eBooks and print on demand

Mike Gascoigne explains how to publish a book for distribution to retail markets.

'How can I get my book published?' is the familiar cry of aspiring book authors trying to get the results of their creativity into the hands of potential readers. Technical authors do not normally encounter the problem of what to do with a finished manuscript, because we normally work for clients who have asked for it to be produced in return for a fee. However, the luxury of paid work might not always come our way, and besides, many of us have spent long enough writing books for other people and would like to write something for ourselves. There might have been a book brewing for years but we never had time to write it. Then for some reason our circumstances change, for good or for bad, and we find ourselves with time on our hands. The opportunity presents itself at last, to write the long-awaited book, but how do we set about it, and will we end up stuck in the well-known publishing bottleneck, together with many other aspiring authors?

The number of books submitted to publishing houses far exceeds the number that they can actually publish, but there are three ways out of the bottleneck:

□ Make yourself famous, like Jeffrey Archer or Edwina Currie.
□ Pay someone to publish your book. This is called 'vanity publishing' and it doesn't work very well because the publisher has no incentive to market your book after you have already paid them. However, they will take a commission on the small number of copies they sell.
□ Publish the book yourself. This is called 'self-publishing' and is the subject of this article. It is the preferred option for technical authors who already know something about the publishing process.

Self-publishing

If you self-publish your book, you pay for it to be printed and then you can sell it directly to customers for the maximum possible return. You can also use dealer and distributor networks who will be able to increase your volume of sales but you will have to pay them a margin. You will also have to spend time and effort on marketing, regardless of your method of distribution, but if you can price the book correctly and keep the costs under control, you can make a fairly modest profit. You could even make the big time, and according to the *Writers' & Artists' Yearbook* (which I would highly recommend), a number of celebrity authors started off by self-publishing. These include Rudyard Kipling, Beatrix Potter, Mark Twain and many others. If you never make it big, at least you keep all the rights to your book. The copyright lasts for 70 years after you are dead and you can pass it on to your descendants so it becomes a long-term investment for your family.

At this stage, you might be asking, 'How much does it cost?', and the answer is 'Not much', because of the following new technologies:

□ eBooks, where an electronic version of a book is distributed over the Internet with built-in securities so that it cannot easily be copied from one customer to another.
□ Small-volume digital printing. There is nothing really new about this, except that the costs have come down to the extent that copies can be printed one at a time as they are ordered by customers. At this stage, it becomes known as 'print on demand'.

eBooks

An eBook is an electronic document that is formatted in such a way that it looks like a printed book. The page size is typically 6 by 9 inches and the text is slightly enlarged to make it easy to read on the screen. It begins with a graphic cover page, followed by a title page, copyright notice, table of contents and all the other things that would normally appear in a printed book.

Depending on the file format, an eBook can be read from a computer or from various types of portable handheld device. For most formats, a free downloadable eBook reader is required.

Security

If the book is intended for sale, as opposed to a free download, you have to implement security measures so that the downloaded book can only be used on the customer's device. This is achieved by encrypting the file so that it becomes linked to the personal identifier (PID) on the processor chip of the customer's hardware. If the customer wants to transport the book between multiple computers, it can be downloaded to a zip disk, which is also hard-coded with an identifier. The available security measures depend on the eBook format and need to be reviewed carefully before you decide which format to use.

---

eBook readers and document preparation

Microsoft
The Microsoft® Reader is available for desktop/laptop PCs, the Windows XP Tablet PC and Pocket PC 2002. The most convenient way to create an eBook for this type of reader is to use Microsoft-Word 2000 with the 'Read in Microsoft Reader' add-in.

Mobipocket
The Mobipocket® Reader is available for desktop/laptop PCs and a wide range of handheld devices. To create an eBook, first create the source document in your word processor or desktop publisher, then use a software package called Mobipocket Publisher.

Adobe Acrobat
The Adobe® Acrobat® eBook Reader works on desktop/laptop PCs but not normally on handheld devices. Nevertheless, it is one of the most popular formats because it is basically a customised version of the widely used Acrobat Reader. It can reliably display text and graphics exactly as intended, as it appeared in the original document. To create an eBook from a source document, you need the full version of Adobe Acrobat. For complete instructions, first download the eBook reader from Adobe eBooks Central, then download a document called *How to create Adobe PDF eBooks*.

Gemstar
There is no downloadable reader for Gemstar® eBooks and they can only be read from proprietary handheld devices. To create a Gemstar eBook, you have to establish yourself as a publisher and enter into a contract with Gemstar.

Distribution

After you have created your eBook, how do you make it available for sale? There are various organisations who will host your book on the Internet in return for a fee and they will look after the encryption and security issues. They will expect the book to be produced according to certain standards, and some of them will provide a publishing service, so that you can send them your word-processed text and they will convert it to an eBook, complete with a cover design. If you use any of these organisations, look carefully at their terms and conditions. Some of them are vanity publishers and you have to be sure that you don't sign away any of the rights to your book.

If you want to distribute it yourself, you will need the cooperation of your

---

Strengths and weaknesses of eBooks

Strengths:
- ☐ Low cost of production. All you need is a word-processed document with a cover design, and then you run a program to convert it to an eBook.
- ☐ Low storage costs. The software for hosting eBooks might be expensive, but the cost per book is quite low if a large number of books are hosted.
- ☐ Low distribution costs. Everything happens automatically, through the Internet, and there is no need for packing books and sending them out through the post.

Weaknesses:
- ☐ Not all books are suitable for eBook distribution. Not many people would want to sit at a computer screen, reading through 300 pages of a fiction novel. The most suitable books for online viewing are reference books, encyclopaedias, travel guides, and anything else where you just want to look things up.
- ☐ eBooks don't have the same prestige value as printed books. Newly published authors can get a buzz out of walking into their pub or club and showing off their new book. It's not the same, handing out bits of paper telling people how to download an eBook.
- ☐ There is a preservation issue associated with eBooks. During the 1980s there used to be office equipment with 8-inch disks. If someone gave you an 8-inch disk today, would you know what to do with it? Would you even know what to do with a 5.25-inch disk? Will anyone be able to read your eBook when the copyright expires, 70 years after you are dead? The British Library is developing procedures for preservation of online publications, but they will depend on support from software companies who are subject to mergers, acquisitions and closures.

Internet Service Provider (ISP) and they will need to install specialised software on their server. In practice, the ISP will have to manage the distribution activities, rather than yourself, and it will only be worthwhile if a significant number of eBooks have to be hosted.

In the case of Adobe eBooks, the ISP will have to install the Adobe Content Server. The cost depends on the capacity for hosting eBooks, but however you do it, we are talking about thousands of pounds. Once installed, the Content Server can communicate with any number of eCommerce sites and securely deliver eBooks to customers. When a book has been purchased, it is automatically downloaded into the customer's eBook reader. The PID of the customer's computer, or the number of their zip disk, is sent to the server so that it becomes encrypted with the downloaded file, locking it to the customer's personal eBook library. In addition to the hosting and delivery service, you will also need an eCommerce site so that people can buy your book and you can use an existing site or set up one of your own.

The Adobe Content Server can also be used for free delivery of eBooks, with or without a timeout, and is sometimes used by libraries. If you want to see how this works, try downloading a book from the Adobe eBook Library.

Common standards

At this stage it is clear that eBook technology depends on the transient activities of a number of companies. However, they are working together, creating common standards, through the Open eBook Forum.

Print on demand

Now we come to the question of how to print and distribute a book, without committing yourself to large print runs and keeping stocks. First we need to look at how the book will be distributed. A customer goes to a bookshop to find a book that they have heard about from somewhere, but it isn't on the shelf, so they go to the desk and order it and pay for it in advance. The order goes to the distributor, then to the printer, where a machine is connected to a network which contains the digital definition of the book. The network could extend

---

to many different locations, anywhere in the world, but the print job will be taken by the machine that is nearest to the distributor. A single copy of the book is printed and sent to the distributor, then to the bookshop to be collected by the customer. It is possible for books to be obtained in this way from any of the major bookshops in the UK (WH Smith, Ottakar's etc.) because they all use the same book-ordering systems. Normally, it will take a few days to get the book, because it has to go through the distributor, but the technology exists for installation of print machines in the bookshops themselves, so that the book can be ready for collection as soon as the glue is dry. You could order a book on the way to work and collect it on the way home.

Vanity publishing

As can be expected, a number of small publishing companies have grown around this industry, some of them offering both eBook and print on demand services. They charge a commission on sales of the book, but they normally also charge for the set up, making them susceptible to the problems of vanity publishers and they might even try to claim some of the rights to your book. There are a number of websites warning people about the problems and pitfalls of this type of publishing and they are indexed by the 'Science Fiction and Fantasy Writers of America'. However, we don't have to go in for any of this because we are technical authors and we know how to publish our own work.

Lightning Source

For some time I have been interested in ancient history and particularly the Babylonian records, which bear some resemblance to the early chapters of the Bible. I wrote a book called *Forgotten History of the Western People: From the Earliest Origins*. While writing it, I also did some research on the available printing and wholesale distribution services. I took the plunge and went in with Lightning Source, which is based in Milton Keynes and networked to their head office in America. They are part of Ingram Industries and they distribute books to retail outlets in the USA

through the Ingram Book Group. They also have an arrangement with Bertram, so that books can be made available to bookshops in the UK.

Technical requirements
Obviously the technical requirements for book publishing will vary from one printing company to another, but I will describe what I had to do to set up my book with Lightning Source. First I had to set up an account with them, to identify myself as a publisher. I called myself Anno Mundi Books and opened up a post office box in that name, so I would have an address to print on the book cover. Anno Mundi is Latin for 'Year of the World' and seems appropriate for my type of book.

I discovered to my very pleasant surprise that I didn't need any expensive publishing tools to prepare my book according to the correct format. All I needed was Microsoft® Word, Paint Shop Pro® and Adobe® Acrobat®.

Book block
Microsoft Office applications are normally unsuitable for press work because they cannot handle CMYK process colours, but my book block

---

Specifications for book block preparation with Lightning Source

Page layout
The page size within Word must be 8.5×11 inches, regardless of the size of the finished book (which in my case was 5.5×8.5). The margins have to be set so that the text block is exactly in the centre of the page and there is sufficient margin left over when the page is cut to size. There is no need for cropmarks, which Word can't do anyway.

Printer resolution
The printer resolution is 600 dpi. This means that all the images have to be prepared so that when they are loaded into the document and resized, their effective resolution is 600 dpi or greater.

Fonts
All the fonts have to be PostScript. A set of standard fonts, suitable for most purposes, is available with the Adobe Type Manager.® TrueType fonts are not allowed.

Portable Document Format
The Word document has to be converted to PDF, using Adobe Acrobat. The Distiller® job options have to be given appropriate values, and I won't go into all the details here, except to say that all the fonts must be embedded into the document.

---

was black and white with some line art and greyscale images, so Word was adequate for the job. The specifications, without going into all the details, are summarised in the side panel.

The conversion to PDF provides a useful opportunity to check that all the fonts in the document are PostScript® and there are no TrueType® fonts left over from previous editing activities. To do this, display the file in Acrobat and click **File > Document Properties > Fonts**. This will display a list of fonts on the current page, then you can click **List All Fonts** to display a list of fonts in the whole document. The font types should all be Type 1, which is a version of PostScript. If there are any TrueType fonts, you will have to go back to the original Word document and find them, and replace them with PostScript fonts.

One peculiar feature of Word is that it won't convert a bullet paragraph to PostScript, so instead of using the bullet feature, you have to use an outdented paragraph with a symbol character as the bullet.

Book cover
For the paperback cover, a single image is required, representing the back cover, spine and front cover, and there needs to be a bleed area round the edges to allow space for the cutters. The image has to be submitted as a CMYK TIF file, at 300 dpi. In Paint Shop Pro, this means you create your image in the usual way as a PSP file, then save it as TIF. When saving the file, first select TIF as the file format, then click the **Options** button and select **CMYK** instead of **RGB**.

The back cover has to display an ISBN number and barcode graphic. To obtain a number, you have to apply to the ISBN Agency in Farnham in Surrey, and the graphic can be generated from a program on the Lightning Source website.

Wholesale distribution
After preparing my book block and cover, I submitted the files to Lightning Source through their website. At the same time, I had to specify a retail price for the book and a discount for wholesale distribution.

When a book is sold, I get paid the wholesale price minus the printing cost. The wholesale discount for print on demand is less than the discount for conventionally printed books, because there is no need for distributors to keep stocks. However, the question of discounts is a minefield of negotiation between different parties, and in the end, I specified a discount slightly higher than the acceptable minimum and then priced the book so that I wouldn't lose out if my assumptions turned out to be wrong. The price of a print on demand book has to be fairly high anyway, because in spite of the benefits of digital technology, the printing cost is still higher than for a conventionally printed book.

A few days after I had submitted the files, a proof copy of my book arrived and it looked just like any other paperback book. If I gave it to someone, they would never know that it was produced with print on demand technology. I went back into the website and approved my proof copy and the details of my book were fed into the distribution system. A few weeks later, it appeared on the websites of Amazon, Barnes & Noble, Blackwell, BookSense and the UK distributor Bertram.

Getting it on the shelves
One of the disadvantages of print on demand is that the book never appears on bookshop shelves. It only arrives in the shop when someone has ordered it and paid for it.

Bookshops normally order books on a sale or return basis and they won't order print on demand books as stock items because there is nowhere to return the unsold copies. They can't return them to the distributor, because they don't keep stocks either, and they would not know what to do with a returned book.

The solution to this problem, for the self-published author, is to find other ways of distributing the book so that it becomes popularised and then it will be possible to send it into distribution through the conventional channels.

Short run distribution
In addition to the print on demand service, Lightning Source also has

a 'short run' printing service so that publishers can order copies of their books at the printing cost and have them delivered to their own address or another address which might typically be a specialist dealer.

When I approved the proof copy of my book, I ordered my first batch of 25 copies for sale through my own efforts. Some of them were sold directly to friends and neighbours, but I also set up an eCommerce website so that I could sell them over the Internet. This has the advantage that I can sell the book to anyone, anywhere in the world, in any currency, and I can get the maximum return for each book sold because I don't have to give discounts to wholesalers. I bought a shopping cart program called shop@home from Halliwell Software, so that customers can get as far as the **Checkout** page. Then they click the **Purchase** button and are transferred to the WorldPay secure site where they can put in their credit card numbers. WorldPay charges 4.5% on the value of each purchase, which would be a lot of

money if I was selling a Ferrari, but it's a convenient way of selling low-value items such as books in multiple currencies.

My first batch of 25 books was soon sold out and I had to order some more. At the time of writing this article I am buying them in batches of 50 and getting some good feedback from readers, and some of them have written reviews. I have also sent some books to a specialist organisation that has an interest in the subject matter and they are capable of selling them in much larger quantities. You never know, by the time you read this, I might have hit the big time, and if that happens, I can go to any mainstream publisher because I haven't given away any of the rights to my book. ■

References

Adobe eBooks Central, www.adobe.com/epaper/ebooks/main.html [Feb 2003]

Adobe eBook Library, http://librarydemo.adobe.com/library/default.asp [Feb 2003]

Gemstar Company Related FAQ, www.gemstar-ebook.com/ebcontent/supt/gen_comp.asp [Feb 2003]

Mobipocket Publisher, www.mobipocket.com/en/Publisher/default.asp [Feb 2003]

Open eBook Forum, www.openebook.org [Feb 2003]

Read in Microsoft Reader add-in for Microsoft Word 2000, www.microsoft.com/reader/info/rmr.asp [Feb 2003]

Science Fiction and Fantasy Writers of America, www.sfwa.org/beware/printondemand.html [Feb 2003]

Writers' & Artists' Yearbook, published annually by A&C Black, London.

Mike Gascoigne BSc MS CEng MIChemE MISTC is a freelance technical author with a chemical engineering background. He has worked on a wide variety of contracts including maintenance management, water quality and gas cylinder filling systems. He is based in Blackwater on the Surrey/Hants border. Website: www.write-on.co.uk