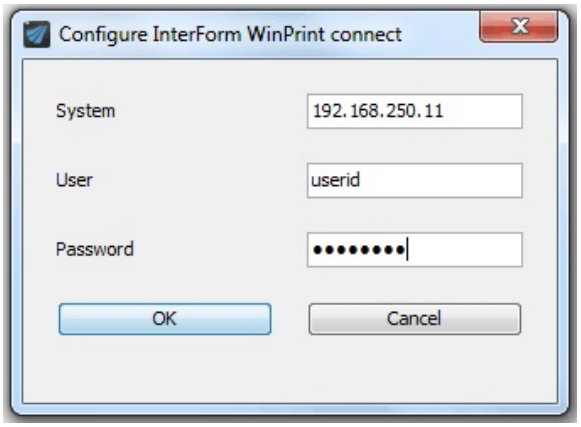
If you want to connect to the System i via another port number you can change the port number as marked in bold above as well as the identification/IP-address of the System i (system).

To change some of the settings you can also open the active process by clicking on this icon on the left of the windows task bar:

This will open this window:




If you now select ‘File’ and ‘Settings’ you can connect to another host if you want:



# Using WinPrint

If you have installed the WinPrint Client on at least one PC, setup the same port number on both the host and the clients and started the WINPRINT subsystem, then you can start to use WinPrint.

It is very easy as it is implemented as an extra function in Auto Forms Control in InterForm400. For details about Auto Forms Control (which is a central part of InterForm400), you can refer to the InterForm400 Manual.

To add a new sequence line in Auto Forms Control (AFC) you go into InterForm400 with the command APF3812/APFMENU and select:

5. Work with Auto Forms Control
1. Functions attached to Output Queues

Now use option '2=Change' for the output queue that should use WinPrint and press Enter twice.

Now add a new sequence line with the function 'W = Print to Windows printer'. Press F23 to see that possibility:

When you select 'W' as the function to execute you will see the screen below, where you select the spooled file attributes to trigger the W-function:

```
         Update AFC-functions attached to output queues              AFC305D

Queue:   AFC_INPUT1     Library:   APF3812

Seqnbr Funct   Form type  Save Jobname    Filename   Device file  Program
 0002    6
              Hold Spooled File




Seqnbr Function   Attributes of input file for which to execute the function
  1.0    W
                 Form type  . . . . . .
                 Save attribute . . . . . .            *NO *YES
                 Jobname  . . . . . .
                 Spooled file name  . . . . . .
                 Device file  . . . . . .
                   Library  . . . . . .
                 Program that opened file . . . . . .
                   Library  . . . . . .
F3=Exit          F13=Fold/Unfold                        F12=Cancel
```

On the next screen you state the setup of the merge:

```
         Update AFC-functions attached to output queues              AFC305D

Queue:   AFC_INPUT1     Library:   APF3812

Seqnbr Funct   Form type  Save Jobname    Filename   Device file  Program
 0002    6
              Hold Spooled File




Seqnbr Function   Print to Windows printer
  1.0    W
                 Overlay name . . . . . .  IF400DEMO
                   File set . . . . . .      SAMPLE
                 or overlay selector  . . . . .
                 Primary/Secondary set  . . . .  *PRI          *PRI, *SEC
                 Unicode output . . . . . .  *INPUT       *INPUT, *YES
                 Color support               *YES          *NO, *YES


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

The overlay or overlay selector must be one that is defined in a file set intended for PCL and PDF output (Laser) - not for label printers. Refer to the InterForm400 manual for a complete explanation of each parameter. Press Enter to select the Windows PC and printer, that you want to print to:

```
         Update AFC-functions attached to output queues              AFC305D

Queue:   AFC_INPUT1     Library:   APF3812

Seqnbr Funct   Form type  Save Jobname    Filename   Device file  Program
 0002    6
               Hold Spooled File




Seqnbr Function   Print to Windows printer
  1.0    W
                  Windows PC  . . . . . .
                  Windows printer . . . . . .




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

Now place the cursor on the ‘Windows PC’ field and press F4. This will list all Windows PCs which are known to the host (PCs that have - or are - connected via the WinPrint Client). In our case the list looks like this:

```
         Select windows pc                                           WIC220D

Type options, press Enter.
  1=Select

Opt   Windows PC                                                  Number
 _    karsten-PC                                                      2
 _    kse-i                                                           1
```

Here you select the right PC with ‘1=Select’ and you will return to the previous screen where you can press F4 to list all printers installed on the PC you selected:

```
         Select windows printer                                      WIC230D

Windows PC  . . . . . :   kse-i

Type options, press Enter.
  1=Select

Opt   Windows printer
 _    Fax
 _    HP  Color LaserJet 4700
 _    HP LaserJet TEST 4250 PCL 5 i Suldrup
 _    HP LaserJet 2200 Series PCL 5
 _    HP LaserJet 4
 _    Microsoft XPS Document Writer
 _    RICOH Aficio AP400N PCL 5e
 _    ZDesigner S4M-300dpi ZPL




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

Select the printer with ‘1=Select’ and you have setup the W-function in Auto Forms Control.

In order to run the W-function you now make sure that the Auto Forms Control subsystem and the relevant AFC job is running and any new spooled file on the output queue can trigger the W-function.

It is highly recommended to get familiar with Auto Forms Control in general (e.g. via the InterForm400 manual) before running this function.

# Limitations of WinPrint

With WinPrint you can print on as good as any printer as long as you can find a windows printer driver for it. There are however a few things to point out when you use WinPrint:

**Printing is not as fast as normal InterForm400 printing**
When you print via WinPrint the printing speed is mainly limited by Windows and the used driver. This will usually mean slower printing compared to normal InterForm400 printing. (However normal InterForm400 printing is also VERY fast..).

**The WinPrint Client can only connect to one System i**
If you have multiple System i's you should remember, that a Windows PC can only run as WinPrint Client for one System i.

**All overlays must be defined in a file set for PCL/PDF**
Even though you might want to use WinPrint to add support for a very special label printer you should always use overlays in file sets intended for PCL/PDF output only. You can state the exact dimensions of the labels (necessary if you print on label printers) with the extension of the X=Custom size. This function has been extended in the 2011 versions of InterForm400. Please refer to the InterForm400 manual for details.

**PCL files are ignored**
If you include PCL files as graphical elements in the design, then these will be ignored when printing with WinPrint. (PCL files are shown in the graphical designer either).

**Font support**
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 print in other fonts you will need to install a TTF (True Type Font) to be used for PDF output in InterForm400 - WinPrint will also use the autodownload setup for the *PDF printer group.

**Barcodes on low resolution label printers**
When printing labels with barcodes directly from InterForm400 (in either ZPL or IPL), then the barcodes are generated by the printer firmware. This makes it more likely to get a readable barcode - even when printing relatively small barcodes on low resolution printers (e.g. 203 dpi) - compared to when printing with WinPrint. To be safe it is suggested to print out a representative collection of barcodes with WinPrint and scanning them before using the barcodes in full production.

**Stapling, PJL commands and duplex are not supported**
Stapling, user defined PJL commands and duplex are not supported for WinPrint. Such definitions are ignored.

**OMR (Optical Mark Recognition) is not supported**
OMR for inserter machines (putting the printed output into envelopes) is not supported.

# Troubleshooting

If you should have problems when using WinPrint, you should check the suggestions below before contacting your local InterForm400 support:

**The print out does not look exactly like the overlay**
There might be minor differences in the fonts, that are printed. If you want to specify the exact fonts, you should consider to install True Type Fonts for PDF in InterForm400 and link them with the used fonts in autodownload. Please also notice that PCL files are ignored for WinPrint output. Please check out the limitations mentioned on page 18.

**Nothing gets printed**
If nothing gets printed you should go through this check list:

- Is the WINPRINT subsystem active on the System i? If not: Start it.
- Is the WinPrint Client active on the relevant PC? (Check the tasklist).
- Is the System i able to 'see' the client? From the InterForm400 Main Menu select
  '80. Administering InterForm 400',
  '30. WinPrint administration' and
  '1. Work with Windows PC's'.
  This will show a screen like below:

  Here you can see the status of each PC. If a PC has status '*ERROR', then the PC cannot be seen by the host.
- If the PC has status '*ERROR' above (and the WinPrint Client is active): Does both the host and the WinPrint Client use the same port number?
- PC status=*ERROR: Is a firewall blocking the used port number?

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