HOW TO PACK A SUITCASE

BY LIDKA SCHUCH

FIFTEEN YEARS AFTER THE INTRODUCTION OF THE MACINTOSH AND FOURTEEN YEARS AFTER the introduction of PostScript, fonts still float like UFOs over the land of digital design for almost anyone who uses them on a daily basis.

WHAT IS A FONT?

There is no reason to create new terminology where existing terminology still applies, so let's stick to traditional definitions.

The world of type is organized much like the world of plants and animals.

Type is a set of characters — printed, handwritten or displayed on monitors.

Type consists of *type families* (also called font families). A type family is a complete alphabet of one design, all styles and all sizes, e.g. Helvetica or Times.

Type families consist of *typefaces*. A typeface is a complete alphabet of one design, one style and all sizes, e.g. Helvetica Bold, or Times Italic.

Typefaces consist of *fonts*. A font is a complete alphabet of one design, one style and one size, e.g. Helvetica Bold, 12 point (14 point is a different font).

No wonder marketing people jumped on the opportunity to use the term "fonts" to sell type! After all, it's sure easier to sell "500 fonts" than it is to sell "15 typefaces" or "5 type families".

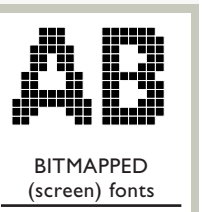
WHY BITMAPPED AND POSTSCRIPT?

In the beginning of the digital graphics era, all fonts were bitmapped. There was one file on a computer's hard drive for each font (or complete alphabet of one design, one style and one size). Fonts were (and still are) grouped into type families and placed in suitcases — a kind of file folder for storing fonts, sounds, and other desk accessories. Some type (or font) families, like Helvetica, have many, many typefaces, and some, like Zapf Dingbats, or Carta consist of only one! Kind of like human beings perhaps?

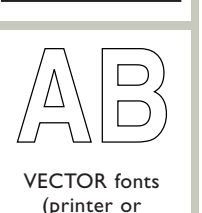
When the Mac was born in 1984, all bitmapped fonts conformed to a standard monitor resolution of 72 ppi. As you probably know, bitmaps are resolution-dependent and resizing them causes loss of quality. So bitmapped fonts were of no use in a real graphics workflow; printing these low res, 72 ppi letters produced jagged edges.

In 1985, over a decade after Pierre Bezier first applied vector functions to describe segments of curves in his first numerically controlled cutter, Apple introduced the first vector-based PostScript fonts. This solved problems with printing but added an extra resolution-independent printer (also called *outline*) font file for each typeface — not each font! Now we had the Helvetica type family screen fonts sitting in a folder called a suitcase, and Helvetica typeface printer fonts sitting loose (and the confusion created then still exists today!).

The first Apple PostScript fonts were distributed with Apple's LaserWriter desktop printers, but soon Adobe together with Linotype Corporation took over the market with their



BITMAPPED (screen) fonts



VECTOR fonts (printer or outline in Adobe PostScript Type 1)

SCREEN (bitmapped) font icon

Vector-based Adobe PostScript Type 1 PRINTER (outline) font icon

high quality fonts called Adobe Type 1.

There were two more Adobe Type font systems: Adobe Type 2 — so short-lived that it never made it into a circulation, and Type 3, much worse than Type 1, created by Adobe for other font makers to produce their own fonts without a licencing fee. Adobe Type 3 did not include *hinting* — a set of instructions built into font coding which improves display and printing of fonts. I'm sure many of you have noticed that letters become clunkier when you change them into objects (such as when you use *Illustrator*'s Make Outlines command). This happens because type loses its hinting when it becomes an object.

This is why Type 1 became the de facto standard in the graphics industry as soon as Adobe released the licence in 1991. Now there are many suppliers of Type 1 fonts — Bitstream, Fontek and Monotype, just to mention a few.

Type 1 fonts looked good, both in print and on the monitor — but there was one problem. Not only did you need to have an outline font file for each typeface installed on your hard drive in order to print, but you also had to have a bitmapped font file for each font (e.g. Helvetica Bold 6 pt, 8 pt, 9 pt, 10 pt, 12 pt, and so on) for monitor display! And all of them sat in your System Folder, always active whether you needed them or not, eating up your RAM!

But let's tackle one problem at a time and start with how to cut down the number of bitmapped font files.

WHAT DOES ATM REALLY MANAGE?

ATM stands for *Adobe Type Manager*. The name is great to describe what this piece of software does now (*ATM Deluxe 4*), but not in 1989 when it was released. And until now it has been yet another source of confusion.

ATM has always been a software PostScript interpreter (kind of like an internal RIP) which could interpret PostScript fonts to non-PostScript printers and draw any size bitmapped font, using just one size available on a hard drive. It has allowed us to cut down the actual number of bitmapped font files, but for many years it could not actually manage fonts in the organizational sense — it couldn't sort, activate or deactivate fonts. At least not in the Mac environment!

Also, if you had ATM dbase installed on your system, ATM could display fonts that didn't exist on your hard drive as long as they existed in the ATM dbase — yet another booby trap for beginners. Remember, displaying a font properly does not mean it will print properly!

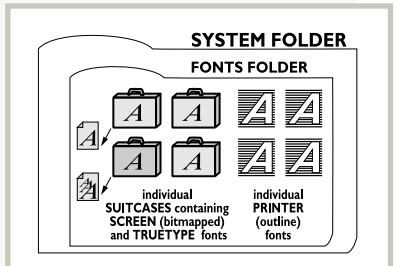
Since the release of ATM, life has become a bit simpler; now you must have one bitmapped (screen) font file per typeface — usually type size 12 pt (for no particular reason other than this size is used a lot) — in a suitcase, for each outline (printer) font file per typeface.

But let's go back to the old days to explain how real font management software came about.

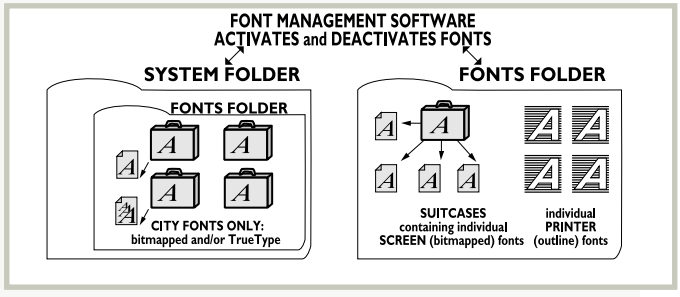
SUITCASE SOFTWARE — CONFUSE US MORE!!!

Originally, all fonts sat in the System Folder (which is not a big deal — unless, of course, you work in the graphics industry and have to deal with many, many, *many* fonts on a daily basis!).

So, of course, somebody came up with a solution. *Suitcase* software (recently sold to Extensis by Symantec) was introduced for font management. *Suitcase* allowed us to keep almost all our fonts outside the System Folder (City fonts had to stay in the System Folder, but we will get to that), group them into sets, and activate them or deactivate them. But we had a problem because of the unfortunate name "Suitcase". Now we had suitcases containing actual screen font files and software called *Suitcase* as well! To top it off, font managers like *Suitcase* and *ATM Deluxe 4* do not manage actual font files! Fonts do not reside within this software. They are still on a hard drive, outside the System Folder. *Suitcase* and *ATM* organize fonts into virtual sets, existing only in



Fonts on hard drive without font management software.



Suitcase (recently sold to Extensis) was the original high end font manager.

these programs' Preferences files. Whether you delete a set or trash the whole program, you are only getting rid of your sets, not the actual font files on the hard drive.

Suitcase is probably the most widely used font manager, but is it the best one?

ATM DELUXE AND FONT RESERVE

A few years ago Adobe finally made ATM live up to its name with the release of *ATM Deluxe 4*. This version of ATM truly manages fonts.

ATM Deluxe still functions as a PostScript interpreter, so instead of ATM and other font management software, you have only one program installed. ATM also makes it easy to display and print samples of fonts. This eliminates the need for yet another program (like *Typebook*).

Adobe *ATM Deluxe* 4 has quickly become a favorite with designers

But ATM lacks an important feature that *Suitcase* has had all along: *startup* and *temporary* sets of fonts. A Startup set of fonts is active as soon as you turn your computer on. Fonts in the Temporary set are deleted when you turn your computer off — which is useful for not mixing clients' fonts with your fonts.

In my mind, any discussion of font management today must include a relatively new program for the Mac called *Font Reserve*. In terms of feature sets, *Font Reserve* beats both *Suitcase* and ATM Deluxe.

Font Reserve takes the capabilities of *ATM* and *Suitcase* and adds a Mac Desktop-like interface plus more management options.

Developed by DiamondSoft, *Font Reserve* has all the best features of ATM and *Suitcase* (like temporary and permanent sets, excellent font sample previews, and the ability to add and simultaneously activate fonts) — plus a lot more.

You can view, sort and filter your list of fonts by beginning letter, by type (e.g. Type 1 only or TT only), by general style, by foundry, by individual font or font family, by suitcase, by activity status, or a number of other criteria.

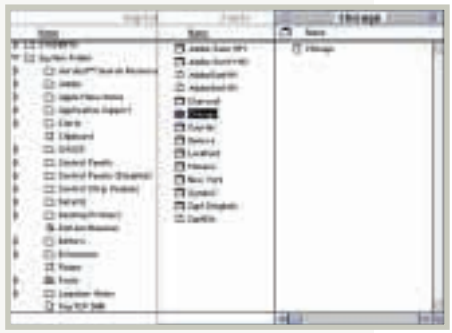
It also allows you the option of managing actual font files by copying them into its own folder called the Font Vault. When you delete a font from the vault, you delete an actual font file from a hard drive.

It lets you create multiple databases of font sets as well as import and export sets. It is fully system 8.5 compatible, includes a *Quark* XTension which automatically opens missing fonts, and works with Adobe *Type Reunion*.

Font Reserve is the most comprehensive font management software on the market — and may well be the best. Diamondsoft has just released *Font Reserve* version 2.0. Check **www.diamondsoft.com** for more details.

SO, WHAT'S STILL IN MY SYSTEM FOLDER?

How about all the pulldown menus and dialog windows you use as soon as you boot up your computer? Your machine needs fonts to display them, of course.



These fonts were given names of cities (or countries) to more easily distinguish them from the rest of the fonts. Chicago, Monaco, New York and Geneva are called City Fonts and they need to reside in your System Folder. These fonts were *not* created with high-end printing in mind — they have awful kerning and a very sloppy look. However, they are perfect for what they were designed to do: monitor display.

Aside from City Fonts, it is also good to have in your System Folder: Courier, the most common substitution font, Symbol, and ZapfDingbats — often used in Read Me files and on-line manuals.

If you have ATM installed (and who in professional graphics doesn't?) you can also find Adobe Serif MM and Adobe Sans MM fonts in your System Folder.

MM stands for Multiple Master fonts, another Adobe font system that isn't-quite-there.

MULTIPLE MASTERS, TRUETYPE AND GX FONTS

There have been a few attempts to eliminate the need for a two-file font system (bitmap–screen and outline–printer) for each typeface.

Introduced by Adobe in 1991, Multiple Master fonts are a variation of Type 1 fonts. They are also based on Beziér PostScript curves, but as the name suggests (this time correctly!), a MM font is really many typefaces in one file. Using a MM font generator you can create new typefaces by blending master typefaces together.

Sound too good to be true? *It is!* MM fonts are not only hard to create, but also incompatible with most imagesetters' software. Just a few days ago I had a phone call from Tony, a great film output guy, reminding me to "*Please* change this damn MM Tekton" in a client's (supplied) ad before the next issue of a publication which we work on goes to film.

There goes the MM idea.

Also in 1991, Apple teamed up with Microsoft in an attempt to take away Adobe's monopoly. They introduced a new font system called TrueType — one file per typeface, not too big in size and capable of printing beautifully to desktop printers. There was just one problem — TrueType fonts are based on quadratic curves, not Beziér PostScript curves. So either they have to be converted into PostScript Type 1 fonts before being ripped, or a TrueType Rasterizer has to be used to print them. Some service bureaus take TT fonts, some don't let them near their imagesetters. Some ask not to mix PostScript and TrueType in one publication. One thing for sure is that TT fonts certainly did not replace Adobe PostScript Type 1 as a commercial prepress standard.

TRUETYPE
font icon

A couple of years later, Apple had yet another go at a less complex font system called QuickDraw GX and GX fonts. Similar to the Multiple Master idea, GX fonts can be customized and even animated — but there is a big tradeoff. First of all, to use existing fonts, you have to enable them with a special Type 1 Enabler (provided by Adobe along with the GX system extension). Second, the GX extension needed to run this system takes a lot of memory. Third, not many imagesetters can print GX fonts. Let's not forget that almost all high end output equipment in digital prepress is based on (and monopolized by!) the PostScript language — not QuickDraw!

All of that leaves us once more with the original user-*un*friendly Adobe PostScript Type 1 fonts system as a commercial standard in prepress, while the rest of the business world uses Windows and TrueType.

But wait! Adobe and Microsoft finally ended their war and teamed up together, and from all this mixing and mingling a new, simpler system may finally arise.

THE PROMISE OF OPENTYPE

OpenType is the most recent entry into the font scene, and is based on a continuation of Microsoft's TrueType Open format with Adobe's blessing. With these two major players involved we may very well get a superior font system — but will it only be of use on the Windows platform? If OpenType is really as good as they say it is, please make it work on a Mac and end the font confusion once and for all!

Adobe calls it "a superset of the existing TrueType and Type 1 formats" and assures all TrueType and PostScript Type 1 users that the switchover will be painless and that all existing fonts will work flawlessly with new technologies.

The superiority of this system lies in the merger of two worlds: PostScript with non-PostScript. Both have been ready for a long time for a simple, easy-to-use font standard which was good for all platforms and both kinds of output: print and monitor display.

However, for the time being we are still stuck with what we've got. So let's get back to reality and summarize a proper layout of fonts on your hard drive.

HOW TO ORGANIZE FONTS ON A HARD DRIVE

PostScript Type 1 is still the standard for prepress, a *two-file per typeface* font system. With ATM installed, you should have one printer font per typeface — sitting loose in the Fonts Folder (*outside* the System Folder *with* font management software installed, and *inside* the System Folder *without*) for each corresponding screen font — all screen fonts sitting in one suitcase. Leave one size of any screen font per typeface: trash all others. What do you do with leftovers that don't match? Don't think twice — trash them, too!

TrueType is a *one-file per typeface* font system. TrueType fonts are the best for internal monitor display (like City Fonts). If you must use them in your work, best keep the whole type family (all typefaces) in one suitcase. Also, check with your service bureau about whether they will accept TT fonts before sending a job there. ✷

E-MAIL LIDKA AT STUDIO_L@ISTAR.CA, OR VISIT STUDIO L'S WEBSITE AT HTTP://HOME.ISTAR.CA/~STUDIO_L.

GLOSSARY

CITY FONTS: fonts with names of cities and countries (Ilike Geneva, or New York) needed by your computer to display menus and dialog windows. City Fonts should always be active, therefore they should reside in a System Folder. City Fonts can be either PostScript Type 1/bitmapped fonts, or TrueType.

FONT MANAGEMENT SOFTWARE: programs allowing you to organize, activate and deactivate fonts (like Suitcase, ATM Deluxe, or FontReserve).

HINTING: a set of instructions built into font coding which improves display and printing of fonts.

OUTLINE FONT: a vector font file, stand-alone or a printer font, based either on Beziér PostScript curves (Type 1 and MultipleMaster) or on quadratic curves (TrueType) or on a mixture of them (OpenType).

PRINTER FONT (also called OUTLINE font)**:** a vector font file necessary for printing, and based on Beziér PostScript curves. Adobe PostScript Type 1 fonts don't print correctly, if this file is missing.

SCREEN FONT (also called BITMAPPED font): a bitmapped font file necessary for display on a monitor. Adobe PostScript Type 1 fonts don't display correctly, if this file is missing.

SUITCASE: a type of a file folder for storing fonts.