# WHAT WE MIGHT HAVE DONE...

Gordon Woolf takes a look at the two decades of DTP

Looking back on 20 years of desktop publishing produces evidence of ambitious claims, and some strange byways which were presented as "the Future". It was not quite the smooth transition of history which some would have us believe, even at this short time in the future.

Typesetting changed from hot metal in the 1950s with the introduction of phototypesetting systems controlled by a unit with a computer terminal. It was equipment that no individual could afford, but it was far cheaper than that which went before. However, while hot metal Linotypes could cope with 100 years of heavy use, the phototypesetting systems had a history in total of less than half that time, and were "black box" systems, produced exclusively for the print industry.

Even when John Warnock and Charles Geschke, the creators of PostScript, started Adobe Systems, they still saw themselves producing a complete package, with the system integrated with laser printing machinery. But three months after they started, according to John Warnock in a 1985 interview, they realised that the days of the big machines could be ending. The pair realised that "all the major computer companies were interested in laser printing" and that while they were all trying to integrate the text and the graphics, they weren't having a great deal of luck." He added: "Our company knew how to do that."

But he also saw that the real breakthrough was when Mergenthaler and Adobe agreed that the Linotronic film typesetting machines would be compatible with the "ultra cheap" 300dpi Apple LaserWriter (itself made possible when Canon dropped the price of their CX laser engine which was inside it). The LaserWriter cost about US$7000, but compare that to the first laser printer, from Xerox, which, in 1978, cost US$500,000. One of the new "cheap" laser printers was advertised with the headline "Say goodbye to Dot and Daisy..."

1985 saw the first issue of the US magazine "Desktop Publishing" which forecast the setting up of "typesetting centers" where "anyone could walk in with a floppy disk and get quality typesetting done". It also wondered about the relative merits of PostScript and its competitor, Interpress from Xerox, and whether both could be left behind by the promised new product from Apple, QuickDraw, which "could divide a pixel into 65,000 locations".

Paul Brainerd, president of Aldus, was quoted as saying that Arthur Young, the then huge accounting and financial firm, had 16 newsletters produced out of their New York office costing US$150,000 a year in typesetting and pasteup. "Two of them are now published with PageMaker and the others will convert during the rest of this year. They can pay for their equipment and software in three to four months" said Brainerd. (Shades of the current debates over PC/Mac and InDesign/QuarkXpress usage at ACP).

At this time, PageMaker was the top-of-the-range package but even it offered only discretionary hyphenation, which meant you had to tell the program where it could hyphenate each word. Computer-assisted hyphenation was promised in the next version. Kerning was also in the future, though the downmarket MacPublisher offered limited manual kerning. At that time, just 17 years ago, all the major firms producing desktop publishing software agreed that it would still be necessary for Apple to get behind the desktop publishing phenomenon as it was "an application that only the Mac could perform with ease."

PageMaker for the PC did not appear until 1986, the same year that Microsoft launched Windows, and PageMaker included a runtime version of Windows (which meant you got a free copy of this new Windows program with PageMaker; when you launched PageMaker from DOS, Windows opened first, then PageMaker within it, though you had to buy a separate copy of Windows to run other programs).

In 1985, the top of the range program on the PC had been Ventura Publisher which

would run on a PC XT or AT or compatible, though it required 512kb of memory and needed a hard disk of some kind. It worked within the GEM (Graphics Environment Manager) from Digital Research which, according to a magazine of the day "lets the PC behave like a Macintosh". The same magazine also said that Ventura worked best with a mouse.

Ventura offered advanced features such as a "Big First Char", that some other programs are still having trouble with. It could also use up to eight colours in each file. It could even sort out widows and orphans (those last short lines of paragraphs at the top of a page, or first line of a para at the bottom of a page), and it offered multiple columns with automatic balancing of columns (yes, this was 1985!)

Incidentally, the first edition of Windows was supposed to run on a PC with two floppy disks, but a magazine review at the time stated "we strongly recommend a hard disk". It also needed "all the memory you can get -- 640k".

Memory of course was a problem even then, solved by several companies with boards to plug into the PC and control the input and output of memory hungry things such as scanned images and files to print. President Computers made much of their "Desktop Page Composition System" with its "Megabuffer Board". However another firm's "Disk Doubler" board, advertised at various prices from under $300 to over $500, had a few problems; many could not get it to work at all, and they were the lucky ones, for those who did found that it trashed their hard drive. The manufacturer went broke.

A long established company in the printing equipment industry brought out a new system in which it made much of the resolution being "90,000 dots per square inch" -- which is precisely 300dpi measured linearly.

And one of the distributors of PageMaker here in Australia, SCA, were taking two-page advertisements to state that with PageMaker and a "Microtek Intelligent Image Scanner", "you could be the next Rupert Murdoch".

The magazines of the time promoting desktop publishing (I could not find any references to "DTP" until early 1987), include many advertisements that are unbelievably bad. I suppose they were good examples of what can be done on a dot matrix printer.

In 1987 things were moving in other parts of the world -- a US magazine told how the kingdom of Bhutan in the Himalayas had a newspaper produced by Buddhist monks using PageMaker with three Macs and a Laserwriter; a second Laserwriter was on standby because the nearest service centre was in Singapore. They were, at an altitude of 8100 feet, just 100 feet short of the limit at which it was claimed laser printers could work at all.

Tax is always a problem with new technology, so it should be no surprise that the US State of California was quick to decide that the output of laser printers at service bureaus would be tax free -- unless they had a graphic, in which case they would be liable for tax at 6 percent.

There was also a peculiarity with some laser printers that different fonts were used for vertical and horizontal printing. It was supposedly handled seamlessly. The early LaserJet was an example, and it also offered to print graphics at 300dpi, unless the graphics totalled more than half a page, in which case the resolution dropped to 150dpi.

By 1990 for example, the competition for the DTP market was really getting intense, and a survey concluded that one needed "at least a processor operating at 8MHz" and at least a 20MB hard disk.

In page makeup packages, the choice included "Newsmaster", which could offer "multiple pages in a single document", included 30 fonts and could print to any of 175 dot matrix printers, while "Publish It!" had text which rewraps "intuitively"

around graphics.

However, if you could afford a Mac with two 800k floppies, you could now get Quark XPress which was described as seeming "to have taken the best features from other leading packages" and combined these with a few new ideas of its own. It cost $1750 in Australia.

At the same time Xerox Ventura Publisher was up to version 2.0 and needed MS-DOS or PC-DOS, 640kb memory and a 10MB hard disc, while PageMaker was at version 3 for Mac, PC and even OS/2. The advantage for the latter operating system was that you could have more than one document open at the same time, and could cut and paste between them. PageMaker for the Mac had an "extension" that allowed one to work in colour, and "for more sophisticated publications, users could print colour separations of their Colour Extension files using Aldus Separator.

Also around at the same time were Design Studio, Ready,Set,Go!, First Publisher, Gem Desktop Publisher, Pagework, and Ragtime.

There was also a challenger from Microsoft: Typographer. Strangely, for today's world, it ran only on the Mac, and it offered a kind of hyphenation, but it wasn't automatic.

Among claims in other equipment was a scanner "which can scan an A4 page in 45 seconds" at 400dpi, while you could buy the "awesome power" of the Barneyscan 35mm transparency scanner for $16,500.

In printers there were beginning to be a few that printed at 600dpi -- and QMS offered a tabloid laser printer with PostScript and four resident fonts at $53,019 "excluding tax".

But in comparison to what had gone before, this period was the breakthrough. No longer did publishing involve an engineering works and an investment spread over decades. Even accountants could see that the few tens of thousands involved in computer, scanner, laser printer and software, could be recouped over the cost of the old way of doing things within a matter of months.

The Desktop Publishing revolution was under way.

---

Gordon Woolf has written several books on desktop publishing including "How to Start and Produce a Magazine" and "Publication Production using PageMaker". For details see <http://www.worsleypress.com>

Several illustrations are available for this article. Contact gordon@worsleypress.com for details.

CAPTIONS

Need something to get pictures on to the page? In 1985 the Datacopy 920 "Integrated Imaging System" could have been the answer -- 200dpi output for around $4000 (that's US dollars!) but it did come with the WIPS image editing program, though the WIPS Planner page makeup program to run on a PC was an extra $1500.

Many of the old office names were in the forefront when it came to desktop publishing. For example, Remington had this "integrated workstation for electronic publishing" which could "combine several types of information - text, tables, graphs and drawings - into a single document". It ran UNIX and was a snip at $33,000, or $45,000 with a LaserWriter. It had trouble with point sizes over 24pt... but it did have a mouse.

When flatbed scanners were expensive, you could always buy a hand scanner -- and

perhaps devise some means of using rules, books or blocks of wood to keep them on track as you wrapped your hand around them and pulled them across the artwork. A colour version could cost considerably more than basic flatbeds today, and they usually came with software to stitch two or more scans together.

extdisk.tif
When standards changed in 1987, a Sydney firm advertised that you didn't have to rush out and buy a new $5000 PC. Instead you could buy their external 3½-inch disk drive for $775 and just plug it in to get the benefits of a 730kb disk drive.

Even in the early 1990s, getting connected to the Internet required a manual of several hundred pages, including a 6-page list of commands. It included details of how to connect Australia-wide via packet switching and you could send an email to a fax number. But in comparison to private networks such as The Australian Beginning of 10 years earlier, it was dead simple.

To get stories into your publication, you might need a modem, such as this acoustic coupler. It enabled you to make a call, then push the phone handpiece into the rubber coupler -- and I can vouch for it even working in phone boxes (though I did have trouble getting a long enough power cord to get my "transportable" computer to reach to the phonebox from the caravan park at one place on the Nullabor).