

PostScript™ imagesetting has long been dominated by Apple's Macintosh® computers. But times are changing. The number of IBM and IBM compatible PC (personal computer) users using PostScript will continue to increase for a number of reasons:

- The large installed base of PC users and the wide range of PostScript applications available to them.
- The appealing price/performance aspect of the PC platform.
- The introduction of Windows™ versions of many Macintosh software applications including Adobe Photoshop™ and QuarkXPress®.

The result is that an increasing number of PostScript files will be exchanged between Macintoshes and PCs.

## DOS

PC-DOS™ (Personal Computer - Disk Operating System) and MS-DOS® (Microsoft - Disk Operating System) are operating systems which control the functioning of a computer. PC-DOS and MS-DOS are used extensively in the PC world. In DOS, commands are entered on a keyboard. Graphical User Interfaces (GUIs) operate through DOS and give users a way of expressing commands via a mouse or similar tool. Many people prefer this type of interface since they don't have to memorize commands and since it tends to be more intuitive.<sup>1</sup> In the DOS environment, both Windows and GEM™ (Graphics Environment Manager) provide GUIs. OS/2® (an IBM-developed operating system) also provides a GUI called Presentation Manager®.

<sup>1</sup>Macintoshes have had a built-in GUI since their introduction.

## File transfer and conversion

There are two primary issues in moving a PC file to a Macintosh (or a Macintosh file to a PC), file transfer (getting the file to where you can work with it) and file conversion<sup>2</sup> (getting it into a form you can use):

**File transfer** – Unless you are receiving a file via a network, modem or directly via a cable, your first concern is being able to read the diskette at all. The two primary diskette types are 3½ inch, hard plastic-coated diskettes that are commonly used on the Macintosh, and 5¼ inch floppy diskettes that are commonly used on the PC.

- 3½ inch diskettes come in three types: single-sided, double-sided and high density. When formatted, a single-sided diskette can hold 400KB (kilo-bytes), a double-sided diskette can hold 800KB, and a high density diskette can hold 1.4MB (megabytes) of information. The SuperDrive™ on a Macintosh is required to read 1.4 MB diskettes.<sup>3</sup> 3½ inch diskettes are also used on many PCs, but 3½ inch diskettes that are formatted for a PC will not be easily readable by a Macintosh and vice versa (without the proper mounting software.) 3½ inch PC diskettes hold either 720KB or 1.44MB.
- 5¼ inch floppy diskettes can hold either 360 KB or 1.2 MB. These diskettes are readable by the 5¼ disk drives that are used by many PC's, however, the 3½ inch disk format is gaining popularity among PC users.

Reading a 5¼ inch floppy diskette on a Macintosh requires a drive that can accommodate that format. One such product is *DaynaFILE II*™ which offers

<sup>2</sup>The terms file conversion and file translation are often used synonymously.

<sup>3</sup>A SuperDrive is also sometimes called the FDHD drive (Floppy Disk High Density). Not all Macintoshes have a SuperDrive but for those that don't have one, an external disk drive can be purchased that provides this capability.

<sup>4</sup>SCSI is an interface that is standard on Macintosh computers.

**Note:** The products mentioned in this article are examples of a wide range of file conversion tools. Some of these products are bundled and sold along with Linotype-Hell products. However, the primary intent of this article is to inform. Therefore reference to products in this article should not be considered a testimonial or endorsement of the quality of these products by Linotype-Hell Company.

<sup>5</sup>A floptical looks like a 3½ inch floppy disk but requires a different kind of drive and holds about 21 MB. A floptical drive can read both flopticals and existing 3½ inch floppy disks.

a variety of SCSI (Small Computer System Interface<sup>4</sup>) floppy disk drives that let Macintosh computers read and write 5¼ inch and 3½ inch MS-DOS disks. (For more information, call Dayna Communications, Inc. at 801-531-0600.) *DOS Mounter*<sup>TM</sup>, a utility that lets a Macintosh with a SuperDrive mount 3½ inch MS-DOS disks on the desktop, is part of DaynaFILE but is also sold separately (and is often bundled with other products.)

Another product, *Mac-In-DOS*<sup>TM</sup>, lets PCs read or write Macintosh files from the PC's 3½ inch 1.44 MB floppy disk drive. This allows files to be exchanged by means of 3½ inch 1.44 MB high density diskettes. (For more information call Pacific Microelectronics at 800-628-3475.)

*AccessPC*<sup>®</sup> is a Macintosh program which manages DOS files through a variety of disk drives (including the SuperDrive) as well as a variety of removable cartridge drives. (For more information call Insignia Solutions at 800-848-7677.)

*Macintosh PC Exchange*<sup>TM</sup> is made by Apple Computer and allows Macintosh users to open PC files on 3½ inch MS-DOS and Windows-formatted floppy disks. (For more information, call your local Apple dealer.)

*Mac-to-DOS Transfer*<sup>TM</sup> is a utility for PCs which provides a convenient way of sharing data between common Macintosh and PC applications. Mac-to-DOS Transfer supports 3½ inch diskettes as well as removable, optical and 'floptical'<sup>5</sup> drives. (For more information, call PLI at 800-288-8754.)

*FormatterFive*<sup>TM</sup> is a drive installer which makes it easier for Macintosh and PC users to share data via a wide variety of removable cartridges or disk drives. (For more information, call Software Architects, Inc. at 206-487-0122.)

**File format conversion** – The line between file transfer and file conversion is not always so clear, because some applications, such as Mac-to-DOS Transfer, do both. But there are a wide range of products that allow some level of file format conversion. Macintosh computers come with a file format conversion program called *Apple File Exchange*<sup>TM</sup> which is supplied along with the system software. Apple File Exchange employs two methods of conversion: text and binary. It also can use translator files to convert files into formats for specific programs. For example, MacWrite<sup>TM</sup> files can be converted into DCA-RFT (Document Content Architecture-Revisable Form Text format) which is used by many MS-DOS word-processing programs.

For a wider range of conversion capabilities, *MacLinkPlus/PC*<sup>TM</sup> and *MacLinkPlus/Translators*<sup>TM</sup> provide conversion for word processing, spreadsheet, database, and graphics programs. (For more information call DataViz Inc. at 203-268-0030.) *Word for Word/Mac*<sup>TM</sup>, is a stand-alone application that lets Macintosh users read DOS diskettes from a Macintosh SuperDrive and convert them into a wide variety of word processor formats. It also comes in DOS and Windows versions. (For more information, call Mastersoft at 800-624-6107.) Another program, *Software Bridge/Mac*<sup>TM</sup>, works with Apple File Exchange, and, like Word for Word/Mac, converts files to word processor and spreadsheet formats. (For more information, call Argosy Software at 212-274-1199.)

In addition, many programs are able to read the file formats of other programs, including ones from other platforms. (For more information on converting PageMaker<sup>®</sup> PC files to Macintosh format, please refer to the Spring 1992 issue of LinoTalk.)

On the PC side, there are easily a dozen programs that are specifically designed for converting many of the graphic file formats available in a PC environment. There are more than 100 PC graphic file formats, and, if you consider that the PC version of TIFF has 100 different 'flavors', CGM (Computer Graphics Metafile) has nearly a dozen sub-formats, and TARGA (Truevision Advanced Raster Graphics Adapter) has eight, it is hard to

imagine why there is a need for so many formats (though in some cases the name is different but the format is actually the same).

### Operating system differences

One of the most basic differences between the Macintosh and the PC is the operating system. There are, however, a couple of software products that allow you to run DOS or Windows applications on a Macintosh. *SoftPC*® emulates various PC configurations, but runs on a Macintosh. (For more information, call Insignia Solutions at 800-848-7677.) *RunPC*™, allows Macintosh users to connect their Macintosh to a PC to run DOS programs in a standard Macintosh window. With RunPC the DOS programs actually run on the PC but are viewed and controlled by the Mac. (For more information, call Argosy Software at 212-274-1199.)

### Application program differences

Even if you have the same program running on two platforms, that doesn't necessarily guarantee seamless conversion between the two. For example, file sharing between the Macintosh and Windows versions of QuarkXPress will not be possible until the 3.2 release of the Macintosh version of QuarkXPress. In addition, there are some functions that are platform specific and are not available across platforms (for example Publish and Subscribe in Apple's System 7). In an ideal situation PC and Macintosh users of the same software application would be able to trade files over a network without having to convert the files. In this way formatting or graphics instructions would be maintained. Some applications are getting pretty close to this ideal.

### File naming conventions

The way that you name a file can play a role in the ability to easily read it on another platform. For example, a DOS file name should be no longer than eight characters plus a three-character extension while Macintosh and OS/2 allow much longer names. To get files to work across platforms you must follow the strictest naming conventions of the platforms in use. (See box to right.) Also, it is important to be able to recognize the three character DOS extension of common compressed formats, for example, Stuffit (.SIT), DiskDoublor (.SEA), PKZIP (.ZIP), and IBM's Archive (.ARC)

#### File naming rules

**DOS** - 8 character max. with an optional 3-character extension

**Macintosh** - 31 character max.

Note: The following characters should be avoided in file names shared between a DOS and a Macintosh environment: angle brackets ([ ]), asterisks (\*), colons (:), commas(,) equal signs (=), null, plus signs (+), question marks (?), quotation marks (") and slashes (/ \)

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### Font conversion

If you want to use your Macintosh PostScript Type 1 fonts on a PC there are several font conversion programs you can use, including, Atech's *AllType*™, Altsys Corporation's *Metamorphosis Professional*™, or Ares Software's *FontMonger*™<sup>6</sup>. But, since font conversion isn't always seamless, the safest bet is to buy the PC version of the font from your font supplier. (Linotype-Hell type sales representatives may be reached at 1-800-633-1900.)

<sup>6</sup>Type design programs like Letraset FontStudio™ and Altsys Fontographer® also allow you to do font conversion.

### PC to imagesetter issues

In researching this article a number of PC to imagesetter issues have come to light. The biggest problem for many PC users is font management. A thorough discussion of PC font management is beyond the scope of this article, but here is one tip: *FontMinder*™ (Ares Software Corp., 415-578-9090) helps you install and de-install fonts in a manner that is much easier than using the ATM® (Adobe Type Manager®) control panel or editing the WIN.INI file. FontMinder works like Suitcase II™ does on the Macintosh. It allows you to create font packs that may be installed for a specific use. Since Windows loads all the fonts for each application, that can increase start-up time by as much as a minute for some applications.

<sup>7</sup>Microsoft (1-800-426-9400) provides a downloading service for those who want the most up-to-date drivers. This electronic bulletin board is dialable by modem at 206-936-6735.

Another common PC issue is a more simple one: printer set-up. PC Users often set up their files for a LaserJet™ and unfortunately, resetting the job for an imagesetter may reflow the job (because of font differences). In addition, other printer parameters can cause problems if the printer set-up is wrong, including page size, crop marks, positive/negative, and wrong/right reading.

Printer drivers for the 3.0 release of Windows were not good and still may be causing problems for some people. Windows 3.0 had no useful printer driver for printing RGB PostScript. Windows 3.1 drivers are much improved.<sup>7</sup>

When bringing Windows 3.1 files over to a service bureau Macintosh to be printed with SendPS or the Linotype-Hell downloader, many people don't realize that there is a Windows header that contains the definitions of some PostScript procedures that needs to be downloaded first.

## Resources

Here are some helpful sources of information on PC graphic arts topics:

**Magazines** – Many magazines are devoting more space to graphic art PC issues. Some concentrate solely on that topic:

- *Aldus Magazine* – Available to owners of Aldus products. Aldus Magazine is useful since Aldus has Macintosh and PC versions of many products.
- *High Color* – “The Magazine of PC Graphics & Video” (207-236-6267)
- *PC Publishing and Presentation* – Aimed specifically at the PC market. (800-275-9052, or 404-493-4786)
- *Publish Magazine* – Covers publishing issues on both the Mac and the PC (800-274-5116, or in Colorado 303-447-9330)

**Books** – Peachpit Press has just released a number of books on the PC. Call them at 1-800-283-9444 for more information. Here are two examples:

- *The PC is not a Typewriter* by Robin Williams is the PC version of her earlier book, *The Mac is not a Typewriter*. This is a wonderful book in either form, but is particularly useful in the PC version because of the attention it pays to accessing obscure characters via a variety of keystroke combinations in many DOS and Windows applications.
- *The Windows 3.1 Font Book* by David Angell and Brent Heslop is another good source for font information, particularly related to some of the nitty-gritty Type 1 and TrueType® installation and compatibility issues.

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