



E-books in China: develop and use

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Abstract

In the past ten years, both the publishing of Chinese e-books and the introduction of foreign e-books have undergone tremendous changes in terms of quantity, scale and form in China. The Chinese e-books have developed from the digitization of printed books by three major integrators to the synchronous publication with that of printed books through cooperation with over 500 publishing houses.

This paper aims to explore the current development of e-books in China and analysis its characteristics and problems, especially from the viewpoint of library.

This paper discusses the development of e-books in China from the aspects of the Chinese e-book industry, homegrown e-books by libraries and the introduction of foreign e-books, and analyses the use pattern of e-books in China, especially the mobile reading and the library using. At last, it summarizes the tendency and problem of the e-book development in China.

Keywords

E-books, China, develop, use

1 The development of e-books in China

1.1 The industry development of Chinese e-books

Chinese e-books have been developed in China in the 1990s. After more than ten years development, it has become an industry. By the end of 2007, there are 400,000 kinds of

e-books published in China, which becomes the world's biggest single-language electronic libraries.

The development of Chinese e-books can be divided into two stages:

The first stage is, from the 1990s to 2002, the embryonic stage of Chinese e-books.

In the 1990s, with the development of digital library in China, the development of Chinese e-books has been driven by the digitization of Chinese document. The earliest producers and providers of Chinese e-books are mainly companies who provide technological service of digital library, such as Beijing Century Super Star Information Technology Development Co., Ltd. (Super Star for short), and Beijing Sursen Company. Super Star is one of earliest developer of digital library technology in China, who, from July 1998 to December 1999, helped National Library of China to digitalize books by adopting the PDG Technology and cooperated with National Library of China to open the column of Read on the Net. In 2000, Super Star Digital Library formally opened on the internet, and in June, it was listed as demonstration project for digital libraries in China in the National High-tech Research and Development Program of China (863 Program). Sursen Company, founded in 1996, is an IT company focusing on providing technologies of Chinese document digitization, who has been working on the construction of Sursen Digital Library since 2000.

During the earliest development of e-books in China, technology plays a leading role and the main content is digitization of printed books. Companies released Chinese e-books mainly in the form of database for organization users, who mainly are libraries, and each has its own e-book readers.

The Second stage is, from 2002 to the present, the rapid development stage of the e-book industry in China.

Super Star Company and Sursen Company released e-book production in Chinese in 2000 which is viewed as the opening year of the e-book industry in China. But the year e-books really began to boom in China is 2002. With the maturity of internet environment, e-book platform technology and DRM technology, many companies also took part in the industry of e-book publication. The foundation of Beijing Founder Electronics Co., Ltd brought the breakthrough development in the industry of Chinese e-books.

Formerly providing electronic typeset services for publishing houses, the Founder Electronics, as the platform and technology provider for digital publications, adopted the developmental pattern of cooperating with publishing houses, which means obtaining legal copyright of e-books and promoting the development of Chinese e-books publication from the digitization of printed books to the synchronous publication with that of printed books,

Up to now, almost 90% publishing houses in China have developed e-books publishing business and 500,000 kinds of e-books have been published. The major e-book integrators are the Founder Electronics, Super Star Company, Sursen Company, Chinese All Company and Digital Library of China.

1.2 The development of homegrown e-books by libraries

In China, besides publishing houses and e-book integrators, many libraries also digitalize and provide e-book services. In 1999, the National Library of China set up the Center for Document Digitization, who is responsible for digitalizing special collections and producing e-books. The homegrown e-books by libraries are mainly the digitization of special collections required by users.

E-books developed by libraries, which are influential and widely used at present, are:

(1) China Academic Library & Information System (CALIS) teaching reference books, which are the digitization of teaching information of the 52 universities participating in the program and of the classic teaching materials and teaching reference books selected by teachers. This program was organized by CALIS Administrative Center in 2003 and basically covers fields of arts, science, engineering, medicine, agriculture and forestry. These e-books, being advanced in technology and without copyright issue, satisfy teaching demands. They are accessible for teachers and students of CALIS members to retrieve and read on the internet, and help to realize studying on the internet through digital library.¹

(2) China-America Digital Academic Library, which is invested by the government, constructed by institutions as Zhejiang University and Graduate University of Chinese Academy of Sciences, produced by China-US Million Book Digital Library project, aims to build digital resources in the scale of millions collections for the teaching and scientific research of Chinese universities. It is planed to digitalize 500,000 volumes of Chinese books and 500,000 volumes of English books. The former includes dissertations, books of the Republic of China (1911-1949), ancient books and other precious traditional cultural resources.²

(3) Special collections database of the National Library of China. The National Library of China is the leading library and the center of document information services in China. In 2002, the National Library of China started National Digital Library Project, intending to focus on collecting, constructing and preserving Chinese digital resources in the long term. So it has digitalized ancient books, books of the Republic of China, minority documents, dissertations and government publications, and provides services of full text image and full text copy.

1.3 The introduction of foreign e-books

The introduction of foreign electric resources in China begins at the end of 1990, but the introduction of foreign e-books begins in 2003, which was led by Shanghai Library, who organized almost 20 libraries, including university libraries, public libraries and research institutions, to purchase OCLC NetLibrary e-books for the first time. In the same year, leading by Peking University Library, CALIS Center for Arts and Sciences cooperated with OCLC NetLibrary to provide e-book services to national university libraries from 2004.

E-books were introduced into China were from integrators like OCLC in the early period to publishing houses, such as Springer and Ebrary. The introduced e-books are mainly scientific monographs and reference books, such as Encyclopedia Britannica, and primarily facing organization users. The introduction is conducted through consortium acquisition by Chinese library consortiums, such as CALIS, China Academic Humanities and Social Sciences Library (CASHL) and Chinese Academy of Sciences.

In summary, the introduction and usage of foreign e-books in China still is not in a large scale. Take Chinese university library for example, the number of the imported e-book databases of Peking University is 4, and that of Tsinghua University is 8.

2 The use of e-books in China

2.1 The use pattern of e-books in China

Based on type of services, the use of e-books in China can be divided into 4 categories: digital library (for organization users such as libraries), pay for reading (for private computer user), mobile reading (for mobile users) and others (for users with special reading equipment). According to 2007 statistical data, the digital library business took up 71.43% of the whole industry, the pay for reading took up 21.84%, the mobile reading took up 2.89%, and others took up 2.89%。³

The e-book providers of digital library business are primarily the four e-book integrators in China, who considers organization users like libraries and research institutions as target clients, primarily provides professional books, educational books and reference books, and generally adopts the sales method of signing license between e-book providers and organization clients. The e-book providers of pay for reading are primarily e-book retail website, who considers internet users as target clients, primarily provides leisure books, and adopts the sales method of retailing and paying on the internet through e-bank. The e-book providers of mobile reading are primarily mobile e-book website (such as Mobile Bookstore of China Mobile), who considers mobile users as target clients, primarily provides leisure books, and adopts the sales method of retailing on the mobile e-book website and paying

through mobile or e-bank.⁴

2.2 Mobile Reading

Although takes up a small scale of the whole usage of e-books, mobile reading develops rapidly. By the end of 2007, there are 50,400,000 people who surf on line through mobile in China, who takes up 24% of the total internet users. With the decreasing of internet access fees for mobile net surfing and the increasing of users surfing on net through mobile, mobile will become one of internet terminal as notebook computer and PC. Surveys show that 58.9% of mobile users, who have already enjoyed the service of Monternet (for young people provided by China mobile), are willing to pay for the e-books of their favored authors and in the 3G age more than one third of mobile users are willing to subscribe to news.⁵ The sales amount of mobile reading business in Chinese e-book market increased from 200,000 yuan in 2002 to 6,500,000 yuan in 2007, and the market share increased from 0.36% in 2002 to 3.84% in 2007. The annual growth rate of mobile reading business in 2007 was 117%, which was because the continuing decreasing of phone bill and price of mobile and the popularization of large screen phone and smart phone, which enhanced the performance, function, speed, capacity and popularity degree of mobile reading. The mobile reading will become more and more popular.

The mobile reading pattern includes mobile newspapers, mobile magazines, mobile novels and mobile original literature etc. There are two methods for mobile users to do mobile reading. One is directly logging on WAP site to read online, and the other is downloading to read through installing reader software.

The providers of digital materials for mobile reading in China are mainly:

(1) E-book providers, such as ChineseAll and Sursen Du8. ChineseAll is the strategic partner of China Mobile and the certification institution of the copyright of Monternet's digital books, and provides 69% e-books in the legal copy for Monternet's mobile business. It also provides reading materials for the self-possessed reading platform of China Mobile operators at provincial level and e-books for SP. ChineseAll's wireless reading website (wap.17k.com) is one of largest online reading website in China, whose daily Page View is more than 100,000.

(2) Original literature websites, such as Qidian. Qidian, founded in May 2003, is a largest reading and writing platform for original literature in China, who started the charged online reading, a new pattern of electronic publication.

(3) Some large portal websites and general websites, such as 3G Portal and Sina etc.

2.3 The acquisition of E-books in library

Since 2002, digital library business has always been the dominant business in the Chinese e-books market, but it shows a tendency towards declining. The scale of digital library business drops from about 90% in 2002 to about 71% in 2007. In 2000, the three major e-book integrators in China were founded and libraries began to purchase e-books. From 2002 to 2006, the annual growth rate of sales amount of digital library business basically keeps above 20%. In recent years, as libraries' purchasing scale of e-books gradually becomes stable, the growth rate of sales amount of digital library business dropped to 10% in 2007. The slowing down of the growth rate of digital library business is the major reason for the declining of the annual growth rate of e-book sales amount in China in 2007.

There are three patterns of e-book acquisition for libraries:

(1) Perpetual Access: Purchasing e-books based on disciplines or species for once, which allows users to use them as long as paying the platform fee or continually purchasing new books to support the database maintenance, such as the Founder.

(2) Access fee: Paying for use allows users to use e-books during the duration of the licence, such as Super Star and NetLibrary.

(3) Purchasing e-book services not for the purchase of e-book resources. In 2006, Super Star released Duxiu Knowledge Base which is an academic search engine. Duxiu integrates document retrieval, reading trial and document delivery to provide original text delivery service base on full-text retrieval. Through Duxiu, users can not only search the library collection, both printed and digital, but also access to the first 17 pages or the first 2 pages and the last 8 pages of e-book found in Duxiu's catalogue, and obtain up to 50 pages through document delivery.

2.4 Integrated services of e-books in libraries

In the early stage, libraries provide e-book services for readers in the form of individual database. Afterwards, with the increase of e-books database, libraries gradually integrated e-book digital resources. The main methods are the following:

(1) Through OPAC. OPAC system is a retrieval system best known and widely used by users, so the integration of printed and the electronic books in the OPAC system can improve the utilization of libraries e-books. Through the reformation of the format of MARC metadata, primarily adding series of new fields (especially fields 856), libraries successfully reveal digital information resources through MARC. Libraries subscribe e-books from e-book publishers and get the e-book metadata, which will be imported into OPAC system. The

disadvantage of this method is that the integrity of the data is difficult to achieve, for not all the e-book publishers can provide MARC metadata, and there might be multiple bibliographic data when there are multiple resources of printed and electronic versions. Users might come across duplicated data or data absence when retrieving e-books via OPAC.

(2) Through navigation system. Libraries always build digital resources navigation system integrated Chinese and foreign digital resources based on resource types and disciplines, which can help users to know the digital resources, quickly discover and locate what they need by hyperlinks. This method is widely used in the integration of digital journals magazines and not so popular in e-book integration. Peking University Library once built the navigation system for Chinese e-books, and Shanghai Jiaotong University once built the navigation system for foreign e-books.

(3) Through federated search system. This system offers a unified retrieval interface, which will transform user's search requests into corresponding search strategy of different database, concurrently search multiple distributed and heterogeneous database both from local and internet, and present the search results with unified format after removing the duplicates and sorting. This is the most common method used in the integrating of digital resources in libraries, which means minimum maintenance and ability of the integration of multi-type resources. Meanwhile, it causes slow search performance, provides less search fields and results than that of searching in a single database.

(4) Through linker resolver. It interconnects library-controlled resources and services, providing users with context-sensitive links to these services based on the library's e-collections and policies. The SFX of Exlibris is the earliest provided and the most widely used linker server of choice for 25 libraries in China.

3 The tendency and problem of e-books development in China

3.1 The e-book market in China expands continuously, but the avenue has not formed a certain scale.

The e-book market in China has been expanded since 2002. By the end of August 2008, there are 500,000 kinds of e-books published by domestic publishing houses. The Amount of e-books published was increased 15000 in 2007, which is three times of the increase in 2006 (see figure1).The annual e-book sales volume also increases, and the sales amount increases from 55,000,000 yuan in 2002 to 169,000,000 yuan in 2007.

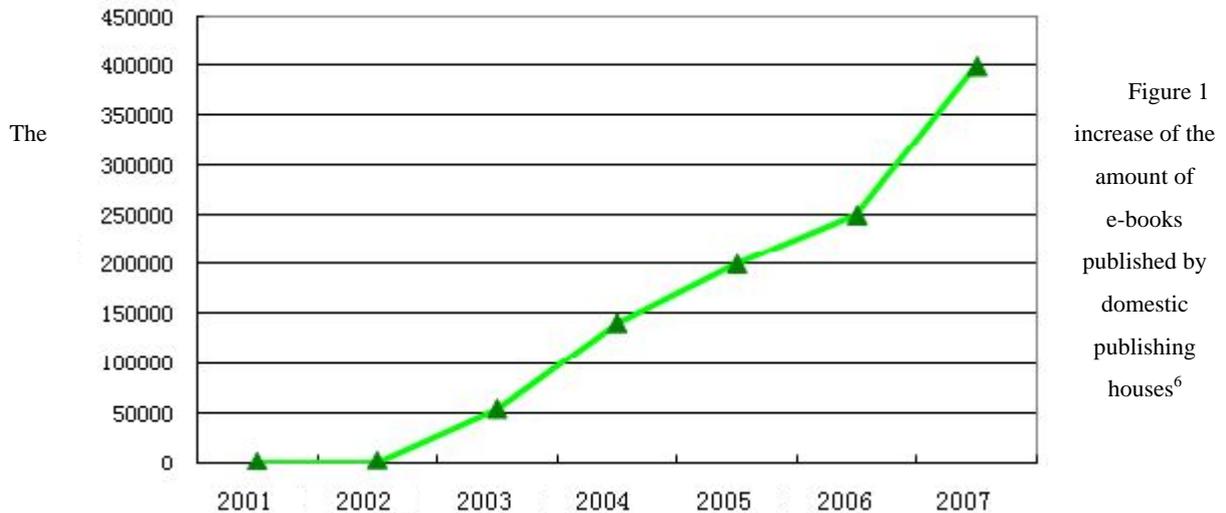


Figure 1
increase of the
amount of
e-books
published by
domestic
publishing
houses⁶

Although the e-book market in China expands continuously, it doesn't impact seriously on the traditional book publication industry. In 2007, there are 248,000 kinds of printed books published in China and the sales amount achieves 51,262,000,000 yuan. Though there are 150,000 kinds of e-books published in 2007, the sales amount is only 200,000,000 yuan. The sales amount of e-books is only 0.3% of that of traditional books. For publishing houses, although the the sales amount of digital publication increases annually, and this has already become a major source of the revenue in a few publishing houses, most publishing houses still depend on traditional publication for their sales income at present.

3.2 Digital publication gets more and more attention and digital publication mechanism is gradually improved, but the industry still lacks unified standards.

Publishing houses in China have realized the importance of digital publication and have begun to make strategic plan of digital publication. Because of the co-existing and integrating of traditional publication and digital publication in China, publishing houses mostly adopt the pattern of combined publishing pattern.

On the one hand, over 90% publishing houses in China are using Founder's Apabi platform (Aim for Paperless Application by Internet) in their e-book publication. On the other hand, traditional publication institutions are developing their strategy and annual plan for the publication of e-book. When signing publication agreement with authors, the right of communication through information on network is added. With authorization of authors, publishers appoint special departments and staffs to preserve the electronic typesetting documents and transform them to e-books. For example, China Construction Industry Press initiated the pattern of direct transforming into e-books by printing factory. Shanghai Century Publishing Co., Ltd. enlarges e-book production scope, appointing special department for the e-book publication and the preserving and back-up of digitalized document of books, arranging printing factory to take part in the early production of e-books, and cooperate with Yiwen Net to develop the e-business of e-books and printed books.

At present there is only Enterprise Standard in China, while industry standards and national standards are lacked. Some of large publishing houses and digital publication technology providers constructed their publishing system and publishing format. High Education Publishing House based on content management platform, formulated a standard of Document Type Definition of technology books—HEPBOOKDTD. Encyclopedia of China Publishing House constructed a database of Wikipedia terminology. Shanghai Century Publishing Co., Ltd. built Yiwen Net for the public platform of digital publication. It's difficult to share or interoperate these enterprise-based standards.

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3.3 Intellectual property protection in China gets more and more attention, but large quantities of books whose copyright issues need to be solved.

With the development of e-book, intellectual property protection in China gets more and more attention. *The right of communication of information on network* was added into the Copyright Law of the People's Republic of China in 2001. Ordinance on the protection of the Right to Network Dissemination of Information was promulgated in 2006. E-book providers have strengthened intellectual property protection during the production of e-books with consideration of the authorization of authors and publishing houses. It is after 2003 that publishing houses in China add items of the right of communication of information on network, when signs a publication agreements for printed books with authors.

For history reason, e-books published before 2001 still have some copyright problems. According to copyright laws, a lot of books are in copyright protection that cannot be digitally published directly. They are primarily the following: most books published in China from 1950 to 2002, which are 1,700,000 titles/ 2,000,000 volumes; part of books published in China from 1912 to 1949, which are 150,000 titles/ 200,000 volumes.⁷ It is difficult and costly to gain the authorization from right holders of these documents.

4 Conclusion

In conclusion, after more than ten years development, the e-book industry has taken shape. Chinese e-books have developed from the digitization of printed books to the synchronous publication with that of printed books, and e-book publishers have developed from libraries and integrators to the combined publication with publishing houses. The issue

of e-book intellectual property has gotten more and more attention, which developed from no consideration of e-book copyright to consideration of the interest of both authors and publishing houses. The e-book users have changed from organization users like libraries to internet user, mobile users and others who use special reading equipment.

Both the quantity and quality of e-books have developed rapidly with the development of Chinese libraries in the past ten years. E-book services also have changed from simply depending on e-book publishers to the combination of printed books, homegrown e-books, and purchased e-books by libraries. The e-book services based on books retrieval provide users with much convenience.

The development of e-books in China will become more mature as time passes by. The establishment and implement of relative standards of Chinese e-books, the solution of the issue of e-book intellectual property, and the expansion of the e-book service pattern of libraries will promote the publication and application of e-books in China in the future.

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