# GX Local Printing

## 1. Introduction

This document describes the proposed GX Local Printing mechanism.

**Important Note-1:** The initial implementation of GX Local Printing (using the GXPrint controller) was only supported for 32-bit applications running on GSM (Windows) configurations. This original implementation has been supplemented by a technique that allows the advantages of GX Local Printing to be enjoyed by 16-bit applications. See section 5 for full details.

**Important Note-2:** GX Local Printing is only supported with printers that are directly accessible from the PC that is running the GX session. In GUI-1 (GSMWIN32.EXE) Aux. Printing parlance: **ONLY** floating printers are supported. This should not be a problem because both directly connected and Windows network printers are supported from the PC that is running the GX session.

Consider a configuration with a number of "thin-client" PC's each with its own directed connected printer. On a GSMWIN32.EXE Auxprint configuration, providing the registry is correctly configured, each user can printer to **any** of the 3 AuxPrint printers (including the one attached to his/her PC), regardless of their location. On a GX Local Printing configuration each user can only access the printer that is directly connected to his/her PC; or to a printer that is accessible as a Windows network printer.

Those with experience of AuxPrint "floating" printer configurations will be greatly relieved that GXPrint configurations are considerably easier to set-up (the "floating" AuxPrint concept is explained in global22to32b.doc).

## 2. Software Requirements

The implementation of GX Local Printing has involved changes to the GSM run-time components (specifically, P.$MON and P.$SDLM0), GLOBAL.EXE and GX.EXE (and GXIO.EXE). The following software versions are required:

| | |
|---|---|
| GSM | SP-7, or later |
| GX.EXE | V2.6, or later |
| GXIO.EXE | V3.5, or later |
| GLOBAL.EXE | V3.4, or later |

## 3. Configuration Changes

Provided the appropriate versions of the various software layers (see above) are being used only a few simple configuration changes are all that is required to enable GX Local Printing.

The configuration of a GX Local Printer requires both changes to the registry, to configure a standard Printer Unit(s) (e.g. 500), and corresponding changes to the GXPRINT.INI file.

The changes to the GSM (Windows) registry are generic. The printer-specific changes are all applied at the "thin-client end" within the GXPRINT.INI file. This is quite different from the configuration of standard DOSPrint, WinPrint and DOS.PRI printers where all the options are specified in the registry.

**Important Note:** The installation of the Global Windows Explorer (GX) does not create a GXPRINT.INI file. This file must be created if you are adding a GX Local Printer for the first time on a PC.

## 3.1 Changes to the GSM (Windows) Registry

To configure a GX Local Printer a relatively small number of new registry options must be added.

**Important Note:** GX Local Printers can only be added to a GSM (Windows) configuration if the UseConfigurationFile option is set of "Off" (i.e. GX Local Printers are NOT supported, and cannot be configured, by Global Configurator).

To configure printer 500, for example, as a GX Local Printer, add the following registry key:

..\Global\Client\Printers\GXPrint

then add the following registry key:

..\Global\Client\Printers\GXPrint\500

It is quite likely that no further registry settings will be required (for printer 500). However, the following registry settings are available:

| | |
|---|---|
| +PrinterDescription | See Technical Note IN181 |
| +HardwareFormFeed | See Technical Note IN181 |
| +PageDepth | See Technical Note IN181 |
| +MaximumPageWidth | See Technical Note IN181 |
| +PrinterExecTimeout | See Technical Note IN181 |
| +SpoolerControlBits | See Technical Note IN181 |
| +PrinterExecFlagByte | See Technical Note IN181 |
| +DeviceCharacteristics | See Technical Note IN181 |
| +PrinterPool | See Technical Note IN181 |
| MultiUserPrinterExecutive | Must be set to "On" |
| BufferStackDepth | This setting may have to be set to a value higher than the default of 10, if complex Printer Control Files are being used (see section 4.5 below). |

## 3.2 Entries in the GXPRINT.INI File

A standard GSM printer unit (e.g. 500) is mapped to a DOS-device, Windows file, or Windows print queue via the GXPRINT.INI file. The proposed option to allow this INI file to be replaced by the filename defined by the GXPRINT%=name override in the GXHOSTS.INI file has **NOT** been implemented and is reserved for future use. Note also that it is **NOT** possible to replace GXPRINT.INI by a GX.EXE command line override.

**Important Note:** The installation of the Global Windows Explorer (GX) does not create a GXPRINT.INI file. This file must be created if you are adding a GX Local Printer for the first time on a PC.

The GXPRINT.INI file contains a separate section for each printer number. For example:

[500]
Type=*printer_type*
Name=*printer_name*
various other settings for unit 500 (see below)
[501]
Type=*printer_type*
Name=*printer_name*
various other settings for unit 501 (see below)
etc.

### 3.2.1 Type

The mandatory Type setting (i.e. *printer_type)* must be one of:

| | |
|---|---|
| DOSPrint | GSM (Windows) compatible DOSPrint style interface |
| WinPrint | GSM (Windows) compatible WinPrint style interface |
| GDI | GDI printer interface |

### 3.2.2 Name

This **mandatory** setting configures the printer name and is dependent on the printer type specified in the Type setting.

For "DOSPrint" the following printer types can be specified by the Name option:

| *Printer type* | *Example Name setting* |
|---|---|
| Device | LPT1: |
| File | C:\GSM\PRINT.TXT |
| Directory | C:\GSM\PRINT\ |

For "WinPrint" and "GDI" an explicit printer can be selected by setting up the Window printer name. Alternatively**, if no name is specified then the standard Windows printer dialogue will be displayed allowing the printer to be chosen.**

### 3.2.3 Other GXPRINT.INI Settings

The various other GXPRINT.INI file settings are:

| | |
|---|---|
| CreateNewFile | This setting is only interpreted for a DOSPrint printer. |
| LFToLFCR | This setting is only interpreted for a DOSPrint printer. |
| RemoveCR | This setting is only interpreted for a DOSPrint printer. |
| RemoveLF | This setting is only interpreted for a DOSPrint printer. |
| RemoveFF | This setting is only interpreted for a DOSPrint printer. |
| Timeout | This setting is only interpreted for WinPrint and GDI printers. |
| StartDocDataType | This setting is only interpreted for a WinPrint printer. |
| StartPageAfterFormFeed | This setting is only interpreted for a WinPrint printer. |
| SkipStartPageCall | This setting is only interpreted for a WinPrint printer. |
| IgnoreStartPageError | This setting is only interpreted for a WinPrint printer. |
| UseDevMode | This setting is only interpreted for a WinPrint printer. |

# 4. Miscellaneous Information

This section describes a number of issues that must be considered when configuring GX Local Printers.

## 4.1 $U Information

Printer Units (e.g. 500) configured as GXPrint controllers will only be available to users running on a GX thin-client. GXPrint printer units will not be available to, and will not appear in the $U report for, users running on the Global Windows Workstation (GUI-1), serial screens, or the "GUI" controller on the GSM (Windows) GLOBAL.EXE fat client.

## 4.2 The GXPrint interface and 16-bit applications

The GXPrint interface is only be available to 32-bit applications. All 16-bit applications, **including $SPOOL**, will suffer an ERROR "T" if an attempt is made to print to a GXPrint printer device.

**NOTE THAT GLOBAL REPORTER IS A 16-BIT APPLICATION AND CANNOT BE USED WITH THE GXPrint INTERFACE. THIS RESTRICTION STILL APPLIES WHEN GLOBAL REPORTER IS BEING USED FROM A 32-BIT APPLICATION SUCH AS GLOBAL-3000 V5.0 OR V6.0.**

**Important Note:** A version of 16-bit Global Reporter is now available, upon request, that performs all printing via 32-bit print overlay and thus can be used in conjunction with the GXPrint interface. The 32-bit print overlay, $PRI32, is only available with GSM SP-8, and later.

Alternatively, it may be far more convenient to use the DOSPrint/GXPrintInterface option to achieve the "GXPrint effect" for 16-bit applications. See Technical Note IN406 for further details.

## 4.3 Mount Messages and buffer flushing

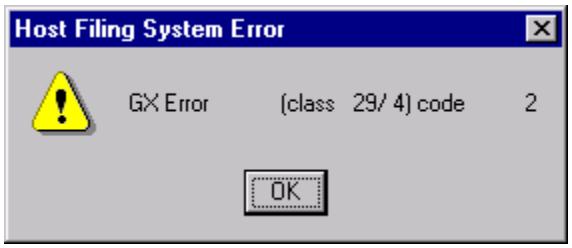
The GX WinPrint and GDI interfaces do not support the FlushOnAlignment option that is supported by the GLOBAL.EXE WinPrint controller. The Timeout option in the GXPRINT.INI file must be used to flush alignment patterns to networked printers.

## 4.4 Multi-User Printer Executive

The MultiUserPrinterExecutive registry setting MUST be enabled.

## 4.5 GX Error conditions

Errors from the GX Printing interface will be reported in a "Host Filing System Error" message box. For example:




The "class" and "code" values in the GX Error message **must** be supplied when reporting problems with the GX Local Printer interface.

The error message will always be of the form:

GX Error (class *x*/*y*) code *z*

Where: *x* is the low-level GX op-code, *y* is the error class code and *z* is the low-level error code. The following combinations of op-code, class code and error code are possible:

| GX op-code | Class code | Error code | Meaning |
|---|---|---|---|
| 29 | 1 | 1 | Invalid block version |
| 29 | 4 | 2 | Printer not configured in GXPRINT.INI |
| 29 | 4 | 3 | Invalid printer type |
| 29 | 4 | 4 | Invalid DOS Printer type |
| 29 | 16 | Various | Error from CreateFile function |
| 29 | 17 | Various | Error from SetFilePointer function |
| 29 | 18 | Various | Error from FindFirstfile function |
| 29 | 19 | Various | Error from FindNextFile function |
| 29 | 20 | Various | Error from OpenPrinter function |
| 29 | 21 | Various | Error from StartDocPrinter function |
| 29 | 22 | Various | Error from CreateDoc |
| 29 | 23 | Various | Error from StartDoc |
| 30 | 1 | 1 | Invalid block version |

| | | | |
|---|---|---|---|
| 30 | 1 | 2 | Invalid property number |
| 30 | 3 | 2 | File is closed |
| 30 | 4 | 2 | Printer not configured |
| 30 | 16 | Various | Error from WriteFile function |
| 30 | 17 | Various | Error from StartPagePrinter function |
| 30 | 18 | Various | Error from Writeprinter function |
| 30 | 19 | Various | Error from EndPagePrinter function |
| 30 | 20 | Various | Error from StartDocPrinter function |
| 30 | 21 | Various | Error from StartPage |
| 30 | 22 | Various | Error from EndPage |
| 31 | 1 | 1 | Invalid block version |
| 31 | 4 | 2 | Printer not configured |
| 31 | 16 | Various | Error from CloseHandle function |
| 31 | 17 | Various | Error from EndDocPrinter function |
| 31 | 18 | Various | Error from ClosePrinter function |

## 4.6 Printer Control Files and the BufferStackDepth

If a complex Printer Control File is being employed printing to a GX Local Printer may result in TOO MANY OPEN FILE errors (i.e. error code "T"). If these errors are experienced the BufferStackDepth registry setting must be increased from the default value of 10.

## 4.7 Printer Control File issues

Although the various GXPrint printers are defined in the dispersed GXPRINT.INI files the Printer Control Files are held centrally on the "fat client". You are strongly advised to adopt a consistent numbering convention for the various types of printers (i.e. the printers that require unique Printer Control Files) on a network. For example, consider a network with 2 GX thin-clients PC's (PC-1 & PC-2) and 2 different types of printers (PrinterModel1 & PrinterModel2).

If the GXPRINT.INI files are configured so that PrintModel1 is configured as printer unit 550 on both PC's, and PrintModel2 is configured as printer unit 551 on both PC's, then establishing Printer Control File $$P550 for PrinterModel1 and Printer Control File $$P551 for PrinterModel2 ensures consistent results.

However, if the GXPRINT.INI file on PC-1 is configured so that PrintModel1 is configured as printer unit 550 and PrintModel2 is configured as printer unit 551; and the GXPRINT.INI file on PC-1 is configured so that PrintModel1 is configured as printer unit 551 and PrintModel2 is configured as printer unit 550; the Printer Control File mechanism will not produce consistent results.

## 4.8 The PRIFN$ routine

The PRIFN$ routine is not **currently** supported on GXPrint printers.

## 4.9 Advanced Winprint options

The "UseDevMode" option in the GXPRINT.INI file is reserved for future use to allow experiments with the extended properties (e.g. number of copies) of the WinPrint Print Dialogue Box to be performed.

## 4.10 GDI printing

The GDI printer interface is now supported with GX V2.6f, and later.

### 4.10.1 Printer Number specific GXPRINT.INI File Settings

The following settings, which appear under the individual [5*nn*] sections of the GXPRINT.INI file (see 3.2) are only interpreted for a GDI printer.

#### 4.10.1.1 Font

This setting specifies the **default** font to be used for printing. The general setting is as follows:

Font=*font_name*,*point_size*,*weight*,*italics_flag*

where the *font_name* selects the font (note this must be a fixed pitch font, e.g. Courier New), the *point_size* represents how large the characters will appear (72 point is required for most printers), the *weight* specifies how bold the text will appear (in the range 100 to 900 where 100 is faint, 900 is bold and 400 is normal) and the *italics_flag* specifies whether the italics version of the font should be used.

The default setting is:

Courier New,72,400,Off

#### 4.10.1.2 Timeout

This setting defaults to 0 (i.e. the timeout is disabled).

### 4.10.2 Printer Number Independent GXPRINT.INI File Settings

A new [gdifonts] section in the GXPRINT.INI file is now supported for use in conjunction with the generic Font Selection PCF sequences (see section 4.10.3.1.1 for more details).

### 4.10.3 GDI Printer Control File settings

The Printer Control File (PCF) for a DOSPrint or WinPrint GX printer interface should contain the low-level, printer-specific PCL escape sequences for the type of printer being employed. For these GX printer interfaces the various low-level escape sequences are sent directly to the printer, which is responsible for handling them.

When using the GX print GDI printer interface all print formatting is performed by GX so an arbitrary, generic set of sequences have been defined to provide all the useful printer control file functionality. The sequences are defined as described below.

A template GX Print GDI Printer Control File ($$PGXGDI) is available upon request.

#### 4.10.3.1 Start Sequences

The following generic Start Sequences are supported by the GX print handling within GX:

##### 4.10.3.1.1 Font Selection

**Font selection** **1B 30 *nn***

where *nn* is in the range 31 to 58 inclusive to allow selection of one of 40 fonts which can be defined in the GXPRINT.INI file.

The font selection sequence is used to choose from a range of up to 40 fonts that are configured in the GXPRINT.INI file. The settings in the GXPRINT.INI file are made in a new section, [gdifonts], and the setting names are specified as Font1, Font2, up to Font40. As with the default font setting in a GDI printer section (see section 4.10.1) the font parameters are specified as follows:

Fontn=*font_name,point_size,weight,italics_flag*

##### 4.10.3.1.2 Paper Type

**Paper type** **1B 40 *nn***

where *nn* is in the range 21 to 7F and selects the printer paper size as follows:-

| *Sequence* | *Paper type* |
|---|---|
| 21 | Letter 8 1/2 x 11 in |
| 22 | Letter Small 8 1/2 x 11 in |
| 23 | Tabloid 11 x 17 in |
| 24 | Ledger 17 x 11 in |
| 25 | Legal 8 1/2 x 14 in |
| 26 | Statement 5 1/2 x 8 1/2 in |
| 27 | Executive 7 1/4 x 10 1/2 in |
| 28 | A3 297 x 420 mm |
| 29 | A4 210 x 297 mm |
| 2A | A4 Small 210 x 297 mm |
| 2B | A5 148 x 210 mm |
| 2C | B4 (JIS) 250 x 354 |
| 2D | B5 (JIS) 182 x 257 mm |
| 2E | Folio 8 1/2 x 13 in |
| 2F | Quarto 215 x 275 mm |
| 30 | 10x14 in |
| 31 | 11x17 in |
| 32 | Note 8 1/2 x 11 in |
| 33 | Envelope #9 3 7/8 x 8 7/8 |
| 34 | Envelope #10 4 1/8 x 9 1/2 |

| | |
|---|---|
| 35 | Envelope #11 4 1/2 x 10 3/8 |
| 36 | Envelope #12 4 \276 x 11 |
| 37 | Envelope #14 5 x 11 1/2 |
| 38 | C size sheet |
| 39 | D size sheet |
| 3A | E size sheet |
| 3B | Envelope DL 110 x 220mm |
| 3C | Envelope C5 162 x 229 mm |
| 3D | Envelope C3 324 x 458 mm |
| 3E | Envelope C4 229 x 324 mm |
| 3F | Envelope C6 114 x 162 mm |
| 40 | Envelope C65 114 x 229 mm |
| 41 | Envelope B4 250 x 353 mm |
| 42 | Envelope B5 176 x 250 mm |
| 43 | Envelope B6 176 x 125 mm |
| 44 | Envelope 110 x 230 mm |
| 45 | Envelope Monarch 3.875 x 7.5 in |
| 46 | 6 3/4 Envelope 3 5/8 x 6 1/2 in |
| 47 | US Std Fanfold 14 7/8 x 11 in |
| 48 | German Std Fanfold 8 1/2 x 12 in |
| 49 | German Legal Fanfold 8 1/2 x 13 in |
| 4A | B4 (ISO) 250 x 353 mm |
| 4B | Japanese Postcard 100 x 148 mm |
| 4C | 9 x 11 in |
| 4D | 10 x 11 in |
| 4E | 15 x 11 in |
| 4F | Envelope Invite 220 x 220 mm |
| 50 | RESERVED--DO NOT USE |
| 51 | RESERVED--DO NOT USE |
| 52 | Letter Extra 9 \275 x 12 in |
| 53 | Legal Extra 9 \275 x 15 in |
| 54 | Tabloid Extra 11.69 x 18 in |
| 55 | A4 Extra 9.27 x 12.69 in |
| 56 | Letter Transverse 8 \275 x 11 in |
| 57 | A4 Transverse 210 x 297 mm |
| 58 | Letter Extra Transverse 9\275 x 12 in |
| 59 | SuperA/SuperA/A4 227 x 356 mm |
| 5A | SuperB/SuperB/A3 305 x 487 mm |
| 5B | Letter Plus 8.5 x 12.69 in |
| 5C | A4 Plus 210 x 330 mm |
| 5D | A5 Transverse 148 x 210 mm |
| 5E | B5 (JIS) Transverse 182 x 257 mm |
| 5F | A3 Extra 322 x 445 mm |
| 60 | A5 Extra 174 x 235 mm |
| 61 | B5 (ISO) Extra 201 x 276 mm |
| 62 | A2 420 x 594 mm |

| | |
|---|---|
| 63 | A3 Transverse 297 x 420 mm |
| 64 | A3 Extra Transverse 322 x 445 mm |

#### 4.10.3.1.3 Paper Orientation

| | |
|---|---|
| **Portrait** | **1B 50 30** |
| **Landscape** | **1B 50 31** |

### 4.10.3.2 Emphasis Control

The following generic Emphasis Control sequences are supported by the GX print handling within GX:

| | |
|---|---|
| **Bold On** | **1B 20 31** |
| **Bold Off** | **1B 20 30** |
| **Underline On** | **1B 21 31** |
| **Underline Off** | **1B 21 30** |
| **Italics On** | **1B 22 31** |
| **Italics Off** | **1B 22 30** |
| **Reserved (on)** | **1B 23 31** |
| **Reserved (off)** | **1B 23 30** |
| **Superscript On** | **1B 24 31** |
| **Superscript Off** | **1B 24 30** |
| **Subscript On** | **1B 25 31** |
| **Subscript Off** | **1B 25 30** |

### 4.10.3.3 Line Control

The Line Control section of the PCF is not supported.

### 4.10.3.4 Hopper Selection

The Hopper Selection section of the PCF is not supported.

### 4.10.3.5 Graphics

Graphics characters can be displayed by enabling graphics mode via the following sequences:

| | |
|---|---|
| **Graphics On** | **1B 2F 31** |
| **Graphics Off** | **1B 2F 30** |

The standard box drawing characters are supported:

| *Character value* | *Box character* |
|---|---|
| 80 | Vertical line |
| 81 | Horizontal line |
| 82 | Bottom left |

| | |
|---|---|
| 83 | Top left |
| 84 | Top right |
| 85 | Bottom right |
| 86 | Middle left |
| 87 | Top middle |
| 88 | Middle right |
| 89 | Bottom middle |
| 8A | Centre |

#### 4.10.3.6 Margin Selection

For GX V4.2d, and later, the following escape sequences are supported to set the top and left-hand margins in terms of lines:

**Set top margin to *n* lines 1B 60 30+*n***
**Set left margin to *n* lines 1B 61 30+*n***

For example:

| | |
|---|---|
| 1B 60 31 | Set top margin to 1 line |
| 1B 61 32 | Set left margin to 2 lines |

### 4.10.4 Notes on the Template GDI Printer Control File ($$PGXGDI)

The Printer Control File, $$PGXGDI is available, **as a template**, to use when constructing a Printer Control File for a GXPrint/GDI printer. The $$PGXGDI template GDI Printer Control File must be renamed then edited using the $CUS; Customise Printers; Printer control file option.

#### 4.10.4.1 Renaming the Template GDI Printer Control File ($$PGXGDI)

The $$PGXGDI template GDI Printer Control File must be renamed to match the unit number of the printer that has been configured as the GXPrint/GDI device. The Printer Control File naming convention is:

| GSM configuration | Unit number | Printer Control File | PCF Unit |
|---|---|---|---|
| GSM (Windows) CentralPCFName=Off | 500 - 549 | $$P5*nnxx* | $DP |
| GSM (Windows) CentralPCFName=Off | 550 - 598 | $$P5*nn* | $M |
| GSM (Windows) CentralPCFName=Off | 599 | $$P5*nnxx* | $DP |
| GSM (Windows) CentralPCFName=On | 500 - 599 | $$P5*nn* | $M |
| GSM (Unix) | 500 - 599 | $$P5*nn* | $M |

#### 4.10.4.2 Amending the Template GDI Printer Control File ($$PGXGDI)

The $$PGXGDI template GDI Printer Control File contains just three classes of Utility Sequences. Some of these sequences may be amended, or replaced, depending on the effects required for a particular GDI printer.

The Portrait (1B5030) and Landscape (1B5031) escape sequences are fixed and should never be changed.

The 40 Font Selection escape sequences (1B3031 to 1B3058) are used to select a particular font via the 40 Font*n* settings within the GXPRINT.INI file (see section 4.10.3.1.1). It is highly unlikely that a site will require all 40 possible fonts thus some of the Font Selection sequences in the Utilities Sequences section of the GDI PCF can be replaced by other sequences (see below).

The 38 Paper Type escape sequences (1B4021 to 1B4046) allow the selection of any one of the first 38 Paper Types described in section 4.10.3.1.2. Note that enabling a GDI Paper Type escape sequence requires no further action; whereas enabling a GDI Font Selection escape sequence requires an equivalent Fontn setting in the GXPRINT.INI file. The various Paper Type escape sequences in the GDI PCF only allow one of the first 38 Paper Types described in section 4.10.3.1.2 to be selected. To select any of the other 30 “well known” Paper Types described in section 4.10.3.1.2 the PCF must be amended to add the appropriate escape sequence. For example, replace one of the existing Utility Sequences by 1B4060 to allow the section of the “A5 Extra 174 x 235 mm” paper type. Note that sequences 1B4051 and 1B4051 are not generally useful.

The various Emphasis Control escape sequences described in section 4.10.3.2 are included in the GDI PCF. Note that only the following emphasis control options are supported: Bold, Underline, Italics, Superscript, Subscript. The Heading emphasis control is not supported. These escape sequences should never be amended.

The Graphics Control escape sequences described in section 4.10.3.5 are included in the GDI PCF. These escape sequences should never be amended.

The relatively new Margin Selection escape sequences described in section 4.10.3.6 are not included in the template GDI PCF. If one, or more, margin escape sequences are required they must be added at the expense of one of the preset Paper Type or Font Selection sequences in the Utilities Sequences section of the PCF.

### 4.10.5 The GDI Printer Interface and WinFax

The interface to WinFax and other 3rd party faxing software is via the GDI printing mechanism. Thus, the GX GDI Printer interface can be used to fax reports from 32-bit Global applications.

**Important Note:** The interface between the GX GDI printer sub-system and fax software only includes the basic transfer of print lines. Features such as report formatting and the transfer of the fax number and recipient details are **NOT SUPPORTED**.

# 5. GX Local Printing and 16-bit Applications

As explained in section 4.2 if a 16-bit application attempts to print to a GX Local Printer via the GXPrint **interface** that application will suffer a ERROR "T". However, the GX Local Printer **functionality** is now available via the traditional DOSPrint interface. The enhanced DOSPrint interface requires the following modules:

| | |
|---|---|
| GX.EXE | V3.4c, or later |
| GLOBAL.EXE | V3.8b, or later |
| GSM | Any service pack |

## 5.1 DOSPrint Configuration

The DOSPrint controller must be configured to "print" to a Windows Spool folder. That is, the familiar "Name" setting must specify a Windows folder. For example:

..\Printers\DOSPrint\520\Name=e:\gsm\prints\

In addition, the following new setting must be enabled:

..\Printers\DOSPrint\520\GXPrintInterface=On

To prevent spurious IN USE errors from appearing on multi-user configurations the following setting should be enabled:

..\Printers\DOSPrint\520\MultiUserPrinterExecutive=On

See section 3.44 of Technical Note IN406 for further details of the GXPrintInterface setting.

## 5.2 GX Configuration

A GXPRINT.INI file must be created and amended as described in section 3.2. Note that the printer number, defined as a section in GXPRINT.INI, must correspond to the DOSPrint Printer Number (e.g. 520, as in the example above).

**ANY PRINTER TYPE** (see section 3.2.1) can be specified in the GXPRINT.INI file. Although GX is receiving the print file **from the host** via the DOSPrint interface this does not preclude the use of either the WinPrint or GDI interface from being used to actually print the **file from GX.** Indeed, the most compelling reason to use the GX Printer interface is to take advantage of the GDI printer interface (e.g. to send reports to printer devices that are not supported by either DOSPrint or WinPrint). Using the DOSPrint registry interface to print to a DOSPrint controller defined in the GXPRINT.INI file is very unusual.

This table summarizes the combinations of Printer Type in the GSM (Windows) registry, as read by GLOBAL.EXE, and the Printer Type in the GXPRINT.INI file, as read by GX.EXE for a particular printer number:

| Printer Type in registry | Printer Type in GXPRINT.INI | Comments |
|---|---|---|
| DOSPrint | DOSPrint | The 16-bit GXPrint interface, when the GXPrintInterface option is enabled, transmits the print file to the PC running GX. GX prints the file using a DOS printing interface. It's not clear how useful this combination is. |
| DOSPrint | WinPrint | The 16-bit GXPrint interface, when the GXPrintInterface option is enabled, transmits the print file to the PC running GX. GX prints the file using a Windows printing interface. |
| DOSPrint | GDI | The 16-bit GXPrint interface, when the GXPrintInterface option is enabled, transmits the print file to the PC running GX. GX prints the file using the GDI printing interface. |
| WinPrint | DOSPrint | Invalid, and pointless. The WinPrint controller cannot be used to transmit a print file to GX. |
| WinPrint | WinPrint | Invalid, and pointless. The WinPrint controller cannot be used to transmit a print file to GX. |
| WinPrint | GDI | Invalid, and pointless. The WinPrint controller cannot be used to transmit a print file to GX. |
| GXPrint | DOSPrint | The 32-bit GXPrint interface transmits the print file to the PC running GX. GX prints the file using a DOS printing interface. |
| GXPrint | WinPrint | The 32-bit GXPrint interface transmits the print file to the PC running GX. GX prints the file using a Windows printing interface. |

| | | |
|---|---|---|
| GXPrint | GDI | The 32-bit GXPrint interface transmits the print file to the PC running GX. GX prints the file using the GDI printing interface. |

## 5.3 GDI Printing

All the options described in section 4.10 are supported by the "GX Local Printer functionality via DOSPrint" option.

## 5.4 Other Options

See section 4.1: Any DOSPrint printer controllers that have been configured to take advantage of the GX Local Printer functionality appear in the printer list displayed by $U.

See section 4.2: **Any** application (either 16-bit or 32-bit) can be used to print to DOSPrint printer controller that has been configured to take advantage of the GX Local Printer functionality.

See section 4.3: The DOSPrint controller does not currently support either the Timeout or FlushOnAlignment options.

See section 4.4: The MultiUserPrinterExecutive option **is** required when a DOSPrint printer controller has been configured to take advantage of the GX Local Printer functionality.

See section 4.5: Errors from the GX Local Printer interface are not reported to the DOSPrint controller.

See section 4.6: The potential problem with the Buffer Stack Depth and Printer Control Files does not occur when a DOSPrint printer controller has been configured to take advantage of the GX Local Printer functionality.

See section 4.7: The issues with consistent Printer Control Files should be considered when a DOSPrint printer controller has been configured to take advantage of the GX Local Printer functionality.

See section 4.8: Although the PRIFN$ routine is supported with the DOSPrint controller it should not be used in conjunction with the "GXPrintInterface".