

Part 1

The production and distribution of e-books

Overview

The development and availability of e-books for the library market have been growing in importance for the last ten years. The range of subject matter now available in e-book format is diverse, and includes textbooks at school, college and university level, self-help manuals, monographs and novels. Some e-books may have illustrations and charts embedded within the pages, whilst others may include interactive features and audio and/or video capability.

The most common distribution methods for e-books are payment and subsequent access through the website of the individual publisher or through third-party intermediaries; however, other methods of making this content available to readers can include consortium purchasing and hosting, in-house production and directing users to the many free e-books available. The authors contributing to this section consider the production and distribution of e-books from a number of perspectives.

Joel Claypool (Chapter 1) of Morgan & Claypool Publishers describes the process from the perspective of a book publisher, as well as highlighting some of the major challenges being faced by the industry in a world where so much factual information is now freely available via the internet.

Anna Grigson (Chapter 2) of Royal Holloway, University of London, provides some practical guidance for library and information professionals, addressing some of the factors to consider when selecting e-book providers, from identifying appropriate suppliers to negotiating licence terms.

Silvia Gstrein and Günter Mühlberger (Chapter 3) of the University of Innsbruck provide a fascinating insight into the eBooks on Demand (EOD) service, which allows readers to request digital versions of the print titles held in 30 member libraries. Gstrein and Mühlberger describe the process involved and consider the future for this impressive pan-European service.

Finally Kate Price (Chapter 4) of the University of Surrey discusses the role of free e-books in the library setting, reflecting on the advantages and disadvantages of managing a collection of freely available titles, and identifying some of the collections currently available.

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Publishing e-books: challenges and perspectives

Joel Claypool

Introduction

This chapter deals with the transitions, opportunities and challenges for publishers, both large and small, arising from the expanding market for e-books. The aim of the chapter is to examine some of the fundamental business practices, cost structures and market forces that affect the ability to create a sustainable business model for e-books, whether in a for-profit, not-for-profit or ‘not-yet-for-profit’ publishing operation. A further aim is to provide an insight into the process of creating high quality books and e-books, to raise awareness of the effort and investment involved, and to examine the concept of value with regard to published information.

The observations that follow are primarily from the perspective of a publisher of professional and scholarly books in the science, technology and medical (STM) areas, but consumer (trade) publishing is also touched upon. The author also brings to bear the experience of founding a start-up publishing company in a market that expects online information to be both readily accessible and inexpensive. Overall, the chapter describes a fast-evolving and sometimes daunting environment for many of those currently working in publishing, and provides some background for library and information professionals who may not be aware of the pressures that are currently being faced by the industry.

The impact of digital technology on the publishing world

It would not be an exaggeration to say that the emergence of e-books will have the most profound impact on the book publishing business since Gutenberg's introduction of the mechanical movable type printing press in the fifteenth century.

In recent years a number of technologies have converged to allow the creation, sale and distribution of e-books: personal computers, page-making software, the internet, mobile communication devices, broadband wireless, e-reader devices and so on. However, the technologies alone do not greatly alter the traditional ways and means of the publishing business. In fact, perhaps the most important change is the potential for a dramatic restructuring of the financial model of the business. For the first time since movable type was introduced, the industry may be facing a situation where the technology available and the consumers who use it come together to create an environment where the price for books and information substantially decreases.

Book publishing may well be approaching a wall similar to that already encountered by the printed newspaper industry. This has transformed seemingly invulnerable publishing giants into companies in search of a survival scenario: there has been a reduction in circulation of 16.9% and an estimated loss of roughly 13,500 jobs in the USA over the past three years, following a migration of audiences and advertising to freely available websites (Project for Excellence in Journalism and Edmonds, 2010). Book publishing is being pressured by similar technological forces, consumer demand for easy online access and the deflation of the price of information in some quarters. These changes present some major challenges to existing publishing companies, both the mega-conglomerates and the many smaller publishing houses, but may greatly benefit consumers and provide equal access to more and better information for all throughout the world. There may be opportunities for new players to enter the market or convert existing content to e-book models. Similarly, new business models may emerge which could develop quickly into the industry standards of the future.

There is no doubt that e-books are gaining ground. In 2009 e-book sales made up 1.5% of total US book sales and grew to 5% of the market in the first quarter of 2010, according to a survey carried out by the Book

Industry Study Group (Holt, 2010). However, a number of crucial questions for publishers remain unanswered: when will individuals shift their purchasing preference over to e-books, how will they want them delivered, and, most importantly, what is the price they are willing to pay? Additionally, how is this influenced by the greatly increasing volume of free and open information in the scientific, technical and medical (STM) communities?

The economics of book publishing

In order to understand the viability of e-book publishing, it is important to have a basic understanding of the traditional printed book business, as, for the publisher, the basic tasks involved in creating e-books are very similar. Primarily these include the acquisition, financing, production, marketing, sales and delivery of books. Although the ways that these tasks and responsibilities are carried out have undergone quite radical change owing to technological, social and economic forces, the basic underlying functions of publishing remain the same: to facilitate the creation of content by an author, and then deliver that content to the interested reader.

Since the early 1980s, a number of internal and external forces relating to costs, pricing, discounts, sales channels and sales volume have led to the erosion of a profitable business model. Book publishing has never been an easy road to riches; it tended to be a business of rather well financed intellectuals who had the cash, patience and perseverance to survive. However, there has never before been a more challenging environment for publishers in which to make a profit.

Cashflow and profitability

The publishing of new and original content requires cash up-front for staffing, production and manufacturing, with sales revenues lagging behind initial investments by several years. At present, this seems to hold true for e-book publishing as well as for print. Publishing plans need to be developed; authors need to be recruited and publishing rights acquired. Then the creative process begins, with authors typically needing one to four years to produce the content. Only after the book has come to market can the publisher begin to recoup any costs.

Profits are constrained by supplier discounts and overheads. Books are generally sold by publishers to suppliers at an average discount, which now approaches 40% – a huge increase from the 20% levels of the 1990s. Also, the allocation for overheads (premises, equipment and staffing) has in some cases climbed above 30% of the list price. With discounts to suppliers and overheads taking up 70% of the revenue from the book, a thin margin of 30% remains to cover the production costs, royalties and profits. Hence, no matter what the price, numbers of books sold or net revenue, the margins of profitability are very slim.

Whether selling books at a cost of \$10, \$25, \$75 or \$150, it takes a great many sales before the revenue will cover expenses and yield a profit. It typically takes the production of dozens of published titles to optimize future income and revenues and absorb fixed costs. Publishing many more titles also spreads the risk of missed sales projections and the costs of production, sales and marketing. However, building up a portfolio of titles takes a tremendous amount of time, patience, labour and cash investment from the publisher, even before the time and efforts of the authors are taken into account.

Therefore, even the smallest start-up publishing company, needing to commission and acquire original content, may require over \$1,000,000 in financing, along with revenues from ongoing sales, to reach a break-even point in around five to seven years. Even with a large amount of luck (or a perfectly-timed bestseller), this investment level and timescale appears to be similar for e-book, or predominantly e-book, publishing companies.

Content acquisition and editorial costs

No publishing operation, whether print or electronic, can exist without content. Therefore the first step in any publishing plan is to determine the costs of acquiring that content. In scholarly and professional publishing, this is likely to be nearly identical for print and e-book models of production. In a small company or start-up, content acquisition is often the function of the founder, but further editorial personnel may soon be required, owing to the time and energy demanded in order to forge a successful relationship with both existing and potential authors.

Commissioning editors may need to sign a large number of authors

and publish a considerable number of books in order to achieve and maintain survivable margins, particularly in smaller companies which have not yet achieved brand recognition in the market. In some areas of publishing it may take the acquisition of three times as many book titles as are actually planned for publication, because of attrition caused by delays, titles that never get written, and those that are cancelled.

The salary cost for a junior commissioning editor is likely to be in the range of \$75,000–\$100,000 per year. Editors may need to travel both domestically and internationally to conferences, campuses and corporations in search of authors. The basic costs of travel can be \$20,000–\$30,000 per year. Add to this the costs of reviewing and editorial honorariums, and expenses begin to mount quickly. Bearing in mind that the editor's initial acquired titles may not be published for a minimum of two years and that the production of a truly substantial number of titles may not be seen for several more years, there will be significant lead time before that editor's salary is covered by sales revenue.

Pre-press costs

Pre-press costs for composition, copy-editing and formatting have reached their lowest point ever in real dollar terms. The move to digital desktop composition in the early 1990s, the introduction of online proofing and the creation of digital page formatting processes, together with the overwhelming shift to full production services offshore, have all led to greatly reduced costs. The pre-press cost of producing one page in 1985 could range from \$30 to \$50 for a standard one-colour book. Now, 25 years later, the pre-press cost of producing the same page ranges from \$8 to \$11, whether this is for an e-book or a physical copy. Once again, this is a cost that will not be reduced significantly by the shift to e-only formats.

Manufacturing costs

Perhaps the biggest misunderstanding from those outside the book publishing business concerns the relationship between the retail price of a book and the cost to the publisher of manufacturing a bound copy.

The cost for the printing, paper and binding (PPB) of a book has historically been as low as 10% of the listed price of the book. In some cases, with the high prices of STM monographs for limited markets, this percentage is even lower. A \$100 book may cost as little as \$2 per copy to produce. These levels will vary slightly according to the size of the print run, with higher per copy prices for print on demand (POD), for example.

Of course, if books are not printed at all there is lower usage of material resources such as paper, and less fuel is expended in transportation, so there is an environmental benefit. Also, the danger of overprinting and the need to maintain warehouses full of seldom- or never-purchased books is reduced, but not to the extent that profits are affected significantly. Therefore an e-book publishing model without the printing of any physical copies may only contribute 10% or less to either increasing profits or lowering prices. When this is coupled with continuing pressure from consumers and retailers for price reductions far greater than 10% for e-books, there may be no net gain to be had from a reduction in manufacturing costs.

Shipping and handling

In recent years, large online retailers such as Amazon have begun to offer free shipping and handling for consumers on what appear to be already discounted books. Unfortunately, this has resulted in even greater pressure on publishers from retailers and wholesalers to absorb their shipping and handling costs through the provision of even greater discounts. In the e-books-only publishing model, shipping and handling are reduced. This in turn reduces the impact on the environment and so is a benefit to society, but as profit margins are already being squeezed to provide discounts on the list price, the cost saving implied by the reduction in shipping and handling is unlikely to affect e-book business models substantially.

Royalties to authors and editors

In STM publishing, royalties paid to the authors or editors of monographs have traditionally ranged from 10% to 15% of net revenues

from sales. In addition, the editors of series and advisory editors have received an average of 2%, and occasionally up to 5%, of sales income. It is likely that, for STM publishing at least, this percentage will not change substantially, owing to the high costs of bringing content to publication, as discussed above.

In the realm of popular publishing, some smaller e-book-only publishing companies are offering royalties of up to 50% (Teicher, 2010), and even major publisher Random House recently increased royalties for some high-selling backlist e-book titles from 25% to 40% as a result of negotiations with authors' agents (Deahl, 2010). This recognition that mass-market e-books with a large potential audience can generate substantial incomes and profits, and that authors therefore deserve an appropriate percentage of that income, is very positive for authors, but such conditions rarely apply in academic or STM publishing.

Sales and marketing

An e-book publishing plan would not be complete without a sales and marketing strategy. STM publishers generally hope to sell collections of e-book content to libraries, particularly in the education, health and business sectors. This requires either a sales representative employed exclusively by the publisher, or a contract with a third-party company which will represent the product on their behalf (this is particularly useful in overseas territories). If the representative works exclusively for the publisher then the returns on individual sales are much higher, as a third-party sales force will take an average of 20% to 30% commission.

In either case, the sales process requires travel and contact with potential buyers on location at the libraries, as well as through attendance at library conferences and meetings. It is important to note that it may take numerous contacts over the course of several years to achieve a sale of e-book content to a library, particularly for new publishing companies where content and reputation take time to build. Costs may also arise from the use of 'passive' marketing channels such as placing advertisements in relevant publications.

Retail pricing and discounts

At the beginning of this chapter it was mentioned that the biggest potential challenge for publishers caused by the move to e-books is the fact that the retail price for books and information may substantially decline under pressure from consumers. This is already happening in the more commercial sectors of the publishing industry that produce fiction and non-fiction ‘trade’ e-books. Some online retailers have for several years been routinely selling e-versions of novels and other popular titles for several dollars less than the paperback price.

Arguably, this is a workable business model for trade publishing, particularly if it follows the classic microeconomic model where, given a large enough potential market, a reduction in price will lead to an increase in sales and revenue. However, some larger publishing houses are rebelling against this practice, which they see as devaluing the content; for example, in the UK Hachette recently moved to a re-selling model where they, rather than the retailer, set the sale price, and other publishers are likely to follow suit (Neill, 2010).

The discount model also works poorly for textbooks, reference works and monographs in STM publishing, as, in comparison to trade publishing, the markets for these books, whether in print or electronic form, are very small. For many titles, the total interested audience worldwide may be counted in hundreds or at the most thousands of individuals. This creates an inelastic market where lowering the price does not necessarily result in increased sales. Furthermore, these readers may not continue to be willing to pay traditionally high print prices for the same material in e-book form, a factor that will be discussed later in this chapter.

In addition to direct sales to consumers, STM publishers have been experimenting with different pricing models for the sale of individual titles and e-book collections to the library market for a number of years, many of which are explained in detail by Anna Grigson in Chapter 2 of this book. However, this is still very much an evolving situation, with no single pricing model being preferred by libraries or publishers.

Additional processes required for publishing e-books

Up to this point, this chapter has concentrated on the processes and

practices involved in publishing a book through the traditional route, and has compared the costs with the parallel processes involved in producing an e-book. However, there are additional factors to consider when moving into the e-book publishing arena.

Technological choices: supporting different devices

Most technologists and futurists would probably agree that there is a trend towards the development of multi-use devices, and that the consumer will eventually come to rely on having their information and communication needs served by only one or two devices. Because a larger format screen is preferable for comfortable reading, this need is likely to be met by an emerging hybrid of a tablet-PC/e-reader for accessing e-books, word processing and additional applications where size of display matters, while a smartphone may also be required for communication and swift access to applications on a smaller device.

The front runners in the portable e-reader market are the Kindle and the iPad. Currently, the Kindle display (which uses e-ink) may be preferable for ease of reading text, particularly in daylight, whilst the iPad may be preferred for its colour display and web linking functionality. Much more information about the pros and cons of different devices can be found in Chapter 10 of this book. Ultimately, the market will decide, and it is likely that these devices and their competitors will converge in functionality very quickly.

Until such a convergence occurs, however, publishers will need to provide content for a variety of platforms and devices, from desktop PCs to e-book readers, iPads and other mobile devices. The cost of creating the digital document and page files necessary for an e-book to be readable on any popular device is relatively small, ranging from \$50 to \$200 per book. This cost is falling constantly owing to advances in software for content management systems and page-making programs. These services are provided to publishers by large content production companies, such as Aptara (www.aptaracorp.com), Innodata Isogen (www.innodata-isogen.com), Cadmus Communications (www.cadmus.com) and many others. In addition, software and hardware companies, internet commerce and delivery companies, content platform companies and search engines all have a role in ensuring that cross-platform access to e-books is possible.

Content platforms

Although the traditional costs associated with manufacturing and transporting physical goods are reduced in the e-book environment, there are many new requirements associated with the hosting and maintenance of e-book files. These represent significant expenses, and in some cases exceed traditional print distribution costs. In particular, STM publishers that make sales to university, corporate and government libraries will need to provide access to their e-books through an electronic content platform. This platform must provide a means of hosting the electronic files and delivering them to end-users through a series of web pages and/or a search engine. It may also provide administrative functions ranging from purchase requests from library staff to the download of COUNTER-compliant usage statistics. Typically, only the very largest journal and book publishers have developed their own platforms, at substantial cost, whilst smaller publishers will tend to outsource their hosting needs to a third-party company.

High quality hosting platforms can cost from a minimum of \$50,000 to many hundreds of thousands of dollars annually, depending on the services required. An alternative, giving a lower up-front cost, is to provide the content to an e-book aggregator, which may both host and sell the e-books on the publisher's behalf, depending upon the contract. However, this might mean providing the content at a larger discount than would otherwise be the case. Another disadvantage is that the publisher's identity can be lost, or at best mixed with those of a wide variety of other companies. However, given the history of declining costs in software-related businesses, it is likely that the price for good quality hosting services will decrease in the future, and so ease of use and functionality will improve, even for those at the cheaper end of the market.

Content management systems

Many e-book publishers are now finding a need for content management systems (CMSs). These internal document-tracking and management systems have been the backbone of large corporations for years. They are also now becoming an essential tool to enable publishers to manage the multiple versions of files resulting from large numbers of book projects

that are either in the process of editing and production or are already available in a variety of document formats for multiplatform delivery.

In addition to managing the workflow for internal documents, most CMS services feature a web content management system (WCMS). Features of WCMSs that are vitally important for e-book publishers include facilities to feed content and updated information direct to the websites of e-book platforms and vendors, transmit data to resellers using the ONIX (Online Information eXchange) standard, create online marketing materials automatically, and provide file storage and transfer functions. Overall, the costs of a CMS or WCMS can be in excess of \$10,000 per year.

The value of information

Much of this chapter has been concerned with the cost of producing and selling books, whether printed volumes or e-books. However, when considering the evolution of business models for publishing, it is of equal importance to discuss the value of the information that is being produced. Value is defined in the Oxford English Dictionary as: ‘That amount of some commodity, medium of exchange, etc., which is considered to be an equivalent for something else; a fair or adequate equivalent or return’ (Oxford English Dictionary, 1989). Hence, value is determined as much by the consumer as it is by the producer.

Prior to the emergence of the internet, there were only certain specific places where specialized information was available. Encyclopedias, dictionaries, handbooks and directories were essential for quickly finding these pieces of information. The effort involved in producing these major reference works meant that a significant financial investment was required on the part of the publisher, and that they were therefore expensive to purchase. Libraries were the logical market for these resources, and were relied upon to provide good quality information sources to their readers through the development of comprehensive reference collections. Hence these collections and the books within them were perceived as a valuable commodity by those who used them, and the value of the information to the consumer was reflected in sales of books to libraries.

Now, in the internet-enabled world, the same information is easily

available, by entering a few keywords, from networked computers in offices, homes and coffee shops, and from almost anywhere using a mobile device. In the space of less than a decade, the demand for major print reference works has withered away, and the widespread accessibility of basic factual information on the internet has led to serious questions about the value of other types of information presented in e-book form, most of which may only be answered in the longer term:

- 1 STM books (and e-books) are sold as packages of information, with the content being determined by the publisher and the author. Often only one portion of that package is of value to a particular reader: perhaps a section, a chapter, a table of data, a standard, a formula or an explanation of a method. Sometimes the reader only wants or needs that small piece of information, but is required to find, or buy, the entire package in order to gain access to that piece. With e-books, can it be assumed that the consumer will be willing to navigate through and/or buy the entire package, or will there be pressure to disaggregate books and sell the elements within separately?
- 2 With the sale of large packages of e-book content to academic and research libraries, and improvements in descriptive metadata for that content, coupled with improvements in the ability of search engines to pinpoint information within the text, will any information be uniquely available in any one portion of any one individual book? If significant proportions of books are found to be duplicating one another, will there be pressure to reduce the number of books published, or to reduce the cost price further?
- 3 Does the reader require information to be absolutely perfect at all times (which is the assumption behind the editorial efforts of most STM publishers), or are they in most cases willing to accept information that is simply ‘good enough’?

Freely available alternatives to published e-books

If the consumer is satisfied with information that is ‘good enough’, then it is possible to find a vast amount of it available for free with even the most basic internet search. In the last ten years the advent of socially

networked sites has resulted in a burgeoning of free information resources which can be seen as competitors to the traditional STM publishing industry, the most visible example of which is Wikipedia (www.wikipedia.org). A few years ago, most publishing professionals, including this author, felt that Wikipedia would not be seen by consumers as a reliable source of information because it was open to peer-editing, with the public being able to make additions and corrections. This perception was proved incorrect – although Wikipedia has not yet become the *de facto* source of citable and verifiable information, it has nevertheless become the place to go for a large proportion of general information needs.

Interestingly, Wikipedia is itself subject to economic forces similar to those affecting traditional publishers; even if the general public provides the content and factual editing for free, physical infrastructure is still required to host the information and make it readily available to a wide audience, and this entails a cost to the provider. Some ‘free’ information sources make a charge to advertisers in order to underwrite their costs, and in some cases make a profit. However, Wikipedia does not sell advertising, and founder Jimmy Wales has recently published an appeal for donations in order to keep it a ‘community creation’ that is advertisement free (Wikimedia Foundation, 2010).

In contrast to the articles on Wikipedia, which are intentionally made freely available by their authors, there is a growing issue of the unauthorized distribution of publishers’ content through file-sharing websites. These sites are often also used for the legitimate sharing of original information, which makes it all the more difficult for publishers to trace and control their digital assets, and to determine whether or not they have been illegally copied. Many would argue that the free flow of information is to be welcomed, particularly in the academic world. However, it is difficult to make this case to those publishers who invest significant amounts of both time and money to bring this content into the world in the first place.

So, the publishing industry is undergoing seismic shifts as a result of freely available information on the web. While this may be extremely uncomfortable (to say the least), it does mean that there is scope for authors, publishers and technological innovators to come together and find new ways of ensuring that the information contained within e-books

and other online resources is both valued highly enough to make it economically worthwhile for those who participate in its creation to continue doing so, and made available at a price low enough to satisfy the information needs and wants of the majority of consumers.

Conclusion

An examination of basic e-book publishing costs shows that the transfer of information delivery to electronic-only formats does not necessarily result in substantial cost savings. If the list prices of e-books substantially decline, and the availability of free and easily accessible information on the internet greatly increases, there may be difficulties ahead for current e-book business models. The challenge for publishers is to find models that enable them to make a profit in a world where the nature of demand for information is changing – and its perceived value is falling. However, there is no doubt that e-books are destined to be a dominant part of the future of publishing, and that the social, technological and economic changes that the industry is now undergoing are likely to result in some very interesting new businesses.

Useful links

Aptara www.aptaracorp.com
Association of American Publishers www.publishers.org
Book Industry Study Group (BISG) www.bisg.org
Cadmus Communications www.cadmus.com
Innodata Isogen www.innodata-isogen.com
ONIX www.editeur.org/8/ONIX
PW: Publishers Weekly www.publishersweekly.com
Wikipedia www.wikipedia.org

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