

ATM® 3.02 for Windows Technical Reference Guide August 24, 1995

Overview

This document supplements the *ATM & Adobe Type Library User Guide*. It is assumed that the reader is familiar with the basic functionality and terminology as described therein.

In 1990, Adobe introduced scaleable font technology to the Windows environment. The technology consists of the scaleable fonts themselves (PostScript Type 1 fonts), and a scaler (or rasterizer) named Adobe Type Manager (ATM). (Microsoft introduced their own scaleable font technology, named TrueType, several years later.) Type 1 fonts originally contained a single *master design*. Such Type 1 fonts are referred to as single master fonts. The single design could be scaled to any point size, for any screen or printer resolution.

In 1992, Adobe revised the Type 1 specification to allow a font to contain several master designs. Such Type 1 fonts are referred to as multiple master fonts (or multiple master *base fonts*). ATM was then revised to blend the master designs in the font according to the user's specification. This blend, or *multiple master instance*, would then be scaled to any point size and resolution, just as if it were a single master font. ATM 3.0 is the first Windows ATM version to support multiple master fonts.

Definition of Terms

Each multiple master font consists of the multiple master font itself (called the *base font*) and one or more *instances* of that font. An instance is a particular rendition of the font described by its coordinates along one or more master design axes. For example, a weight axis might run between light and heavy. By selecting a coordinate along a given axis, you can determine how a font appears when printed and on screen. All design axes collectively define a *design space*. For example, a multiple master font with three design axes has a design space of three dimensions. An instance is simply a point in this three dimensional space.

Each multiple master font comes with a set of ready-to-use *primary instances*. The typeface designer chooses the primary instances from the design space to give you a useful palette of designs similar to a family of single master Type 1 fonts. These instances can be installed using the standard Add ATM Fonts dialog or the new Font Creator.

Each set of primary instances has a unique *default instance*. To select the default instance of a particular multiple master font click on the button labeled Default in the Choose Primary Instance dialog of the Font Creator. This default instance is usually near the center of a multiple master design space. The coordinate values of the default instance are also used by ATM when you select the base multiple master font from within an application.

An instance anywhere else in the design space is called a *custom instance*.

Once you install a multiple master instance using the Font Creator dialog in the ATM Control Panel, it is referred to as a *permanent instance*. If you open a document that uses a multiple master instance you do not currently have installed, ATM will generate the instance *on-the-fly*. Some applications will not allow ATM to generate on-the-fly instances. For a list of these applications, see the README.WRI file included on this disk.

Single Master Font Files

A single master Type 1 font is made up of two files. For Tekton Regular these files are:

- TKRG____.PFB, the outline font file, and
- TKRG____.PFM, the font metrics file.

PFM files are not included with Adobe typeface packages, they are built by ATM when it installs the font for you. ATM uses two files when building PFM files. For Tekton Regular these files are:

- TKRG____.AFM, the Adobe font metrics file, and
- TKRG____.INF, the font information file.

Multiple Master Font Files

A multiple master font comprises two files. For TektoMM, these are:

- ZJRG____.PFB, the outline font file.
- ZJRG____.MMM, the multiple master metrics file.

ATM requires both files when installing a multiple master font. The first five characters of the file name are uniquely specified by the manufacturer.

When you install a multiple master base font, the ATM Control Panel produces a third file:

- ZJRG____.PFM, the metrics file for the default instance.

This file is for compatibility with PostScript drivers as well as other applications. ATM does not use this file; it uses MMM files. However, ATM must be active in order to build this PFM file.

When you create a multiple master instance, ATM generates two additional files, for example:

- ZJRG_000.PSS, the PostScript stub file
- ZJRG_000.PFM, the metrics file for the instance.

The PostScript stub file is a small file which contains PostScript instructions for your PostScript printer's interpreter on how to build the specific multiple master instance.

The file name of each multiple master instance contains a five character font name descriptor followed by a three-digit sequence number assigned by ATM to make each file unique within a given directory. ATM uses base 36 numbers to define this sequence number.

If you add a previously created instance to a target directory which already contains the identical file name for another defined instance, ATM will renumber the sequence numbers to preserve uniqueness. You should use caution when manually copying instance files to directories. It is best to use the ATM Control Panel and let ATM renumber file names, so that files aren't overwritten.

If a given multiple master font has a weight axis, and you or an application ask for the bold style, ATM will increment the font's weight coordinate to achieve a bold style for a particular instance. The distance ATM moves along the weight axis when a bold style is requested is

defined in the multiple master file of the base multiple master font. For example, the bold style of MyriaMM_215 wt 600 wd and the regular style of MyriaMM_565 wt 600 wd are identical in appearance, although ATM treats them in all other ways as two separate fonts. The user may choose to install either or both as permanent instances.

Design coordinates of a given axis may not exceed the limits specified in the MMM file of the base multiple master font. For example, MyriaMM can currently have weights between 215 and 830, inclusive. ATM does not allow creating instances outside of these limits. If an application requests a font whose coordinates beyond these design limits, ATM adjusts, or *clamps*, the font coordinates to fit within the defined range. For example, if an application requests the font MyriaMM_1000 wt 1000 wd, ATM will generate the instance MyriaMM_830 wt 700 wd, which is the closest match to the requested font within the design range. This clamping behavior is also used when applying bold styles. Applying a bold style to the font MyriaMM_800 wt 600 wd has very little effect, while applying it to MyriaMM_830 wt 600 wd has no effect.

Font Menu Names, Style Groups, and PostScript Font Names

Every PostScript font contains a specific Windows menu name, which may differ from the original PostScript font name. For example, when you see the font Bookman in the font menu of a typical Windows application, you are actually using the PostScript font Bookman Light. In Windows, fonts may be arranged in style groups of up to four fonts. Each font is designated a style: regular, italic, bold, and bold italic.

In a typical Windows application, a style group is represented by a single name in the font menu. Selecting this name is the same as selecting the regular font in the style group. You can access the other fonts in the style group by selecting the bold and italic style attributes in the application.

In the ATM Control Panel, each member of a style group is listed individually by its Windows menu name, plus the style link. For example, with its four different styles, Helvetica appears as

Helvetica
Helvetica,BOLD
Helvetica,BOLDITALIC
Helvetica,ITALIC.

Many typeface families contain more than four fonts. For example, the Adobe Garamond family contains six different fonts. Since Windows only allows four fonts per style group, the typeface family must be broken up into two style groups: AGaramond (four fonts) and AGaramond Bold (two fonts). The following table shows the correspondence between the Windows menu name (the name you see in your application's Font menu) and the PostScript font name for each font in these two style groups:

<i>Windows menu name with style link</i>	<i>PostScript font name</i>
AGaramond	AGaramond-Regular
AGaramond,BOLD	AGaramond-Semibold
AGaramond,BOLDITALIC	AGaramond-SemiboldItalic
AGaramond,ITALIC	AGaramond-Italic

AGaramond Bold
AGaramond Bold,ITALIC

AGaramond-Bold
AGaramond-BoldItalic

The Readme document included with every Adobe font package lists the fonts in each style group.

Some display or decorative fonts have only one style and were designed with a specific style and weight in mind.

The menu names for multiple master fonts may also differ from the true PostScript font names. For example:

Windows menu name with style link

TektoMM
GraphMM
CafliScrMM

PostScript font name

TektonMM
GraphiteMM
CaflichScriptMM

Adding and Removing Fonts while Applications are Active

You can add and remove ATM fonts without restarting Windows. When you use ATM to add and remove fonts while other applications are running, the font changes are usually automatically reflected in the application font menus. Some applications require that you re-select your printer before the ATM font changes appear in font menus. A few applications build their font menus when they are initially launched. You must restart these applications to see ATM font changes in their font menus.

ATM Control Panel

The Main screen of the ATM Control Panel gives you status information and provides options for changing the operating behavior of ATM.

When ATM is active, the actual version number of the program is displayed in the Version field.

The On/Off switch is used to enable and disable ATM font support. You must restart Windows for this change to take effect.

The Font Cache setting specifies the amount of memory ATM uses to store font outline information and character bitmaps to enhance the display and printing performance. The recommended font cache setting depends on the number of fonts you generally use in a single document. It is best to experiment to find the best font cache setting to meet your needs. You must restart Windows for this change to take effect.

The Use Pre-built or Resident fonts checkbox configures ATM to use pre-built or resident fonts whenever possible. When this option is checked, ATM will defer to internal, cartridge and pre-built downloadable printer soft fonts as well as screen fonts that match installed ATM fonts. Using pre-built or resident fonts can help your applications display and print documents more quickly. You do not have to restart Windows when this option is changed.

The ATM Control Panel lets you install and remove both single and multiple master Type 1 fonts as well as create multiple master instances.

You may install a large number of fonts with the ATM Control Panel. Windows limits initialization files (including ATM.INI and WIN.INI) to a size of 64K. If this limit is approached, Windows will be unable to reliably open, read, or write these files.

Using the default path, c:\psfonts, you can install up to 900 fonts into ATM.INI. If you are using the Microsoft PostScript driver, the ATM Control Panel will also update WIN.INI when adding fonts for each printer port supported by this driver. Because of this 64K file size limitation of WIN.INI, it is best to limit the number of unique printer ports used by this driver when installing a large number of fonts. The Adobe PostScript driver reads its fonts directly from the [Fonts] section of ATM.INI; it does not require soft font entries to be present in WIN.INI.

Many applications limit the number of fonts that they can display in their font menus. For example, an application font menu might show only 200 fonts, even though you have installed more than 200 ATM fonts. Some applications do not run properly when a large number of fonts is installed.

The more fonts you have installed, the longer it takes Windows to start and applications to launch. The exact time required depends on the type of processor you have and your system configuration. You can reduce the time it takes Windows to start and applications to launch by removing fonts you use infrequently.

Print ATM fonts as graphics

ATM utilizes a new feature of Windows 3.1 and Windows 95 printer drivers, which lets ATM use the driver to create soft fonts containing only the characters actually needed for printing a given document. Creating soft fonts in this manner speeds up printing. These drivers include the drivers for the HP LaserJet, IBM Lexmark and Canon LBP laser printers. To determine whether a Windows 3.1 and Windows 95 printer driver supports this type of soft font creation, check the Printer Setup Options dialog box in the Windows 3.1 Printer Control Panel or in the Windows 95 Fonts tab of the printer's Property Sheet. If you do not see a Print TrueType as Graphics option, the driver probably cannot create printer soft fonts.

The Print ATM Fonts as Graphics option controls whether or not ATM uses a printer driver's soft font creation feature when it is available. By default, ATM uses the soft font creation feature, and the Print ATM Fonts as Graphics option is cleared. When you select the Print ATM Fonts as Graphics option, however, ATM prints characters as graphics. Some applications always print text as graphics regardless of this setting. If you set up your printer driver to print TrueType fonts as graphics, ATM prints fonts as graphics regardless of how the Print ATM Fonts as Graphics option is set.

Selecting the Print ATM Fonts as Graphics option can solve certain printing problems, such as printing special shadow or zoomed text effects, or graphic objects placed on top of text strings.

You do not have to restart Windows when changing this option. Changes take effect immediately even while other applications are running. In a few applications, however, you may have to re-select your printer before the ATM print mode changes.

Adding ATM fonts

In the Add ATM fonts dialog you can install single master fonts and base multiple master

fonts, as well as their primary and previously created custom instances.

When the source directory contains an INF/AFM or PFM file for a single master font or a PFM file for a multiple master instance, the Windows menu name of the font and its style link are displayed in the Available Fonts list box.

If the Control Panel finds a MMM file for a multiple master font, it displays the name of the base multiple master font and all of the primary instances for the font. The style links of these fonts are also listed with the font name. If you select a primary instance or a previously created instance and the corresponding base multiple master font is not installed, the base multiple master font will be automatically selected with the originally selected instance. The MMM file of the base multiple master font must be present in the source directory for this auto-select mechanism to work.

You must remove base multiple master fonts before attempting to re-add them.

When you add a single master font, ATM copies the PFM and PFB files to the specified target directories. If you are adding the font from an INF/AFM file pair, ATM generates the PFM from the INF and AFM files and copies it to the appropriate target directory. The Control Panel then updates the [Fonts] section of ATM.INI with the font name and style link, as well as the paths and file names of the PFM and PFB files. If the Control Panel finds an installed printer that uses the Microsoft PostScript driver*, it also updates the [PostScript, portname] section of WIN.INI with the path and file names of both the PFM and PFB files; the portname is the port on which the printer is installed. These changes might look like this:

ATM.INI:

```
[Fonts]
Anna=c:\psfonts\pfm\iarg____.pfm,c:\psfonts\iarg____.pfb
```

WIN.INI:

```
[PostScript,LPT1]
SoftFonts=1
SoftFont1=c:\psfonts\pfm\iarg____.pfm,c:\psfonts\iarg____.pfb
```

(Note: There are several PostScript printer drivers that are based on the Microsoft PSCRIPT driver. These include those from Agfa, Hewlett Packard and Compaq. We will refer to this class of PostScript drivers as the Microsoft PostScript Driver in the remainder of this document.)*

When you add a multiple master base font, ATM copies the MMM and PFB files to the corresponding target directories. It then updates the [MMFonts] section of ATM.INI with the font name and style link, as well as the paths and file names of both the MMM and PFB files. A PFM file is then created for the default instance, and the [Fonts] section of ATM.INI is updated with the font name, style link, paths, and file names of both the PFM and PFB files. If the Control Panel finds an installed printer using the Microsoft PostScript driver, it also updates the [PostScript, portname] section of WIN.INI with the path and file names of both PFM and PFB files.

ATM.INI:

```
[Fonts]
```

```
MezzMM,ITALIC=c:\psfonts\pfm\zmrq____.pfm,c:\psfonts\zmrq____.pfb
```

```
[MMFonts]
```

```
MezzMM,ITALIC=c:\psfonts\pfm\zmrq____.mmm,c:\psfonts\zmrq____.pfb
```

WIN.INI:

```
[PostScript,LPT1]
```

```
SoftFonts=1
```

```
SoftFont1=c:\psfonts\pfm\zmrq____.pfm,c:\psfonts\zmrq____.pfb
```

When you add a multiple master instance, ATM creates the PFM and PSS files (if not already present), and copies the PFM file to the target font metrics file directory and the PSS file to the target directory for PostScript outline fonts. ATM will renumber the file names of multiple master instances if there are duplicate file names already present in the target directory. The Control Panel then updates the [Fonts] section of ATM.INI with the font name and style link, as well as the paths and file names of both the PFM and PSS files. As with other kinds of fonts, if the Control Panel finds an installed printer using the Microsoft PostScript driver, it also updates the section [PostScript,portname] section of WIN.INI with the path and file names of both the PFM and PSS files.

ATM.INI

```
[Fonts]
```

```
VivaMM_250 LT 600 NO=c:\psfonts\pfm\zkrq_000.pfm,c:\psfonts\zkrq_000.pss
```

WIN.INI

```
[PostScript,LPT1]
```

```
SoftFonts=1
```

```
SoftFont1=c:\psfonts\pfm\zkrq_000.pfm,c:\psfonts\zkrq_000.pss
```

There are also two options for specifying how the font files are to be installed: Install without copying files and Autodownload for PostScript driver. If you check the Install without copying files option, the Control Panel will leave the font files in their original locations. If the Control Panel needs to create any files such as a PFM file for a single master or base multiple master font, or a PFM and a PSS file for a multiple master instance, the file will be created in the specified target directory.

To set up the Microsoft PostScript driver to automatically download a font at print time, install the font with the Autodownload for PostScript driver option selected. When this option is checked, ATM adds the PFM and PFB paths and file names for each single master and base multiple master font, and the PFM and PSS paths and file names for each multiple master instance to appropriate [PostScript,portname] section of WIN.INI.

PostScript Resident Fonts and Auto Downloading

You must select the Autodownload for PostScript driver option if you are installing the standard Base35 fonts for a printer that does not contain them. The Base35 fonts (available with the Adobe PlusPack and the PostScript Type Cartridge) are:

Avant Garde	Bookman	Courier	Helvetica
Helvetica Narrow	New Century Schoolbook		Palatino
Symbol			
Times Zapf Chancery	Zapf Dingbats		

Most, but not all, new PostScript printers contain the Base35 fonts. If you are adding fonts to ATM that are already resident in the printer, you can uncheck the Autodownload option to instruct the printer driver not to send the font outline files to the printer at print time. When the Autodownload fonts for PostScript driver option is unchecked, ATM adds only the PFM part of the soft font entries in WIN.INI. You should also uncheck this option for fonts you plan to manually download to the printer or for fonts that have been previously downloaded to a printer's hard drive.

When the Autodownload for PostScript driver option is *unchecked*, ATM does not add soft font entries to WIN.INI for the Base35 soft fonts. The soft font entries for these fonts are not needed because the font metrics for these fonts are hard-coded in the driver. If soft font entries for the Base35 fonts are present in WIN.INI, they are ignored by the PostScript driver at print time if the Base35 fonts are resident in the printer. In other words, the PostScript driver does not download the outlines of these fonts if they are already present in the printer. One exception to this rule is for the Bookman font. When using the Microsoft PostScript driver, and a Bookman PFB entry is present in WIN.INI, the driver downloads the outline file at print time. To correct this problem and to force the driver to use the Bookman font resident in the printer, re-add the four faces of Bookman with the Autodownload for PostScript driver option unchecked. When adding any Base35 fonts with the Autodownload option unchecked, ATM will remove from the [PostScript,portname] section the entire soft font entry it finds for these fonts.

It is recommended always to check this option for multiple master fonts (both base fonts and instances). In order for multiple master instances to print correctly when using the Microsoft PostScript driver, both the instance and its corresponding base multiple master fonts must be installed with the Download for the PostScript driver option checked. If you have manually downloaded the base multiple master font to a printer's virtual memory, you can install the font with the Autodownload option unchecked, but you must make sure the base font is present in your printer's memory every time you print an instance of this base font. The PSS files of instances, which are downloaded at print time, are very small. Instances should always be installed as autodownload when using ATM's Add Fonts dialog and the Font Creator dialog.

If you do not have a Microsoft PostScript driver installed, Autodownload for PostScript driver is grayed out.

Path Names

When installing fonts, you can use the Browse buttons to locate the desired target directory. If you enter in the edit field a target font file directory that does not exist, the Control Panel will create it before copying files.

When installing fonts to a network drive, you can define the target path using UNC path names instead of specifying a network drive letter and path. A UNC path name consists of a server name followed by a server volume and path, for example, \\ourserver\sys\atmfonds. When using UNC path names, you do not have to assign a network drive letter.

When specifying a target path, you are limited to a maximum of 34 characters. This limit includes the drive letter and all backslashes and path names, but it does not include the actual file name of the font files. This 34 character limit also applies when using UNC path names or when installing fonts with the Install without copying files option.

Removing fonts

When removing single master fonts or multiple master instances, the Control Panel removes the font entries from the [Fonts] section of ATM.INI. It also removes any corresponding soft font entries from the [PostScript, portname] sections of WIN.INI for all installed printers using the Microsoft PostScript driver.

When you remove a base multiple master font, **all associated instances are also removed**. The Control Panel removes the font entries for both the base multiple master font and its instances from the [Fonts] and [MMFonts] sections of ATM.INI. It also removes any corresponding soft fonts entries from the [PostScript, portname] sections of WIN.INI for all installed printers using the Microsoft PostScript driver.

Checking the No confirmation to remove fonts option instructs the Control Panel to remove all remaining selected fonts regardless of whether you decide to actually remove the current font, and not prompt you for confirmation.

When you check the Delete fonts from disk option, the Control Panel removes the actual font files from your disk. If the files are marked as read only or are located in a read only directory, the files are left on disk regardless of this setting.

ATM and Printing Issues

When only a regular style is available, ATM can synthesize bold and italic styles. However, you should use true outline fonts for each font style whenever possible. This will ensure that the documents you create will not only be formatted with the precise characters metrics of the true font styles, but also can be shared among various operating systems.

For the highest print quality, it is recommended to set up your printer to the highest graphics resolution available. For example, if you set up your PCL printer to print at 75 or 150 dpi, ATM will print fonts at these resolutions. To configure ATM to print fonts at the highest possible printer resolution while still allowing graphic images to print at a lower resolution, place the line

```
DownloadLowRes=On
```

in the [Settings] section of ATM.INI and restart Windows.

For non-PostScript printers, ATM prints all color fonts (including white text on black background) as graphics. To configure ATM to print color text as soft fonts, create a section called...

```
[Colors]
```

in ATM.INI. Place the line

```
PrintColorGraphics=Off
```

in this section and restart Windows. This switch is designed only for non-PostScript printers whose drivers support soft font printing. The resulting color of the text depends on the available colors in which the printer driver can generate soft fonts.

PostScript printing

Single master fonts and base multiple master fonts

When printing single master fonts or base multiple master fonts with the Adobe PostScript driver (which reads the `[Fonts]` section of ATM.INI directly) the entire font outline font (PFB) is downloaded at print time. If the font has been previously downloaded or is specified in the driver as being resident in the printer, the outline file is not downloaded. There is also an option in the driver setup to prevent all font downloading regardless of font configuration.

The Microsoft PostScript driver downloads the entire single master or multiple master base font whose outline files (PFB) are listed in the `[PostScript, portname]` section of WIN.INI. If the driver finds only PFM entries, it assumes the font is resident in the printer, and the outline files are not downloaded at print time.

Installed multiple master instances

When you print installed multiple master instances with the Adobe PostScript driver, ATM instructs the driver to download the entire font outline file of the base multiple master font before sending the PostScript stub file associated with the actual instance.

The same approach is used when printing with the Microsoft PostScript driver, provided that both the PFM/PFB of the base multiple master font and the PFM/PSS of the actual instances are present in the appropriate `[PostScript, portname]` section of WIN.INI.

On-the-fly instances

Both Adobe's PostScript and Microsoft's PostScript drivers have the ability to generate PostScript fonts for Type 1 fonts not present on the system. ATM 3.0 and greater takes advantage of this feature when printing on-the-fly instances to PostScript printers.

For this mechanism to work properly when using the Adobe PostScript driver, you must configure the driver to print TrueType fonts as Type 1 or Type 3.

Printing on-the-fly multiple master instances with the Microsoft PostScript driver also requires configuring the option Send to Printer as Adobe Type 1 or Bitmap (Type 3) in the Advanced section of the Windows 3.1 printer setup dialog. In addition, this printer driver requires that TrueType be enabled when printing on-the-fly multiple master instances. Under Windows 95 go to the Fonts tab in the PostScript driver's Property Sheet and make sure that the option Send TrueType as is configured as Outlines or Bitmaps.

On-the-fly soft font printing is also used with the Microsoft PostScript driver, when the list of fonts in the `[PostScript, portname]` section of WIN.INI does not match the fonts in the `[Fonts]` section of ATM.INI. When the driver can not find the fonts in WIN.INI and does not assume the fonts are resident, ATM will supply it with the font information necessary for creating PostScript soft fonts (provided that the fonts are installed for ATM). This applies to all single master and

multiple master base fonts and instances.

Using ATM on a Network

The ATM installer supports installation from a network server, and using fonts that are resident on a network server. ATM can also be installed and run on a shared installation of Windows, where the Windows program files are shared among one or more users. ATM does not depend on the network protocol. It works with both client-server and peer-to-peer networks.

Installation

The ATM Installer operates in one of three modes:

- Local
- Network Client
- Network Administrator

The User's Guide describes the ATM Local mode. This is the default mode of the program. During installation, the installer expands the file ATMCNTRL.EX_ to ATMCNTRL.EXE and copies it to the Windows directory. It also expands the other executable files (ATM16.ND_ becomes ATM16.NDL, ATM32.ND_ becomes ATM32.NDL and ATMSYS.DR_ becomes ATMSYS.DRV) and copies them to the Windows System directory. It then creates or update ATM.INI in the Windows directory, creates an icon for the ATM Control Panel in the Main Program Manager group, and updates SYSTEM.INI and WIN.INI (if you are installing fonts and have the Microsoft PostScript driver installed). At the end of the installation, you are prompted to restart Windows. When Windows is started again for the first time after installation, the programs files ATM16.NDL and ATM32.NDL are renamed to ATM16.DLL and ATM32.DLL respectively. ATM is then completely installed, and all installed Type 1 fonts are available for use.

The Installer determines that it is in *network mode* whenever the System directory is not a subdirectory of the Windows directory. The default network mode is Network Client mode.

In Network Client mode, the installer does not copy executables, since they are shared. It does check that ATMSYS.DRV and the ATM??.DLL files are present in the System directory, and that at least one DLL is of the correct version. The installer checks the DLL version if the DLL is running. The installer also creates or updates the ATM.INI file, adds the ATM icon to the Main group for the shared ATM Control Panel, and updates the SYSTEM.INI file and WIN.INI (if you are installing fonts and have the Microsoft PostScript driver installed).

You can select Network Administrator mode by running the ATM Installer with the command line parameters -a or /a. The network administrator must be logged on as a client of the shared installation of Windows and must have write access to the Windows system directory.

In Network Administrator mode, the installer copies all executables to the System directory where they can be shared. It is the network administrator's responsibility to ensure that the System directory is writable, and that no one is using the ATM files that are being upgraded. Adobe recommends that the network administrator check to make sure that all users have logged off the network before starting installation. Once the installation is complete, the network administrator must select the Restart Windows option from the ATM install program. (The Return to DOS button is grayed out.) When Windows reboots, ATMSYS.DRV renames ATM??.NDL to ATM??.DLL.

In most cases, clients of a shared installation of Windows do not have write permission for the Windows system directory on the network. You can also mark the ATM program files as read only to prevent accidental deletion.

If you are running several shared versions of Windows on different servers and would like to manually install ATM on each of them, first install ATM on one server, then copy the program files, ATMCNTRL.EXE, ATMSYS.DRV, ATM16.DLL and ATM32.DLL, to the Windows system directories of the other installations of Windows.

After the network administrator has completed the network installation of ATM, each client must install ATM from their workstation in the network client mode.

To configure ATM so that it can be installed from network drive, copy the entire contents of the installation disk to a network directory, recreating the directory structure found on the actual disk. If your version of ATM is delivered on multiple disks, simply copy the contents of all disks into the same directory, again preserving the directory structure on the actual disks.

You can also share fonts on a network drive. To prevent accidental deletion of the font files, it is recommended to mark them as read only. Sharing fonts across a network does save disk space on the local client workstation. The file access time, however, is usually slower than when accessing font files from a local hard drive. This, of course, depends on the amount of network traffic and the network topology.

If you are using fonts on a network drive or from a removable medium such as a CD ROM and the fonts files cannot be found at Windows startup time, ATM will mark such fonts for *late binding*. When the fonts later become accessible to the system, ATM will enable them for use.

The ATM Installer uses two configuration files for customizing the installation process. The INSTALL.CNF file controls the behavior of the Installer. The file ATM.CNF describes how the Installer should create or update the ATM.INI file.

The following is a sample of a typical INSTALL.CNF file:

```
[Branches]
Version=3.02
Disks=2
Fonts=YES
PCLBits=NO
MinFontCache=256

[Disk1]
Name=Program Disk
ID=PROGDISK
Files=ATMCNTRL.EX_, ATMSYS.DR_, ATM16.ND_, ATM32.ND_, ATM.CNF

[Disk2]
Name=Font Disk
ID=FONTDISK
PSFonts=\PSFONTS
CPSFONTS=120
```

The [Branches] section of the INSTALL.CNF describes the general installation environment.

Version=3.02	Specifies the version of ATM you are installing.
Disks=2	Lists of number of installation disks
Fonts=YES	Specifies whether Type 1 fonts will be installed
PCLBits=NO	Specifies whether pre-built PCL soft fonts will be installed. This setting should be set to No, because it is more efficient to let the PCL driver create soft fonts on-the-fly rather than downloading a pre-built soft font.
MinFontCache=256	This setting is optional. It specifies a minimum font cache setting. If an ATM.INI file already exists and the font cache is set to a value higher than specified here, the original font cache setting is preserved.

The [Diskx] section of the INSTALL.CNF lists information about each disk.

Name=Program Disk	Specifies the name of a disk when the user is prompted to insert a disk into the disk drive.
ID=PROGDISK	Specifies the file name used for determining whether the correct disk is present.
Files= ATMCNTRL.EX_, ATMSYS.DR_, ATM16.ND_, ATM32.ND_, ATM.CNF	Specifies the location of each program file and the ATM.CNF file.
PSFONTS=\PSFONTS	Specifies the location of the font files. For each single master font a PFM and a PFB must be present in this directory. For base multiple master fonts you must include the MMM, PFB and PFM files. For multiple master instances you must include the PFM and PSS files. It is important to note that when installing multiple master instances, you must also install the base multiple master font.
CPSFONTS=120	This value specifies the speed at which the Installer thermometer progresses. This value should be set to roughly twice the number of PFB or PSS files present

You can also customize the INSTALL.CNF file.

To change the default target directory for the font files, you can add the section

```
[Setup]
```

to the INSTALL.CNF and include the lines

```
PFM_Dir=c:\newdir\pfm  
PFB_Dir=c:\newdir
```

where *newdir* is the desired default directory. When you install ATM, these target directories

will appear in the Main Installer screen. At this point, you can change the directories or accept the pre-defined paths.

If you are installing fonts with the Installer and you do not want it to update the [PostScript, *portname*] sections of WIN.INI if an installed Microsoft PostScript driver is found, you can add the following line

```
PSUpdate=NO
```

to the [Branches] section of the INSTALL.CNF.

The other ATM Installer configuration file is the ATM.CNF. This file controls how the Installer creates or updates individual sections of the ATM.INI file.

The following is a sample of this file:

```
[Touch]
Aliases=
Synonyms=
OldScreenFonts=
ATMVersions=
DisablePSBD=

[Aliases]
Helv=Helvetica
Tms Rmn=Times
Roman=Times
Modern=Helvetica

[Synonyms]
Helv=Helvetica
Tms Rmn=Times

[OldScreenFonts]
Helv=Yes
Tms Rmn=Yes
Courier=Yes

[ATMVersions]
pm5app=2.60

[DisablePSBD]
Acroexch=Yes
Acroread=Yes
Pm5app=Yes
Wpwin60=Yes
Wpwprint=Yes
XPress=Yes
FLW2=Yes
```

Each section that is to be modified in ATM.INI must be listed in the [Touch] section of this file.

The actual lines for each ATM.INI section are then listed. If the section specified in the ATM.CNF is not already present in ATM.INI, the Installer will create it and update the section accordingly.

Language Support

You can easily set the language you want ATM to use, and change that language setting at any time. ATM includes dialog box and message text in 10 different languages, so that they are always available.

ATM includes the following language support. (The three-letter codes are Windows' standard language codes).

Language		Windows Codes
Danish		dan
Dutch	nld	
Finnish		fin
French		fra
German		deu
Italian	ita	
Norwegian		nor
Spanish		esp or esn
Swedish		sve
US English		enu

Note: *ESP is the code for Castilian Spanish, there is a separate Windows code for Modern Spanish (ESN). ATM recognizes both, but displays Castilian Spanish for either code. If ATM does not internally support a particular language, it will use English.*

When you install ATM, the Installer first looks to see if there is an existing `LanguageCode=` entry in the `[Settings]` section of ATM.INI. Otherwise it uses the language specified by the `sLanguage=` value in the `[Intl]` section of WIN.INI. This `sLanguage=` value can be modified by changing the language specified by the Language setting in the International applet found in the Windows Control Panel.

If you want to launch the ATM Installer in a specific language despite ATM.INI or WIN.INI language settings, you can use the Installer command line switch `/lxxx` or `-lxxx`, where `xxx` is the desired language code. For example, to cause the ATM Installer to install in a particular language, choose Run from the Program Manager File menu and type `z:\install -lxxx`, where `z:` is the letter of the drive containing the ATM disk and `xxx` is the three-letter code specifying the language. Click OK to install ATM in this language. At the end of the installation, the Installer writes this language information into ATM.INI. When you launch the ATM Control Panel, it will run in that language.

The ATM Control Panel uses the same logic as the Installer to determine the language in which it should run. It first looks for an existing `LanguageCode=` entry in the `[Settings]` section of ATM.INI; otherwise it uses the language specified by the Language setting in the International applet found in the Windows Control Panel.

As with the Installer, you can also force the ATM Control Panel to run in a specified language

regardless of the language settings found in ATM.INI or WIN.INI. Choose Run from the Program Manager file menu and type `atmcntrl -lxxx`, where `xxx` is the three-letter code specifying the language. Click OK to run the ATM Control Panel in this language.

If you work in an environment with speakers of various languages, you may wish to set up several ATM icons, each using a different language.

To create an ATM icon for a specific language:

1. For each icon you want to create, in the Program Manager (or its equivalent in another shell) select a program group such as Main.
2. Choose New from the File menu. Windows displays the New Program Object dialog box.
3. Click Program Item. Windows displays the Program Item Properties dialog box.
4. Enter a description (for example *ATM en Espanol*) and a command line such as:

```
ATMCNTRL.EXE -lESP
```

You can browse for the program name (ATMCNTRL.EXE is in the \Windows directory), but you must add the `-l` switch and the language code.

5. Click OK. Windows places the new ATM icon in the Main window.

Note: *The language parameter affects the Control Panel user interface only. All font management functions are language-independent.*

ATM.INI

The Installer creates or modifies ATM's initialization file, ATM.INI, during installation. ATM.INI contains a list of fonts installed in ATM, and other ATM program-related settings. The following section contains technical information on ATM version 3.02's initialization file. The sections and individual entries in each section do not have to appear in any specific order.

[Setup]

PFM_Dir=c:\psfonts\pfm

PFB_Dir=c:\psfonts

SampleText=The quick ...

SampleSize=24

These two entries list the paths of the default target font directories.

This entry specifies the sample text used by the Font Creator.

This entry specifies the sample text point size used by the Font Creator.

[Settings]

FontCache=256

BitmapFonts=On

TmpDir=c:\psfonts\tmp

TmpCount=00000000

Specifies the font cache setting.

Specifies the status of the Use Pre-built or Resident Fonts setting.

These two settings are used by Adobe Acrobat and must not be deleted. The actual drive letter and directory reference in this section must also exist.

ATM=On	Specifies whether ATM is loaded at Windows startup time.
SynonymPSBegin=9	This value specifies the point size at which ATM forces Windows to render fonts on screen. The fonts affected by this setting are listed in the [OldScreenFonts] section of ATM.INI.
QLCDir=c:\psfonts	Specifies the path of the ATM QuickLoad file, ATMFONTS.QLC. This file contains a list of installed fonts and font metrics of recently used fonts, which reduces Windows startup time. It is updated every time you exit Windows. You can force ATM to rebuild this file by exiting Windows, deleting the file with the MS-DOS DEL command, and restarting Windows.
Version=3.02	This value enables the ATM Installer to determine the version of ATM when ATM is inactive; otherwise, the Installer determines the version of ATM from the active ATM program files.
DownloadFonts=On	Specifies the status of the Print ATM fonts as graphics option in the ATM Control Panel.
LanguageCode=enu	This entry is present if you have run the ATM Installer in a specific language. Refer to the section Language support in this document for a list of country codes.
DownloadLowRes=On	This switch is optional. The default value is Off. This option instructs ATM to use soft font printing even when the driver resolution is set below 300 dpi. It applies only to non-PostScript devices.
DeferUnder=On	This switch is optional. The default value is Off. This option instructs ATM to let the printer perform underlining when printing a string of line which use both printer resident fonts and Type 1 fonts. It applies only to non-PostScript devices.
[Fonts]	This section lists the font name and style link, and the PFM and PFB paths and file names, for each installed single master and multiple master base font. Multiple master instances are listed in this section also by font name and style, but these lines include the path and file names for PSS and PFM files.
[MMFonts]	This section lists the font name and style link, and the MMM and PFB paths and file names, for each installed multiple master base font.
[Mono]	This section contains a list of monospaced fonts.
[Aliases] Helv=Helvetica Tms Rmn=Times Roman=Times	This section instructs ATM to substitute the font on the right hand side, when an application requests the font on the left hand side of the equal sign.

Modern=Helvetica

Courier=Courier

[Synonyms]
Helv=Helvetica
Tms Rmn=Times

[OldScreenFonts]
Helv=Yes
Tms Rmn=Yes
Courier=Yes

[ATMVersions]
pm5app=2.60

[DisablePSBD]
Acroexch=Yes
Acroread=Yes
Pm5app=Yes
Wpwin60=Yes
Wpwprint=Yes
XPress=Yes
FLW2=Yes

[PSDriverNames]
HPWINPS=Yes

[Colors]
PrintColorGraphics=Off

This line is included in this section, but is no longer used by ATM 3.0 and greater.

This section instructs ATM to use the resident screen or printer fonts when either font to the left or right of an equal sign is requested by an application. This mechanism is controlled by the Use Pre-built or Resident Fonts option in the ATM Control Panel.

This section identifies the fonts that are subject to the threshold established by SynonymPSBegin.

This section lists the names of program modules that expect a specific version of ATM to be running.

This section lists the names of program modules that cannot use the newly extended ATM backdoor PostScript printing Application Programming Interface (API).

This section lists the names of PostScript drivers that use the `[PostScript, portname]` sections of WIN.INI to download fonts. This section can also be added to ATM.CNF to instruct the Installer to update the appropriate sections in WIN.INI during installation. This value is then written into this section of ATM.INI for future use when adding fonts with the ATM Control Panel.

This entry is optional, the default value is On.
Refer to the section on color printing in the "ATM and Printing Issues" section of this document for changing ATM's printing behavior.