

CHINESE MARC: ITS PRESENT STATUS AND FUTURE DEVELOPMENT †

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ABSTRACT

中文機讀編目格式 (Chinese MARC Format) 之現況及展望為本文之主題：報告中文機讀編目格式之發展歷史及目的，並重點介紹本格式之特色，與國際機讀編目格式 (UNIMARC) 之比較，目前完成情況及其未來發展之計劃。

1. INTRODUCTION

The Library Automation Planning Committee (LAPC) was established by the Library Association of China, in cooperation with the National Central Library in 1980, to improve library and information services, and to keep in step with the needs of libraries in local and international environment. By the present demand, the National Library Automation Project (NLAP) was formed under

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the auspices of LAPC in May, 1980 to study the related library problems and to carry out cooperative ventures with the purposes to accomplish the following objectives:

- 1) to develop the Chinese MARC Format within the constraint of international requirements, as the standard for cataloging the Chinese publications;
- 2) through joint efforts to organize a data processing system for improving technical and information services of Chinese language materials;
- 3) to create a data base for Chinese publications and introducing data bases from overseas to meet the local research needs, and
- 4) to establish a national information network with the coordination of the National Reconstruction Project and the advancement of academic research and development.

Since the Chinese MARC format is the essence of library automation, the Chinese MARC Working Group (CMWG) was formed by the Committee in May 1980. The Group has been assigned to the tasks of designing the Chinese MARC format which should meet the international requirements in order to facilitate data processing for Chinese materials and to promote international resources sharing and exchange.

In the course of designing a format structure to be acceptable internationally, attempts have been made to take into consideration of every possible way for data processing of Chinese materials in libraries. In addition, UNIMARC (Universal MARC Format, 1980 edition, IFLA) and the Library of Congress MARC II Format have been thoroughly studied and compared. With cooperative endeavor of the Group, a desirable format for the Chinese publications has been worked out, whereas the next phase of our task will be aimed at designing a format structure for non-book materials.

2. PRINCIPLE, PURPOSE, AND SCOPE

The guiding principle in developing a format for the Chinese publications is to achieve a structure that would have a wide applicability to all types of bibliographic data written in the Chinese language. The Group, at the very beginning, has agreed that the layout of the format has to be hospitable to all kinds of biblio-

graphic information for all forms of Chinese imprints (books, serials, maps, music, etc.) and related records (name, subject, etc.). Meanwhile, the Group has considered it of the same priority to develop a format which could be utilized in a wide variety of computers to manipulate machine-readable cataloging records. Regardless of the form of Chinese materials received in a given library it is anticipated that the Chinese MARC would be able to provide a format necessary for processing.

Inevitably the UNIMARC and Library of Congress MARC II Format have been consulted from time to time, the structure design for Chinese MARC format is essentially a cooperative achievement of the team. The UNIMARC format has been recommended as a medium for recording information in roman alphabet, nevertheless, the primary purpose of UNIMARC is to facilitate the international exchange of bibliographic data in machine-readable form between national bibliographic agencies. As a result of these considerations, the Group has opted to map out Chinese MARC as modeled on UNIMARC format incorporating with certain modifications to adjust to the current local requirements.

The bibliographic records in magnetic tapes are processed on the basis of ISO-2709 (Documentation – Format for Bibliographic Information Interchange on Magnetic Tape, 1973, and revised 1980).

The character set used for the Chinese MARC is prescribed by the Chinese Character Code for Information Interchange (CCCII) which is formed with the 7-bit code and is based on ISO-646 (7-bit Coded Character Set for Information Processing Interchange) and ISO-2022 (Code Extension Techniques for use with the ISO – 7-bit Coded Character Set).

For full description of bibliographic records in the Chinese language, it is essential to follow the Chinese Cataloging Rules (CCR) just partially completed in 1981, which conforms, to a large extent, to ISBDs (International Standard Bibliographic Descriptions) and AACR 2 (Anglo-American Cataloging Rules, Second edition, 1978) principles.

The Wade-Giles romanization is used in the Chinese MARC as the standard transliteration for its bibliographic records.

The ultimate objective of the Chinese MARC is to facilitate

the processing of Chinese language materials with computers for regional and international information exchange and sharing.

3. CHARACTERISTICS

In order to achieve the goal for international information exchange, consideration has been given to: ISO-2709 for record structure; ISO-3166 Codes for the Representation of Names of Countries, the Library of Congress Revised List of Languages and Language Codes for various languages and so on . . .

Special attention has also been given to the needs of non-Chinese speaking environment: major fields are designed in such a way that could be recorded and searched in Chinese, English, or Wade-Giles transliteration. They are, for instances, title proper, statement of responsibility, physical description, series, subject, etc.

Chinese Character Code for Information Interchange is employed for encoding data. Reservation of space for future expansion of encoded data has been prepared. There is sufficient coding room for more than at least 50 thousand Chinese characters in various forms. In addition, it provides many options selecting a filing system for Chinese characters, with which data file may be arranged according to a predetermined sequence or method.

Special features and major characteristics of UNIMARC, such as the constant meaning of coded data values, subfield identifiers, etc. are retained in Chinese MARC.

And, Chinese MARC format is definitely machine independent.

4. COMPARISON BETWEEN CHINESE MARC AND UNIMARC

The CCR follows the basic framework of ISBDs, however, the characteristics of Chinese materials and tradition of Chinese bibliography dictate the pattern for CCR which in reality has departed to certain degree from ISBDs. Consequently, additions and changes are necessary for Chinese MARC to reflect all these features.

FIGURE 1 shows the tag relationship between Chinese MARC and UNIMARC:

FIGURE 2 List of Tags, Indicators and Subfields being added

or modified to Chinese MARC:

In summary, the major modifications in Chinese MARC are as follows:

1) Add subfield identifier "\$r" to fields 200, 225 and 5xx. This identifier marks title proper and series title accessible by romanization. Such need is likely to be in libraries located in the United States and Europe. Whereas "\$r" may not be a necessity for local libraries where the likelihood for accessing a bibliographic record by transliteration would be at minimum.

2) Add subfield identifier "\$u" to fields 3xx for libraries which use cataloging rules other than CCR to record notes in Chinese, English, or romanization.

3) Subfield identifier "\$g" is assigned in fields 600, 700, 701, and 702 to identify the dynastic era during which a Chinese individual lived either in the Ch'ing dynasty or earlier. The association of a personal name with the name of a dynasty when he lived is a long observed tradition in Chinese scholarship.

4) Some undefined indicators employed in UNIMARC have been assigned new functions in Chinese MARC to offer flexibility in the format, e.g., indicators in Field 215 (Physical description) and Field 225 (Series).

5) To make them compatible with CCR, some fields found in UNIMARC are not used in Chinese MARC, e.g., Field 501 (Collective Uniform Title), Field 503 (Uniform Conventional Headings). However, they are reserved in Chinese MARC with an asterisk (*) for libraries adopting other cataloging rules.

5. PRESENT ACTIVITIES AND ACCOMPLISHMENT

The Group set for itself the herculean task of completing within eight month the design of Chinese MARC format for books and computer program requirements for testing and implimentating purposes. At present time, 1100 records were carefully selected from the Chinese National Bibliography of National Central Library, the L.C. National Union Catalog, and the catalog of the National Taiwan University Library holdings, and input into the Chinese MARC data base. With this data base one can perfrom the following operations:

1) Computer produced Chinese National Bibliography (中華

民國出版圖書目錄) (Figure 3)

- 2) Computer produced catalog cards (Figure 4)
- 3) On line display of Chinese bibliographic records in three forms:—
 - a. Chinese MARC Bibliographic Record (Figure 5)
 - b. Chinese MARC Bibliographic Entries (Figure 6)
 - c. Chinese MARC Work Form
- 4) On line query and search functions:
 - a. On line input
 - b. On line update
 - c. On line delete and modify, and
 - d. On line searching bibliographic information

6. FUTURE DEVELOPMENT

Through cooperative efforts, the Chinese MARC format for monographs has been finally materialized, its counter-part for non-book publications has yet to be fully developed. Nevertheless, it is anticipated that the Chinese MARC will be employed as the sole standard for Chinese language materials regardless of their type or format. For future development of the Chinese MARC, it is expected to be carried out within the first two stages of the three phases in the NLAP:

The first phase: Beginning from 1981, the Group has been inputting, in Chinese MARC format, the newly acquired titles of the National Central Library to a special file on computer with the anticipation that it will grow to be a data base for bibliographic control. Presently seven large local libraries have agreed to participate in the same program by taking like measures from 1981. Each of them will utilize the records found in the Chinese MARC data base, add data information as required, evaluate the usefulness of all data obtained, and report to the Group of their assessment which may be considered as the basis for future improvement. This operation can also help to pave the way for further cooperation among libraries.

Meanwhile, the Group will be involved in implementing the goal for constructing Chinese MARC format for non-book materials. As reports come in from various participating libraries, further modification and improvement to the format will be

executed.

The second phase: The first distribution of catalog cards based on the Chinese MARC format is to begin in October, 1981 by the Chinese MARC Distribution Office located at the NCL. The first test tape is scheduled to be mailed in 1982. And also more participants will be invited to cope with the goal of setting up a national library network. During this period, the retrospective records are planning to be converted.

Along with the setting up of the data base of Chinese materials, the computerization for materials in Western languages including books and non-books will be conducted. Since this will involve the domestic and international library cooperation, careful considerations will be made and unanimous support and valuable suggestions from all participants, will also be required for working out a better cooperation exchange program in this conference discussions. The computerization of western books is now being experimented by several local libraries. But the ultimate objective in this respect is the nation-wide unification and standardization.

The third phase: Preparations for the establishment for the national information network will be made after the completion of the tasks in the first and second phases. Starting from 1983, all libraries and institutions in this country will be welcome to take part in this cooperation project for national library automation system. Accordingly, the Committee will take the responsibility of selecting the most suitable systems for achieving the objectives of NLAP.

IN CONCLUSIONS, the accomplishment of the Chinese MARC is not merely a success in providing a uniformed standard for the processing of publications in the Chinese language but also an achievement in enabling Chinese libraries to participate in the communication with information service systems world-wide.

Figure 1. Tag Relationship between Chinese MARC and UNIMARC

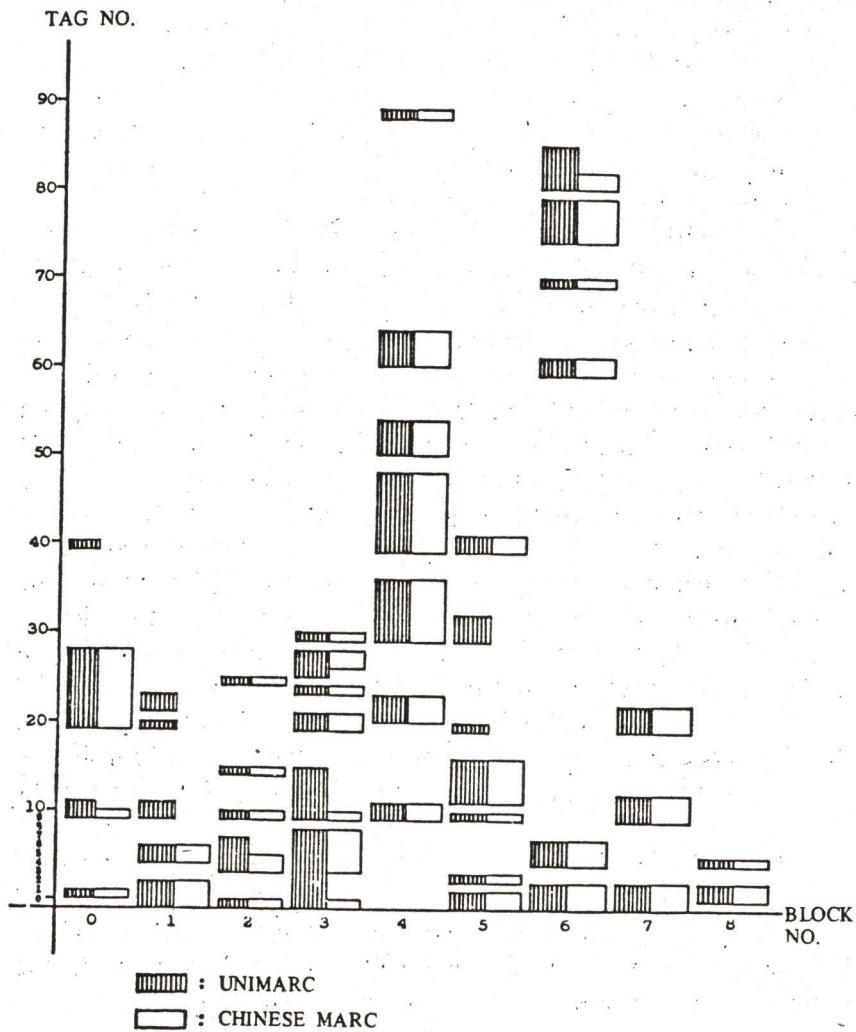


Figure 2. List of Tags, Indicators, and subfields being added to Chinese MARC:

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
010	V	R			b	R	International Standard Book Number Qualification
200	V	N			P r	N N	Title and Statement of Responsibility Number of Chüan Romanization of Title Proper
215	V	R	0 1				Physical Description For library uses Chinese Cataloging Rules For library uses other cataloging rules
225	V	R		0 1 2 3			Series Make added entry for series in Chinese Make added entry for series in Romanization No series added entry Make added entry for series in

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
300	V	R			r	N	Chinese and Romanization Romanization of Series Title
302	V	R			u	N	General Note United Languages
304	V	R			u	N	Notes Pertaining to Coded Information United Languages
305	V	R			u	N	Notes Pertaining to Title and Statement of Responsibility United Languages
306	V	R			u	N	Notes Pertaining to Edition and Bibliographic History United Language
307	V	R			u	N	Notes Pertaining to Publication, Distribution, Etc. United Languages
							Notes Pertaining to Physical Description

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
308	V	R			u	N	United Languages
310	V	R			u	N	Notes Pertaining to Series United Languages
312	V	R			u	N	Notes Pertaining to Binding and Availability United Languages
314	V	R			u	N	Notes Pertaining to Related Titles United Languages
316	V	R			u	N	Notes Pertaining to Intellectual Responsibility United Languages
320	V	R			u	N	Notes Pertaining to Number of Chuan United Languages
321	V	R			u	N	Bibliography, Index, Appendix Note United Languages
							Availability of Indexes and Abstracts Note

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
324	V	N			u	N	United Languages Facsimile Note
328	V	R			u	N	United Languages Dissertation (Thesis) Note
330	V	R			u	N	United Languages Summary Note
332	V	R			u	N	United Languages Copy Being Described and Library's Holdings
510	V	R			u	N	United Languages Parallel Title Proper
512	V	R			r	N	Romanization of title Cover Title
513	V	R			r	N	Romanization of title Added Title-page Title

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
514	V	R			r	N	Caption Title Romanization of title
515	V	R			r	N	Running Title Romanization of title
516	V	R			r	N	Spine Title Romanization of title
517	V	R			r	N	Other Variant Titles Romanization of title
600	V	R			g	N	Personal Name Used as Subject Dynasty
681	V	R			a b	N N	Chinese Classification Scheme Chinese Class Number Book Number
700	V	R			g	N	Personal Name-Primary Intellectual Responsibility Dynasty

Tag	Field		Indicator		Subfield Code	Subfield Comment	Name of Field, Indicator, or Subfield Code
	Length	Comment	1	2			
701	V	R				N	Personal Name-Alternative Intellectual Responsibility Dynasty
702	V	R			g	N	Personal Name-Secondary Intellectual Responsibility Dynasty
710	V	R					Corporate Body Name-Primary Intellectual Responsibility
720	V	R					Family Name-Primary Intellectual Responsibility
850	V	R			a b c d e	N R N N N	Local Accession and Call Number Agency Code Accession Number Class Number Book Number Cataloger

Figure 3. Computer produced Chinese National Bibliography

- 易一貫／〈清〉呂調陽撰。--影印本。--台 121.17/8333 68
 北市：新文豐出版公司，民國80年（1979）
 （1）620面：圖；22公分
 據觀象錄藏書本影印
 新台幣320元〈精〉
 I. 〈清〉呂調陽
 121.12/7536 68
- 易經精華 六卷，首末各一卷／〈清〉薛嘉
 穎編。--台北市：新文豐出版公司，民國80年（1979）
 （10）476面；22公分
 據清同治二年刻華文堂藏版影印
 新台幣250元〈精〉
 I. 〈清〉薛嘉穎
 121.12/7643 68
- 五峯山房易學 十卷，首一卷／武鈺撰。
 台北市：新文豐出版公司，民國80年（1979）
 （8）564面：圖；22公分
 據民國八年（己未）鄂垣華林工藝傳習
 廠鉛印本影印
 新台幣280元〈精〉
 I. 武鈺
 121.12/835 60
- 周易贊氏學 八卷，首末各一卷／馬其昶撰。
 --台北市：新文豐出版公司，民國80年（1979）
 1冊：圖；21公分
 據民國九年（庚申）抱選軒藏版影印
 新台幣360元〈精〉
 I. 馬其昶
- 無為的思想／森三樹三郎撰；姚百勤譯。--
 高雄市：敦理出版社，民國80年（1979）
 159面：圖；19公分。--〈敦理叢刊；
 16〉
 新台幣50元
 I. 森三樹三郎 II. 姚百勤
 121.17/8743
- 莊子天下篇校釋／譚戒甫校譯。--影印本。
 --台北市：新文豐出版公司，民國80年（1979）
 （90）面：圖；21公分
 據民國二十四年排印本影印
 新台幣150元〈精〉
 I. 譚戒甫
 121.335/8433 68
- 墨子竹義／王企鵠撰。--台中市：金氏圖書
 公司，民國80年（1979）
 （8）135面；21公分
 新台幣90元
 I. 王企鵠
 121.417/8462
- 心理學論集／熊兆平撰。--臺北市：黎明文
 化公司，民國80年（1979）
 （4）193面：有表；21公分。--〈大
 學叢書〉
 附錄：國民心理自覺測驗表
 新台幣60元
 I. 熊兆平
 170.7/8755

Figure 4. Computer Produced Catalog Card

856.17	賢手札／〈清〉郭子爵輯。--台北市：老
7444	古出版社，民國68年（1979）
483948	（3,381）面；19公分
中國	收錄曾國藩、胡林翼、駱秉章、左宗棠、 彭玉慶、曾國荃、沈葆楨、李鴻章等八位手 札
	附錄：隋史八賢列傳
	新台幣 100元
	I. 〈清〉郭子爵

○

	TAGS	Subfields
Local Accession and Call Number	805	\$c 856.17 \$d 7444 \$b 483948 \$a 中國
Title and Statement of Responsibility	200	\$a 八賢手札 \$f 〈清〉郭子爵輯
Imprint	210	\$a 台北市 \$c 老古出版社 \$d 民國68年〔1979〕
Collation	215	\$a 〔3,381〕面 \$d 19公分
Note	300	\$a 收錄曾國藩、胡林翼、駱秉章、左宗棠、彭玉慶、 曾國荃、沈葆楨、李鴻章等八位手札
Note	320	\$a 附錄：隋史八賢列傳
Price	010	\$d 新台幣 100元
Author	700	\$g 〈清〉 \$a 郭 \$b 子爵

Figure 5. Chinese MARC Bibliographic Record

Chinese MARC Bibliographic Record							1 of 1
Record	Label :	RS =n	IC =am0	ARD =2i			
001		70-00003					
100	+a	1=19801004	2=d	3=1979	4=	5=	6=y
		7=0	8=Chi	9=b	10=3C2i	11=3C2i	12=e
105	+a	1=C	2=	3=0	4=0	5=0	6=y 7=y
805	+abcde	中圖 487864 943.6 8334 12					
200 1	+afr	潘石生作品集 潘石生書會編 Tan Iu i					
		men shih sheng tso P'ing Chi					
210	+acd	台北市 該會 民68年(1979)					
215 1	+adad	144 面 28公分 144 P. 28 cm.					
712 02	+a4a	潘石生書會 編 Tan Iu shu hui					
681	+ab	943.6 8334					
102	+a	C W					

Figure 6. Chinese MARC Bibliographic Entries

Chinese MARC Bibliographic Entries	
70-00082	673.23 / 8725
臺灣堡圖集 = Atlas of the historic administrative pav division of Taiwan / 張炳南、李汝和同修；洪敏麟等編。--臺 北市：臺灣文獻委員會，民國58年（1969）	
70-00033	230.4 / 8328
山學辭典全集／戴源長編；李榮修校。--臺北市：真善美出版社，民 國59年（1970）	
70-00031	830 / 5265
標眉菱正正讀文章軌軌／（宋）謝枋得輯；（明）李延機評訓；原田 由巳標菱 七卷。--臺市：廣文書局，民國59年（1970）	
70-00017	673.2 /
臺灣省通志／張炳楠監修；李汝和等纂。 卷十，光復志 收復準備 篇 光復紀盛篇 日俘日僞退送篇。--臺北市：臺灣省文獻委員會 ，民國年59年（1970）	