



Fontastic!

OpenType format may herald an end to the font wars: Gordon Laing examines the implications. Plus, CorelDraw for the PowerMac, fonts in Windows 95, and a real smooth operator.

Lots of font news this month. First on the agenda is Windows 95 and how it handles fonts, including enhancements over 3.x. Next is the spectacular news of the forthcoming OpenType format, developed by Adobe and Microsoft, which, it is claimed, will end the TrueType and Type-1 font wars by tying the two together. But before launching head first into fonts, here's a short aside for those who, like myself, didn't believe CorelDraw for Macintosh would ever make it beyond a myth.

Canadians bite the Apple

Yes, it's true! CorelDraw is finally going to happen for the Apple Macintosh platform. I've just got hold of far-from-finished Beta-1 and Beta-2 copies, although the ever-

optimistic Canadian company is convinced that the final shrink-wrapped product will be available by the end of summer.

First things first: it's Power Macintosh only, without any plans for a 68000 version. You'll need a decent-spec machine too, with at least 16Mb of RAM and, of course, stacks of disk space if you want to install the ubiquitous clip-art and fonts.

Despite rumours of version 7 for Windows by the end of the year, Corel has opted to release version 6 for the Mac. It is, however, quite a different package to version 6 for Windows.

The main drawing and layout application itself is present, although with a new look interface. Corel PhotoPaint, the Windows bitmap photo-retouching editor, is

missing, but is replaced by something similar called Corel Impressionist.

CorelTrace, used to convert bitmaps into vector form, is here, as is CorelDream 3D, the modelling and rendering module, new to Windows version 6 although seen here in a later form. A brand new texture generator, CorelTexture, is unique to the Macintosh suite, as is the inclusion of WordPerfect 3.51, fresh from the Corel acquisition. But get this: there are rumours of Corel bundling Draw alone with its forthcoming Windows office suite.

Fonts are handled by the Master-Juggler utility, while Kodak Precision Colour Management System looks after... well, the colour management. CorelDraw wouldn't be the same without the reams of clip-art and font libraries, and indeed, the Mac pack sports a similar but not identical array to the Windows version.

CorelDraw 6 for Macintosh will undoubtedly offer excellent value with its many applications, utilities and extras. While there are some differences, the drawing portion is claimed to be 100 per cent compatible with files created in CorelDraw 3, 4, 5 and 6 for Windows (our early copy was almost 100 per cent). Corel reckons users will include those familiar with the PC version, or those in mixed platform environments desiring compatibility — there are certainly some curious Mac users out there who want to see what all the fuss is about.

It is doubtful whether Mac illustrators will become evangelical and wholeheartedly embrace the other side — I remain a firm believer in FreeHand — but at least the option is there. More importantly, a company as competitive as Corel will shake up the market and force complacent products to shape up or get out.

Font frenzy

Anyone using Windows 95 may think it handles fonts in essentially the same way as Windows 3.x, but there are in fact quite a few enhancements for TrueType. As explained last month, Microsoft and Apple developed the TrueType font format together and have built software into their respective operating systems to rasterise the outline shapes.

Adobe Type Manager, ATM, is required to rasterise Adobe Type-1 PostScript out-

Some said it would never happen, but it's finally on the way: CorelDraw for Power Macintosh, expected for release sometime this summer, complete with the usual array of programs, fonts, clip-art and freebies we've come to expect from the Canada-based graphic gurus



Smooth Smooth Smooth Smooth

Smooth vs jagged: Top row TrueType with Windows 95 font smoothing activated. Bottom row Type-1 PostScript. The font is Times; 8-point on the left and 18-point on the right, enlarged to show the differences. Note the grey levels used in anti-aliasing, giving the illusion of a smoother edge. Right 95's Display Properties with Plus pack installed and smooth edges activated

lines for either Windows or the Macintosh. You'll need ATM 3.02 to work under Windows 95, but it doesn't offer any enhancements over earlier versions designed for Windows 3.x. Windows 95, however, boasts many built-in enhancements for the TrueType 1.0 format to enhance performance and appearance, and support international characters.

You'll be pleased to learn that Windows 95 has a 32-bit TrueType rasteriser, which performs outline-to-bitmap conversions much quicker. Converting vector outlines into bitmaps at very small point sizes often results in an illegible character, due to too few pixels to play with. Hinting is the process of adding information to a character's outline, slightly altering various aspects to improve its appearance at small point sizes. The TrueType hinting process actually works quicker with the new 32-bit rasteriser.

Windows 95 also supports TrueType fonts with embedded bitmaps. Sometimes, even with hinting, a character is just too complicated to be rendered legibly at small point sizes. In these instances, a pre-rendered bitmap may be automatically substituted. This process is transparent to the application and the user.

File space is used more efficiently by allowing TrueType fonts to share common character shapes, avoiding unnecessary duplication. Microsoft manages this with a TrueType collection (TCC) file, as yet implemented only in the Far Eastern version of Windows 95.

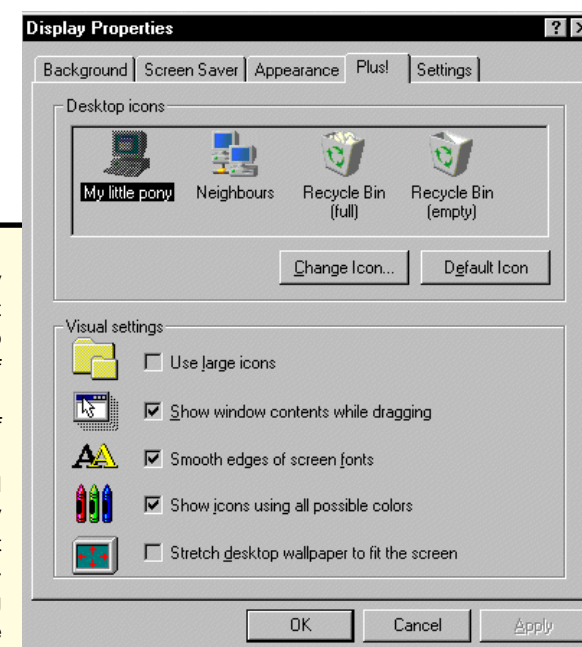
Greyscale rasterisation is responsible for the greatest improvement in TrueType appearance under Windows 95, although the feature was removed from the beta

and popped cunningly into the optional Microsoft Plus pack: you'll need to go into the Plus section of Display Properties and tick "smooth edges of screen fonts".

Once activated, all TrueType fonts in any application or document will be anti-aliased, resulting in a smoother-looking outline. Anti-aliasing is the process of inserting pixels of intermediate background and foreground shade into the jagged steps of a bitmap, which fools the eye, at a distance, into perceiving a smoother shape. Under Windows 95 it works very well, and is particularly noticeable when compared side by side with non-anti-aliased type. Check out our example [above] with and without smoothing. The smoothy is a TrueType font, while the jaggie is a Type-1 font; sadly, ATM does not offer an anti-aliasing facility despite one being available for type within Adobe Photoshop.

Windows 95 uses three intermediate levels of grey, along with plain black and white, to create a smoothed character. The greyscale converter figures out which level of grey to use by considering how much of the original outline would fall into the pixel's space. If a large percentage of the outline falls into the pixel's area, a dark grey is chosen, while a small percentage would result in a light grey.

Next month I'll be delving into the complexities of character sets, particularly those with more than 128 or 256 on offer, ideal for complex languages. In the mean-



time, Windows 95 supports a curious halfway house between Windows ANSI (256 character) and double-byte sets (up to 65,536 characters). It's called Windows Glyph list 4 (WGL4) and was developed by Microsoft. Described as a Pan-European character set, WGL4 consists of 652 characters required in Western, Central and Eastern European writing systems, including Greek and Turkish.

OpenType

Now for this month's big news. As reported in last month's *Newsprint*, the font format wars could be over. Adobe and Microsoft have got together to develop the OpenType font format, which combines TrueType and Type-1 technologies. Right now details aren't 100 per cent solid, but here's what I've gleaned so far.

To be accurate, OpenType is an extension of TrueType Open, with added support for Adobe Type-1 information. An OpenType font could contain either TrueType or Type 1 information, or both. The interesting and slightly unclear part is what, precisely, will do the rasterisation.

Font of the Month

Orange

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 a b c d e f g h i j k l m n o p q r s t u v w x y z ß € 1 2 3 4 5 6 7 8 9 0

After months of serious body fonts I thought it was time for a bit of fun. This month and next sees the return of the display face to my *Font of the Month* section. Here's Orange, from the Fontek collection, available from FontWorks. Fontek has a wide range of single-weight display faces selling for only £35 (plus VAT) — a welcome change from pricey type collections.



TrueType information will be rasterised as usual by software built in to the operating system, while Type-1 information will be rasterised by ATM. However, there is said to be some means by which Type-1 information could be converted to TrueType, probably to be implemented in the next version of Windows 95 and, presumably, Macintosh System 7. This could mean the end of ATM, unless Adobe comes up with (or even wants to come up with) a super-duper new version, with outstanding facilities and support.


All existing Type-1 and TrueType fonts will be supported by OpenType and should work transparently as far as the user is concerned. Microsoft and Adobe will promote and develop OpenType fonts, while Adobe will convert some of its popular Type-1 fonts to the OpenType format. This certainly implies the end of ATM in favour of OpenType support built in to the OS, although the possibility of a Type-1 rasteriser built into Windows has not yet been dismissed. Either way, thanks to the Type-1 to TrueType converter, all Type-1 fonts will work with Windows out of the box.

You won't be surprised to learn there's a pronounced Internet slant to the OpenType initiative. Any users of the World Wide Web who are into fonts will know the limitations of what can be used as text on a Web page. Depending on your browser, you're usually limited to just one or two typefaces; anything else has to be

embedded as a bandwidth-greedy graphic.

Adobe and Microsoft are submitting a proposal to the World Wide Web Consortium for font embedding using OpenType technology. The first benefit is the faster downloading of fonts thanks to compression technology incorporated into OpenType. The second benefit is, of course, better-looking Web pages, which is good news for everyone.

It is expected that Microsoft's Internet Explorer will support font downloading later this year. The forthcoming Adobe Acrobat 3 will probably support OpenType, as will future versions of Windows.

Next month I'll delve into the different character sets, from old-faithful ASCII, through Windows ANSI, ending up in the territory of double bytes offering up to 65,000 characters and ideal for those particularly difficult languages. Also, when is a character really a glyph? And more details on WGL4. Those who can't wait should immediately check out the source for most of my information this and next month: Microsoft's superb Web site on <http://www.microsoft.com/truetype>. 

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