

The Characteristics of ISBN and Its Functions in Book Purchasing and Compiling

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Abstract

This paper analyzes the structure and the characteristics of ISBN and the functions of ISBN in book purchasing and compiling of libraries.

Keywords: ISBN, Book purchasing and compiling, Functions

With the application of computer technology in the administration of libraries, various internet applications on book administration are widely applied, so book purchasing and compiling has gained strong technology support. In book purchasing and compiling, to fully acknowledge and master the characteristics of ISBN and to apply the characteristics of ISBN in it will bring along great convenience for the job. ISBN is the abbreviation of International Standard of Book Number and is the unique number the International ISBN Agency assigns to the literatures of a publishing company. China joined in LSBN system in 1982 and started to execute CSBN in 1987. CSBN is the abbreviation of China Standard of Book Number. CSBN makes supplementary on the basis of ISBN and consists of two parts. One of the two is LSBN, the main body of cabin, which can be used independently; the other is the supplementary part, consisting of the basis classifications and type serial numbers of *China Library Classification Method*. “□/” is used to separate the main body from the supplementary part and “·” is used to separated book classification number from type serial number. The form is group number-publisher number-book number-verification number/book classification number-type serial number, for example, the CSBN of *The Modernization Road of Chinese Finance* is 7-100-04478-2IF·500, of which “7-100-04478-2” is LSBN, the main body, and the part after “/”, “F·500”, is the supplementary part. “F” here means that the book belongs to economic class in *China Library Classification Method* and “550” means that the book is the 550th book classified as “F” that the publishing company has ever published.

1. The structure of ISBN

ISBN consists of ten digits with ISBN as the title, of which 9 are effectively assigned digits and the 10th is the verification number. The ten digits form four groups of numbers, respectively group number, publishing number, book name number and verification number, separated by “-”, namely, group number-publishing number-book name number-verification number. For example, in “ISBN 7-5366-7065-6”, the group number, publishing number, book name number and verification number are respectively “7”, “5366”, “7065” and “6”. These numbers represent different meanings. The first group of number is the group number and can also be called region number, which represents the language number of a country or a region. A group number can at most consist of 15 digits. The more digits a group number consists of, the less the publishing amount is; the less digits a group number consists of, the larger the publishing amount is. The group number is assigned by International Standard Book Number Center, with the shortest consisting of 1 digit and the longest consisting 5 digits. As a general rule, group number takes into account language types, countries and regions. 0 and 1 represents English and Australia, Canada, Ireland, New Zealand, Porto Rico, South Africa, Britain, America and Zimbabwe use these two codes; 2 represents French and France, Luxemburg, Belgium and the French area of Switzerland use this code; 3 represents German and Germany, Austria and the Germany area of Switzerland use this code; 4 is the code representing Japanese publications; 5 Russian publications and 7 Chinese publications. The second group is the code for publishing companies, so it is also called publisher number. The publisher number represents the number of a publisher and can consist of one to seven digits. The larger the scale of a publishing company is and the more books it publishes, the fewer the number of the digits is. The publisher number is set and assigned by the ISBN center of a country or region. The third group is book serial number and is also called book name number. Book name number is a serial number representing a publication. The number of digits of book name number is determined by the sum of the numbers of digits in group number and publisher number. The book serial number of a publishing company is fixed, with the shortest being 1 digit and largest 6 digits. The larger the scale of a publishing company and the more books it publishes, the longer the book name number is. Book name number is determined by the publisher. The fourth group is the computer verification code and is also called the verification number. The verification number is the last digit in ISBN number,

whose function is to verify whether the ISBN is legitimate. The verification of ISBN adopts weighted method, which means to multiply the first to the ninth number in ISBN number respectively by 10, 9, 8, 7, 6, 5, 4, 3, 2, add the verification value to the sum of the products, and then divide the result by 11 to see if the result can be divided exactly. If the result can be divided exactly, the ISBN number is legitimate. If not, the ISBN number is illegitimate. Let us take ISBN 7-5366-7065-6 as an example, whose calculation formula is $7*10+5*9+3*8+6*7+6*6+7*5+0*4+6*3+5*2+6=286$, $286\div 11=26$, where 286 can be divided by 11 exactly, so this book is a legitimate publication. The publications that adopt ISBN number include printings, micropublishing products, mixed media publications, computer soft wares, Braille publications, atlases, maps, discs, education TV or movies, and teaching films. ISBN number is usually printed on the striking place and sometimes ISBN number will appear at several places, for example, ISBN number can appear in the bottom part of the back cover, the copyright page of vip information <http://www.cquvip.com>, the overleaf of book name page, or the CIP data of the republication numbers of books.

2. The characteristics of ISBN

2.1 World uniqueness

Each ISBN number only represents books of certain editions. When the printing ways, edition, formats or frames of books of same types are different, the ISBN numbers will be different. For the world uniqueness of ISBN, it is very important for the purchasing, compiling and catalogue programs of library literatures. What is more, if using ISBN to search, the correctness and the speed of the search is far higher than searching through book names and writer names.

2.2 Identification characteristic

Through the four group of numbers of ISBN, we can get to know the real information of the books, such as the publishing regions, the scale of the publishers, the amount of the published books, and whether the publications being comprehensive or professional.

2.3 Verification characteristics

We can use the verification method of ISBN, weighted method, to determine whether the ISBN is legitimate. Weighted method means to multiply the first to the ninth number in ISBN number respectively by 10, 9, 8, 7, 6, 5, 4, 3, 2, add the verification value to the sum of the products, and then divide the result by 11 to see if the result can be divided exactly. If the result can be divided exactly, the ISBN number is legitimate. If not, the ISBN number is illegitimate. Therefore, ISBN can itself verify its status and has the capacity of error correcting, so ISBN greatly improves reliability and correctness of the data of book purchasing and compiling.

2.4 Standardization

The structure of ISBN number is simple and the hierarchy is clear, which provides great convenience for computer processing, searching, booking and purchasing, classification and compiling and is an important searching basis for readers to search books. It is more convenient and faster to use ISBN to search information about books.

3. The functions of ISBN in book purchasing and compiling

3.1 The functions of ISBN in book purchasing

There are generally three kinds of ways to purchase books, with the first one being searching and purchasing through ISBN bar code numbers, the second being through book names, and the third being through the date of book booking. Among the three purchasing ways, the first two are the important ways that libraries usually adopt, which is to search and purchase through the ISBN bar code numbers and the names of books. Years of book purchasing experience proves that the repetition of book names is very common. The main problems to use book names to search and purchase are that books of the same names but of different types are taken as repetition by computers and it is hard to correctly search and purchase. For example, Chinese writer, Mao Dun wrote a long novel named *Rainbow*, while British writer, Lawrence also wrote a long novel named *Rainbow*, so just depending on the book names, we cannot distinguish the two books. Therefore, the best way to purchase books is to adopt ISBN bar code numbers of books whose characteristic is world uniqueness to search and purchase. The correctness and speed of using ISBN to search is far higher than using book names because bar code readers can be used to scan and input ISBN number, which not only saves time, but also increases the input correctness. By this way, we can cut down the phenomenon of repeated and missed purchasing and improve the correctness of book purchasing.

3.2 The functions of ISBN in book catalogue work

Book catalogue work is the first pass in book administration work. To make the administration, circulation and use of books more convenient, the basic requirement on book catalogue work is to ensure catalogue quality. The

requirement on book catalogue correctness is high too, or else, the borrowing, searching and circulating of books will be influenced. At present, computers take place of hand operation in book catalogue work. To fully make use of the characteristics of ISBN data will bring along great convenience for book catalogue work. To use ISBN to make catalogues of books refers to that in the process of book catalogue making, catalogue personnel can use bar code readers to directly scan and input ISBN bar code numbers and then to record data and search the repeated rather than to use keyboard to input ISBN bar code numbers, ISBN numbers, book names and writer names. To use bar code readers to directly record date and search the repeated will save operation time and improve the input correctness. The most obvious advantage to adopt ISBN number in book catalogue making is the uniqueness of ISBN. ISBN covers information on the publishing scale of books and the publishers, the present publishing amount of books, and whether the publisher being comprehensive or professional. In automitization systems, if we set up a data base where codes are matched with publishers, the names of the publishers will be automatically given and there is no need to input the names. In the information catalogues of machine reading CNMARC books, the necessary number in ISBN is "010". Because all automitization systems have set up ISBN data bases, catalogue personnel need only to input "010" into ISBN numbers when working on CNMARC data, and then the systems will automatically generate information, such as publishing places and publishing companies. Meanwhile, when conducting catalogues of discs annexed to the books, we can generate resource visiting links according to the recorded ISBN numbers and copy these links to chipboards, and then we can conveniently copy these links to "856" field when OPAC system arrives. Therefore, the "856" field in catalogue system will automatically generate the information about the discs, which will make the work of library catalogue personnel more convenient, cut down repeated labor, and improve work efficiency.

References

- Chen, Lijuan. (1999). The arriving method of ISBN in machine reading catalogues. *Knowledge of Library and Information Science*, pp.57-59.
- Li, Lu. (2004). The application of ISBN and ISSN in library operations. *Journal of Library and Information Sciences in Agriculture*, pp.219-220
- Song, Jinyan, Cao, Yongmei & Wu, Guiping. (2005). International standard book number will be enlarged to 13 digits. *Library Theory and Practice*, pp.93-94.
- Zheng, Xisheng. (2002). A discussion on missed searching phenomenon in using ISBN to conduct check on repeated computer catalogues. *Jiangsu Library Journal*, pp.19-20.