

# TechLines

## Technical Information Sheet

EPP7

©2001 • Revised August 2004

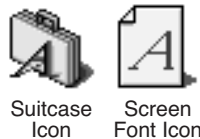
## Successfully finding and collecting your fonts

### Don't think they are just another pretty "face"

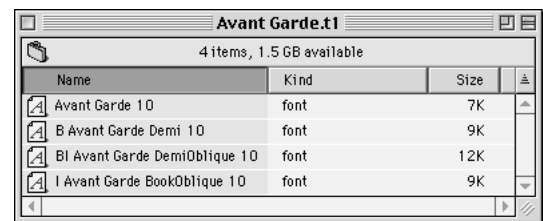
For successful PostScript output – whether on your laser printer or a high-end imagesetter, a screen font and a printer font work together. May we introduce you!

### PostScript Bitmapped (screen) fonts

The term bitmapped font and screen font are interchangeable. Fonts are displayed on your screen as bitmap representations. Each letter is built using a pattern of dots (pixels) that depict the letter at a specific point size.



When using the Macintosh, bitmap fonts are often kept in font "suitcases" and with ATM (Adobe Type Manager) installed, only one point size is required for each font. The bitmapped font name usually includes the point size and appears in the Macintosh Finder as a dog-eared page with the letter "A". The bitmapped font notifies the system to include the font name in the font menu.



On the Windows platform, .pfm (printer font metrics) files are used to display fonts on screen. Some fonts come with .afm (Adobe font metrics) and .inf (PC font information) files instead of .pfm files. When you install a font that includes a .afm and .inf file in ATM, ATM combines the .afm and .inf files into a .pfm file. The .afm and .inf files can then be deleted. Windows identifies .pfm files as PostScript Metric files under file type. Bitmapped fonts are created dynamically by ATM on the Windows platform.



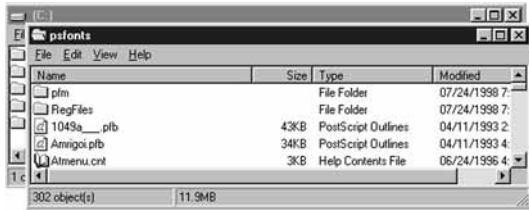
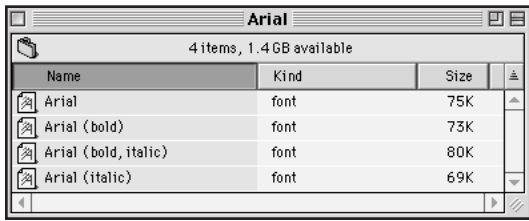
### PostScript Outline (printer) fonts

PostScript font, outline font and printer font are terms that also can be used interchangeably. Outline fonts are the means by which digital type is scalable. The outline font is created using code that describes the perfect outline of each character in mathematical terms. By adjusting the mathematical formula your computer can scale the point size of a character without distortion. Outline fonts generate smooth output.

Adobe PostScript outline fonts appear in the Finder on the Macintosh, as a letter "A" in front of horizontal lines. Outline font appearance is dependent on the manufacturer. Most PostScript outline font names contain the first five letters of the font followed by the first three letters of the font's style (e.g. HelveBol) and do not include a point size. Outline font files are stored loose in the same folder your suitcases are stored in.

Outline fonts are named .pfb files (primary font binary) on the Windows platform and are





installed in the \PSFONTS directory. Each Type I PostScript font filename uses up to five characters, followed by underscore characters to make an eight-character prefix, followed by .pfb (e.g. Uvcl\_\_\_\_.pfb. the complete filename for the font Univers-Condensed Light). Font file name prefixes often do not resemble the font's actual name.

In Windows, PostScript Type I fonts can have a maximum of four styles (e.g., normal, bold, italic, bold italic) per family in the font menu. The Macintosh doesn't limit the number of font family styles that appear in the font menu.

While each Type I font has a unique PostScript name that is identical in Windows and on the Macintosh, the same

Type I font may appear with a different name in the font menus in Windows, in the font menus on the Macintosh and in Adobe Type Manager for Windows. Because of the Windows limitation of four styles, many fonts have styles such as Bold or Italic that do not appear in the font menus, you must apply these styles separately rather than selecting the font from an application font menu. When purchasing fonts for Windows, documentation should include the fonts in each style group and the style you must apply to get the font you want (e.g. to use Univers 67 Condensed Bold in an application, you select the font Univers 47 Condensed Light from the font menu, then apply the type style Bold). On the Macintosh platform avoid using style attributes unless the actual Outline font is available (e.g. New York font with the bold attribute applied will not work because the New York Bold Outline font is not available).

## TrueType fonts

Apple and Microsoft, in a joint venture, introduced TrueType fonts in 1991 as an alternative to PostScript Type I fonts. TrueType has been unsuccessful in replacing the PostScript font standard in print but has become a necessity for Web designers.

A TrueType font is composed of a single file that is used for both display and printing. TrueType font icons display in the Macintosh Finder as a dog-eared page with three letter "A's" in successively larger



sizes, and their file names do not include a point size. On the Macintosh platform, TrueType font files are stored in suitcases similar to PostScript Type I bitmapped fonts. In Windows,

TrueType fonts are installed in the Fonts Control Panel or folder in the System. Both platforms, Windows and Macintosh, include TrueType fonts within their system.

When you print TrueType fonts to a PostScript printer, the printer driver usually converts them to PostScript-compatible fonts (e.g. PostScript Type 1). During this conversion some font information may be lost or altered, including font hinting (instructions built into outline fonts that enable character shapes to print as close to the designed character shape as possible) and stroke widths. If both the TrueType and PostScript fonts are installed an application may compose a file using one version of the font and print using the other version. The PostScript font's character spacing may not be identical to the equivalent TrueType font's character spacing which can result in unexpected character spacing, line breaks or page breaks.

## MultipleMaster fonts

MultipleMaster fonts are PostScript fonts that you can manipulate. The MultipleMaster format draws a typeface's characteristics using linear design axis, which include optical size, width, weight and style. Each design axis has a linear range. When you use a MultipleMaster font in a program that understands

Name	Kind	Size
%MMMyriaMMIt_215 300 10	font	11K
%MMMyriaMMIt_215 700 10	font	12K
%MMMyriaMMIt_830 300 10	font	12K
%MMMyriaMMIt_830 700 10	font	12K
%MMMyriaMM_215 300 10	font	20K
%MMMyriaMM_215 700 10	font	20K
%MMMyriaMM_830 300 10	font	20K

MultipleMasters, you get to customize the look of any of its controllable attributes by sliding controls in a special window within the Font Creator utility. MultipleMaster fonts include several configured primary fonts. As you create new fonts, you will see new fonts listed in the Font menu. MultipleMaster font files are larger than single master font files and can be identified by the “MM” after the

typeface name followed with the abbreviated numeric value of the weight, width and optical adjustments (e.g. MyriaMM\_830 300 10).

## OpenType fonts

In an effort to develop a font that would be platform independent, Adobe and Microsoft collaborated in the development of OpenType fonts. OpenType enables you to have a single font library for multiple platforms. Adobe and Microsoft combined TrueType and PostScript technology into one format that would be capable of reading either:

The OpenType format is a single file, but the file can have PostScript or TrueType outlines, or both. OpenType fonts are recognized by the suffix Pro. The filename extension of OpenType fonts will vary depending on the outline the font contains, for example, .OTF is an OpenType font with PostScript outlines. OpenType fonts with TrueType outlines have the same .TTF extension as TrueType fonts. TektonPro was the first OpenType font and was included with Adobe InDesign. Adobe is expanding their OpenType library and now most of their PostScript fonts have been converted to the Open Type format.

One of the great features of OpenType is that it offers increased language support and contains thousands of more glyphs which are outlines that enable characters to take on different shapes. The expanded use of glyphs allows a single font file to access extended characters and typographic features, such as ligatures, fractions and accent marks while eliminating the need for a second font such as Zapf Dingbats. OpenType's compression and subsetting technology make this font format valuable online as it enables embedding of type in documents which facilitates faster downloads.

The only operating systems that currently support OpenType fonts in their full capacity are Mac OS 10.x, Windows 2000 and Windows XP. Beginning with Adobe Photoshop 6 and Adobe InDesign 1.5, applications have begun to support Open Type layout features.

Not all technology advances at the same speed. OpenType fonts can be used on computers with earlier operating systems and in applications other than InDesign and Photoshop, although you may need additional software to do so and you may not be able to access full functionality of the OpenType fonts. The key to success in creating your document is to use the appropriate font format for your documents intended use and do not combine font formats within the same document.

If you are producing a document that will be viewed online, opened on multiple platforms and output to a non-PostScript printer; use TrueType or OpenType fonts with TrueType outlines (.ttf).

If you are producing a document for output on a PostScript printer or other high-end PostScript device, use PostScript fonts or OpenType fonts with PostScript outlines (.otf).

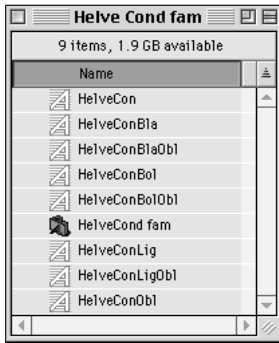
## System (dfonts)

Introduced in Mac OS X, dfonts are specially packaged TrueType fonts that contain information in the data fork instead of in a separate resource fork. Dfonts are acceptable and safe to use in a workflow in which the creative professional is submitting PDF files with all fonts embedded. Problems can occur if dfonts are used, native files are supplied for output and the job is opened in Mac OS 9 or earlier ➤

or a Windows platform. Another instance where dfonts may lead to issues with output is if Apple-provided dfonts are used that have the same names as standard Type 1 fonts.

## Collecting your fonts to submit with your page layout documents

When using QuarkXPress “Collect for Output” feature in either Windows or Macintosh platform, only the document and graphics are gathered. You will need to gather both bitmap and outline (printer & screen) fonts used in creating the document and graphics manually and place them in a single dedicated “Fonts” folder:



PageMaker “Save for Service Provider” option helps you copy fonts required to print your document. These fonts should be gathered in a “Fonts” folder to be submitted with the job.

InDesign’s “Preflight and Package.” After the preflight report is read, click the Package button to collect everything you need for reproduction.

“Preflight” software such as Markzware FlightCheck and Extensis Preflight Pro do a great job of checking over your documents for accuracy and also itemizing font usage. If your budget does not allow for preflight software, a quick way to insure that you are submitting all fonts required for output is to copy your files to disk (document, graphics and fonts) and try opening the document from the disk at another workstation. Any fonts used within the document that are not resident on the new workstation will be flagged as missing.

## Need more information?

This Technical Information Sheet contains a lot of information. We hope that it will be beneficial in helping you find, identify and understand your fonts. If you have more questions, please contact Sue Kohl, our customer education manager, at 1-800-321-3136, extension 232; or Jason Hauman, customer education specialist, at extension 312.

*Sue Kohl, Customer Education Manager*