

Block

2

LIBRARY CATALOGUING

UNIT 5**Basic Concepts** **5**

UNIT 6**Types and Forms of Catalogues** **22**

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UNIT 8**Cataloguing of Non-Book Material** **90**

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BLOCK 2 LIBRARY CATALOGUING

Introduction

Library cataloguing shares a symbiotic relation with library classification. The latter provides access to the resources in a library by class number, enables browsing to select a book, provides a panoramic view of the resources whereas the former provides all bibliographic details and subject of resources at one place. Library classification provides a linear view of subject relations but the catalogue takes care of the multi-dimensional relations. There have been significant changes in library cataloguing due to the arrival of non-book material and use of computers for processing information. ICT has enabled sharing of information for which paradigmatic changes have been brought about in cataloguing. The four units in this Block are devoted to the concepts of cataloguing and developments in it.

Unit 5 introduces the concept of cataloguing. It is titled **Basic Concepts**. After defining library catalogue, it discusses its need, objectives, functions and qualities. There are some other bibliographic records in a library that are related to a library catalogue. These include shelf list and accession register that have been discussed in relation to a library catalogue. **Types and Forms of Catalogues** is the title of Unit 6. There are two forms of a catalogue, viz. internal and external forms. Internal forms relate to the internal arrangement of catalogue entries whereas the different physical forms are referred to as external forms. Different types of both the forms have been discussed in detail in the Unit.

Unit 7, **Formats and Standards**, discusses International Standards Bibliographic Description (ISBD) and MARC formats. Standardisation in cataloguing is needed to bring in uniformity in cataloguing procedures. Rules for cataloguing are examples of standardisation. These help to identify, present and display bibliographic elements in catalogue entries. Formats have been given to codify and present bibliographic elements for processing by computers. Different MARC formats and their characteristic features have been discussed in the Unit.

Unit 8 is **Cataloguing of Non-Book Material**. Non Book Materials (NBM) are those materials which do not come within the definition of a conventional book, periodical or pamphlet. Audio-visual materials, microforms, computer files, electronic resources, etc are some examples of these. NBM require special treatment in terms of their bibliographic description for access and searching information. The Unit discusses different NBM giving examples and rules for their cataloguing in AACR2R.



UNIT 5 BASIC CONCEPTS

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5.0 OBJECTIVES

The library catalogue is an index to the contents of a library, which helps the reader in discovering and locating documents in a library. It is an important tool of a modern and well equipped library. It is very essential for the proper use of library resources, for easy and quick location of information contained in the library holdings. It is a key to unlock the resources of a library. In this Unit, you will be acquainted with the basic concepts of library catalogue and cataloguing. After reading this Unit, you will be able to:

- discuss the objectives and functions of a library catalogue;
- differentiate between a library catalogue and other library records;
- discuss the role of technology in cataloguing process; and
- explain symbiosis (mutual relationship) between classification and cataloguing.

5.1 INTRODUCTION

Library catalogue, said to be the mirror, reflecting the holdings of a library, helps the user to locate and access the material required by her/him. It identifies to the user the bibliographical details of books for the purpose of selection and study. The catalogue groups the books in the library according to author, subject and collaborator etc. By consulting the catalogue, a user can know the availability of all types of reading materials, both print and non-print in the library. It is a time saving device both for the user and the

library staff. A library catalogue is expected to satisfy every kind of bibliography i.e., enquiry but it is obviously limited to the collection of a particular libraries.

5.2 LIBRARY CATALOGUE

An ideal and functional library facilitates its readers in many ways for optimum utilisation of the resources by adopting certain techniques and operations like classification and cataloguing etc. The extent of the use of resources greatly depends on an efficient, effective and updated catalogue so as identify, locate and access the collection easily and quickly. A comprehensive catalogue enhances the image and reputation of a library. In this section, we shall discuss in detail the definition, purpose, objectives and functions of a library catalogue.

5.2.1 Definitions

The word 'catalogue' has been derived from the Greek phrase 'Katalogs'. It means a list, register or complete enumeration of things. 'Kata' means, by or according to, where as 'logos' means word, order, reason. Hence catalogue can be explained as the work in which contents are arranged in a reasonable way or in a particular order or according to a set plan.

The library catalogue can be defined as, "a list of documents of a particular library or group of libraries arranged according to a systematic or logical order providing bibliographical information along with a location mark for easy identification and quick access".

The Terminology Group at the International Conference on Cataloguing Principle (ICCP) held at Paris in 1961 defined a catalogue as a, "Comprehensive list of a collection or collections of books, documents or similar materials". Ranganathan defined it as "a list of documents in a library or collection forming a portion of it. It is a methodically arranged record of information about bibliographical resources".

According to C.A. Cutter, a library catalogue is a, "list of documents which is arranged in some definite plan. As distinguished from a bibliography, it is a list of books in some library or collections".

The Oxford English Dictionary defines a catalogue as "usually distinguished from a mere list or enumerated by systematic or methodic arrangement, alphabetical or other order and often by the addition of brief particulars, descriptive or aiding identification indicative of locality, position, date, price or the like".

Hence a library catalogue can be defined as, "a list of documents (both books and other reading materials) in the holdings of a particular library or group of libraries arranged according to a set plan or recognised order and containing specified items of bibliographical information for the purposes of identification and location of the material catalogued".

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

1) State the definition of a library catalogue.

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5.2.2 Need

Libraries generally acquire reading and reference materials both in print and non-print forms for the benefit of readers for the purpose of study, reference and research. All the time the desired documents may not be available physically on the book shelves as these are issued and if the users go to the shelves directly without consulting the catalogue, they will think that these documents are not acquired by the library though actually these are possessed by the library. Besides, the non book materials cannot be browsed which are likely to miss the notice of readers. Further, the reader may waste her/his valuable time in locating the needed document without taking the call number from the catalogue. Because of these reasons, it is absolutely necessary that a library must prepare an effective catalogue ensuring the users for quick identification, location and access to the reading materials.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answer given at the end of this Unit.

- 2) State and explain the need for a library catalogue.

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5.2.3 Objectives

Library catalogues are prepared to accomplish certain objectives as mentioned by the legend and genius in the field of cataloguing namely Cutter, Ranganathan and Lubetzky. In the opinion of Cutter, a catalogue should:

- “1) enable a person to find a book, of which
- a) the author, or
 - b) the title, or
 - c) the subject is known.
- 2) show what the library has
- d) by a given author,
 - e) by a given subject,
 - f) in a given kind of literature.
- 3) assist in the choice of a book
- g) as to its edition by describing the work adequately for easy identification, or
 - h) as to its character”

However, according to Ranganathan, “if a reader is interested in a subject which takes him to the library, his wants will be better served if the catalogue can spread before him a full, connected, panorama of all the materials on his desired subject, all its sub-divisions and all broader subjects of which it is itself a sub-division” (CCC, p. 81).

Further, Ranganathan has stated in the Library Manual about the objectives of a catalogue which can answer the following questions:

- 1) Is there a book in the library by such and such author? What are all the books in the library by her/him ?
- 2) Is there a book in the library with such title?
- 3) Is there a book in the library by a particular editor, translator, reviser, compiler?
- 4) Is there a book on a specific subject and its sub-divisions?
- 5) Is there a book in a publisher’s series in the library?

Moreover, Ranganathan has analysed the objectives in the light of the Five Laws of Library Science and stated that the catalogue should be designed so as to:

- 1) disclose to every reader his or her documents;
- 2) secure for every document its reader;
- 3) save the time of the reader; and for this purpose
- 4) save the time of the staff.

However, Lubetzky is of the view that a library catalogue should serve “First to help for quick location of a particular publication, i.e. of a particular edition of a work which is available with library. Secondly to display the relevant and related documents of a given author”.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
- ii) Check your answer with the answer given at the end of this Unit.
- 3) Write objectives of library catalogue as stated by Cutter.

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5.2.4 Functions

The basic function of the library catalogue is to let know an enquirer whether or not a particular publication is in the collection of the library and if so where it can be found. It also reveals what material the library has on a given subject, author etc. Catalogue is a tool designed to enable the enquirer to find a particular book of which some or all the details are known; to survey the entire stock or sections of it; and to select the books which will best serve her/his purpose. The larger libraries and particularly national libraries can assume the bibliographical function appropriately. A library catalogue is expected to answer the following questions: Is a particular book available in the library?

Which books by a particular author are available in the library? Which editions of this particular book are available in the library? Which books by a particular author are in the library? Is there a book in the library with such and such collaborator – editor, translator reviser, compiler etc.? What are all the books in the library with him as collaborator? What are all the books in the library in that publisher's series? Is there a book in the library on such and such subject? What are all the books in the library on that subject?

Shera, in emphasising the importance of a subject catalogue as opposed to a dictionary catalogue, enumerates the following functions of the subject catalogue : (1) to provide access by subject to all relevant material; (2) to provide subject access to materials according to the principles of subject organisation; (3) to bring together material of same subject regardless of the disparities in terminology etc.; (4) to show affiliations among subject fields; (5) to provide entry to any subject field from most general to most specific; (6) to provide entry through any vocabulary common to groups of users; (7) to provide a formal description of the subject content of any bibliographic unit; and (8) to provide means for the user to make selection from among items in any particular category.

In the International Conference on Cataloging Principles, Paris it has been unanimously decided that the functions of the catalogue should be, an efficient instrument for ascertaining:

- i) whether the library contains a particular book specified by
 - a) its author and title or
 - b) if the author is not named with book, its title alone, or
 - c) if author and title are inappropriate or insufficient for identification, a suitable substitute for the title, and
- ii) which works by a particular author and which editions of a particular work are in a library.

Hence the functions of a library catalogue can be summarised as:

- 1) It is the most important finding tool for staff reference but its primary task is to enable the readers to ascertain what books a library possesses.
- 2) It provides records in an order which helps the reader to know what those materials are, where they are, and to determine their character and suitability for that purpose.
- 3) It serves as an exhaustive bibliography on a subject.
- 4) It helps the library staff in ordering new books and to avoid duplication of the materials by checking the catalogue.
- 5) It displays the record of library's resources with a view to making them easily accessible for study and reference.
- 6) It serves as a dependable tool for communication of ideas and subjects dealt within the books to readers who use the library.
- 7) It bridges the wide gap between the resources of rich collections of a library on one side and the users on the other side who are looking anxiously to satisfy their thirst for information by getting their desired documents without any loss of time.

5.2.5 Qualities

The requisites of a good catalogue should be considered for preparing a functional library catalogue which are enumerated as under:

- i) **Accuracy:** Errors of spelling and style or format may be avoided. Inaccuracy of any type may lead to misunderstanding, loss of time and even dislocation of a card leading to disappointment to a reader. Cards should be carefully checked before filing.
- ii) **Consistency:** The rules of cataloguing should be strictly adhered to so that consistency can be maintained. If an amendment in rules is required to be made due to some practical exigencies, it may be made only after a careful consideration of all the pros and cons. But once an amendment has been adopted, it should be followed consistently and there should not be after thoughts and frequent changes. All changes should be recorded in a file or on the cataloguing code for future reference and guidance.
- iii) **Needs of Users:** A librarian should always keep the needs of the users in mind while deciding about the various entries in the catalogue. He should keep in mind the type of queries frequently made by the users. The catalogue should be so designed that it is able to satisfy the needs of majority of the users.
- iv) **Arrangement:** The arrangement of content in an entry should be simple, uniform and easy to understand. It should not confuse the reader but give clear cut guidelines about the nature of the book and its location.
- v) **Up-to-dateness:** There should be no time gap between acquisition and processing of books and between preparation of catalogue cards and their filing in the catalogue cabinet.
- vi) **Multi-pronged approach:** The cataloguer should try to provide at least a few added entries in order to enable the users to locate a document from various angles i.e. author, title, editor, subject, joint author. The chances of retrieval of documents on demand increase with this multi-pronged approach.

Self Check Exercise

- Note:**
- i) Write your answer in the space given below.
 - ii) Check your answer with the answer given at the end of this Unit.
- 4) Mention the functions of a library catalogue as decided in the International Conference on Cataloging Principles, Paris.

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5.3 LAWS OF LIBRARY SCIENCE AND LIBRARY CATALOGUE

All the activities of the library revolve around the Five Laws of Library Science because these are the guiding principles for effective scientific planning of a library. For preparing

an effective catalogue, a number of guidelines are implied in these Five Laws enunciated by Ranganathan.

‘Books are for Use’, the First Law implies the need for organising the collections of a library for optimum utilisation by providing a number of physical facilities and providing reader services.

The physical form of a catalogue should be such that it is flexible, can be kept up-to-date, easy to consult and allows speedy search. It allows for addition of entries for new documents as and when added to the library. The users should know the scope, contents and coverage of documents by means of annotation and useful notes in a catalogue so as to make appropriate choice among various documents. The catalogue is the only medium to bring together the users and the collections leading to maximum use and satisfy the thirst for knowledge.

The Second Law states “Every Reader Her/His Book” which implies that various approaches of the users i.e. search by author, subject and title etc. should be satisfied. Many books are of composite nature. Neither the title nor the main entry may disclose the contents. This law requires that hidden contents should be brought to the notice of the readers by preparing subject analytical entries. So also the Third Law “Every Book its Readers” requires for preparation of analytical entries and cross-reference entries as and when necessitated, especially in case of books published under editorial direction (where a number of contributors contribute papers). Seminar/Conference proceedings and journals in which some of the articles/papers are highly needed by the readers are likely to miss the notice of the readers if only added entries are prepared. Instead they will be helped if analytical entries are prepared.

The Fourth Law “Save the Time of the Reader” ensures to save the precious time of the users. A catalogue should not only be simple in its design and construction but also up-to-date, communicable with elaborate guides. For effective use of the catalogue, user education/orientation programmes should be organised for the users.

‘Library is a Growing Organism’ is the Fifth Law which implies that catalogue also grows because of addition of books to the library. Keeping in view the changes and growth in nature and variety of publications, other forms of documents, needs of users and the advent of ICT has enormous impact on changes both in the physical form and internal structure of the catalogue. Change is a must and the library should prepare to face such challenges. Hence, while selecting a physical form decision should be taken on the basis of features like longevity, durability, space, simplification, portability, selectivity, flexibility and cost.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

5) Explain the implications of the Laws of Library Science in designing a catalogue.

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5.4 LIBRARY CATALOGUE VIS-a-VIS OTHER LIBRARY RECORDS

So far we have discussed the definition, purpose, and functions of a library catalogue. In a library certain other records are necessary, primarily for administrative and stock taking purposes.

5.4.1 Library Catalogue, Index, Shelf-List and Accession Register: A Comparison

Let us discuss such records and tools to know their differences in scope and utility.

- i) Shelf list, Accession Register and Index
- ii) Bibliographies
- iii) Publishers Catalogues

Index means 'to indicate' or 'to point out' and we all know that at the end of a book there is an exhaustive index showing the list of terms along with the relevant page numbers for instant reference for easy retrieval of the information. Very often the index satisfies the subject approach.

		Library Catalogue	Index
i)	Arrangement	A catalogue can be arranged alphabetically or in a classified sequence.	An index is always arranged alphabetically.
ii)	Entry	Includes some descriptive specification of a document containing a subject.	Index entry only specifies the subject.
iii)	Flexibility	New entries can be inserted in a systematic order at any time.	New subjects can be inserted any time.
iv)	Purpose	It is a record describing the documents acquired by a library.	Provides access to any of bibliographical entries of the catalogue through author, title or subject.
v)	Entries	Analytical entries may be prepared depending on the nature of the document.	No such entries are required in case of an index.

Shelf List

It is an inventory which records bibliographical data of items arranged exactly the same way as arranged on the shelves. Each title is represented by a card mentioning the author, title, edition, numbers of volumes, number of copies, call number and such other items as necessary. The call number determines the arrangement of the cards in the shelf list in the exact order of the arrangement of books on the shelves and a reader can easily obtain the needed book from the shelf by this number. A shelf list thus serves principally for inventory and control of the collection.

More or less the shelf list card is a duplicate of the main entry excepting the exclusion of notes, contents and tracing. To some extent, it resembles a classified catalogue i.e. a subject catalogue.

		Library Catalogue	Shelf List
i)	Users	It is an indispensable tool for readers as well as library staff.	It is consulted only by staff of the library.
ii)	Degree of use	Used frequently.	Used usually at the time of book selection and stock verification.
iii)	Arrangement	Arranged either alphabetically or in a classified sequence depending on the choice of the inner form of catalogue.	Always arranged in classified order.
iv)	Form	May be in various forms like card, register or computerised.	Generally in card form.
v)	Added and Analytical entries	Needs added entries to satisfy various approaches of the readers.	No such entries found in shelf list.

Accession Register

It is a very important administrative record in which books either purchased or received through gift and exchange are listed in chronological order date wise and assigned a number sequentially. The record contains the information about author, title, edition, date of publication, publisher, price, source of supply, sometimes the call number and remarks. As it is a date wise record of the collections and arranged according to serial number of the items, it cannot serve as a finding tool about the availability of documents of a library. In many libraries it also serves as a stock register. To get information from this register, one needs to know the accession number of the document.

Library Catalogue	Accession Register
i) Purpose: Helps in identifying and locating a book in a library and serves as a retrieval tool.	Indicates the total collection of the library. Retrieval of books is not easy rather a time consuming process. Date-wise collections
ii) Use: Extensively used and brings all the like subjects together.	Used by library staff only and fails to bring together the similar subjects together.
iii) Items of information: Detailed and useful Information about the document is given.	Bibliographical details are much
iv) Degree of use: Since it is an indispensable tool, it is used heavily both by the users and library staff.	More less as compared to library catalogue. Used some times by staff only,
v) Arrangement: Arrangement is done systematically either alphabetically or by call	Arranged chromo logically according to accession or serial number of the item.
vi) Form: Form may be in register/ book, card or computerized form self check exercise	Usually in a book/register

Self Check Exercise

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answer given at the end of this Unit.
- 6) State briefly the purpose of shelf list and accession register.

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5.4.2 Library Catalogue, Bibliography and Publishers' Catalogue : A Comparison

<u>Library Catalogue</u>	<u>Bibliography</u>	<u>Publisher's Catalogue</u>
1) Purpose: To serve the users and satisfy the laws of library Science.	Depends upon kind of bibliography. To bring to the notice of the readers select list of documents relevant to the study	Promotion for sale of books.
2) Function: Serves as retrieval tool.	Inventory functions	Inventory functions Resticted to the books published by a particular publishers or a group of publishers.
3) Scope: Collection confined to a particular or group of libraries. However it is not restricted to subject or to only language or geographical area and time etc.	Normally it is restricted to a particular subject region, person or language. Importantly it is not confined to any library.	Subject wise alphabetically and again the list of document of particular subject arranged according to authors alphabetically. Librarians, faculties and scholars.
4) Arrangement: Either alphabetically or acceding to call number.	Usually it is arranged alphabetically.	
5) Users: Large number of uses including research scholars and library staff.	Mostly the scholars and library staff.	
6) Physical form: Found generally in card, register and computerized form.	Usually found in the form of book:	Occurs in the form of book (both printed or mimeographed)
7) Bibliographical information: Maximum information about the document along with availability and location mark is provided.	Likely to have useful information with an annotation for selecting the best document	Information is inadequate. Highlights the special feature and revision, if any about the document.
8) Preparation of entries: With the help of catalogue codes containing the rules for preparation of entries made basing on the needs of users.	Prepared acceding to some citation standards (e'g BIS: 2378 or 2381	Prepared from the documents them selves Does not follow any cataloguing codes

Some examples of publishers' catalogues are:

- Books in print
- Ulrich's International Beriodical Directory,
- Catalogues of publishers like Mcegraw-Hill, SpringerVerlag, Van-Nostrand, Academic press, Elsievier Concept, UBS, ESS, Oxford & IBH, Vikash Publishing company etc.

- Note:** i) Write your answer in the space given below.
- ii) Check your answer with the answer given at the end of this Unit.
- 7) What is the distinct characteristic of library catalogue that differentiates it from a bibliography?

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5.5 CATALOGUING AND THE ROLE OF TECHNOLOGY

As we know varieties of entries are prepared for the document to satisfy the various approaches of readers as the needs and requirements differ from one user to another. Hence the main entry and added entries are usually prepared for this purpose. Main entry provides maximum relevant and useful information about the documents. Whereas, the added entries are prepared under a number of access points such as joint authors, editors, translators, title and series of the document consisting of brief information for easy location.

Cataloguing is the process of preparing entries for a catalogue.

The steps involved for making entries are enumerated as under:

- i) Choice of access point / determination of heading and rendering for the above entries.
- ii) Recording of information under various sections / areas of description of the entries.
- iii) Determination of the style of writing and punctuation marks etc, as per international standard bibliographic description (ISBD).
- iv) Writing call number in all the entries.
- v) Filing of catalogue cards.
- vi) Preparation of guide/ reference card, proper maintenance and updating of entries in the catalogue.

All these processes and procedures are involved in the act of cataloguing. Provision of detailed information facilitates a reader for selecting the needed documents. To help the cataloguer for cataloguing properly keeping in mind the expected approaches of the readers, the catalogue codes have been developed, designed and revised. The Classified Catalogue Code (CCC) was formulated by S. R. Ranganathan in 1934 is a user oriented code that provides rules for subjects entries and exhaustive rules for choice and rendering of bibliographic items for descriptive cataloguing. Likewise Anglo- American Cataloguing Rules (AACR) edition 1 and 2, 1988 revised edition, amendments and regularly incorporation of new rules for new items like "electronics resources" proves to be the most popular catalogue code. It follows International Standard Bibliographic Description (ISBD) format for the purpose of cataloguing which achieve uniformity, consistency and standardisation for preparing catalogue entries.

Besides, it is amenable for computerisation of library activities and leads to international library corporation, resources sharing and global networking.

Guidelines to the Cataloguers

- i) He must be thorough and well versed with the rules of the catalogue code used for preparing entries. The information provided in the entry should be accurate and, most importantly, the choice of access point otherwise the needed document may not be located and the reader will be appropriate about the accessibility of that document.
- ii) The title page is the main source of information to a cataloguer. However, some time the information contained in preface, table of contents and the body of the text etc. is also used for cataloguing non book material. The cataloguer is expected to run the different materials like CD's, micro film, video-cassettes and web resources.
- iii) The information contained in the catalogue entries should be sufficient enough to provide access points to satisfy the multifarious approaches of the users.
- iv) All the entries for a book should be filed immediately before there are sent to circulation section. The entries of all the lost, damaged and with drawn books be removed from the catalogue to ensure that the' catalogue is kept live and update. Proper maintenance, use of guide cards and training to the users on how to use the catalogue important for optimum utilisation of resources of the library.

Due to unprecedented growth of publications, it is difficult to know the location, availability of publication with the help of traditional / manual methods. But with the advent of IT and Information communication Technology (ICT), it is possible to ascertain what information exists and where . Many libraries are computerized and networked so that they can have access to the resources of other libraries through on line access i.e. the catalogue entries are stored and searched for display as desired by the user.

In the context of cataloguing process, there is no scope for computer to create the basic entry as it involves technical skill and expertise in subject field. But once the data is entered and suitable software package is in use, then the computer is capable enough for preparing highly complicated type of catalogue for control of information. It can manipulate the entries and the list of books of be displayed easily either under other, title, subject even under a particular publisher and in a specific year. We have to grab this opportunity offered by IT so that maximum benefit can be given to the users for best exploitation of the resources of other libraries.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

8) Name four important catalogue codes known to you.

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5.6 SYMBIOSIS

Classification helps to arrange documents on the shelf in a logical order bringing together documents on like subjects and separate those on different subjects. Library catalogue interprets the collection of the library and helps the user to select and locate the desired document. These are two interrelated processes which help the readers in laying hands on their requisite information. Classification and cataloguing satisfy the laws of library science and work for their mutual help. Where classification fails to satisfy the need of the users, catalogue, comes to the rescue by preparing the suitable entries and vice versa. This mutual relation between classification and cataloguing is termed as symbiosis. This mutual cooperation is necessary for providing effective and expeditious services to the clientele.

Now let us discuss the possible areas where the classifier comes to the aid of cataloguer:

- i) Use of classification scheme automatically brings a systematic and logical order of the documents on shelf as well as the entries in the classified part of a catalogue. All the books on a subject and its subdivisions are arranged in close vicinity due to classification.
- ii) According to the Canon of Pre-potency, the call number is an individualising number, a part of the leading section of the main entry. As such the place of main entry among various entries is totally concentrated in the leading section.
- iii) The class number assigned by the classifier helps the cataloguer in assigning subject headings to a document.
- iv) The class index entries are derived from the class number.

Similarly, the cataloguer helps the classifier, as mentioned below:

- i) Some books deal with more than one subject or are interdisciplinary in nature but are classified in one place only. To bring to the notice of the readers, the cataloguer prepares more than one subject entry providing access from different subjects dealt with therein.
- ii) In case of books bound together/ printed together in one cover, another main entry is to be prepared for the second book as the book will have one place only on the shelf as per the classification number assigned. Hence by preparing cross reference entries the location of second part of the book can be shown to the users. So also for seminar and conference proceeding and edited books etc., analytical entries are prepared under the specific articles/papers contained in the above documents.
- iii) The books acquired by the library may not be available all time on the shelves as these might have been issued or misplaced making the reader to think that these books are not available in the library. A library catalogue will inform the reader about the availability of such books in the library.

Hence, both classification and cataloguing act as complementary and supplementary to each other for effective organisation of collection and providing best services to the users.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
- ii) Check your answer with the answer given at the end of this Unit.
- 9) Explain briefly complementary nature of classification and cataloguing.

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5.7 SUMMARY

In this Unit we have studied some of the basic concepts of the library catalogue and cataloguing. The definition, objective/ purpose, and the different functions of a library catalogue are explained with reference to the various approaches of readers in using the collection of a library. The implications of the Five Laws of Library Science are explained in relation to a library catalogue and cataloguing. The Five Laws not only provide useful guidelines for the preparation of library catalogue but also emphasise the need for saving the time of reader in the use of the library. The catalogue vis-à-vis other library records such as accession register, shelf list, bibliographies, and trade catalogues are highlighted with illustrative examples. Cataloguing as a process in organising a library collection has been briefly explained along with provision of some guidelines to cataloguers. The complimentary and supplementary nature of the twin library operations of cataloguing and classification are indicated. The usefulness of a library catalogue as a reference tool is also briefly mentioned.

5.8 ANSWERS TO SELF CHECK EXERCISES

- 1) Library catalogue may be defined as a list of documents and other materials organised in a systematic order available in a library.
- 2) The basic purpose of a library catalogue is to serve as a guide to the collection of materials acquired for the library. Primarily the library catalogue reveals to users of a library the document in a library and helps the person in finding out whether documents of the person's interest are available in the library or not. It also serves users as a retrieval tool.
- 3) According to C.A. Cutter, a library catalogue should:
 - i) enables a person to find out a document of which
 - a. The author, or
 - b. The title, or
 - c. The subject is known
 - ii) Show to user what the library has
 - a. by a given author
 - b. on a given subject
 - c. in a kinds of literature

- iii) Assist users in the choice of a document
 - a) as to its edition (bibliographically)
 - b) as to its character (literary or topical)
- 4) In the I.C.C.P. Conference it has been unanimously decided that the function of the catalogue should be an efficient instrument for ascertaining
 - i) Whether the library contains a particular book specified by
 - a) its author and title or
 - b) If the author is not named with book, its title alone, or
 - c) If author and title are inappropriate or insufficient for identification, a suitable substitute for the title.
- 5) Laws of library science/implication for a library catalogue
 - a) Books are for use

Accessibility to library collection through a well designed physical form of a catalogue as well as the inner structure of a catalogue entry and their organisation.

- b) Every reader his book.

The physical form as well as its internal structure of library should be designed to help every type or category of users, such as children, specialists or physically handicapped persons.
- c) Every book its reader

Provision of analytical entries for document to reveal the hidden contents of documents.
- d) Save the time of reader

All possible approaches to the catalogue through author, title, and subject indexes, cross references entries, and guidelines in the use of the catalogue, all these provide speed of service.
- e) Library is growing organism

Provision to adopt a library catalogue to changes in publications (both paper-print and electronic) and changing needs of users and other environment factors.
- 6) An accession register and a shelf list are essential management records of a library and are not meant for public use. Accession register is a data-wise record of reading materials acquired by the library, giving all details about the documents, arranged in the serial order of documents. A shelf list reflects the arrangements of documents on the shelf. Their purposes are different and hence they cannot be used as a substitute for a library catalogue.
- 7) A bibliography is an organised list of reading materials of a particular author or particular subject or a particular geographical region. It is not limited to collection of any particular library. A library catalogue is list reading and reference materials. Acquired by a library. This feature differentiated a library catalogue from bibliography.

- 8) The important cataloguing codes are as follows:
 - a) Anglo- American Cataloguing Rules, 1908.
 - b) American Library Association Cataloguing Rules, 1949.
 - c) Anglo-American Cataloguing Rules, edition 2. 1978.
 - d) Classified Catalogue Code of Dr. Ranganatham, edition 5. 1964.
- 9) Catalogue and Classification are two interrelated processes that are performed in a library. The basic purpose of these two operations is to aid users in locating and selecting appropriate reading materials required for study, research or any other organisation of documents on the shelves of library while a catalogue serves the purpose of a retrieval tool and also project the contents possessed by a library. All these mechanisms are to a large extent complementary to each other, and together they serve the users in an effective manner to use the library collection. Between themselves, they rectify the shortcoming or limitations of each other.

5.9 KEYWORDS

Analytical Entries	: Entries that go into a catalogue for parts or chapters of a document.
Bibliographical Data	: Data comprising author, title, editor, publisher, place of publishing, year, number of pages, illustrations, etc.
Canon of Prepotence	: The potency to decide the position of an entry among various entries in a catalogue should if possible be concentrated totally in the leading section and the highest potency i.e. power/ strength lies in the entry element that is on the class number and further if total concentration is not possible in the leading section then it flows to the next section that is heading section and the least potency lies on the last section that is the accession number.
Cross Reference Entries	: Directing elements connecting two related entries, one of which leads to the other, also called see and see also entries.
Index	: To indicate or to point out .Provides access to any of the bibliographical entries of the catalogue through author, title or subject index.
Inventory	: A detailed, often descriptive list of something.
Linear Arrangement	: Arrangement one after another, as in a line on library shelves.
Machine-Readable Form	: A form of document, readable only by a machine such as a computer or microform reader.
Standard Format	: Recognised and accepted organisation of bibliographic data of a document.

5.10 REFERENCES AND FURTHER READING

Bowman, J.H. *Essential Cataloguing*. London: Neal-Schume, 2002. Print.

Krishan Kumar. *Cataloguing: Theory and Practice*. New Delhi: Har- Anand, 1993. 9-23. Print.

P.S.G Kumar and Muhammad Riaz . *Cataloguing: Theory and Practice*. New Delhi, S.Chand , 1999. 17. Print.



UNIT 6 TYPES AND FORMS OF CATALOGUES

Structure

6.0 Objectives

6.1 Introduction

6.2 Inner Forms of a Catalogue

6.2.1 Author Catalogue

6.2.2 Name Catalogue

6.2.3 Title Catalogue

6.2.4 Alphabetical Subject Catalogue

6.2.5 Dictionary Catalogue

6.2.6 Classified Catalogue

6.2.7 Dictionary Catalogue and Classified Catalogue: A Comparison

6.2.8 Alphabetico-Classified Catalogue

6.3 Choice of Inner Forms of a Catalogue

6.4 Outer/Physical Forms of a Catalogue

6.4.1 Criteria for Selection of the Best Physical Form of a Catalogue

6.4.2 Bound Register Form

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6.4.10 Comparative Study of Physical Forms of a Catalogue

6.5 Summary

6.6 Answers to Self Check Exercises

6.7 Keywords

6.8 References and Further Reading

6.0 OBJECTIVES

In Unit 5, you have learnt about the definition, objectives and functions of a library catalogue. In this Unit you will know about the forms of a library catalogue. After reading this Unit, you will be able to:

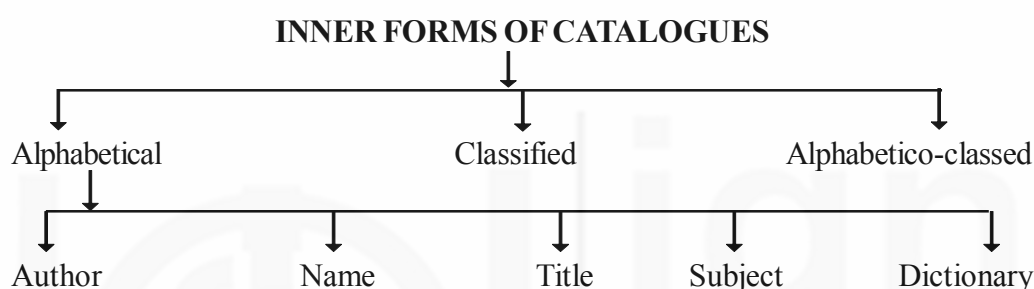
- discuss the different forms of a catalogue;
- compare their relative advantages and disadvantages;
- explain the criteria to select the best form of a catalogue; and
- discuss the features of a computerised catalogue.

6.1 INTRODUCTION

A library catalogue has a long history of one and a half century. It has evolved over the period of time. The evolution has taken place in the form, format as well as contents of a catalogue. Developments in document production and changing user needs have affected the library catalogue. Information Communication Technology (ICT) has also played a role in the developments in catalogues and cataloguing. A catalogue is discussed from the point of view of its external form/ physical appearance and internal form. The different forms have been discussed with their relative advantages and disadvantages in this Unit.

6.2 INNER FORMS OF A CATALOGUE

The inner form of a library catalogue refers to the arrangement of a catalogue entry in a logical and systematic order to fall into a helpful sequence for storage and retrieval. The chart below depicts the various inner forms of a catalogue.



There are three types of inner forms of a catalogue, viz. alphabetical, classified and alphabetico-classed. Author, Name, Title, Subject and Dictionary catalogue fall in the category of an alphabetical catalogue. A Classified Catalogue is so named because it is arranged in a classified order. Classified order is an artificial order which may be difficult to use. Hence a classified catalogue has two parts the other part being alphabetical which is easy to use and leads the user to the classified part. Alphabetico-classed catalogue is a variation of the classified catalogue. It overcomes the shortcoming of the artificiality of a classified arrangement by making it classified alphabetically.

Self Check Exercise

- Note:** i) Write your answers in the space given below.
ii) Check your answers with the answers given at the end of this Unit.

- 1) Define the inner forms of a library catalogue.

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- 2) Enumerate different categories of inner forms of a library catalogue.

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6.2.1 Author Catalogue

Author is the person who is chiefly responsible for the intellectual thought content of a work. In simple words, author is the creator of a work. In an author catalogue, the entries of documents are under author's name and arranged alphabetically. It provides access to documents by the names of their authors. In other words, the leading section of an author catalogue would comprise the name of an author. An author is generally a person or a corporate body who is responsible for the thought contents of the document brought out under the name. Listing of personal names of author varies greatly because of the cultural traditions in the naming of person in different regions of the world. For example, names of persons in Western countries, Indic names, Muslim names, Chinese and Japanese names differ as per their own traditions. Which part of the names should be taken as the lead in a catalogue has been set by cataloguing codes and there are established practices. There are also a variety of corporate bodies under whose names documents are published. Although we are not concerned very much with rendering of names in catalogue entries here, it is important to note that their filing position is determined by the rendering of names. Inaccuracies in the rendering of names would seriously affect the alphabetical arrangement of entries in the catalogue.

The catalogues of the British Library, the Library of Congress, the National Library of India are some of the fine examples of author catalogues.

Libraries may have author catalogues arranged in three different ways: a) There may be an exclusive author catalogue without entries mixing it with any other entries such as titles, subjects, series, etc. b) Author entries may form part and parcel of a dictionary catalogue. c) Author entries may form part of the alphabetical index of a classified catalogue. Irrespective of the form in which an author catalogue exists, it provides an important approach to a document. If the user approaches the catalogue with the correct name of an author, the catalogue immediately gives the person all the documents by the author. To help a user, the other variants of the name of an author are usually provided as cross-references in a catalogue.

Advantages

- 1) It brings together the titles of books of the same author at one place in the catalogue
- 2) It helps a user to obtain at a glance what books are available in the library by a given author. This function, can however be fulfilled by author entries in other inner forms of a library catalogue. In a classified catalogue, this function is performed by the alphabetical index of dictionary part.
- 3) It ensures that there will be no scattering of works of the same author through the catalogue.

Disadvantages

- 1) Approaches of readers under subject, collaborators, distinctive titles etc. cannot be satisfied.

However it requires that the reader must know the exact name of the author and title. In case the author is known by different forms of name or pseudonym, the reader may be helped with the use of see references.

6.2.2 Name Catalogue

A name catalogue is a variation and extension of an author catalogue. It contains entries for works of one author and also for books written on him. All entries are arranged

alphabetically by the name of the author. In other words, a name catalogue is a compound or mixed type of catalogue which combines the author and subject entries (the subject entries representing the author as a subject) into one alphabetical sequence. In this type of catalogue autobiography, biography and other critical studies, memoirs and diary of an author, are arranged along with his original work. The author entries include:

- corporate authors, both as an author as well as a subject
- name series
- place name forming part of an author heading

The following examples, exemplify these points:

Person as an author	Nehru, Jawaharlal: Discovery of India Nehru, Jawaharlal: Glimpses of World History Nehru, Jawaharlal: Towards Freedom Autobiography of Jawaharlal Nehru
Person as subject	Jawaharlal Nehru, Political Biography by F. Moraces Jawaharlal Nehru: Biography by S. Gopal Nehru: the Making of a Nation by M.J. Akbar
Name Series	Oxford Historical Series Madras University Sir C.P. Ramaswami Aiyar Endowment Lecture Series
Place name	Bombay University Calcutta University

Name catalogue serves as an author catalogue and also as a subject catalogue. Any reader interested on the works by or on an author may find this type of catalogue very useful to find specific material of his interest. In this type of catalogue, one can find the works of Rabindra Nath Tagore as well as works on him arranged in a single alphabetical order under Tagore.

Name catalogue seems to be almost confined to Great Britain. Such a catalogue outside Great Britain appears to be rare. The catalogue of the British library is near name catalogue which includes references from all names that occur in titles.

Advantages

- 1) It is useful and valuable for collection of books of an author and books on her/him.

Disadvantages

- 1) Subject entries are limited to personal and corporate names only.
- 2) There is no title entry in this form of catalogue so also under collaborator and series.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 2) State the essential difference between an author catalogue and a name catalogue in two lines.

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6.2.3 Title Catalogue

In a title catalogue, the titles of documents occupy the leading section of entries, which are arranged in an alphabetical order. Queries of readers who remember only the exact title can be answered with the help of a title catalogue. However, it is noticed that many of the readers do not spell out a title exactly the way it appears on the title page, particularly non-fiction titles. To fulfill title approach of readers, entries can be selectively provided in catalogues of public libraries for fiction and for those that are well-known by their titles. It is a part of dictionary catalogue or part of author-title index of classified catalogue. For books in classical language particularly Sanskrit and Pali, this catalogue is somewhat preferred.

Advantages

- 1) Satisfies the approaches of readers especially in cases for classical languages and for fiction, drama, poetry and for the class literature.

Disadvantages

- 1) It cannot alone satisfy all approaches of the readers except the title approach.

6.2.4 Alphabetical Subject Catalogue

It is a list of books in a collection, each entered under the name of the specific subject as a heading, the entries being arranged alphabetically. Several books on the same subject will be brought together in the catalogue. When there is more than one book on one subject, the author of the book is taken to determine the alphabetical order. If the author's name is common for several books, then the title of the book is taken in to account for arrangement of entries. The sample example of this type of catalogue is given below:

CHEMISTRY ORGANIC

Bahal, B S

Text book of Chemistry

DOCUMENTATION

Mukherjee, A K

Fundamentals of Special Librarianship and Documentation

Ghosh, Alok

Indian Economics

This form of subject catalogue is called an alphabetical subject catalogue as the specific subjects are arranged alphabetically. If a reader approaches the catalogue with a view to find book or books on a specific subject it provides excellent service as s/he has to refer to it like dictionary. However if at all reader wants to see all the materials on a field of knowledge systematically, the catalogue fails to respond to his query i.e. a book on BOTANY will be separated from books on ZOOLOGY. Similarly books on CHEMISTRY will be separated from books on PHYSICS. Hence a reader has to look under separate headings at different places in the alphabet if all the materials available on a given field of knowledge are to be gathered.

Features

- i) The primary function of this catalogue is to know what books are there on a particular subject in the library.
- ii) In this catalogue, entry is to be made under specific subject term which represents the specific subject matter of the book.
- iii) This catalogue is made under specific subjects and again arranged in alphabetical order that is why it is named as alphabetical subject catalogue.
- iv) This catalogue is prepared with the help of a Standard List of Subject Headings like Sears List of Subject Headings or Library of Congress List of Subjects Headings for consistency, uniformity and standardisation.

Advantages

- i) With the help of this catalogue, the specific subject approach of the readers is satisfied.

Disadvantages

- i) The related subjects are scattered throughout the catalogue owing to their alphabetical arrangement.
e.g. Money and Banking, Electricity and Magnetism, Astronomy and Planet etc.
- ii) The Standard List of Subject Headings fail to cope with the ever emergence of new subjects and the new editions have to be brought out regularly; otherwise the catalogue is unable to assign exact subject headings for newly published books.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 4) Give ten example of subject headings. Illustrate how an alphabetical subject catalogue scatters related subjects.

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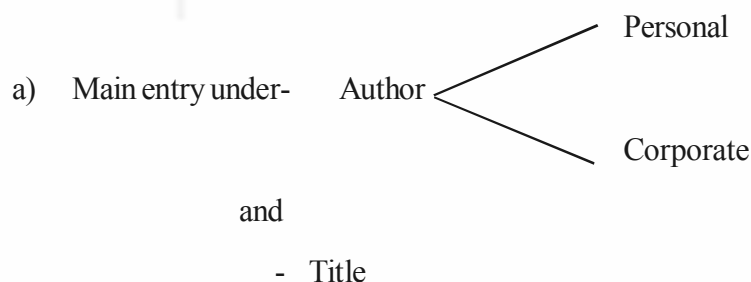
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6.2.5 Dictionary Catalogue

It is a catalogue in which all the entries (authors, title, subject, series etc.) and their related references are arranged together in one alphabetical reference. It resembles arrangement of entries in a dictionary where the words are strictly arranged alphabetically. The various entries of this catalogue are arranged just like a dictionary that is why it is called dictionary catalogue.

Features

- i) It is a mixed type of catalogue, where we find two distinct approaches merged together. It is a combination of two distinct and different approaches, the author and title approach for the reader who knows the book by the author s/he wants, the subject approach of the reader who does not know either the name of author or title of the book but wants material on some definite subject.
- ii) As a result of this type of arrangement quite unrelated headings will come together and related headings will be dispersed (e.g. classification and cataloguing; flowers and rose will be dispersed.)
- iii) It takes its name from its arrangement which follows the simple alphabetical order of entries.
- iv) So far the subject entries are concerned, it follows the principle of specific subject heading. It should be entered under the specific subject.
- v) Dictionary catalogue provides an elaborate scheme of cross reference to bring together scattered related subjects and to correlate and unify the entries in order to bring systematic and logical order.
- vi) A dictionary catalogue with cross references is called syndetic or connective catalogue.
- vii) A dictionary catalogue is divided into two files; one for author, title, series and collaborator entries and another for subject entries.
- viii) Different types of entries in this catalogue are:



- b) Added entries under – Joint author, Translator, Editor, Compiler, Title, Series and
- c) Subject Analytical entries – In case of collections of papers like conference and seminar proceedings article of journals etc. Author, Title and Subject Analytical entries are to be prepared.
- d) Cross- reference – These are of two types, viz. (1) ‘see’ reference and (2) ‘see also’ reference from unused to used headings and from specific subject to general subject from narrower term to broader term(e.g. Roses see also Flowers) respectively.

Advantages

- i) It is the most popular form of catalogue used in public, school and college libraries, and even in university libraries. Its popularity is due to its arrangement like a dictionary i.e. in alphabetical order.
- ii) It can satisfy the different specific needs of the readers.
- iii) The users need not be aware of class numbers to refer this catalogue.
- iv) With the help of cross references and general references, readers are guided from one heading to another heading.
- v) Direct approach on any specific subject can be satisfied easily e.g. if a reader wants books on “CRICKET” he will refer the catalogue directly under this term and at once know all the books available on “CRICKET” in the library.

Disadvantages

- i) For readers who need information on a subject with all its ramifications, the dictionary catalogue is most difficult to use. It is slower in yielding information and less satisfactory in its result than the classified form.
- ii) Extensive use of cross references to bring together the related subjects together results in the catalogue becoming bulky. Its maintenance is more difficult. Moreover the cross references often proves to be tire some.
- iii) It is a tedious and time consuming affair on the part of the readers to find out information on the various aspects of a particular subject and its related subjects from this catalogue.
- iv) Dictionary catalogue suffers from all the consequences of excessive dependence on verbalisation.
- v) Replacing the old subject terms by new subject terms is a tedious and time consuming process.

The sample of Main entry of Dictionary Catalogue is given below

Call number	
541	
Pk4	Palit, S R
Text book on physical chemistry/ by S.R. Palit . – 2 nd ed. – Calcutta: Asia Publishing House, 1964.	
Acc no	XX, 245p. : ill. ; 22x12cm.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
- ii) Check your answer with the answer given at the end of this Unit.
- 5) Write six examples of your own, illustrate how the distributed relatives get collected in one place in a dictionary catalogue.

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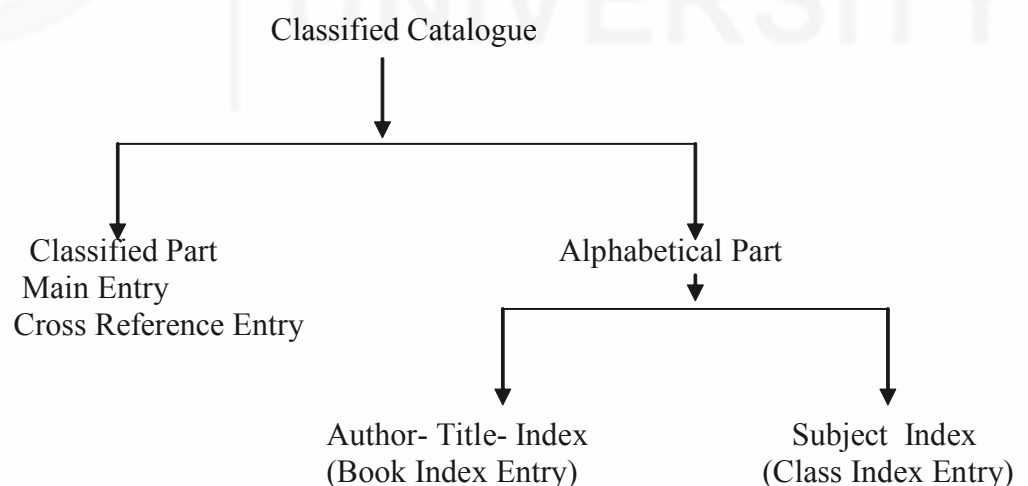
6.2.6 Classified Catalogue

Classified catalogue provides access to information by subject. It is different from an alphabetical catalogue in that the arrangement is by class numbers. It brings in an artificiality as the user is expected to be aware of the scheme of classification. To help the user, a classified catalogue is in two parts, the other part being alphabetical in nature that guides the user in navigating through the classified part and reaching the desired information.

Definition

According to Encyclopaedia of Librarianship, it is “a catalogue of subject entries arranged in the systematic order according to a scheme of classification.”

Dr. Rangnatham defines it as, “a catalogue in which some are numbered entries and some are word entries”. Consequently a classified catalogue consists of two parts (i) the classified part and (ii) the alphabetical part.

**Classified Part**

It is the arrangement of entries of documents by class number that gives the systematic and structured display of subjects in a classified catalogue. It maps out the subordinate and coordinate subject divisions and puts them in a logical sequence. This systematic arrangement to a certain degree reflects the logical thinking of specialists in different subjects and gets their appreciation.

While displaying the entries in a classified catalogue merely giving the class numbers would not be very helpful to users of the catalogue. The class numbers are not intelligible to persons who have no knowledge of the classification scheme chosen for the library. Therefore, while displaying the class numbers in guide cards, for entries under them, it is absolutely necessary to give their verbal equivalents of the divisions of class numbers. These verbal equivalents provided for class numbers in a classified catalogue are known as 'Feature Headings'.

Alphabetical Part

The alphabetical index to a classified catalogue, consisting of author, title(wherever necessary), subject entries and other entries for collaborators, series, editors of series and a host of cross references, is meant to support the classified part of the catalogue. It can fulfill all the functions of a dictionary catalogue i.e. collect the works of an author together, bring all the different editions of a title, cross reference for subjects, etc. With the classified part bringing all the related subjects together, and the alphabetical order bringing together all the distributed relatives, the classified catalogue can fulfill all the functions of a library catalogue.

Features

- 1) It is a subject catalogue where entry is made under the class number which represents the subject matter of the book.
- 2) It consists of two parts, namely the classified part (the number entries) and the alphabetical Part(the word entries) where the entries are made and arranged according to alphabetical order.
- 3) The success of this catalogue depends upon largely on the soundness of the classification scheme chosen and the extent to which subjects are collocated in that scheme.
- 4) As the classified catalogue is based on some classification scheme, all the entries are arranged from general to specific at all levels in this catalogue.
- 5) Any shortcoming in the scheme of classification reflects in the catalogue when the subject entries are prepared by the chain indexing from the class number of the document.

Advantages

- 1) In classified catalogue, the main entry not only falls under the subject with which a book deals, but it falls in close proximity with related subjects.
- 2) The logical or systematic arrangement of subjects is assumed because the catalogue is based on a recognised system of classification.
- 3) The close identity of arrangement between catalogue entries and books on shelves tends to increase the readers' familiarity with a large number of books.
- 4) It discloses the strength and weakness of a library by subjects, broad and specific.
- 5) It is easy to bring out printed parts of a classified catalogue, class by class with a consolidated index at the end of the volume when the parts are printed.
- 6) Specific sections of classes of the classified catalogue in a large library with a fairly balanced and representative active collection can be used as relative subject bibliographies.

- 7) The arrangement of entries according to notation of the classification scheme makes it independent of natural language which may lead to international standardisation and ultimately international cooperation.
- 8) A classified catalogue is very helpful for exhaustive literature search as it offers all possible approaches. The classified part satisfies the linear approach. In alphabetical part it serves multi-dimensional verbal approach.
- 9) More number of readers can consult the catalogue at a time because of the facility of separate catalogue cabinet both in classified and alphabetical part.
- 10) Changes in subject terminology do not seriously affect the classified catalogue. Only the subject index cards in the alphabetical portion needs to be re-filed according to changed terminology.
- 11) The index entries of a classified catalogue are easier to use and consult.
- 12) Arrangement of entries in the classified part is the same as that of books on shelves. Arrangement in the alphabetical part is like a dictionary, which is easy to understand. Arrangements of multilingual entries do not present difficulties in the classified part but in the alphabetical part, multilingual entries can present difficulties.

Disadvantages

- 1) In a classified catalogue, the reader has to consult the alphabetical part first then taking the call number he has to again go to classified part for detailed information about the document.
- 2) The success of this catalogue depends on the classification scheme chosen. Because if there is any drawback in the classification scheme, it will be reflected in the catalogue.
- 3) Revision of classification scheme necessitates revision of the relevant part of the subject catalogue.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 1) Bring out the differences between a dictionary catalogue and a classified catalogue with reference to the structure and provision for adding new subjects. Give your answer in a tabular statement.

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6.2.7 Dictionary Catalogue and Classified Catalogue : A Comparison

No 1.	Features/Aspects 2	Dictionary Catalogue 3	Classified Catalogue 4
1.	Arrangement	One single, alphabetical sequence of author, title, subject, etc.	Two parts i) classified part arranged according to class numbers and ii) alphabetical part. Arrangement of entries in the classified part is exactly the same as that of books on shelves and in the alphabetical part is just like a dictionary which is easy to understand and to use.
2.	Author and title filiations	Works of the same author, different editions of the same work, different translations of a work kept together.	The alphabetical index gets this filiations of authors and works.
3.	Subject filiations.	Related subjects get scattered because of alphabetical arrangement but can be connected by a system of cross references.	Presents a structured and organized arrangement of subjects, displaying their relations.
4.	Distributed relatives	All distributed relatives are collected and brought together.	The alphabetical index can perform this function.
5.	New subject	Can be inserted into the catalogue without any difficulty.	To be fitted properly in the subject filiation. There may be difficulties to position a new subject into the classification scheme without the permission of the designers of the classification scheme. It may also introduce an element of inconsistency.
6.	Specific subject.	Provides direct approach to users if he searches under a particular subject and need not required to know the classification scheme.	A reader has to consult alphabetical part first, then taking the class number, he has to refer the classified part then only he can get all the books on the subject.

7.	Classification as a basis.	Does not depend on any scheme of classification.	Success of this catalogue depends solely on the qualities of scheme of classification.
8.	Use of cross references.	Extensive use of cross references solely depends for its success. But ultimately becomes more bulky which poses problems for best use.	Number of cross references is less due to automatic presence of classified arrangement which brings related subjects together.
9.	Ease of use.	Simple, ease and straight forward, a direct search is sufficient to find any kind of information.	Two step search is necessary. It does not require complete knowledge but by providing elaborate guide cards will help for best use.
10.	International cooperation.	Difficult to achieve.	Possible if UDC is used with its multilingual indexes which facilitates literature searches for foreign language literature.
11.	Printing.	Cannot be done in parts.	Printing of subject is possible, as a result a number of subject catalogues can be produced.
12.	Compilation of bibliographies.	Not very convenient to compile subject bibliographies	Very convenient for the preparation of subject bibliographies.
13.	Strength of collection.	Not possible to know the exact strength or weakness of a particular subject.	Can be easily assessed the strength of a subject and act as a book selection aid for book selector.

6.2.8 Alphabetico-Classed Catalogue

The alphabetico-classed catalogue may be considered as a combination or mixture of the best points associated with dictionary and classified catalogue. In other-words, it represents an attempt to combine some of the advantages of a classified catalogue with the directness and ease of consultation of the alphabetical catalogue. A catalogue with entries under broad subjects alphabetically arranged and sub-divided by topics in an alphabetical order. It is out and out a subject catalogue. It does not stand independently by itself as in case of dictionary catalogue. An alphabetico-classed catalogue provides alphabetically arranged broad subjects. Topics subordinate to the main subjects are listed as sub-divisions. The references needed from specific headings e.g.

MNEMONICS

See

PHILOSOPHY—PSYCHOLOGY—MEMORY—MNEMONICS

“A catalogue of this kind consists of an alphabetical sequence of mutually exclusive broad subject headings, under each of which appears of further alphabetical sequence

of sub-headings, the process of alphabetical divisions can be carried down to the degree of minuteness required by the material being catalogue” (E.J. Coates). The rearrangement of D.D.C. division of 600 Technology in an alphabetical order would yield the following:

Agriculture and related technologies (630)

Building (690)

Chemical and related technologies (660)

Engineering and allied operations (620)

Home economics and family living (640)

Management and auxiliary services (650)

Manufactures (670)

Manufacture of product for specific uses (680)

Medicines (610)

Diseases (616)

of blood- forming, lymphatic, glandular system(614.4)

cardiovascular system (616.1)

digestive system (616.36)

of biliary tract (616.36)

of mouth and throat (616.31)

This type of catalogue must have alphabetical index of specific subjects for its successful operation.

As will be seen from the above examples, the alphabetico-classed catalogue gets related subjects together in a way, but their alphabetical arrangement takes away the filiations of subjects. There are few examples of such catalogues today, because compromises are never entirely successful.

Parts of the original museum subject index use the alphabetico-classed principle.

Advantages

- 1) In this type of catalogue there is an attempt to incorporate the advantages of dictionary and classified catalogue with the simplicity of an alphabetical arrangement broad subject headings where again sub-divisions are arranged alphabetically.

Disadvantages

- 1) It is a complex type of catalogue and see references are made from the specific heading to the complex heading.
- 2) Subject headings are complex creating confusion for the reader .

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 7) List any five criteria for choosing an inner form of a library catalogue for a library.

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6.3 CHOICE OF INNER FORMS OF CATALOGUE

The essential requirements in the choice of an inner form of catalogue are:

- i) A good library catalogue should satisfy the different approaches of the readers.
- ii) Works of same author or collaborator or on the same subject should come together.
- iii) The catalogue should be logically constructed so that closely related classes should be brought together.
- iv) It should be prepared in such a way that a reader can easily understand without much trouble.
- v) The catalogue should be selected keeping in mind the type of user community, their information needs and nature of documents.
- vi) The library must provide a user- oriented catalogue.
- vii) Technical soundness of particular inner form; open or closed access system adopted; the range of services to be planned and financial position of the library.

6.4 OUTER/PHYSICAL FORMS OF CATALOGUE

In Section 6.2 you have learnt about the various inner form of catalogues, their features, advantages and disadvantages. Also you must be aware of the factors to be considered in selecting an inner form of catalogue for a library.

However, now let us discuss about the different types of physical forms of catalogue including their relative requirements i.e. the criteria for selecting the best possible catalogue which can be used conveniently by the maximum number of readers leading to least cost for its presentation and occupying less space.

In due course, you will be able to know the importance of some of the catalogues in the libraries of 21st century. You can also understand the relative merits and demerits of such catalogues and the reasons for choosing a specific one for a particular type of library. Most of these forms have historical importance since the scenario has changed with use of computers in cataloguing.

6.4.1 Criteria for Selection of the Best Physical Form of Catalogue

In the recent past, due to advent of IT, most of the libraries are in the process of computerisation and developing computerised catalogues. However, card catalogue still exists and in operation especially in colleges and university libraries. Whatever physical form a catalogue may have, it should possess all the features of the most suitable catalogue, if not all, the selected physical form should have most of the following criteria for its choice.

- Should be possible to keep it up to date which implies that one should be able to insert or withdraw entries easily as and when required. It means the catalogue should be flexible in nature.
- To bring like entries together i.e. on the same author and same subject.
- It must be easy to use and should be possible to consult it inside or outside a library. This is related to portability.
- Should be economical to produce and maintain and should have facility for making number of copies.
- Must be compact in size, so that it does not occupy much space.
- Should provide multiple access points and save the time of the readers so that at a time more number of readers can use this catalogue.

6.4.2 Bound Register Form

In this form, the entries of documents of a library are written in hand in a bound register or ledger. The information about each document like author, edition, accession number, number of copies and class number is provided and separate registers for author, title and subject can also be prepared.

Advantages

- i) The ease with which readers can use this catalogue is unquestionable
- ii) Xerox copies of the catalogue can be placed at different locations in libraries facilitating the readers to consult the catalogue in any corner of the library so that at a time more number of readers can use it because it has the quality of portability.
- iii) Several entries that can a reader see on a page at a time without the necessity of turning one card after another is definitely an added advantage which saves precious time of the readers. Some times a card may be skipped up while consulting hurriedly.
- iv) It needs neither much space nor special equipment for its display due to its compactness.
- v) Since the readers are in the habit of reading and consulting the books from childhood, they feel it much more convenient to consult being like a book.

Disadvantages

- i) It does not possess the quality of flexibility hence when new books are added, entries cannot be filed in their appropriate places as the left out space is filled soon. Hence such books will be entered at the end of the register or a supplementary catalogue is prepared which is a delaying process. Addition of books is an inherent feature of a library this catalogue is unable to keep good company as one is fast, the other is slow.
- ii) It cannot be kept up to date.
- iii) The quality of paper is not thick as the card catalogue; hence its durability is less and cannot withstand constant use by the readers.
- iv) In case of stolen, damaged, tornout, mutilated and outdated books are to be discarded, then immediately the relevant entries are to be deleted from the catalogue which looks confusing and indecent.

6.4.3 Printed Book Form

It is a catalogue of books and other reading materials available in a library bound in a volume or volumes where entries are printed on pages. It is also known as printed page catalogue or bound book catalogue. These are prepared in conformity with standard principles and rules of cataloguing. Some of the big libraries like British Library, the Library of Congress, National Library, Kolkata, Glasgow and Liverpool Catalogues printed their catalogues in the book form. To keep the catalogue updated, they regularly issued supplements to these catalogues.

Advantages

- a) Since this catalogue resembles the printed reading materials, it creates less psychological barrier to the readers for use as they are familiar with the conventional printed books.
- b) Speed of search is fast as compared to other form of catalogues.
- c) Multiple copies of this catalogue can be made on demand and can be sold so that readers can consult the catalogue at home and hostels comfortably.
- d) No thoughtless and careless reader can make any alteration in the pagination or in the order of arrangement of entries. The volumes of it can be kept on a table without any special equipment and easy to handle. In this context, Gellar has said that, “the printed book catalogue are an active, positive salesman for its service, an effective display window for its merchandise and as an instrument by which it has been able to improve professional service to the public. Experience shows that the printed book catalogue is attractive psychologically to the public, and that it is easy, simple and conventional to use. There are no long trays to pullout and pull back.....”
- e) In small libraries, it is considered economical to use this catalogue as in such libraries, books are added in small numbers. Subsequent, supplementary catalogues can be prepared.
- f) Easy to consult as a reader can have a glance of many entries on one page.
- g) It does not occupy much space.
- h) Can be segmented to various sections and can also be issued subject wise to satisfy the needs of different subject groups of users.

Disadvantages

- i) Insertions and withdrawal of entries or deletion is not possible as it is not flexible.
- ii) It is high expensive for its production, issue of supplements takes much time hence it cannot be kept up to date.
- iii) Printing of the catalogue consumes a lot of time and in the mean time new books are acquired by the library whose entries cannot be included, as a result, the information about such books cannot be brought to the notice of the readers. As such the catalogue cannot indicate the complete collection.

6.4.4 Sheaf Form

Sheaf form of library catalogue is also known as loose-leaf form. A sheaf form of catalogue is one in which slips of paper are put into a loose-leaf binder and bound by

some mechanical device into a volume. This is a loose-leaf binder format, which provides the convenience of handling a book. In the sheaf form, each entry is made on a separate slip. But, there may also be more than one entry on each slip or page. The entries are either handwritten or typed. New slips can be inserted in appropriate places without disturbing the existing order of arrangement of entries. It is also possible to remove entries for specific documents in case such documents are withdrawn from the library stock. Roughly, each volume of a sheaf catalogue may contain about 500 to 600 leaves. The volumes so constituted may be displayed on special shelves with appropriate labels on their spines, indicating the order (either alphabetical or classified) of arrangement. At one time this form of catalogue became somewhat popular in countries like England and other European countries.

Advantages

- i) It combines certain advantages of book form catalogue like portability, familiarity and certain good features of card catalogue like up-to-dateness, infinite expanding capacity and freedom of manipulation of entries.
- ii) It is possible to bring like entries together i.e. books by the same author and on a specific subject.
- iii) Easy to consult and can be referred inside and outside the library.
- iv) Most economical to produce and can be kept in a small wooden/ steel rack resulting into occupying less space due to its compact nature.
- v) A mobile library collection may be entered in a sheaf catalogue and it can be carried in a van.
- vi) Duplicate entries can be made easily.

Disadvantages

- Since the size of slip is 7- ¾ by 4 inches/ the particulars of one document may be recorded resulting into wastage of space.
- The entries be struck off as and when the relevant document is lost, damaged or withdrawn. Otherwise, again the whole slip is to be re-written or retyped on the entire page.
- The filing and fixing of sheaves into loose leaf binder is a time consuming and tedious process as it involves unlocking and locking time and again. Hence it creates problems in proper maintenance of the catalogue.
- Those libraries that follow this catalogue cannot conveniently participate in any cooperative venture where unit cards are used for entries.

6.4.5 Card Form

Library catalogue in the card form is by far the most popular physical form. It is widely prevalent in libraries throughout the world including India.

In this form the bibliographical elements of every document are recorded on a single card. This method of representing every document on a single card is known as the unit card principle. These cards stand in card-trays or cabinets with a punched hole of about half a centimeter from the bottom for inserting a locking rod. This locking system keeps the cards from falling out and also prevents unauthorised persons from removing any card from the tray. Because of its wide usage all over the world, many aspects

pertaining to the card catalogue are standardised. For example, 12.5×7.5cm or 5×3inches is the universally adopted size for a catalogue card. Similarly, the sizes of cabinets, trays for a card catalogue are all of uniform standard. Consequently, most of these items of furniture could be obtained readily from commercial vendors.

Advantages

Some of salient features, which made the card catalogue quite popular are:

- a) It is flexible in keeping it constantly updated with the quality of expansion and withdrawal of entries.
- b) The users and the library staff can handle it with ease.
- c) Possible to bring together entries with the same handling.
- d) The cards are single, self-contained units. This feature permits additional approach points and cross reference in the catalogue.
- e) The entries for lost books can be withdrawn and like entries can be filed together.
- f) The library using the card catalogue can participate in central and cooperative cataloguing scheme. This reduces the burden of the staff.
- g) The cards are hard and tough, so its durability is longer than that of other catalogues.

In fact, the unit card principle is one of the most beneficial outcomes of the card catalogue.

This principle paved the way for centralised cataloguing of documents at central place. The printed unit cards can be multiplied and distributed to other libraries at a fairly low price. The Library of Congress, USA, was the pioneer in starting this card service and many libraries in the United States and other countries use this service. The well-known commercial bibliographic publisher, H. W Wilson and Co. also provides printed catalogue card service to libraries, for selected items.

Cooperation in compiling bibliographic records is another extension of centralised cataloguing.

Libraries participating in cooperative cataloguing provide catalogue entries to the Library of Congress of those documents that are not available at the Library of Congress. The Library of Congress gets them printed for distribution, as part of its catalogue card service.

The British National Bibliographic (now incorporated with the British Library) from its very inception in 1950, assumed responsibility as a national cataloguing agency. Besides, its printed weekly and monthly edition and other cumulations, a printed card service was also made available on subscription to individual libraries. Now new records can be downloaded from its site.

Cataloguing-in-Publication(CIP)

Centralised cataloguing led to the logical step of publishing bibliographic entries of documents in the publication itself, on the reverse side of the title page. Ranganathan called it “prenatal cataloguing”. This facility enabled libraries to use the bibliographical data available on the book for the preparation of their catalogues. The Library of Congress was the pioneer in this enterprise. The British National Bibliography has also been participating in the CIP Programme from January 1977. Such facilities are yet to develop in countries like India.

Disadvantages

Though the card form of library catalogue is universally accepted. It also suffers from some disadvantages. Which stated as under:

- a) The card catalogue occupies large space in libraries. The problem of space is very acute in large libraries located in metropolitan cities. Libraries with a massive collection running into lakhs of documents with an annual addition of 10,000 volumes would need enormous space for its card catalogue. The cost of space is prohibitive in metropolitan cities and this has been a deterrent against continuing with the card catalogue in such libraries.
- b) The growth and complexity associated with the card catalogue call for greater maintenance cost and administratively unmanageable. Difficult to detect the lost card taken out by some careless and thoughtless reader.
- c) Due to inherent defects associated with the structure of a card catalogue, it is possible for a single person to monopolise a considerable number of trays at a time, precluding its use simultaneously by other users.
- d) It is not portable and hence the users have to go to the library for consulting it. This naturally leads to wastage of time, particularly if the library does not possess the documents of his interest.
- e) Speed of search is slower as compared with book form and sheaf form of catalogue.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 2) Enumerate the physical forms of a library catalogue.

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- 3) State two reasons for a card catalogue to be popular than printed book forms.

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6.4.6 Computer-produced Book Form

This type of book catalogue was produced with the help of a computer. The structure, extent of information about the document, typography etc. varied with that of conventional physical form of catalogues. The print out available used to be in the form of line printer output. Many institutes of repute like Library of Congress used to provide services like abstracting and indexing services including the production of catalogues by use of a computer.

Advantages

- 1) The cost of production of multiple copies was less because it is produced first by creating a master copy from which additional copies can be reproduced.
- 2) The maintenance cost was low since the whole catalogue display is recreated at intervals which facilitates the complete catalogue which can be reorganized as and when necessary.
- 3) At a time one entry could be referred in a card catalogue, whereas this catalogue presents an entire page displaying a number of entries.
- 4) The computer produced book catalogue representing both the bibliographic information of a catalogue and organisation.

Disadvantages

Problems may arise in displaying current additions and changes in the cataloguing database.

6.4.7 Microform Catalogue

In microform catalogue, entries were greatly reduced and printed upon a film or fiche.

The microform cannot be read by naked eyes. A suitable microform reader, magnifies the reduced images on the film or fiche and projects them on to a screen is necessary consulting a microform catalogue.

As mentioned earlier, microform catalogue may either be in the form of a microfilm or in the form of microfiche. Microfilm can be on a single reel, but generally it is housed in a cassette containing two reels so that the film can be wound forwards or backwards within the container at the time of consultation. Microfilm readers usually allow the rotation of images through 90 degrees.

On the other hand, microfiche is a transparent card type format. A reduction of nearly 42×42 indicates that the width and height of the microimage is $1/40$ of that of the original. Microimage area is correspondingly $1/1600$ of that of the original would give 200 frames per card. Microfiche has the advantage of direct access to a particular frame whereas microfilm requires a serial number through the film to locate a required entry, and serial search is a time consuming process compared to the direct access method afforded by microfiche.

Microform catalogues became popular with the development of Computer-output microform/COM. The COM method converts the digital information contained on the computer generated magnetic tape into print displayed on microform.

Microform catalogues are the output forms computerised cataloguing system. These forms were used extensively in the production of library catalogue during 1970s.

Advantages

Some of the advantages of microform catalogue are:

- i) Microform catalogues are compact and occupy less space in libraries. The space requirements of microform catalogues arise mainly because of space for microfilm or microfiche readers.
- ii) At a time several records can be viewed.

- iii) They are portable and accessible to users depending upon the number of copies of catalogues and machines available. Multiple copies of these catalogues can be prepared easily and inexpensively.
- iv) These catalogues are very easy to use and maintain. COM catalogues are much more cheaper than printed book catalogue produced by computer.

Disadvantages:

- 1) It is not easily updated and rearrangement of information is difficult on live catalogue.
- 2) Unless the file is updated, the deleted material still remains.
- 3) Psychologically the users do not feel comfortable in operating the equipments.
- 4) Cannot be used without microform reader.
- 5) They also required special care and protection
- 6) Medium and small libraries may not be benefited by this catalogue as microform readers/ printers are costly.

6.4.8 MARC and Online Catalogue

There has been a sea change in cataloguing practice with the increasing use of computers, information communication technology and network communications. Cataloguing standards have been rationalised to suit the changing cataloging practice, which have been universally accepted and adopted.

In a machine-readable catalogue, entries are rendered in a format which permits input and storage on magnetic tape or magnetic disc for manipulation in a computer. MARC format, UNIMARC, Common Communication Format (CCF) are standard formats. There are communication formats that are different from physical formats. Access to the catalogue entries may be 'off-line' or 'on-line'. 'Off-line' means that the computer can be used only at certain times. At the available computer time search must be made for a collection or batch of enquires. On-line systems, however, are linked directly to the computers which can be used immediately or at any time for processing enquiries and searching.

There are three major computer produced physical forms of library catalogues which are relevant to off-line access. These are:

- Printed form: Entries are printed in a conventional book format and are available in multiple copies.
- Card form: Each entry is transferred to one or more cards of standard catalogue card and are filed just as in a conventional card catalogue.
- Microform entries are transferred to microfiche and are used with appropriate microform readers.

In these forms, they are no more than the conventional catalogue forms. The only difference being their mode of production.

In an on-line catalogue, the entries are held in computer files and can be projected on the screen or printouts obtained. It is an organised accumulation of machine-readable accumulation of bibliographic records which are maintained on computer storage media facilitating for easy retrieval by library users and staff. It also helps keyword searching of title names and series names. The online catalogues are designed to access the

information online about the library materials by the users with varying background, age, subject interests and computer literacy etc.

Library of Congress defined online catalogue as, “An online catalogue is an access tool and resource guide to the collections of a library or libraries, which contains interrelated sets of bibliographic data in machine-readable form and which can be searched interactively on a terminal by users.”

The computer configuration needed for this catalogue is:

- A computer with keyboard and display units.
- Secondary storage facility
- Terminals wherever necessary.

Focus on the User

Online catalogues can be looked at from several perspectives. Many issues pertain to their design and using libraries, ranging from the number of terminals required to serve a given number of users, to the ergonomics of terminals placement, to the types and amount of information to be included in a catalogue, as well as its arrangement on a screen display. But in examining any form of library catalogue, online or other, the distinction between its implication for the internal operations of the library and its implications for library users must be kept in mind. Even though two perspectives do act on one another in the creation and use of the final product, the distinction is important. The internal-operations perspective has to do primarily with the production and maintenance of a catalogue; the library- user perspective has to do with the presentation and use of it.

An online catalogue has the following characteristics:

- It is meant to be used by end-users with or without training in online searching.
- The database records are usually in the MARC format or derived from MARC format.
- The records are brief bibliographic descriptions enriched by a small number of controlled subject descriptor from Sears list or LC Subject Headings and classification number either from DDC or LC.

The online catalogues consist of information about the books like author (s), title pagination/volumes, publisher, year of publication, series, ISBN, subject descriptors and class number etc. Where as in case of periodicals this catalogue generally describes periodical as a whole. The contents of a periodical and the description of the article are recorded in the full-text databases.

Online catalogues are basically menu-driven and designed with little search options to help the novice searches. Some online catalogue, however operate with command language mode for more exhaustive searching. It can be done by specific item searching and subject searching.

The MARC record format was designed by the Library of Congress and the British Library also adopted it. The aim was to construct bibliographic records in machine-readable form and to facilitate reformatting for a wide variety of purpose, one of which was production of a record for the creation of library catalogues. This national effort made it possible to download from the database on magnetic tapes supplied by the

Library Congress or the British Library, to obtain the records for the stock of a specific library. Thus, a number of computers readable catalogues proliferated in USA, UK and other European countries.

Advantages

The machine-readable catalogue performs, all the functions of a library catalogue with greater efficiency and speed than any other form. We shall spell out these advantages: A computer readable catalogue:

- can be kept updated with speed and efficiency;
- can search for any bibliographical element, such as author, subject, publisher, price;
- is user friendly and new access points and search capabilities can be added as and when necessary;
- can easily be multiplied;
- union catalogue amongst several libraries by electronic communication is possible;
- easy to construct provided the cataloguer has expertise in the technique and the user feels very easy and has instant access to the pool of information and is well versed with necessary instruction;
- facilitates extensive search facility and possesses all the best qualities of both DDC and CC;
- interchange of catalogue records has led to greater consistency, uniformity and standardisation in catalogue records; and
- identifies the availability of the required item on the shelf or on loan if the computer system is linked to a computerised system for issue and return of the reading materials.

Using a computer, one can store and sort catalogue entries automatically. The resultant computer output can be utilised. For example, the computer 'printout' itself can be used as 'master' and reproduced by offset printing process to obtain any number of copies. Alternatively, the output on magnetic tape may be used as the catalogue to access entries directly and one can search and know from it the availability of any document in a library.

Disadvantages

- 1) Users should be trained to the computerised systems to exploit fully the capability of a machine-readable catalogue.
- 2) Both the users and library need to be trained to use the online catalogue
- 3) Interruption in power supply, breakdown of computer system, lack of proper knowledge of the users to operate the system poses problems for its best use.

As a result of rapid development in computer and communication technologies, a number of libraries in the world are switching over to computer readable catalogues and in the process, several on-line catalogue networks have developed and are available for public access in libraries.

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answer given at the end of this Unit.

4) Discuss the advantages of microform catalogue.

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5) Discuss the advantages of computerised catalogue.

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6.4.9 CD-ROM Catalogue

It is a MARC-based compilation of bibliographic records distributed on CD-ROMs supported with software. CD-ROMs are optical discs and with the help of laser beams it can be written and recorded. It is an offline format like the microform that provides excellent search facilities. The introduction of offline, computer produced book and Computer Output Microform (COM) catalogue was a milestone in the history of library catalogue, in terms of production and maintenance. It reveals many of the problems in card catalogue production and effective maintenance. Besides, many cumbersome tasks that are fundamental to card catalogue were eliminated with the use of computers and machine-readable records.

Advantages

- a) It is used because of its fine quality of portability and transportability.
- b) It provides the best possible combination of large data-storage capacity, less production and high speed computer based search.
- c) Union Catalogues can be prepared for sale purpose with the production of CD-ROMS

Disadvantages

- 1) Since it is an offline medium, it faces all the problems of conventional forms of offline catalogues.
- 2) In comparison with online retrieval, CD-ROM is slow.

6.4.10 Comparative Study of Physical form of Catalogues

Types and Forms of Catalogues

Forms of catalogue	Easy to use	Easy to scan multiple copies	Easy to keep up-to-date	Easy to produce	Bulky	Easy to guide	Other factors
Printed	Yes	No	Yes	Yes	No	Yes	
Guard book	Yes	Yes, with some effort	Yes	Feasible but important	Yes	Yes	Time consuming to compile. Withdrawals are a problem
Card	Database	Yes	No	No	Yes	Fairly easy	One user can monopolise a complete section.
Sheaf	Yes	Yes	No, unless multiple entries to page which makes updating difficult.	Not usual but it is possible.	Yes	No	Binding mechanism can be awkward. Sheaf slips are filmsy.
Micro form	Database	Yes	Yes	Yes	No	Yes	Requires a machine to read.
Machine readable	Yes, but some training may be necessary.	Yes	No, but other search facilities compensate.	A number of access terminals may be provided.	A terminal as small as a portable typewriter.	Not applicable.	Power and equipment failure are problems to access

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

5) List the best features of the physically forms of library catalogue.

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6.5 SUMMARY

In this Unit, the different types of physical forms of library catalogues have been enumerated and described. These include conventional forms like Bound register. Printed book form, Sheaf or loose leaf form and Card form, modern forms like Microform and Machine-Readable forms. The advantage and limitations associated with each of these different forms are explained.

With the advent of computers, the entire cataloguing process as well as the physical production of catalogues has undergone many changes, making library catalogue a

versatile tool in a library. Modern machine-readable catalogues perform the functions of a library catalogue with more efficiency and speed. Whatever physical form a library catalogue may take, it should have the following essential features: ease of use, updating capability, browsing facility, easy production of multiple copies and occupies less space. A comparative statement of the different features of the physical forms of library catalogue is also given.

6.6 ANSWERS TO SELF CHECK EXERCISES

- 1) The physical forms of library catalogue are:

Bound register or ledger form

Printed book form

Sheaf or loose-leaf form

Card form

Microform and

CD-ROM catalogue

- 2) The two reasons why a card catalogue is more popular than a printed book form are:

- i) The card catalogue can always be kept updated which is the most essential requirement of a catalogue.
- ii) Addition or withdrawal of entries to the catalogue does not disturb or dislocate the existing arrangement of entries.

- 3) The advantages of a microform catalogue are:

Microform catalogues are compact and occupy less space in libraries. They are portable and immediate access to the catalogue is possible. Multiple copies of this catalogue can be prepared easily and inexpensively. These catalogues are very easy to use and maintain.

- 4) The advantage of computerised catalogue are as follows :

Using a computer, the entries can be stored and sorted out automatically, but also the resultant computer output can be utilised in a number of ways. For instance, the computer printout itself can be used as a master copy that can be reproduced by offset printing process. Alternatively the output on magnetic tape may be processed into a microform. Eventually, the computer itself can be used as a master copy that can be reproduced by offset printing process. Alternatively the output on magnetic tape may be processed into a microform. Eventually, the computer itself may be used as the catalogue to access the entries directly.

It can search any document in a library.

- 5) The best features of the physical form of library catalogue are:

- i) Ease of use, ii) Easy to update, iii) Permit browsing, iv) Easy production of multiple copies, v) Occupy very little space, and vi) Serve as a good guide providing multiple access points.

6.7 KEYWORDS

- Bibliographic Record Format** : The layout of presentation of bibliographical data of a document in a machine-readable form or in machine printout.
- Cooperative Cataloguing** : The sharing by a number of libraries the cost and labour of cataloguing to avoid the duplication of effort common to each.
- Centralised Cataloguing** : The cataloguing of documents by a central agency or library and the distribution there form of printed entries on catalogue card, or in machine-readable form, e.g. Library of Congress printed card service.
- Database** : Information stored on computer files and accessible via a remote terminals and telecommunication link.
- Downloading** : To capture data online from a remote host computer and transfer it to the store of an in house stand-alone system, e.g. a microcomputer, for processing.
- Master** : The plate or then stencil for duplication or for off-set printing, from which a multiple copies are made.
- Microform** : A generic term indicating any form of document in a reduced form whether on flat or on roll film or on microfiche.

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UNIT 7 FORMATS AND STANDARDS

Structure

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7.0 OBJECTIVES

The objectives of this Unit are to introduce you to the formats and standards of bibliographic description of documents.

After reading this Unit you will be able to:

- explain the concept of a bibliographic record format;
- describe a machine-readable record format;
- discuss the development in and structure of ISBD format; and
- describe the structure of MARC, USMARC, UK MARC, ISO – 2709, CCF, UNIMARC and Z39.50.

7.1 INTRODUCTION

The advantage of computers is that they can rapidly and efficiently manipulate and retrieve any information/data, which is stored in machine-readable form. Their use in creation and development of bibliographic databases has raised the hope of developing a universal bibliographic system through the cooperation of several national and

international organisations. Data generation and exchange take place at different levels, i.e. international, national, regional and local. Librarians have felt the need for and have arrived at standards to describe different kinds of bibliographic materials in catalogues and other bibliographic lists. The standardisation helps in deciding what elements to consider while describing a bibliographic material. It also extends to standardising their form and order of presentation including the punctuation and capitalisation. AACR2 is an example of such a standard. But it is not enough to prepare online catalogues where we need to code and structure bibliographic elements to utilise the capabilities of a computer. We have devised formats for this purpose and MARC is an example of such a format. MARC is a machine readable cataloguing format devised by Library of Congress. Many other such formats followed later some of which we will discuss in this Unit. These formats are also standards but standards in this Unit refers to bibliographic standards.

Machine-Readable Cataloguing (MARC), International Standard Bibliographic Description (ISBD) and AACR emphasised on preparation of uniform standardised bibliographic records. The standardisation of bibliographic description is aimed at compatibility and promotion of procedures and practices with a strategy for development towards universal bibliographic control which is a precursor to universal access to publications. Application of computers in the development of bibliographic databases has raised the hope of developing universal bibliographic system through the participation of several national and international organisations.

There is a need for exchange formats, i.e. formats that are designed specifically for the transfer of machine-readable bibliographic data between systems. This Unit discusses the formats available at national and international levels which can be adopted by agencies/ organisations or individuals as per their requirements.

7.2 FORMAT

In the UNISIST Reference Manual 'a (machine readable) bibliographic record is defined as a collection of information which pertains to a single document and which is stored in machine readable form as a self contained and unique logical structure'.

A machine-readable bibliographic record is arranged according to a particular format. Format conveys the notion of a formalised framework or structure, which will hold records of varying content according to certain set of rules or conventions controlling the representation of data. These rules may be unique to a system, or shared with other systems.

7.2.1 Bibliographic Record Formats

Bibliography record formats are used to describe the arrangement or structure of computer readable record of bibliographic items. The essential components of a bibliographic record format are:

- A description of document itself in relation to author, title, publisher, etc.
- Choice of elements to use as approach points for retrieval of the record.
- A unique record identifier of the document.
- Descriptors representing the subject matter of the document selected from standard list of subject headings or thesaurus.

7.2.2 Types of Formats

Formats can be of two types:

- Internal / Local format
- Exchange / Communication / Interchange format

Internal / Local formats

Internal formats are so called because they are internal / local to a software system. They can be changed specifically as per the needs of the local system and do not have to conform to any external standards. For the internal format (the identifiers used and their records structure), system designers can adopt any conventions that they wish. Rules for input are more restricted, being constrained by existing cataloguing codes and practices and need to be compatible with other systems or with a standard exchange format. Their main aim is economy and efficiency in processing, while the ability to convert, if necessary, from the local format to an exchange format is an extra advantage. This conversion can be done by a computer program. An agency may, therefore, adopt its own internal processing format, but at the same time retain system compatibility with a national or international exchange format. Internal formats can be structured in infinite varieties or ways which depend on the software used.

Exchange / Interchange Communication Formats

Exchange formats are also known as interchange/communication formats. Exchange formats are used for exchange of records between systems. Systems should be sufficiently flexible to cope with the needs of many different software systems. Ideally, they should facilitate the exchange of data which are to be used in wide range of different bibliographic applications, from the production of traditional catalogue cards to records in databases which are used for online access. A major problem for designer of exchange format is the lack of international agreement on standards for constructing bibliographic records.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

1) What do you understand by “format”? What are the two types of formats?

.....

.....

.....

.....

7.3 EXCHANGE FORMATS: STRUCTURE AND CONTENT

Bibliographic data formats adopted for exchange of data consist of three basic components. They are:

1) **A defined physical structure:** Rules for the arrangement (on a computer storage medium) of data to be exchanged. This may be linked to a container or carrier into

which data may be placed. The carrier remains constant although the data change from record to record.

- 2) **Content designator:** Codes to identify the different data elements in the record e.g., author, title, scale of map, starting data of journal, etc.
- 3) **Rules:** Content of the records governed by rules for the formulation of the different data elements, very closely tied up with content designator. The data elements separately identified by the codes in the exchange format have to be defined, not only in terms of content but also in form, if the records are to be suitable for use by another agency.

7.3.1 Structure

Records in automated systems may be of fixed length or variable length. Fixed length records in a file must contain the same field and any given field must always be of the same length from one record to another. If a field is repeatable, it must be repeated the same number of times in each record. Variable length records may be variable because they do not contain the same number of fields (a given field may not occur in every record) or because a given field is not always of the same length. Bibliographic records do not fit naturally into the fixed length pattern.

An example of a database whose records can be treated at fixed length is a mailing list for officials within an organisation. In each record there can be fields for each of name, job title, province, state, postal code. Few of any of these data elements will always be of the same length, but most of them will have a similar length. Each data element is allocated a number of characters and any space not used will be filled with blank space. The system designer has to allocate to each data element a suitable number of characters which will not be too small to accommodate the majority of records, but not too large also, to waste space by having records full of spaces. Most records in a mailing list will include all the fields mentioned above and there will not be too many fields in a mailing list database which are completely filled with spaces. In bibliographic records, the situation is different.

- Many fields occur only from time to time, for example cover title, ISSN, edition. The edition, appears in bibliographic records only when the document contains specific edition statement or when it is known to be other than a first edition.
- Many fields occur for a variable number of times in a record. For example: A document may have one author or it may have any number of joint authors. The same document may be a member of more than one series. A record may be assigned more than one subject descriptor.
- A data element may vary in length between records. This is true in most systems which do not code their data but record them in ordinary language.

Content Designator

Content designators are used to denote the identity of each data field (instead of identifying data fields by position) within a record. It may be grouped at the beginning of the record with 'pointers' to the data they identify. The storage of the computer file invariably uses the method of indexing the location of the files at the beginning of the file. The computer calculates from the given starting character position of each file the likely position of that file on the tape/disk, moves the same very quickly to a position just before the start of that file at which point the tape / disk moves more slowly in order to locate the data. This index is known as a directory.

7.4 BIBLIOGRAPHIC STANDARDS

The basic need of bibliographic standard is to have bibliographical control which facilitates comprehension and transfer of bibliographic data between bibliographical agencies at national and international levels. It is highly necessary to develop and design a suitable and feasible standard record format uniformly acceptable to all agencies involved in exchange of information.

7.4.1 International Standard Bibliographic Description (ISBD)

Introduction

The developments that took place in library and information science from the early 1960s revolutionised the concept, scope and purpose of bibliographic description. The exponential growth of literature resulted in the development of different tools such as bibliographies, union catalogues, indexing and abstracting services to ensure effective bibliographic control. The centralised and cooperative cataloguing efforts further intensified the need to have a standard bibliographic format that will promote resource sharing among libraries. The efficient information retrieval system must have a format of bibliographic description that suits its requirements. The micrographic, computers and telecommunication technologies brought a sea change in the library environment. The changes in the pattern of library and information services with the introduction of new technologies rendered the traditional manual oriented bibliographic description standards and practices inadequate and thus the need for newer bibliographic standards.

Origin

The **International Standard Bibliographic Description (ISBD)** dates back to 1969, when the IFLA Committee on Cataloguing (subsequently renamed the Standing Committee of the IFLA Section on Cataloguing, now known as the Standing Committee of the IFLA Cataloguing Section) sponsored an International Meeting of Cataloguing Experts. This meeting produced a resolution that proposed creation of standards to regularise the form and content of bibliographic descriptions. As a result, the Committee on Cataloguing put into motion work that ultimately would provide the means for a considerable increase in the sharing and exchange of bibliographic data. This work resulted in the concept of the International Standard Bibliographic Description (ISBD), which has now endured for about 44 years. The individual formats to which the ISBD concept has been applied are now used by bibliographic agencies, national and international cataloguing codes and cataloguers in a wide variety of libraries throughout the world, because of their potential for promoting record sharing.

The first of the ISBDs was the *International Standard Bibliographic Description for Monographic Publications (ISBD(M))* that appeared in 1971. By 1973, this text had been adopted by a number of national bibliographies and with translations of the original English text into several other languages, had been taken into account by a number of cataloguing committees in redrafting national rules for description. Comments from users of the ISBD(M) led to the decision to produce a revised text that was published in 1974 as the “First standard edition.”

In 1975, the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules proposed to the IFLA Committee on Cataloguing that a general international standard bibliographic description suitable for most common types of library resources should be developed. The ISBD (G) was published in 1977. The ISBD (M) was then revised to bring it into line with the ISBD (G), and the “First standard edition revised” was published in 1978.

Keeping in view the peculiarities of different forms of materials such as serials, cartographic materials, non-book materials, printed music, antiquarian, audio visual materials, computer files, etc. ISBD(M) followed by publication of series of specialised ISBDs, viz., ISBD (S), ISBD (CM), ISBD (NBM) ISBD (PM), ISBD (A), ISBD (AVM) and ISBD (CF) [S-Serials; CM- Cartographic Material; NBM- Non- Book Material; PM- Printed Music; A- Antiquarian; AVM- Audio- visual Material; CF- Computer files]. An integrated general format for all types of documents, called General International Standard Bibliographic Description ISBD (G) was also brought out to bring harmony among various ISBDs and to remove incompatibilities among them.

Subsequently, ISBD Review Committee was formed by the Standing Committee of the IFLA Section on Cataloguing met in 1981 to make plans for reviewing and revising the ISBDs covering monographic publications, serials, cartographic materials, and non-book materials. There were three major objectives set out for this project to:

- 1) harmonise provisions among the ISBDs, achieving increased consistency;
- 2) improve examples; and
- 3) make the provisions more applicable to cataloguers working with materials published in non-roman scripts. In addition, two narrower objectives motivated this particular revision effort: (a) to review the use of the equals sign; and (b) to consider proposals regarding the ISBD(NBM) emanating from specialist groups such as the International Association of Music Librarians (most prominent of which was to remove “machine-readable data files” as a format from this standard). By the end of the 1980s, this project had been completed.

The consolidated edition of the ISBD was published in 2007. IFLA’s ISBD Review Group is responsible for maintaining the ISBD.

Purpose

The ISBDs seek to serve the following primary purpose: First, and of greatest importance, they are intended to make it possible to interchange records from different sources. As subsidiary purposes, the ISBDs, secondly, have assisted in the interpretation of records across language barriers, since bibliographic items in each record can be easily identified through specialised punctuation and its place for the record so that records produced for users of one language can be interpreted by users of other languages. Thirdly, they have facilitated the conversion of bibliographic records to electronic form. Fourthly the ISBD was to provide a standard form of bibliographic description that could be used to exchange records at international level. This would support IFLA’s program of Universal Bibliographic Control.

Structure of an ISBD Record

The ISBD prescribes eight areas of description. Each area, except area 7, is composed of multiple elements. For example, area 1 includes the title proper, general material designation GMD, other title information, parallel title, and statements of responsibility. Elements and areas that don’t apply to a particular resource are omitted from the description. Standardised punctuation (colons, semicolons, slashes, dashes, commas, and periods) is used to identify and separate the elements and areas. The order of elements and standardised punctuation make it easier to interpret bibliographic records when one does not understand the language of the description. These eight areas are:

- 1) title and statement of responsibility area;

- 2) edition area;
- 3) material or type of resource specific area (for example, the scale of a or the numbering of a periodical);
- 4) publication, production, distribution, etc., area;
- 5) physical description area (for example: number of pages in a book or number of CDs issued as a unit);
- 6) series area;
- 7) notes area; and
- 8) resource identifier (e.g. ISBN, ISSN) and terms of availability area.

Heading

Title Proper = Parallel Title : Sub-title / Statement of authorship; Other authors. – Edition Statement; Edition author statement. – Material or type of resource specific area. - Place of publication : Publisher, Year of publication.

Preliminary pages, Textual pages ; Plates : Illustration;

Size.– (Series: Sub-series; Series number).

Notes.

ISBN

The ISBD (G) prescribed preceding area and punctuation element for elements

Note each area other than the first, is preceded by a point, space, dash, space (. -) (Appendix - 1)

Recent Developments

ISBD and FRBR (Functional Requirements for Bibliographic Records)

In the early 1990s, the IFLA Section on Cataloguing with the cooperation of the Section on Classification and Indexing set up the IFLA Study Group on the Functional Requirements for Bibliographic Records (FRBR). One immediate consequence of this development was the decision to suspend most revision work on the ISBDs while the FRBR Study Group pursued its charge to “recommend a basic level of functionality and basic data requirements for records created by national bibliographic agencies.” In 1998, the FRBR Study Group published its Final Report after its recommendations that were approved by the IFLA Section on Cataloguing Standing Committee.

The objective of this “second general review project” was to ensure conformity between the provisions of the ISBDs and FRBR’s data requirements for the “basic level national bibliographic record.” It also involved a mapping between ISBD elements and FRBR attributes and relationships, developed by Tom Delsey in 2004 and the publication of ISBD (ER) electronic resources and later, the ISBD for ‘Continuing Resources’.

The ISBD Review Group has taken initiation to discuss and examine the following:

- to clarify the purpose of area 6 and its relation with area 1 in ISBD(CR) and ISSN: identification or transcription;
- to verify the compatibility of sources of information recommended or prescribed in all ISBDs for area 6 and for area 1 in ISBD(CR) and ISSN, and

- to propose a common phrasing for area 6 in all ISBDs.

7.4.2 ISO - 2709

Introduction

Bibliographical information plays an important role in information retrieval for the research community particularly in the field of science and technology. But during the bibliographical information exchange certain problems arise and more when the information interchange is on magnetic tape or CD-ROM. Different international organisations such as UNESCO/PGI, UNISIST, ICSU-AB, IFLA, ISO have taken many steps towards the standardisation of bibliographic exchange formats. The process of standardisation follows a set of codes given by International Standard Organisation (ISO).

Purpose

The major purpose of standardisation is to:

- permit the exchange of bibliographic records between groups of libraries and abstracting and indexing services;
- permit a bibliographic agency to manipulate bibliographic records received from both libraries and abstracting and indexing services;
- serve as the basis of a format for an agency's own bibliographic database by providing a list of useful data elements; and assist the development of individual systems.

Basic Structure

The ISO-2709 describes a generalised structure specially designed for communication between the data processing systems and not intended for use as a processing format within systems. However, this standard was designed specifically for recording and processing data on magnetic tapes and its structures can be used for other data carriers. (see Appendix –2)

- The ISO-2709 format, also known as MARC, is a standard bibliographic information view. The records in the ISO-2709 format have a fixed structure and consist of: **record marker** of 24 characters;
- **data directory**, consisting of 3 numerical marks for each data field, field size and initial symbol position, relating to the first data field; and
- **variable-length data fields** separated from each other by a field divider.

An ISO-2709 record has **three** sections:

- **Record label** : The first 24 characters of the record. This is the only portion of the record that is fixed in length. The record label includes the record length and the base address of the data contained in the record. It also has data elements that indicate how many characters are used for indicators and subfield identifiers. (See Variable Fields, below)
- **Directory** : The directory provides the entry positions to the fields in the record, along with the field tags. A directory entry has four parts and cannot exceed nine characters in length:
 - Field tag (3 characters)

- Length of the field
 - Starting character position of the field
 - (Optional) Implementation-defined part
- **Data fields** : A string containing all field and subfield data in the record.

Note that although tags are often displayed as labels on bibliographic fields and each bibliographic field has an associated tag, the tags are stored in the directory not in the bibliographic field.

Fields

There are **three** kinds of fields in the ISO-2709 record:

- Record identifier field – identifying the record and assigned by the organisation that creates the record. The record identifier field has tag 001.
- Reserved fields – Reserved fields supply data which may be required for the processing of the record. Reserved fields always have a tag in the range 002-009 and 00A to ZZZ.
- Bibliographic fields – these are in the range 010-999 and 0AA to ZZZ. The bibliographic fields contain data and a field separator. They can also have these optional sub-parts:

Indicator (0-9 characters, as coded in the Leader) – Indicators generally provide further information about the contents of the field, the relationship between the field and other fields in the record, or about action required in certain data manipulation processes (including display labels).

Identifier (0-9 characters) – This identifies data within the bibliographic field. Where used, identifiers are composed of a delimiter (1 char, ? of ISO 646) and an identifying code (1-9 character, as defined in the leader), plus a variable length string containing the data.

Record separator – A single character (of ISO 646).

Example

MARC 21 library cataloguing record was coded in ISO-2709 format. MARC 21 is an instance of ISO-2709 that has the following characteristics:

- tags are in the range 002-999 only;
- there is a two-character indicator on each field, and each character is a separately defined data element; and
- the identifier within data fields (called “subfield code” in MARC 21) is a single ASCII character preceded by of ISO 646.

Principle and Codings

The standard ISO-2709 (standard AFNOR NF Z 47300, December 1987) makes it possible to present any structured bibliographic record a large variety of formats, in particular the MARC or UNIMARC or CCF formats.

A recording comprises in ISO-2709 the following parts:

- **The guide**, continuation of 24 numbered natures from 0 to 20
- **The directory**, which comprises a variable succession of numerical characters
- **Bibliographical data** themselves.

The ISO-2709 standard doesn't limit the content of particular data fields, so this standard offers different bibliographic data view formats, such as USMARC, UNIMARC, RUSMARC, MARC21, UKMARC, DANMARC, etc.

Advantages of ISO-2709

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose. Hence ISO-2709 (Format for Bibliographic Information Interchange on Magnetic Tape) has many advantages. Some of the important advantages are given below:

- It provides a small number of mandatory data elements, which are recognised by all sectors of the information community as essential in order to identify an item.
- It gives mandatory data elements that are sufficiently flexible to accommodate varying descriptive practices.
- It also provides a number of optional elements, which may be useful to describe an item according to practices of the agency, which creates the record.
- It provides a mechanism for linking records and segments of records without imposing on the originating agency any uniform practice regarding the treatment of related groups of records or data elements.

7.5 STANDARDS FOR MACHINE-READABLE RECORD FORMAT

7.5.1 MARC and MARC 21

What is a MARC Record?

A MARC record is a Machine-Readable Cataloging record. It is a format standard for the storage and exchange of bibliographic records and related information in machine.

Machine-readable: "Machine-readable" means that one particular type of machine, a computer, can read and interpret the data in the cataloguing record.

Cataloguing record: "Cataloguing record" means a bibliographic record, or the information traditionally shown on a catalogue card. The record includes (not necessarily in this order): 1) a description of the item, 2) main entry and added entries, 3) subject headings, and 4) the classification or call number.

- 1) **Description:** Librarians follow the rules in *Anglo-American Cataloguing Rules*, 2nd ed., 2002 revision to compose the bibliographic description of a library item. It includes the title, statement of responsibility, edition, material specific details, publication information, physical description, series, notes, standard numbers and keywords.
- 2) **Main entry and added entries:** AACR 2R also contains rules for determining "access points" to the record (usually referred to as the "main entry" and "other added entries"), and the form these access points should take. Access points are the retrieval points in the library catalogue where patrons should be able to look up the item.

In other words, the rules in AACR 2R are used to answer questions such as: For this book, should there be entries in the catalogue for more than one author or more than one title? Should the title of the series be noted? How should the author's name be written? Is this a "title main entry" item (no author)?

- 3) **Subject headings (subject added entries):** The librarian uses the *Sears List of Subject Headings* (SLSH), the *Library of Congress Subject Headings* (LCSH), or some other list of standard subject headings to select the subjects under which the item will be listed. Use of an approved list is important for uniformity and consistency, to ensure that all items on a particular subject are found under the same heading and therefore in the same place in the catalogue.
- 4) **Classification/Call number:** The librarian uses a Dewey Decimal Classification or Library of Congress Classification schemes to select the class/call number for an item. The purpose of the class/call number is to place items on the same subject together on the same shelf in the library. Most items are sub-arranged alphabetically by author. The second part of the call number usually represents the author's name, facilitating this sub-arrangement.

Importance

MARC format is most necessary to any type of library for:

- Prevention of duplication of work;
- Better sharing of bibliographic resources; and
- Bibliographic control at international level.

MARC : Terminology

To describe a MARC record, we need to first understand the terminology associated with that.

Signpost: The information from a catalogue card is not simply typed into a computer to produce an automated catalogue. The computer needs a means of interpreting the information on a catalogue record. The MARC record contains a guide to its data, which is called as Signpost, before each piece of bibliographic information.

The following example gives us a clear idea about Signpost.

Signpost	Data
Main entry, personal name with a single Surname The name	Brenner, Richard J
Title and statement of responsibility Title proper Statement of responsibility	Make the Team Richard J Brenner
Edition area Edition statement	1st ed.
Publication, distribution, etc. area Place of publication Name of publisher	Boston Brown
Physical description area Pagination Illustration	127 p. ill.

Fields

Each bibliographic record is divided into fields. Means there is a field for the author, title, etc. These fields are again subdivided into one or more “subfields”. Each field is represented by a “tag”.

Indicator

Indicators are one-digit numbers. Each tag is followed by two character positions. In some fields first or second position is used, in some fields both are used and in some fields (like 020, 300) neither is used. When an indicator position is not used, that indicator is referred to as “undefined” and it is marked by character position “#”. Each indicator value is a number from 0 to 9.

For example:

Tag Indicator Title Field

245 14 a The Handbook of Library and Information Science.

In the above example “1” is the first indicator and “4” is the second indicator. The value of first indicator in the field i.e., “1” indicates that there should be separate title entry in the catalogue, means title added entry should be prepared and title should be added to the tracing in the card catalogue. A first indicator value of “0” would mean that a title main entry is involved and no additional tracing for the title would be required.

The second indicator i.e., “4” displays the number of characters at the beginning of the field (including spaces) to be disregarded by the computer in the sorting and filling process. For the title *The Handbook of Library and Information Science*, the second indicator is set to “4” so that the first four characters (“T”, “h”, “e”, and the space) will be skipped and the title will be filed under “handbook”.

Variable Fields

The data content of a record is divided into variable fields. The MARC 21 formats distinguish two types of variable fields : variable control fields and variable data fields. “Variable control fields” consist of data and a field terminator. The 00X fields (001 to 009) in the MARC 21 formats are variable control fields. “Variable data fields” contain the textual information that describes the bibliographic item being catalogued. All fields except 00X are variable data fields.

Subfields, Delimiters and Subfield Codes

Within a field, there may be several related pieces of data. Each type of data within the field is called a subfield. Each subfield is preceded by a subfield code. Subfield codes are always lower case letters which is preceded by a delimiter. A delimiter is used to separate subfields.

For example :

In the field publication, distribution, etc. (Tag 260), the most commonly used subfields are :

- a) Place of publication, distribution
- b) Name of publisher, distributor

c) Date of publication, distribution

260 ## \$a New Delhi :
\$b Allied Publishers,
\$c 2001.

Here “\$” is delimiter.

MARC : Structure

The format of MARC structure includes :

Leader Record Directory Variable Field

Leader

The leader is the first 24 characters of the records. Each position has an assigned meaning, but much of information in the leader is for computer use. Leader provides information about the ensuing record such as the total length of the record, type of the record code and the bibliographic level.

Record Directory

Immediately following the leader, the directory begins. Directory tells what variable fields are in the record and where they are placed. There is a 12 characters record directory for each variable field. The record directory helps in the retrieval of select fields from the record. The directory ends with a field terminator character.

The MARC format, both by its structure and the content designators has caused a revolution in the design of bibliographic database, worldwide. The existence of many formats based at least on the principles behind MARC format proves the impact that MARC had. The creators of various databases such as INIS, AGRIS and INSPEC have used MARC structure as the basis for the creation of their own communication format. Why one standard? One could devise her/his own method of organising the bibliographic information, but s/he would be isolating her/his library, limiting its options, and creating much more work for himself. Using the MARC standard or format prevents duplication of work and allows libraries to better share bibliographic resources. Choosing to use MARC enables libraries to acquire cataloguing data that is predictable and reliable. If a library were to develop a “home-grown” system that did not use MARC records, it would not be taking advantage of an industry-wide standard whose primary purpose is to foster communication of information.

Using the MARC standard or format also enables libraries to make use of commercially available library automation systems to manage library operations. Many systems are available for libraries of all sizes and are designed to work with the MARC format. Systems are maintained and improved by the vendor so that libraries can benefit from the latest advances in computer technology. The MARC standard or format also allows libraries to replace one system with another with the assurance that their data will still be compatible.

7.5.2 USMARC

Introduction

USMARC formats are standards for the representation and communication of bibliographic and related information in machine-readable form. A USMARC record

involves three elements: the record structure, the content designation and the data content of the record. The structure of USMARC records is an implementation of national and international standards, e.g., Bibliographic Information Interchange (ANSI Z39.2) and Format for Bibliographic Information Interchange on Magnetic Tape (ISO-2709). Content designation, the codes and conventions established to identify explicitly and characterise further the data elements within a record and to support the manipulation of those data, is defined in the USMARC formats.

The content of most data elements is defined by standards outside the formats, e.g., Anglo-American Cataloguing Rules, Library of Congress Subject Headings, National Library of Medicine Classification. The content of other data elements, e.g., coded data is defined in the USMARC formats. A USMARC format is a set of codes and content designators defined for encoding a particular type of machine-readable record. USMARC formats are defined for the following types of data: bibliographic, holdings and authority.

USMARC format for bibliographic data contains format specifications for encoding data elements needed to describe, retrieve, and control various forms of bibliographic material. The USMARC Format for Bibliographic Data is an integrated format defined for the identification and description of different forms of bibliographic material. USMARC specifications are defined for books, archival and manuscripts control, computer files, maps, music, visual materials and serials. With the full integration of the previously discrete bibliographic formats, consistent definition and usage are maintained for different forms of material. USMARC Format for Holdings Data contains format specifications for encoding data elements pertinent to holdings and location data for all forms of material. USMARC Format for Authority Data contains format specifications for encoding data elements that identify or control the content and content designation of those portions of a bibliographic record that may be subject to authority control. USMARC formats are maintained by the Library of Congress in consultation with various user communities.

USMARC Format: Utility

USMARC formats are communication formats, primarily designed to provide specifications for the exchange of bibliographic and related information between systems. They are widely used in a variety of exchange and processing environments. As communication formats, they do not mandate internal storage or display formats to be used by individual systems. USMARC formats, particularly the bibliographic and authority formats, were developed to enable the Library of Congress to communicate its catalogue records to other institutions. The formats have had a close relationship to the needs and practices of United States libraries. USMARC formats were designed to facilitate the exchange of bibliographic and related information on magnetic tape within the United States. An attempt has been made to preserve compatibility with other national and international formats, e.g., CANMARC and UNIMARC. Lack of international agreement on cataloguing codes and practices has made complete compatibility impossible. National agencies in the United States and Canada are given special emphasis and consideration in the formats because they serve as sources of authoritative cataloguing and as agencies responsible for certain data elements. USMARC format provides content designation only for data that are applicable to all copies of the bibliographic entity described. USMARC format provides limited content designation for the encoding of this information and for identifying the holding institution, e.g., subfield \$5 in the 700-740 added entry fields in the bibliographic format. Information that does not apply to all copies of a title and is not of interest to other institutions, is coded in local fields.

Structural Features

USMARC formats are an implementation of the Bibliographic Information Interchange (ANSI Z39.2). The formats also incorporate other relevant ANSI standards, e.g., Magnetic Tape Labels and File Structure for Information Interchange (ANSI X3.27). All information in a USMARC record is stored in character form. USMARC communications records are coded in Extended ASCII, as defined in USMARC Specifications for Record Structure, Character Sets, Tapes. The length of each variable field can be determined either from the length-of-field portion of the directory entry or from the occurrence of the field terminator character.

Content Designation

The goal of content designation is to identify and characterise the data elements that comprise a USMARC record with sufficient precision to support manipulation of the data for a variety of functions. USMARC content designation is designed to support functions that include:

Display the formatting of data for display on a CRT, for printing on 3x5 cards or in book catalogues, for production of COM catalogues, or for other visual presentation of the data. Information retrieval, identification, categorisation and retrieval of any identifiable data element in a record. Some fields serve multiple functions. For example, field 245 (Title Statement) serves both as the bibliographic transcription of the title and the statement of responsibility and as an access point for the title. USMARC formats provide for display constants. A display constant is a term, phrase, and/or spacing or punctuation convention that may be system generated under prescribed circumstances to make a visual presentation of data in a record more meaningful to a user.

Organisation of the Record

A USMARC record consists of three main sections: the leader, the directory, and the variable fields which is shown below:

Leader	Directory	Variable Control Fields	Variable Data Fields
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Fig. 7.1: Sections of a USMARC Record

Leader: The leader consists of data elements that contain coded values and are identified by relative character position. Data elements in the leader define parameters for processing the record. The leader is fixed in length (24 characters) and occurs at the beginning of each USMARC record and provides general information about the record.

This part of the record consists of data elements to process the record. It is a fixed field consisting of a total 24 characters with positions counted from 0 to 23.

Character position

0-4 Logical record length

0-5 Record status

0-6 Type of record

0-7 Bibliographic level

8-9 Blank

- 10-11 Indicator count & subfield code count
- 12-17 Base address
- 17-19 Implementation defined positions
- 20-22 Entry map
- 23 Undefined & set to 'o'

They are used to indicate nine types of data such as length, status, type and bibliographical level of the record and blank characters, subfield code, base address, etc. Length indicates the total number of characters used in the records, status tells whether it is new, changed or deleted record, type tells whether it is printed or not, and bibliographical level states whether it is an analytic, monograph, serial or a collection and so on.

Directory: The directory contains the tag, starting location, and length of each field within the record. Directory entries for variable control fields appear first, in ascending tag order. Entries for variable data fields follow, arranged in ascending order according to the first character of the tag. The order of the fields in the record does not necessarily correspond to the order of directory entries. Duplicate tags are distinguished only by location of the respective fields within the record. The length of the directory entry is defined in the entry map elements in Leader/20-23. In the USMARC formats, the length of a directory entry is 12 characters. The directory ends with a field terminator character.

Variable fields: The data content of a record is divided into variable fields. USMARC formats distinguish two types of variable fields: variable control fields and variable data fields. Control and data fields are distinguished only by structure. The term fixed fields is occasionally used in USMARC documentation, referring either to control fields generally or to specific coded-data fields, e.g., 007 (Physical Description Fixed Field) and 008 (Fixed-Length Data Elements) which is enumerated below:

- 001 Control number
- 002 Subrecord map of directory
- 003 Subrecord relationship
- 004 Related record directory
- 005 Date and time of latest transaction
- 006 Fixed length data elements
- 007 Physical description fixed field
- 008 Fixed length data elements: Coded information useful for retrieval and manipulation of data.
- 009 For local use

Data fields in USMARC follow the variable control field. Their definition depends on the bibliography format blocks, authority format blocks and holding format blocks. However, here the bibliographic format block is mentioned. Bibliographic format blocks 0XX = Control information, numbers, and codes.

XX = Main entry

2XX = Titles and title paragraph (title, edition, imprint)

3XX = Physical description, etc.

4XX = Series statements

5XX = Notes

6XX = Subject access fields

7XX = Added entries other than subject

or series; linking fields

8XX = Series added entries, etc.

9XX = Reserved for local implementation

Variable Control Fields

The 00X fields in the USMARC formats are variable control fields.

Variable control fields consist of data and a field terminator. They contain neither indicators nor subfield codes.

Variable control fields contain either a single data element or a series of fixed-length data elements identified by relative character position.

Variable Data Fields

All fields except 00X are variable data fields.

Four levels of content designation are provided for variable data fields in ANSI Z39.2:

- a) a three-character tag, stored in the directory entry;
- b) indicators stored at the beginning of each variable data field, the number of indicators being reflected in Leader/10 (Indicator count);
- c) subfield codes preceding each data element, the length of the code being reflected in Leader/11 (Subfield code count); and
- d) a field terminator following the last data element in the field.

Indicators

Hence it is clear that variable data fields are made up of single as well as groups of data elements. Each variable data field consists of indicator, subfield codes, data elements and field terminator. Further a tag is assigned to each variable data field and that tag is stored in the directory. For example 100 is the tag for main entry-personal name. Indicator is a code supplying additional information about the field and it is located at the beginning of the field.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answer given at the end of this Unit.

- 2) Enumerate the different types of USMARC Communication Formats and discuss their structure.

7.5.3 UKMARC

Introduction

UKMARC format was developed primarily to facilitate the production of the printed British National Bibliography (BNB) and thus closely reflects the cataloguing practice of the British Library in its interpretation of AACR2 and other standards.

A distinction can however be drawn between the UKMARC format as a national format and its use by the national library in preparing records for the national bibliography, and UKMARC Manual seeks to make such a distinction.

MARC is an acronym for Machine Readable Cataloguing. The MARC format was primarily developed as a convenient way of storing and exchanging bibliographic records. It has since been extended to include non-bibliographic forms of library material, such as maps and music scores. There is also a MARC format for the storage and exchange of authority records.

The original MARC format was developed by the Library of Congress in the mid-1960s. A pilot project, known as MARC I, was set up to investigate the feasibility of producing catalogue data in machine-readable form. Similar work was being done in the United Kingdom by the Council of the British National Bibliography Ltd. which had set up the BNB MARC Project to examine whether the production of the printed British National Bibliography (BNB) could be simplified by using machine-readable bibliographic records.

Genesis of the UKMARC format

In 1969 the *British National Bibliography* introduced a MARC tape service for current British books and a machine-readable version of the weekly printed BNB was published. UKMARC primarily reflected the requirements of BNB but was gradually being developed to cater for use by the wider information community. By 1975 when the first edition of the UK MARC Manual was published, UKMARC had become a national communications format and its use in the production of records for BNB represented just one particular application of the format.

Since the early 1970s an extended family of more than twenty national MARC formats grew up. Attempts were made to preserve compatibility between national formats, but differing national requirements made complete compatibility impossible and differences in data content meant that editing was required before records could be exchanged. The solution to the problem of incompatibility was to create an international MARC format. UNIMARC was given which facilitates the exchange of records created in any MARC format.

UKMARC and AACR2

The publication of the second edition in 1978 was a landmark in standardising procedures for the description of books and other items and for the construction of headings and references and in addressing the needs of machine processing.

The British Library decided to adopt AACR2 with effect from 1981 and the changes this made necessary to UKMARC were incorporated into the second edition of the UKMARC Manual in 1980. Throughout the 1980s there was a growing international commitment to networks and shared cataloguing based on AACR2 which by then had been adopted by a number of non-English speaking countries. Although the basic concepts of AACR2 did not change, three sets of rule revisions were required to take account of international usage, new library materials, and rapid technological change. This process was consolidated with the publication of the 1988 revision of AACR2. In 1994 a set of amendments, known as Amendments 1993, was published comprising clarifications and slight changes to existing rules which the British Library applied to BNB MARC records.

Structure of the UKMARC format

UKMARC format provides a record structure for the description of bibliographic and other items and identifies and describes the data elements within that record. UKMARC format has been defined for books, serials, cartographic items, music and audio-visual materials, but originally UKMARC was used for the exchange of bibliographic records on magnetic tape and the way in which records are organised reflects this.

Because computers can only store and manipulate numbers, the data content within a UKMARC record, i.e. a traditional catalogue record as defined by AACR2, consists of strings of characters arranged in fields. UKMARC format uses the Extended ASCII (American Standard Code for Information Interchange) character set to determine the numeric value to be used for each character of data. The data content of these fields, or the subfields within them, may be indicated by either a tag or by its position in the record. The end of each field is indicated by a character usually represented as a # (a special character with no ASCII equivalent).

UKMARC format uses tags consisting of three numeric characters, e.g. 100, and, wherever possible, parallel meanings have been preserved between tags, e.g. between fields 100 and 700. Tags 950-999 and all tags ending in 9 are reserved for local use. UKMARC specifies no structure or meaning for local fields. Theoretically, all fields except 001 may be repeated, but the nature of the data often precludes repetition, e.g. a bibliographic record may contain only one main title.

There are two types of fields: fixed length fields, in which coded characters in particular character positions give information about the item, e.g. whether the item is a monograph or a serial; and variable-length fields, in which the sense of the data is not dependent on a particular character position, e.g. title.

Fields are arranged in functional blocks, sometimes referred to as areas. These blocks organise the data according to its function in a traditional catalogue record:

Blocks Definition

001-009

Control fields

010-099

Coded and other information

100-244

Main entry access points

Title and title paragraph

300-399

Physical description

400-499

Series statements

500-599

Notes

600-699

Subject access points

700-799

Added entry access points

800-899

Series access points

900-945

References

946-999 *Local fields*

Fields 001-009 are termed control fields. Unlike bibliographic fields, control fields do not contain either indicators or subfield codes. Control fields contain either a single data element or a series of fixed length data elements identified by their relative character position.

The data content of a field is further defined by the use of the following elements:

Indicators

Each variable length bibliographic data field in UKMARC records is introduced by two indicators, each in the form of a single character in the range 0-9, A-Z (giving a possible total of 35 values). These digits 'indicate' the relationship between the field in which they occur and other fields in the record, and about how the data in the field should be manipulated for catalogue production. For example, the 100 tag, followed by indicators .10, i.e. 100.10, shows that the person is entered under the last element of the name.

Subfields

Subfield codes distinguish data elements within a field that require (or might require) separate manipulation. Subfield codes in the UKMARC format consist of an alphabetic lower case character following a \$. Subfield codes are defined independently for each field. Each subfield code has its own punctuation and typographic value, and therefore no punctuation needs to be input at subfield boundaries. The small amount of additional punctuation used, particularly within notes fields, follows AACR2.

Levels

Levels are 1-digit numbers input following the indicators and separated from them by a colon, e.g. 700.10:1, used to show that a work included within a publication has been catalogued as a bibliographic entity in its own right. If a separate entry is required for each of the three levels in that collection. Levels in this sense are not used in BNB/MARC records (added entries, i.e. fields 700-745, are used instead)

MARC 21

In 2000, the British Library after consultation with the UK library and information community unanimously decided for a move from UKMARC, the national cataloguing format maintained by the British Library since 1975, to the MARC 21 bibliographic format developed by the Library of Congress and the National Library of Canada after merging their respective national formats. Because of that MARC 21 has become the format favoured by other national libraries and by online bibliographic utilities and their end-users; is the format supported by the majority of library systems; and offers participation in an international bibliographic community following common standards, and the advantage of copy cataloguing at much reduced cost and with no need to maintain conversion programs. The British Library undertook to support libraries and other organisations, including overseas users of UKMARC, in preparing their implementation of MARC 21.

There are five types of MARC 21 formats. These are:

Format for Bibliographic Data : It provides details for creation and design of bibliographic records. It describes the records and provides access to them. It defines the different data elements in terms of codes, tags and indicators for processing the records.

Format for Authority Data : Authority format provides codes and code values for accepted and used headings for authority control. It includes personal and corporate names as well as subjects and their subdivisions.

Format for Holdings Data : The format includes codes, tags and indicators that enable to provide holdings information of single part and multi part items as well as serial items. It enables to interface the automated system with the union catalogue or inter library loan system.

Format for Classification Data : It includes codes and indicators for classification data in LC scheme and DDC. It provides details of classification schedules helping in assigning and validating class numbers.

Format for Community Information Data : It is suitable for coding community non-bibliographic information. One may be interested in creating database for experts in an area for which there are details in this format. Similarly for organisations, events, programmes or services the format provides details.

The first three formats and particularly are most commonly used in cataloguing in libraries.

UKMARC VS USMARC

There is some difference between USMARC and UKMARC formats in respect of terminology and other aspects. Adoption of different texts of AACR caused some differences between the two formats. The second edition of AACR had its impact on the second edition of UKMARC manual which appeared in 1980 primarily in terms of

coordinated treatment for materials of all kinds. In contrast USMARC format never confined to AACR only but reflected various cataloguing codes applied in American cataloguing practices. Differences of terminology between two formats such as “Leader” in USMARC versus “Record label” in UK MARC format of Bibliographic level” in USMARC versus “Class of record” in British format. Besides, there were also differences between these formats in respect of calculation of fixed field position, fixed length data elements and control numbers used. For example, the record control number used in USMARC is the LC card number whereas in UK MARC it is ISBN.

How does MARC 21 differ from UKMARC

The main differences are that of scope and development. MARC 21 is a set of five communication formats for representing and exchanging data in machine-readable form, of which the bibliographic format is the most widely used. UKMARC is a national format, developed solely for bibliographic purpose. MARC 21 bibliographic format has been developed as a standard format for conveying information in a systematic way about print and a wide variety of other types of materials. In this respect, it can be said to be better suited to the diverse nature of library collections today.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answer given at the end of this Unit.
- 3) Differentiate between USMARC and UKMARC directory.

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7.5.4 UNIMARC

Introduction

UNIMARC was the brain-child of IFLA. It was conceived of as a tool for an international network. Although the record structure which became ISO-2709 was accepted early on; during the very first cooperative project between L.C. and B.N.B.

Development of UNIMARC

Despite cooperation there emerged several versions, e.g. UKMARC, INTERMARC and USMARC, whose paths diverged owing to different national cataloguing practices and requirements. Since the early 1970s an extended family of more than 20 MARC formats has grown up. Differences in data content means that editing is required before records can be exchanged.

One solution to the problem of incompatibility was to create an international MARC format (UNIMARC) which would accept records created in any MARC format. So records in one MARC format could be converted into UNIMARC and then be converted into another MARC format. The intention was that each national agency would need to write only two programs – one to convert into UNIMARC and one to convert from UNIMARC - instead of one program for each other MARC format, e.g. INTERMARC to UKMARC, USMARC to UKMARC, etc.

So in 1977 the International Federation of Library Associations and Institution (IFLA) published *UNIMARC: Universal MARC format*, stating that “The primary purpose of UNIMARC is to facilitate the international exchange of data in machine-readable form between national bibliographic agencies”. This was followed by a second edition in 1980 and a *UNIMARC Handbook* in 1983. All focussed primarily on the cataloguing of monographs and serials and took advantage of international progress towards the standardisation of bibliographic information reflected in the International Standard Bibliographic Descriptions (ISBDs).

In the mid-1980s it was seen necessary to expand UNIMARC to cover documents other than monographs and serials. So a new description of the format – the *UNIMARC Manual* – was produced in 1987. By this time UNIMARC had been adopted by several bibliographic agencies as their in-house format. So the statement of purpose was amended to include “UNIMARC may also be used as a model for the development of new machine-readable bibliographic formats”.

UNIMARC Manual was issued in 1987. This edition of the format removed the provisional status form and revised field that were specific to sound recording, visual projections, video recording, motion pictures, graphics, printed music, and microforms, in addition to the remaining provisional cartographic fields. Fields for electronic resources were added as provisional.

The 1994 edition supersedes the previous ones and contains additions and changes agreed upon by the permanent UNIMARC Committee from June 1990. The changes are described in Appendix O. The new loose-leaf formats was intended to be updated with change pages as needed.

UNIMARC is maintained by IFLA and UBCIM office.

Purpose and Scope of UNIMARC

- i) The primary purpose of UNIMARC is to facilitate the international exchange of bibliographic data in machine-readable form between national bibliographic agencies.
- ii) UNIMARC may also be used as a model for the development of new machine-readable bibliographic formats.
- iii) UNIMARC is intended to be a carrier format for exchange purpose. It does not stipulate the form, content, or record structure of the data within individual systems.
- iv) UNIMARC does provide recommendations on the form and content of data when it is to be exchanged. Records are usually structured in exchange tape format as the last stage in any conversion process, after form, content, and content designators have been converted to the UNIMARC standard.
- v) Those organisations intending to use UNIMARC for data interchange will find it useful to coordinate their internal format content designators and field and subfield definitions with those in UNIMARC to reduce the complexity of data conversion when the records are converted into the UNIMARC exchange tape structure.
- vi) It facilitates the description, retrieval and control of bibliographic items. This is achieved by providing a structure for recording bibliographic information which is input by reference to international standards.

Scope

The scope of UNIMARC is to specify the content designators (tags, indicators and

subfield codes) to be assigned to bibliographic records in machine-readable form and to specify the logical and physical format of the records. It covers monographs, serials, cartographic materials, music, sound recording, graphics projected and video materials, rare books and electronic resources.

Features Relating To UNIMARC as an Exchange Format

- i) An interesting feature of the format is the inclusion of fields in blocks defined by type of data element. Up to the development of UNIMARC, the major national MARC formats had ordered the different fields in a way that reflected the order of the field on a traditional catalogue card.
- ii) UNIMARC avoided this towards one particular end product of a machine-readable bibliographic record and put all name access points in one block instead of supplying different fields for author as main entry from author as added entry.
- iii) The most novel feature of UNIMARC is its treatment or links between one bibliographic item and another.
- iv) Bibliographic items have relationships with each other. They may have previous editions, they may, as in the case of serials, have related, earlier titles. Moreover, they may be in the same journal or series as each other. In special cases, some bibliographic items are translations of others.
- v) Another kind of relation is the sharing of common subject or authorship and it has a number of different ways of showing these linking relationships.

The UNIMARC format

The UNIMARC format, like any other version of MARC, involves three elements of the bibliographic record:

- Record structure
- Content designation
- Data content

Record structure

The record structure is designed to control the representation of data by storing it in the form of strings of characters known as *fields*.

All data in the record must be stored using one or more character sets. Since computers can store and manipulate only numbers, each symbol, alphabetical character etc. is assigned a number following the rules of a particular character set. For example, one character set assigns the number '75' to 'K'. UNIMARC allows the use of certain character sets, approved by the International Organisation for Standardisation (ISO).

The record structure established by UNIMARC is an implementation of the relevant standard: *Format for Bibliographic Information Interchange on Magnetic Tapes (ISO 2709-1981)*. This structure utilises record labels and directories. As few users need concern themselves with such items, the description below covers the way a catalogue sees the record.

Content designation

Certain conventions are followed in order to identify the data elements within records. Such elements which include author, title and subject access are further characterised

where necessary. This supports the manipulation of the data for a variety of purposes:

- To provide multiple access points for searching,
- To allow the typography and layout to be varied,
- To permit certain elements of the record to be omitted where this is required.

In addition, UNIMARC records may be formatted for visual display on a VDU, for output on CD-ROM or fiche and for printing out as hard copy.

In general, UNIMARC provides content designation only for data which is applicable to all copies of a work. However, information which applies only to some copies (or even a single copy) of a work may be of interest beyond the holding institution. In such cases UNIMARC assigns specific fields for such details. These fields are also available for cases where the information is for in-house purposes only.

Data content

The content is the data which is stored in the fields within the record. Data can be coded data or bibliographic data.

- Coded data is used to represent such items as control numbers, publication type, and main language of text. There is also provision for the characteristics of special types of items such as printed music.
- Bibliographic data is defined by reference to the International Standard Bibliographic Description for that type of material. In addition, each record can carry a class number and subject heading.

The fields, which are identified by three-character numeric tags, are arranged in functional blocks. These blocks organise the data according to its function in a traditional catalogue record. In the table below, fields 0 to 1 hold the coded data while fields 2 to 8 contain the bibliographic data:

Block	Example
0— Identification block	010 International Standard Book Number
1— Coded information block	101 Language of the work
2— Descriptive information block	205 Edition statement
3— Notes block	336 Type of computer file note
4— Linking entry block	452 Edition in a different medium
5— Related title block	516 Spine title
6— Subject analysis block	676 Dewey Decimal Classification
7— Intellectual responsibility block	700 Personal name - primary intellectual responsibility
8— International use block	801 Originating source
9— Reserved for local use	

In addition to the 9 –block any other tag containing a 9 is available for local implementation.

The fields defined by UNIMARC provide for different kinds and levels of information. This can be shown by looking at a typical record in the UNIMARC format.

Putting UNIMARC to work

Bibliographic records in the UNIMARC format are designed for use in automated library systems. Depending on the versatility of the system a range of related functions can be supported by manipulating the data. Two such functions are information retrieval and displaying citations.

Information Retrieval

In the UNIMARC format each data element is identified for the purpose of information retrieval. Using computer software, it is possible to search on most of the MARC fields and subfields in the record. For example:

- Keywords (i.e. significant words)
- Subject headings
- Author
- Name, topical name, geographical name as subject
- Title and series title
- Standard numbers (ISBN, ISSN etc.) and numbers assigned by agencies (a national bibliographic agency, a government printing office etc.)
- Classification numbers
- Publisher
- Publication date and type
- Acronyms formed from name and title words
- Coded items. For example, FICTION would select the above record because field 105 character position 11 codes it as fiction.

While each record in the UNIMARC format is a discrete entity, a catalogue consisting of many such records becomes a database enhanced with the capacity to respond to highly specific or comprehensive search strategies. The range of search options will, of course, depend on the kind of software employed.

Displaying citations

UNIMARC offers a choice of formats for displaying records. Naturally, readers will not want to consult the full MARC record simply because the format is intended not for human perusal but for processing by computer.

7.5.5 Common Communication Format (CCF)

Historical Backdrop

The rapid growth of international bibliographic exchange formats including ISO's well known format for bibliographic information interchange on magnetic tape (ISO- 2709) and lack of compatibility amongst them poses problems both to libraries and other information services to exchange records with one another. Hence, necessity arose for each of these organisations to agree upon a common standard format for easy exchange

purposes. As such to study the desirability and feasibility of establishing optimum compatibility between existing bibliographic exchange formats led to the convening of the International Symposium on Bibliographic Exchange Formats with the initiation by the Unesco General Information Programme in April 1978 in Taormina, Sicily. The Symposium was organised by UNISIST International Centre for Bibliographic Description in collaboration with International Council of Scientific Unions Abstracting Board, IFLA and ISO.

Genesis of CCF

As a direct result of the Symposium, an ad hoc Group was constituted for developing the Common Communication Format (CCF). After prolonged deliberations by the experts, the Group decided :

- 1) That the structure of the new format would be in accordance with the ISO – 2709.
- 2) That the core record would consist of a small number of mandatory data elements essential to bibliographic description, identified in a standard manner.
- 3) That the core record would be larger in number by adding optional data elements, identified in a standard manner.
- 4) That a standard technique would be developed for accommodating levels, relationships, and links between bibliographic entities.

Besides, it was also resolved that CCF should provide a meaningful link between the major exchange formats basing on ISBD. In the course of deliberations, the Group duly considered and compared all the data elements in the Reference Manual, UNIMARC, Guidelines for ISDS, MEKOF-2 ASIDIC/EUSIDIC/ICSU – AB/NFAIS Interchange specifications and the USSR- US Common Communication format. Commonly used data elements in those six formats were identified and formed the basic guide and core of CCF on the above six standard formats. The Group identified a small number of data elements which were used virtually by all information-handling communities, including both the libraries and the abstracting and indexing organisations. These commonly used data elements form the core of the CCF. Attempt was also made to devise a technique to establish relationship between bibliographic records and between elements within bibliographic records. The concept of the record segment was developed and later refined and finally a method for designating relationship between records, segments and fields was duly approved by the Group. Consequently the first edition of CCF was published in 1984 and subsequently the second edition was brought out in 1988, The publication entitled, "Implementation notes for users of CCF was brought as the guide for the benefit of CCF users. Subsequently UNESCO/ PGI brought 3rd edition of CCF in 2 volumes. There volume one CCF (B): Bibliographic Information and volume 2 CCF (F): Factual. Various bibliographic agencies in Asia, North and South America and Europe recommended changes which were incorporated into this new edition.

Rationale

Within an information system, the records which form the database will usually exist in a number of separate but highly compatible formats. At least there will be:

- A format in which the records will be input to the system,
- A format best suited to long – term storage,
- A format to facilitate retrieval, and

- A format in which records will be displayed.

Need of CCF

The need of CCF is of paramount importance if two or more organisations wish to exchange records with one another. It cannot be achieved unless each of these organisations agree upon a common standard format for exchange purposes.

If there is a single national standard exchange format, information interchange with that country is possible so also will be greatly facilitated both technically and economically. But on the other hand, if each nation's standard format is different from all others, then it will be more problematic and complex to have international information interchange among national bibliographic agencies because of the number of computer programs that must be written to accommodate the translation of records from one format to another.

At present many national standard exchange formats exist. However, a number of these formats are very similar to one another, others differ significantly. Very rarely if two national formats are likely to be identical then their records can be handled by the same computer programs.

Scope and Uses of CCF

The CCF is designed to provide a standard format for three major purposes :

- 1) To permit the exchange of bibliographic records between groups of libraries and the abstracting and indexing services.
- 2) To permit a bibliographic agency to use a single set of computer programs to manipulate bibliographic records received from both the libraries and the abstracting and indexing services.
- 3) To serve as the basis of a format for an agency's own bibliographic database, by providing a list of useful data elements.

Uses

These uses have been accommodated in the following ways:

- 1) By specifying a small number of mandatory data elements which are recognized by all sectors of the information community as essential in order to identifying an item.
- 2) By providing mandatory data elements that are sufficiently flexible to accommodate varying descriptive practices. A section entitled "USE" for each field and subfield indicates whether-the use of that data element is mandatory or optional.
- 3) By providing a number of optional elements which may be useful to describe an item according to the practices of the agency which creates the record.
- 4) By providing a mechanism for linking records and segments of records without imposing on the originating agency any uniform practice regarding the treatment of related groups of records or data elements.

Structure

The record structure of the Common Communication Format comprises a specific implementation of the international standard ISO- 2709, Each CCF record consists of four major parts:

- a) Record Label
- b) Directory
- c) Datafields
- d) Record Separator

Record Label

Each CCF record begins with a fixed-length label of 24 characters to provide parameters to process record.

Directory

The directory is a table containing a variable number of fourteen-character entries ; the table is terminated by a field separator character. Each directory entry corresponds to an occurrence of a datafield in the record, and is divided into five parts :

- 1) Tag
 - 2) Length of datafield
 - 3) Starting character position
 - 4) Segment identifier
 - 5) Occurrence identifier
- 1) **Tag :** A three character code identifying the datafield which corresponds to the directory entry.
 - 2) **Length of Datafield :** A four digit number showing how many characters are occupied by the datafield, including indicators and datafield separators but excluding the record separator code if the datafield is the last field in the record.
 - 3) **Starting character position :** A five digit number giving the position of the first character of the datafield relative to the base address of data, i.e. the first character of the first of the datafields.
 - 4) **Segment identifier :** A single character which designates the datafield as being a member of particular segment.
 - 5) **Occurrence identifier:** A single character (chosen from 0-9 and A-Z) which differentiates multiple occurrences of datafields that carry the same tag within the same record segment.

A single directory entry is organised as follows:

TAG	LENGTH OF	STARTING	SEGMENT	OCCURRENCE
3characters	DATAFIELD	CHARACTER	IDENTIFIER	IDENTIFIER
	POSITION	POSITION	1 character	1 character
	5 characters	5 characters		

Datafields

A datafield consists of:

- 1) Indicators,
- 2) One or more subfield each of which is preceded by a subfield identifier, and

3) A data field separator

- (1) **Indicators** : Two bytes reserved for use as defined for each data field. These may supply further information about the contents of the data field or about the action required in certain data manipulation processes.
- (2) **Sub fields** : A subfield consists of sub field identifier followed by a data string which is terminated by either another sub field identifier or a field separator.
- (3) **Data field separator** : The data field separator (Character 1/14 of ISO 646) constitutes the final character of every data field.

A data field which has a single subfield will be organised as follows:

INDICATORS	SUBFIELD IDENTIFIER	SUBFIELD Variable	FIELD SEPARATOR
2 characters	2 characters		1 character

A data field which has two subfields will be organised as follows:

INDICATORS	FIRST SUBFIELD IDENTIFIER	FIRST SUBFIELD VARIABLE	SECOND SUBFIELD IDENTIFIER	FIELD SEPARATOR
2 characters	2 characters		2 characters	1 character

Record

The record separator (Character 1/13 of ISO 646) is the final character of the record. It follows the field separator of the field datafield of the record.

Features of CCF

The unique features of CCF attract many institutions, information centers, and other organisations of various countries are mentioned as under:

- 1) It can be used to produce catalogue cards as all the necessary data elements are incorporated.
- 2) It is used friendly and rather catalogue friendly for no cataloguing rules are imposed.
- 3) It is a flexible and very popular format among UN organisations and international bodies. Many developing countries are adopting it for the creation of bibliographic records in machine readable form. Bibliographic agencies following AACR2 can be conveniently converted to CCF format.
- 4) It provides basic data elements and has facility for optional elements and private fields thus enabling an agency to incorporate new standard elements considered important.
- 5) It facilitates a library and bibliographic agency to use a single use of computer program for the exchange of data.
- 6) Some of the mandatory data elements are flexible and can accommodate varying descriptive practices.

- 7) Its simple set of data elements that can be used at any bibliographic level and are dissociated from cataloguing codes.
- 8) It is the logically defined record structure which uses the fourth element of the ISO 2709 directory to denote the bibliographic level and filed occurrence.
- 9) CCF is specifically designed for retrieval and output within an institution. It neither includes its own cataloguing rules nor recommends any particular cataloguing code oriented towards any specific type of output format.
- 10) It identifies and defines relationship between the data elements and their respective content designators independent of category of items or different types of materials. It outlines a specific system of content designators for bibliographic records pertaining to all forms of documents.

7.6 INDIAN STANDARDS

Standardisation of record format has not received due attention in Indian libraries. At national level, Indian standards institution now renamed as Bureau of Indian Standards (BIS) had evolved a standard for bibliographical references in 1963 for use in non-computerised systems. However it could not keep track of the development in the media and forms of documents in the following years. A revision of the standard appeared in 1979 wherein ISBD was suggested as a substitute format to be adopted by agencies willing to do so. It was a format incomplete and inadequate in many respects. The sixteenth Indian standards convention of ISI held in Bhopal in October 1975 discussed the issue of standardisation of bibliographic information in the contest of machine-readable records. Continued efforts taken by ISI in this direction resulted in design and publication of a standard IS: 11370-1985 titled 'Guide for data element and record format for computer Based bibliographic Description of different kinds of Documents' in July 1986. Structure of this format confirms to ISO 2709-1981.

Structure of IS: 11370

The general structure of the bibliographic record format is given below:

Leader

Directory

Data fields

Records separator

Among the data elements, descriptive block is based on ISBD. Subject in analysis block includes POPSI, PRECIS, keywords and synopsis or abstract. The Bureau of Indian Standards is yet to take steps to revise it. During the late 1980's NISSAT organised a tripartite meeting (CALIBNET, DELNET, INFLIBNET) to sort out the difference in choice of format – Common Communication Format (CCF) vis-à-vis UNIMARC. Finally it was decided that database producer can use either of the formats. NISSAT also constituted a group to draft the INDIMARC guidelines based on the framework prescribed by the CCF.

7.7 SUMMARY

Current exchange formats may be affected by rapidly changing technology for data storage, transfer, retrieval, etc. For example the development of Open System

Interconnection procedures for data transfer, growth of CD-ROM, Multimedia, Hypertext CD-ROMs, DVD technology, web server based databases, etc., as medium for data storage and distribution. But this is the right time for us to start thinking and working in this direction to solve the problems, which we are going to face in near future.

7.8 ANSWERS TO SELF CHECK EXERCISES

- 1) Format conveys the notion of a formalised framework which will hold records of varying content according to certain set of rules of conventions controlling the representation of the data. These rules may be unique to a system, or shared with other system., Formats can be of two types:
 - Internal/Local format
 - Exchange/Communication/Interchange format
- 2) There are three USMARC communication format:
 - USMARC format for bibliographic data (UFBD)
 - USMARC format for authority data (UFAD)
 - USMARC format for holdings and location (UFHL)

All the three USMARC formats are implementations of ANSI Z39.2, American National Standard for bibliographic information interchange on magnetic tape which conforms with the ISO 2709.

The physical structure of all USMARC formats are similar to the structure of the UK MARC record, although there are some differences in terminology and definition of fields:

Leader	Directory	Variable Control fields	Variable Data fields
--------	-----------	-------------------------	----------------------

- 1) Nature and function of directory are identical to UK MARC with the following exceptions:
 - USMARC records have less restriction on length of fields, with maximum 9999 characters:
 - USMARC contains no subrecord directory entries as analytical records are not handled via the directory:
 - Character positions are counted from zero.

7.9 KEY WORDS

- Data** : Each record contains data which refer to a separate entity, object of unit recognised by the system, e.g., books, journals, employee, customer, etc.
- Field** : Field is a part of record which contains data referring to one characteristics of the entity or unit represented by the record. Fields may be

fixed in length or variable in length. The number and nature of field is generally determined at the time record structure is designed and also taking care of applications.

- Logical Record** : A record for a bibliographic or other item presented in machine readable form may be described as a logical record. It is not necessarily stored in the computer system in the same form, it may be broken up and the parts stored in the different places on a computer disk or it may be grouped with other records in one large physical record.
- Physical Record** : Physical record refers to the physical arrangement on the storage medium.
- Record** : A record is a group of related data elements treated as a unit. A record may be divided into identifiable fields and subfields which speeds up the process of search and retrieval by computer.
- Subfield** : Subfields are part of a field which cannot stand completely in isolation from the data in the field, but require individual treatment.
- Tag** : A tag consists of one or more characters or digits which uniquely denotes a data element or a whole field in a record.
- Variable Field** : A field which can be extended to any length as per requirement.

7.10 REFERENCES AND FURTHER READING

Byrne, Deborah. *MARC Manual: Understanding and Using MARC Records*. Englewood: Libraries Unlimited, 1991. Print.

Gredley, Ellen and Hopekinson, Allan. *Exchange Bibliographic Data: MARC and Other Intermediary Format*. London : Library Association, 1990. Print.

Indian Standards Institution. *Guide of Data Elements and Record Format for Computer-based Bibliographical Databases for Bibliographic Description of Different Kinds of Documents (IS: 11370-1985)*. New Delhi: Indian Standard Institution, 1986. Print.

Prasad, A.R.D. "Brief Introduction to Z39.50 Protocol". *National Convention on Library and Information Networking*, 6-9 Nov. 2001. Print.

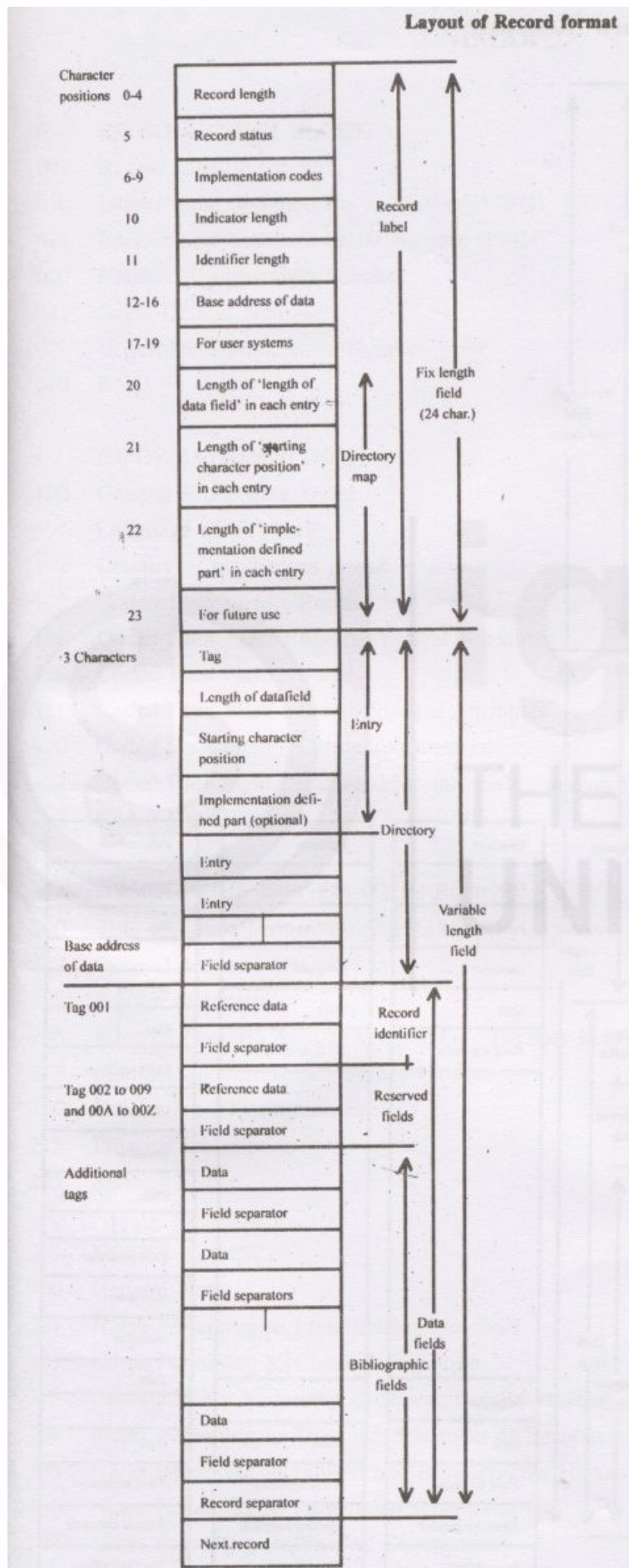
CCF/B: *The Common Communication Format for Bibliographic Information*. Ed Peter Simmons and Alan Hopkinson. Paris:Unesco, 1992. Print.

AREAS IN ISBD (G)

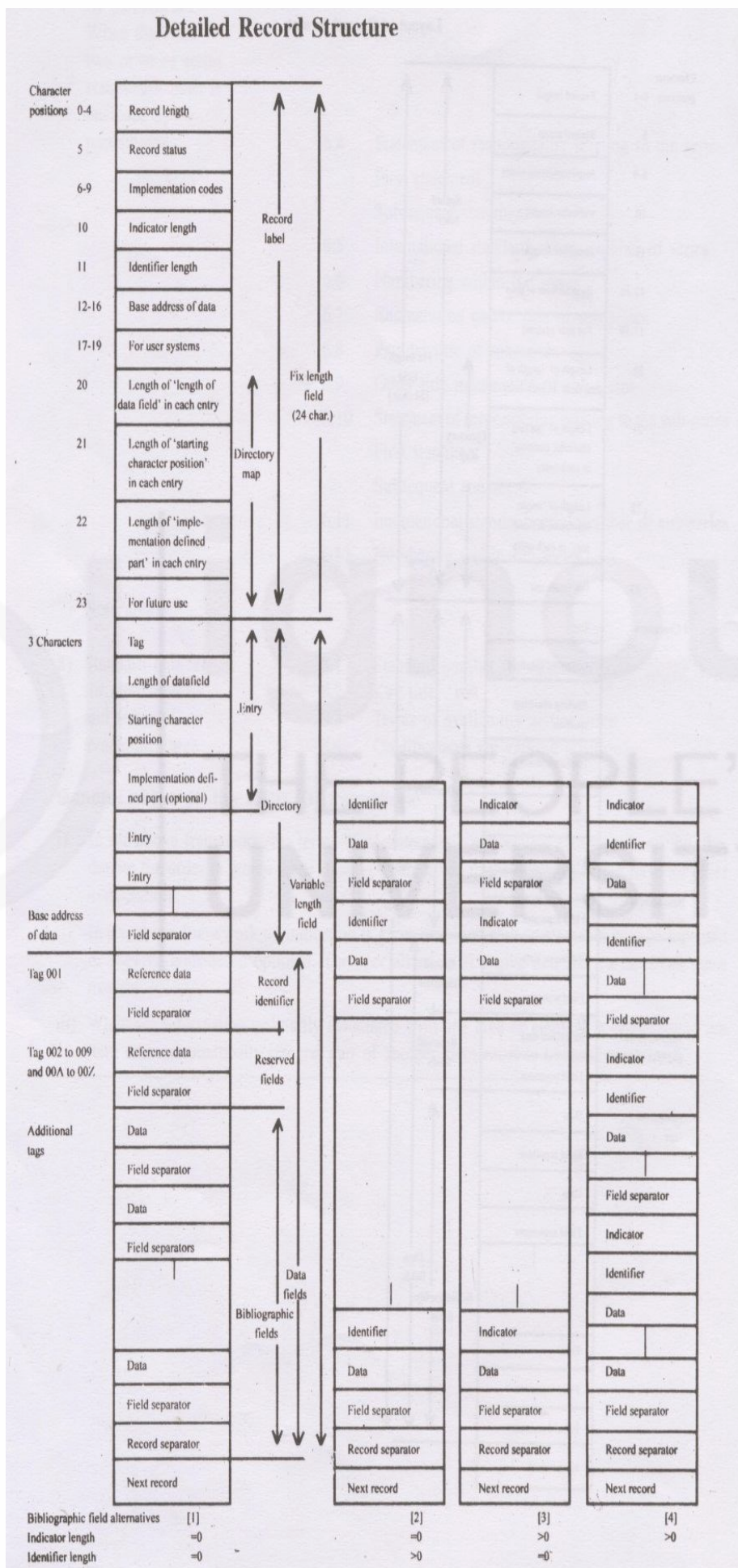
Area		Prescribed	
Data elements		Punctuation (Preceding/ Enclosing) For elements	
Note: Each area other than the first, is preceded by a full stop, space, dash, space (._)			
1	Title and statement of responsibility area	1.1	Title proper
]	1.2	General material designation
	=	1.3	Parallel title
	:	1.4	Other title information
2	Edition area	2.1	Edition Statement
	=	2.2	Parallel Edition Statement
		2.3	Statement of Responsibility relation to the Edition
	/		First Statement
	;		Subsequent Statement
	,	2.4	Additional edition Statement
		2.5	Statements of responsibility following an additional edition statement
	/		First Statement
	;		Subsequent statement
3.	Material (or type of Publication) Specific area		
4.	Publication, Distribution area etc	4.1	Place of publication, distribution, etc
	:		First place
	;		Subsequent place
	:	4.2	Name if publisher, distributor etc.,
	[]	4.3	Statement of function of publisher, distributor
			Etc.,
	,	4.4	Date of publication, distribution etc.,
	(4.5	Place of manufacture
	:	4.6	Name of manufacturer
)	4.7	Date of manufacture

5.	Physical description area		5.1	Specific, material designation and extent Of item
		:	5.2	Other physical details
		;	5.3	Dimensions of item
		+	5.4	Accompanying material statement
6.	Series area	,	6.1	Title proper of series
	Note: A series statement	=	6.2	Parallel title of series
	is enclosed by parentheses	:	6.3	Other title information of series
	When there are two or more		6.4	Statement of responsibility relating to the series
	enclosed by parentheses	/		First Statement
		:		Subsequent statement
		,	6.5	International standard series number of Series
		;	6.6	Numbering within series
		.	6.7	Enumeration and/or title of sub-series
		=	6.8	Parallel title of sub-series
			6.9	Other title information of sub-series
			6.10	Statement of responsibility relating to the Sub-series
		/		First Statement
		;		Subsequent statement
			6.11	International standard serial number of sub-Series
		:	6.12	Numbering within sub-series
7.	Note area			
8.	Standard number		8.1	Standard number (or alternative)
	(or alternative	=	8.2	Key title
	and terms	:	8.3	Terms of availability and/or price
	availability	()	8.4	Qualification (in varying positions)

ISO-2709



UKMARC

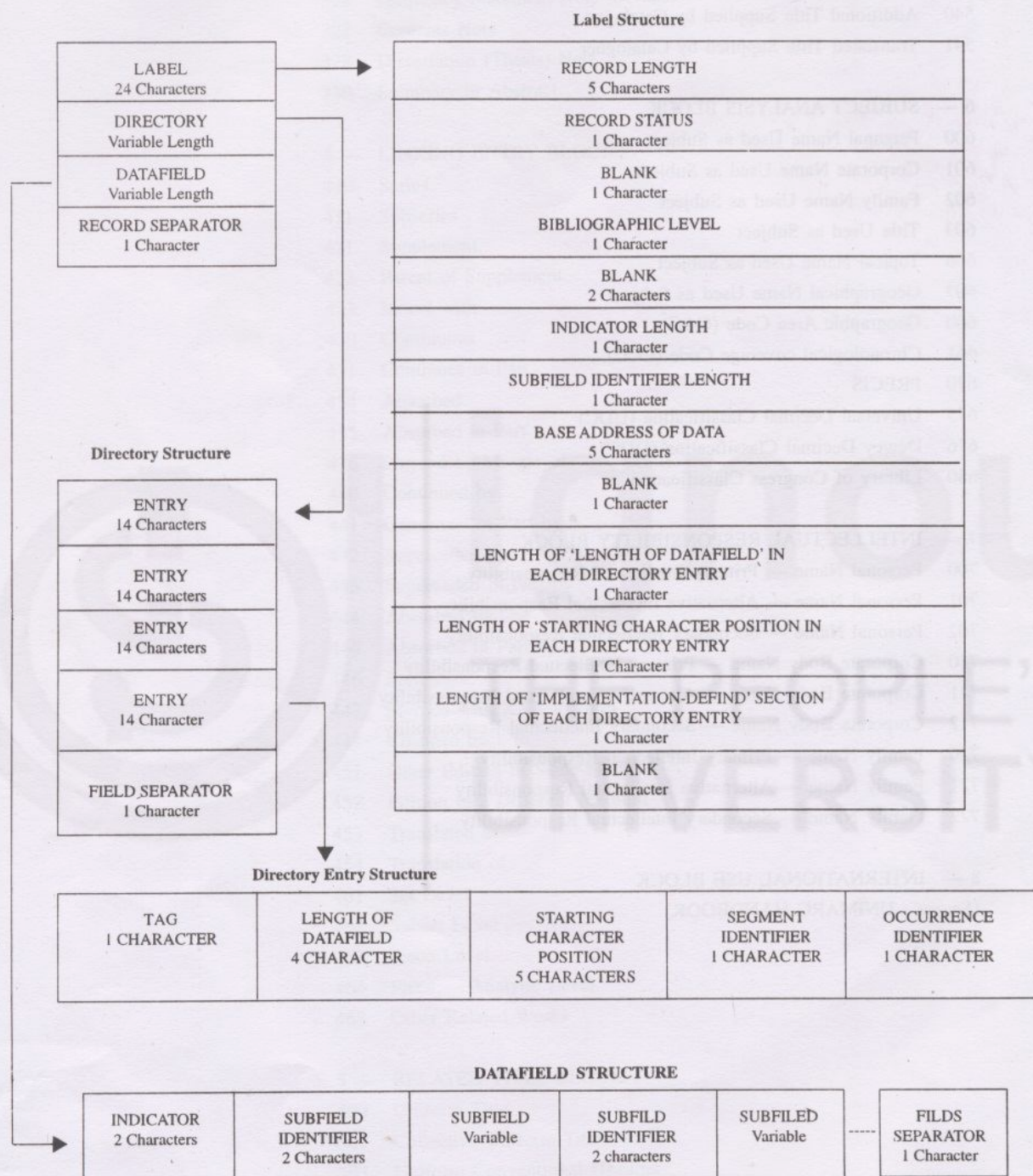


List of Data Elements

001	Record identifier
010	Record identifier for secondary segments
011	Alternative record identifier
015	Bibliographic level of secondary segment
020	Source of record
021	Completeness of record
022	Date entered on file
023	Date and number of record version
030	Character sets used in record
031	Language and script of record
040	Language of item/entity
041	Language and script of summary
050	Physical medium
060	Type of material
061	Type of patent document
062	Type of factual information
063	Type of standard
080	Segment linking field: vertical rel.
085	Segment linking field: horizontal rel.
086	Field to field linking
088	Record to record linking
100	Int'l. Standard Book Number (ISBN)
101	Int'l. Standard Serial Number (ISSN)
102	CODEN (for serials)
110	National bibliography number
111	Legal deposit number
120	Document number
125	Project number
130	Contract number

200 Title
201 Key title
210 Parallel title
230 Other title
240 Uniform title
260 Edition statement
300 Name of person
310 Name of corporate body
320 Name of meeting
330 Affiliation
340 Countries associated with patent
400 Place of publication and publisher
410 Place of manufacture and manufacturer
420 Place of distribution and distributor
430 Address
440 Date of publication
441 Date of legal deposit
442 Dates related to patent
444 Dates related to standard
446 Dates related to thesis
448 Start and end dates
450 Serial numbering and date
460 Physical description
465 Price and binding
470 Mathematical data for
 cartographic material
480 Series statement
490 Part statement
500 Note
510 Note on related items/entities
520 Serial frequency note
530 Contents note
600 Abstract / Description
610 Classification scheme notation
620 Subject descriptor

DIAGRAMATIC REPRESENTATION OF THE CCF RECORD STRUCTURE



UNIT 8 CATALOGUING OF NON-BOOK MATERIAL

Structure

- 8.0 Objectives
- 8.1 Introduction
- 8.2 Non-Book Material
 - 8.2.1 Types of Non-Book Material
 - 8.2.2 Utilities of Non-Book Material
 - 8.2.3 Constraints of Using Non-Book Material
- 8.3 Problems of Cataloguing Non-Book Material
- 8.4 Cataloguing Non-Book Material
 - 8.4.1 Punctuation Marks
 - 8.4.2 Areas of Description
 - 8.4.3 Structure of Description
 - 8.4.4 GMD (General Material Designation)
- 8.5 Bibliographic Description of Non-Book Material (AACR-2 Rev.Ed.)
 - 8.5.1 Cartographic Material
 - 8.5.2 Manuscripts (including Manuscript Collections)
 - 8.5.3 Music
 - 8.5.4 Sound Recordings
 - 8.5.5 Motion Picture and Video Recordings
 - 8.5.6 Graphic Materials
 - 8.5.7 Computer Files
 - 8.5.8 Three Dimensional Artifacts and Realia
 - 8.5.9 Microforms
 - 8.5.10 Electronic Resources
- 8.6 Changes in AACR 2R and Amendments 2002
- 8.7 Resources Description and Access (RDA)
- 8.8 Summary
- 8.9 Answers to Self Check Exercises
- 8.10 Keywords
- 8.11 References and Further Reading

8.0 OBJECTIVES

This Unit aims to give an overview of the bibliographic description of the various types of non-book material and the rules followed for their cataloguing according to AACR-2R.

After reading this unit, you will be able to:

- identify and describe the bibliographic information about each item of non-book material as prescribed in AACR-2R;

- discuss the relevant rules for effective cataloguing of non-book material;
- identify and mention access points for different items to be catalogued; and
- catalogue electronic resources according AACR 2002, RDA and FRBR.

8.1 INTRODUCTION

Library is a centre for the communication of ideas and knowledge. It is also a repository of records of human civilisation serving as an information clearing house to the community. The librarian must organise and order the flow of information so as to maximise the use of the resources of a library. In the present era of scientific and technological advancement, the sources of knowledge are not confined to conventional print media only. The impact of ICT has directly caused the spread of non-print materials. These documents are responsible for the communication of recent information and new knowledge. As a result, the libraries world over have acquired large collection of such materials. These materials need to be collected, organised and disseminated at the right time. The information loses its dynamism if not communicated timely. The nature of non-print material demands a separate treatment for organisation that forms the subject of the present Unit.

Evolution of Non-Book Materials (NBM)

The most primitive media for recording knowledge were stones, rocks, clay tablets, parchment, vellum, papyrus and palm leaf. The book in paper medium is the outcome of the printing press of John Gutenberg. The advent of microforms or non-book material goes back to 1953 with the invention of microphotography. Although these have been available for a considerable time, it is only in the past six decades that we have seen their active use and availability in the library market.

The educational use of audio-visual materials began during the 1950s and libraries started acquiring the materials in the late 1960s. During this time the governments and national professional organisations became interested in the educational possibilities of the materials as opposed to their entertainment value they had been labelled with previously. Thus, the history of the non-book materials has passed from the stone age to the electronic age. Libraries have been providing information in many different media. They circulate books, microforms, art prints, periodicals, disc records, audio and video tapes, games and simulations, motion pictures, films, slides, film strips, models, realia and so on.

The world is now witnessing an exponential growth of information and there is a need to provide quick access to information. The exorbitant cost of printing and publishing and the need to reduce time lag in conventional printing necessitated the shift in focus from traditional print media to non-print media. Over the last two decades, there has been tremendous growth in the development of new technologies in photographic, micrographic, computers, fiber-optics and telecommunications technologies that affect the preparation, organisation, storage and retrieval of information.

8.2 NON-BOOK MATERIAL

NBMs are those materials which do not come within the definition of a book, periodical or pamphlet and which require special holding e.g. audio-visual materials, microforms or computer files, electronic resources. It is generally understood to be any resource material, which is not a printed book but contributes to the learning process. The NBM require special treatment in terms of their bibliographic description in order to exploit

information from those formats. Webster's Third New International Dictionary defines "Non-book being something other than a book; being a manuscript, microfilm, map on other library holding that is not a book." Harrold's Librarian's Glossary describes NBM as "those library materials which come within the definition of special holding, i.e., audio-visual materials, vertical file materials, microforms or computer software."

8.2.1 Types of Non-Book Material

There are various types of NBM which are mentioned as under:

Cartographic Materials

- Ariel Chart
- Leaf
- Ariel Remote Sensing image
- Atlas
- Celestial Globe
- Chart
- Globes
- Map
- Plan
- Relief Model
- Remote Sensing Image
- Space Sensing Image
- Topographic Drawings

Motion Pictures and Video Recordings

- Film Cartridge
- Cassette
- Video Cassette
- Video Disc
- Video Reel

Graphic Materials

- Art Original
- Art Print
- Art Reproduction
- Chart
- Film Strip
- Kit
- Photograph
- Picture
- Post Card
- Slide.
- Technical Drawing
- Transparency

Manuscripts

- Item (for collection of manuscripts.)
- Box

Music

- Score
- Condensed
 - Minature Score
- Chorus Score

Sound Recordings

- Sound Cartridge
- Sound Cassette
- Sound Disc
- Sound Track Film Reel (Cassette)

Computer Files

- Data Files
- Program File
- Object Program

Three-Dimensional Artefacts and

Realia:

- Art Original
- Realia
- Game
- Diorama
- Model

Microform

- Aperture Card
- Microfiche
- Micro Film Cartridge Cassette Reel

8.2.2 Utilities of Non-Book Material

Following are some of the utilities of NBM:

- NBM as storage media provide potential alternative access to information, which has enormous information storage capacity with low cost.
- Data damage is drastically reduced with NBM and information can be retrieved and transferred speedily and accurately.
- Their durability quality provides the benefit of repetitive use of information without deterioration or loss.
- Presently there is a trend towards compressing information carriers so that they occupy less space and make storage and distribution easy. Books are “space eaters” where as NBM are “space savers”.
- They have the quality of security, accessibility, portability, reliability, economy, easy retrieval and easy updating.
- Rare books can be stored in microform. The whole set of Encyclopedia Britannica; Chemical Abstracts and Biological Abstracts can be stored in a CD-ROM.
- Monotonous topics in history produced in coloured picture with enchanting voice as videotapes helps to remember and grasp the topic easily as media resources are powerful forms of communication. It has been ascertained that a person can remember 10% of information on reading, 20% of what is heard, 30% of what is viewed, but 50% of information are remembered if it is heard, seen and discussed which can only be possible with the audio-visual materials.

8.2.3 Constraints of Using Non-Book Material

Following are some constraints in using NBM:

- In a paper oriented society majority of the people still are not acquainted with microform or the screen display of information and this, they are not quite reconciled to this change.
- Special methods of handling materials are troublesome to operate. Hence, special awareness program to users are very much essential.
- Reading NBM sometimes gives strain to the eyes.
- Acquiring of equipments for operation of NBM, its maintenance and storage facilities amounts to high cost.
- Like books, NBM are not issued for use at home.
- The cost of microfilming may not be justified if the record has short retention schedule with little or no reference. It requires special storage devices for the NBM.
- Special types of equipment are required to retrieve the information from different types of materials, e.g., micro film reader or reader/printer is required to retrieve information from microform.
- As and when necessary, information on microform can't be manually changed or updated as on paper.
- High obsolescence of equipment due to technology adds on to cost.

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

1) State the important reasons for advent of non-book materials.

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.....

2) State the different types of NBM.

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8.3 PROBLEMS OF CATALOGUING NON-BOOK MATERIAL

New media materials due to their inherent peculiar format, very frequently pose serious problems in their arrangement, cataloguing and retrieval of information contained in them. Hence, the cataloguer may encounter the following possible problems.

- Information may be difficult to obtain from the documents to be catalogued than with conventional documents having title page.
- Information collected from one source in the NBM may differ with that obtained from another source of documents.
- It may be harder to reach the cataloguing decisions with reference to choice of access point i.e. determination of heading or in other words to decide the person who is chiefly responsible for the intellectual content of the document, which is less experienced in case of books and serials.
- Information about physical description of different types of NBM definitely creates problems for cataloguer rather than that for conventional documents.
- Not possible to obtain information through the naked eyes as it requires special equipments.

Cataloguing of NBM in comparison to books has a number of special problems. Eric J. Hunter has pointed out some specific problems regarding frequent variation in its physical forms and difficulties in getting the author equivalent. John Horner at the same time in his book **Special Cataloguing** has discussed a number of possible problems along with the two above problems as stated by Hunter. The problems stated by Horner are:

- a) Machinery may be needed to use the documents.
- b) The materials may be more fragile, rare and expensive than normal book-form materials.

- c) Special subject knowledge and that of the relevant rules in catalogue code may be needed to catalogue the materials thoroughly and quickly.
- d) Special knowledge and experience of the physical form may be needed.
- e) Special cataloguing tools that is, codes and thesauri may be needed.
- f) Hence, it may be necessary to compile one's own aids because of the variety of the type of material.

Despite these bottlenecks, the entire spectrum of the new media cannot be kept out of the libraries of today and tomorrow. With the publication of AACR-2, Amendments and AACR-2002, the cataloguing of NBM has become easy, clear and standardised. Hence, through proper cataloguing their use in the libraries gets facilitated.

Self Check Exercise

- Note:**
- i) Write your answer in the space given below.
 - ii) Check your answer with the answer given at the end of this Unit.
- 3) Mention the major problems of cataloguing of NBM.

.....

.....

.....

.....

8.4 CATALOGUING OF NON-BOOK MATERIAL

AACR-2 specifies sources of information to be used in describing a publication; in the case of printed monograph, for example, such sources include the title page, the verso of the title page, etc. Of these, the source of bibliographic data to be given first preferences as the source from which a bibliographic description is prepared is called the chief source of information. The rules identify a chief source of information for each type of material.

Chief Sources of Information

Type of Materials

Cartographic materials

Manuscripts

Music

Sound recordings

Disc

Tape (open reel-to-reel)

Tape Cassette

Tape Cartridge

Sound recording on film

Motion picture and video

Sources

Cartographic item itself

Container or case, the cradle and stand of globe, etc.

Title page and Colophon

Title Page

Label

Reel and label

Cassette label

Catridge and label

Container and label

Film itself and its container

Recordings	(if integral part of item)
Graphic Materials	Item itself including any labels and the container
Computer files	Internal user label Information issued by publisher, creator, etc.
Three – dimensional artefacts and Realia	Object itself with any accompanying textual material and container
Microforms	Title frame

8.4.1 Punctuation Marks

One of the significant features of the ISBD is a set of prescribed punctuation. The prescribed punctuation mark precedes each element in the description and signifies the nature of that element. The prescribed punctuation marks are used as a device of recognition for both machine and human manipulation of bibliographic records.

Specific and detailed rules with regard to prescribed punctuation are given in each chapter in AACR-2. The details of punctuation marks of ISBD (G) has been provided in Unit 7. Besides some punctuation marks necessary for NBM have been given below:

Parentheses ()

Parentheses are used to:

- 1) enclose physical details of accompanying material.
- 2) enclose the number of logical records after the designation for a data file; the number of statements and the name of programming language the designation for a program file; the number of logical records, or statements in each file after the designation for a multipart file; or the name, number, etc. mentioned after the designation for an object program.
- 3) enclose the number of frames of microforms a filmstrip and the speed of a film or recording.

Plus Sign +

- 1) precedes a statement of accompanying material.
- 2) is used to indicate the Northern Hemisphere when giving the declination of the center of a celestial chart.

Square Brackets []

- (1) enclose information taken from outside the prescribed source or sources.
- (2) enclose the general material designation.

8.4.2 Areas of Description

AACR-2 prescribes detailed rules for each area of description. The general rules are presented in AACR2R Chapter 1 and rules for specific types of materials are given in chapters 2 to 12. Adequate examples are included to illustrate the rules. The major elements in bibliographic description are discussed below.

In presenting data in the bibliographic description, information taken from the chief

source of information is preferred. If the information required is not available or is insufficient from the chief source, other sources are used. Rules for each area are enumerated in Chapters 2 to 12. Information taken from outside the prescribed sources is enclosed in brackets.

8.4.3 Structure of Description

The bibliographic description of NBM follows the same norms as for books and other materials. The main structure of the bibliographic entry comprises the heading, the description and the subject description. The structure of the bibliographic description according to AACR 2R is given below.

First Level (1.OD1)

The level was designed for minor-item and for entries in catalogues with a policy of minimum description. The bibliographic elements to be included are set forth in the following schematic illustration.

Title proper/First statement of responsibility, if different from main entry heading in form of number or if there is no main entry heading. Edition statement. Material (or type of publication) specific details first publisher, etc., date of publication, etc. Extent of item – Note(s) – Standard number.

It would primarily be sufficient to identify item in a small library collection

Shastri Ravindra	
1946	<p>Hamare Deshbashiyon[manuscript].-[s.l:s.n],</p> <p>10 leaves; 24cm.</p> <p>Holograph, signed poem in Hindi.</p> <p>Two leaves are stained by water.</p> <p>1. Hindi Poetry. I. Title.</p> <p>○</p>

Second Level (1.OD2)

This level was designed for the standard range of item found in the library and for entries in catalogues with a policy of standard description. The following elements are included:

Title proper [General material designation] = Parallel title: other title information/First statement of responsibility, Each subsequent statement of responsibility. –Edition statement/First statement of responsibility relating to the edition,- material (or type of publication) specific details,-first place of publication, etc.: First publisher, etc., Date of publication, etc.. – extent of item: other physical details; Dimensions. –(Title proper of series/Statement of responsibility relating to series, ISSN of series; Numbering within the series. Title of sub-series, ISSN of sub-series; Numbering within sub-series) – Note(s). –Standard number. This level might appropriately be used in medium sized library.

Shastri Ravindra	
1946	<p>Hamare Deshbashiyon[manuscript].-[s.l:s.n], 10 leaves; 24cm.</p> <p>Holograph, signed poem in Hindi.</p> <p>Two leaves are stained by water.</p> <p>1. Hindi Poetry. I. Title.</p> <p>○</p>

Third Level (1.0D3)

It includes all the rules applicable to the item being catalogued. This level represents full description and is recommended for items which, in the context of the catalogue are considered to be important and rare. All elements set forth in the rules which are applicable to the item being described are included, it is appropriate to large libraries and research collections.

8.4.4 GMD (General Material Designation)

GMD prescribes the broad class of publication to which the item belongs, for example, sound recording, music, map, film- scripts, microform, motion picture, machine-readable data file will be replaced by computer file etc.

This is an optional addition in AACR-2. The use of GMD is very much essential in case of non-book materials and it may not be preferred by the libraries for book form materials. For the purpose of using GMD the cataloguer may use the following terms immediately following the title proper enclosed in square brackets:

Cartographic Materials_____	Map
	Globe
Computer File_____	Computer File
Graphic Materials_____	Art Original
	Art Reproduction
	Chart
	Filmstrip
	Flash Card
	Kit
	Picture
	Slide
	Technical Drawing
	Transparency

Manuscript_____	Manuscript
Microform_____	Microform
Motion Picture_____	Motion Picture
Music_____	Music
Sound Recording_____	Sound Recording
Art original, Diorama, Game Model, Realia	Realia
Video Recording_____	Video Recording

Self Check Exercise

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answer given at the end of this Unit.
- 4) Mention the chief source of information for motion picture and computer file of cataloguing of NBM.

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8.5 BIBLIOGRAPHIC DESCRIPTION OF NON-BOOK MATERIALS (AACR-2 REV.ED.)

Various types of NBMs along with relevant rules of AACR 2, 1988 Rev have been discussed with examples for your better understanding about their bibliographic description.

8.5.1 Cartographic Materials

Rule 3.01A Scope

The rules in this chapter cover the description of cartographic materials of all kinds. Cartographic materials include all materials that represent the whole or part of the earth or any celestial body. These include two and three – dimensional maps and plans (including maps of imaginary places); aeronautical, navigational and celestial charts ; globes ; block diagrams ; sections ; aerial photographs with a cartographic purpose; birds eye-views (map views), etc.

Rule 3.0 B2 Chief Source of Information

The chief source of information (in order of preference) is:

- The cartographic item itself; when an item is in a number of physical parts, treat all the parts (including a title sheet) as the cartographic item itself.
- Container (portfolio, cover, envelope, etc.) or case, the cradle and stand of a globe, etc.

Rule 3.1B: Title proper, 3.1C: GMD, 3.1D: Parallel title and 3.1E including 3.4 follows the rules given in rule 1 and applicable to cartographic materials.

Rule 3.3B1 Give the scale of a cartographic item (except as noted below) as a representative fraction expressed as a ratio (1). Precede the ratio by scale. Give the scale even if it is already recorded as part of the title proper or other title information.

Scale ca 1: 45, 00000

If a scale statement found in the chief source of information or accompanying material is not expressed as a representative fraction, give it as a representative fraction in square bracket.

Scale [1:221,440]

Rule 3.3B3 If the scale within an item varies and the outside values are known give scales connected by a hyphen.

Scale 1: 11,000-1:20,000

If the values are not known, mention that scale varies

Rule 3.3C Statement of Projection

Give the statement of projection if found in the item, e.g. conic equidistant projection

Rule 3.5B2 If there is more than one map, etc. or one or more sheets, specify the number of maps and number of sheets. e.g. 6 maps on 1 sheet.

Rule 3.5D5 Give the physical description of maps and globes as follows:


1 globe: col., plastic, on metal stand; 22 cm. in diam. no box 12 × 10 × 10 cm.

1 map: col.; 200 × 350 cm. folded to 20 × 15 cm. in plastic case 25 × 20 cm.

There are various types of Notes given in chapter/rule 3.7B for benefit of the cataloguer

Cataloguing of a Map: **For Example:**

Tourist map of West Bengal. Department of Tourism.
Editor. A.K. Ghosh .-Scale 1:250,000 – 1:3500,000.-
Kolkata: Government Printing Press. 2007 . There are
15 coloured maps on sheet 20" x 12" folded to 25 x 12
cm. Place names are in Bengali and English in red
coloured ink. Also shown important tourist places in West
Bengal.

	West Bengal.	Department of Tourism.
	1:250,000- guide.	Tourist map of West Bengal [map]/edited by A.K. Ghosh.-scale 1:3500,00.-Kolkata: Government Printing Press,2007. 15 map:col.,on sheet 20"x12" folded to 25x12cm. Useful guide for tourists. Places names in Bengali and English in red colour ink. Shows important tourist places of West Bengal along with a separate 1. West Bengal-Description and Travel.I.Ghosh,A.K.II. Title. 

8.5.2 Manuscripts (Including Manuscript Collections)

Rule 4.0a. Scope

Rule 4.0A10

The rules in this chapter cover the description of manuscripts (including type-script) materials of all kinds, including manuscript books, dissertations, letters, speeches, etc., legal papers (including printed forms completed in manuscript), and collections of such manuscripts for reproductions of manuscripts published in multiple copies, see chapter 2 or 11 as appropriate for manuscript cartographic items, see also chapter 3 for manuscript music and chapter 5 of AACR2R.

Rule 4.0B1 Chief Source of Information

The chief source of information for manuscripts is the manuscript itself. Within manuscripts, use (in this order of preference) information from the : Title page, Colophon Caption , Heading etc., Content of the manuscript and reference sources. For collection of manuscripts, treat the whole collection as the chief source.

Rule 4.2B. Edition statement:

Transcribe a statement relating to a version of a manuscript that is different from other versions.

Rule 4.4B. Date of manuscript

Rule 4.5B1. Give the number of leaves or pages

e.g. VII, 18 leaves; leaves 43-43; [3] , 122 p.

Rule 4.5C1. (Physical Details):

Name the material on which the item being described is written if it is other than paper e.g. [2] leaves : vellum; [1] leaf : parchment.

Rule 4.5 D for dimensions

Rule 4.6. Series area :

This area is not used for manuscripts

Rule 4.7B Notes area

Edition, place of publication, name of publisher, series, ISBN and materials are not used as these are irrelevant to manuscript. If it is handwritten, the word is used as holograph (s). Ms will be used for manuscript and Mss for collections of manuscripts.

Hamare Deshbashiyon. Manuscript. Hindi Poems.

10 leaves. 2 leaves stained by water. There is a signed holograph on the manuscript.

Author- Ravindra Shastri

Example

Hamare Deshbashiyon. Manuscript. Hindi Poems.

10 leaves. 2 leaves stained by water. There is a signed holograph on the manuscript. Author- Ravindra Shastri

Shastri, Ravindra

Hamare Deshbashiyon [manuscript]/ by Ravindra Shastri. – 1946

10 leaves; 24cm.

Holograph, signed

Poem

In Hindi

Two leaves are stained by water

1. Hindi Poetry I Title

	Shastri Ravindra	
	1946	Hamare Deshbashiyon[manuscript]/by Ravindra Shastri.-[s.l:s.n], 10 leaves; 24cm. Holograph, signed poem in Hindi. Two leaves are stained by water. 1. Hindi Poetry. I. Title. ○

8.5.3 Music

Rule 5.0a Scope

The rules in chapter 5, AACR 2 (Music) cover the description of published music. They do not cover the other unpublished music in detail, though the use of an additional term in the physical description (5.58) and the use of specific provisions of chapter 4 (Manuscripts) will furnish a sufficiently detailed description for the general library catalogue. For the description of recorded music, see chapter 6. For microform reproduction of music, see chapter 11.

Rule 5.0B 1 Chief Source of Information

If the title page consists of a list of titles including the title of the item being catalogued, use as the chief source of information whichever of these: title page, the cover, or the caption furnishes the fullest information. In all other cases, use the title page or title page substitute (see 2.OB1) as the chief source of information. If information is not available from the chief source, take it from the following sources (in this order of preference): Caption, Cover, Colophon, Other Preliminaries and other sources

Rule 5.5 B 1 – 5.5 B 3: Extent of item

For example: 1 score + 1 piano conductor or part (Bp.) + 16 parts.

Rule 5.5 C 1 : Illustration

Rule 5.5 D 1 : Dimensions

Rule 5. E 1 : Accompanying material

Rule 5.7 B 1-5.7 B 20, : Note area

For Example:

Home sweet home: A musical play David Smith. Lyrics
- John Austin. Book by Derek Edward. Publisher,
Random House. New York. 1976

One vocal score. 10 inches.

	Smith, David	
	John Austin;	Home sweet home: a musical play[music]/by David Smith; Lyrics by book by Derek Edward.-New York: Random House, 1976. 1 vocal score(51p.); 10in. I. Austin, John. II. Edward, Derek. III. Title. ○

8.5.4 Sound Recordings

Rule 6.01 Scope

In Chapter 6 of AACR2R, the rules cover the description of sound recording in all media, i.e. discs, tapes (open reel to reel, cartridges, cassettes) piano rolls and sound recordings on film. The use of appropriate specification in the physical description (*Rule 6.5*) and special notes will furnish a sufficiently detailed description for such item.

Rule 6.0 B1 Chief Source of Information

The chief source of information for each major type of sound recording is as follows:

Type	Chief Source of Information
Disc	Dis and label
Tape (open reel-to- reel)	Reel and label
Tape cassette	Cassette and label
Tape cartridge	Cartridge and label
Roll	Label
Sound recording on film	Container and label

Treat accompanying textual material or container as the chief source of information if it furnishes a collective title. If information is not available from the chief source, take it from the following sources (in this order of preference).

Accompanying textual material

Container (sleeve, box, etc.) and other sources.

Rule 6.1E Other Title Information :

If any sub-title i.e. the other title information is to be transcribed after the title putting a colon (*Rule 6.1E*)

Hello Dolly ! [GMD] : Original motion picture sound track

Rule 6.1F Statement of Responsibility :

It relates to the heading chosen for the type of sound recording which is to be incorporated by giving a diagonal slash after the Title/Sub-title (*Rule 6.1F*). e.g. Melville [GMD]/written and narrated by Thomas Heath. It is to be remembered that, the cataloguer is required to add a word or short phrase to the statement of responsibility if the relationship between the title and the person(s) or body named in the statement is not clear, e.g. Born to run [GMD]/ [written and performed by] Ken Russel.

Rule 6. 7B 21 Items without a Collective Title :

In case a sound recording lacks a collective title, either it is to be described as a unit or separate description for each separate titled part is to be made as mentioned in the Notes section (6.7B 21).

Place of Publication, Distribution etc. : e.g. London : RCA Victor : Distributed by Middle Earth Co.

It is more appropriate to prefer a trade or brand name rather than the name of the publisher if both appear on the label. Prefer label information rather than information appearing in accompanying material or container.

If the statement of function of publisher, distributor is found, the information is to be added as mentioned below.

New York : Sunflower; [London] : Virgin Records [distributor] Date of Publication, distribution etc.

The date of a published sound recording is to be provided after the name of publisher after giving a comma.

Rule 6. 7B7 But if the date of recording appears on a published sound recording, it is to be given in a note (Sec 6. 7B7)

[New York] Music Guild, 1971

Note : Recorded in 1965.

Sometimes the name of the publisher is unknown, whereas the place and name of the manufacturer are found in the item, then that place and name are to be cited.

[s.l. : s.n.], 1986 (London : High Fidelity Sound Studios)

Rule 6.5B Extent of Item

The number of physical units of sound recording be noted as

- 1) Sound discs
- 2) Sound cassettes

The playing time of a sound recording is to be transcribed as in many cases, playing time is included on the item as part of the information on the label, container or accompanying material. e.g. 2 sound cassettes (35 min. each). 1 sound disc (45 min.)

Rule 6.5C Other Physical Details

The type of recording i.e. the way in which the sound is encoded on the item. e.g. 1 sound cassette (50 min.) : digital

In case of a sound cassette, the playing speed can be given.

e.g. 1 sound cassette (40 min.) : analog, 1 5/16ips.

Rule 6.5D5 Dimension for Sound Cassette

Give the dimensions of a cassette if other than the standard dimension (e.g. the standard dimensions of an analog cassette are $3 \frac{7}{8} \times 2 \frac{1}{2}$ in.). Give the width of a tape if other than the standard width (e.g. the e.g. 1 sound cassette (85 min.): analog, mono, $7 \frac{1}{4} \times 3 \frac{1}{2}$ in; $\frac{1}{4}$ in. tape.

Rule 6.6B Series Statement

The series statement is to be recorded in parentheses after the last element of the physical description preceded by a full stop, space, dash, space.

e.g. (Audio – cassette library for professional librarians; 48).

Rule 6.7B Notes

There are 19 types of notes given and if the cataloguer decides that a particular information is of importance for the users' viewpoint, then it can be mentioned in the order as mentioned below by starting a new paragraph for each note or precede each note by a full stop, dash, space.

Example

Farewell My Friend. Sound Recordings. Arranged and composed by Roger Taylor. Stereo. Also issued in cassette

Songs: Roger Taylor with orchestra and in part

With background vocals

Taylor, Roger

Farewell my friend [sound recordings] / [composed and Arranged by] / Roger Taylor.- London: Royalty Records, 1991.

1 sound disc: 33 $\frac{1}{3}$ rpm, stereo: 12 in.

Title from container

Also issued in cassette tape

Songs: Roger Taylor with orchestra and in part

With background vocals

Fare well my	Friend [sound recording]/[composed and arranged by Roger Taylor].-
	<p>London: Royalty Records, 1991.</p> <p>1 sound disc: 33 1/3 rpm, stereo: 12 in.</p> <p>Title from container.</p> <p>Also issued in cassette tape.</p> <p>Songs: Roger Taylor with orchestra and part with background vocals.</p> <p style="text-align: center;">○</p>

8.5.5 Motion Pictures and Video Recordings

In AACR 2, Chapter 7 prescribes rules for the descriptive cataloguing of all types of media involving a sequence of images projected in rapid succession so that they can create the illusion of movement. These include video recordings with all of their manifestations. This chapter also includes motion pictures which come in many packages such as film cassette and film reels, etc.

Rule 7.0B Sources of Information

The chief source of information for motion pictures and video recordings as it is for other library items, is the work itself. As you know, when a book is catalogued, the title page is the chief source of information. Likewise for motion pictures and video recordings the chief source of information is the item itself, its container (and container label) if the container is an integral part of the piece. However, if the information is not available from the chief source, then the following sources can be consulted :

- a) Accompanying textual material (e.g. scripts, shot lists, publicity material).
- b) Container (if not an integral part of the piece.) and other sources.

Rule 7.1B – 7.1E1 (For title proper, GMD, Parallel titles and other title information).

The rules for description of information are identical as for sound recordings.

Rule 7.1E2

If the item is a trailer containing extracts from a larger film, add [trailer] as other title information.

Home sweet home [GMD] : [trailer]

Rule 7.1F Statement of Responsibility:

This area covers those persons or bodies credited in the chief source of information with participation in the production of a film (e.g. as producer, director, animator) that are considered to be of major importance, while all other statements of responsibility are to be recorded in Notes.

Classroom control [GMD]/ University of London

Audiovisual centre ; produced and directed by W.C. Collins.

Rule 7.1G Items without a Collective Title : Follow the rules for description as mentioned under 6.1 G.

Rule 7.2B Edition Statement: Same rules as for sound recording (6.2B).

Rule 7.4. Publication, Distribution, etc. : Exactly identical with sound recording.

Rule 7.5 Extent of Item

The physical units of a motion picture or video recording can be given the number of parts in Arabic numerals as mentioned under : (a) 1 videocassette (b) 2 video discs (c) 3 film reels.

Rule 7.5B2 Playing Time:

It is to be recorded as indicated in the item. If the playing time is mentioned as 'about 10 minutes', then it will be written as (ca. 10 min.). (a) 2 film cassettes (25 min. each) (b) 1 Video reel (4 min., 20 sec.)

Rule 7.5C Other Physical Details:

It recommends to give sound characteristics, colour etc in extent of item area.

1 video cassette (20 min.) : sd., col. with b & w sequences.

Rules 7.5D and 7.5E:

for incorporating the dimension and accompanying material.

Rule 7.7 Note Area

It facilitates scope for recording 18 types of notes for essential information about the item which are not recorded previously in the entry.

Rule 7.7B1 Nature or Form:

Make notes on the nature or form of a motion picture or video recording.

Documentary, T.V. Play

Rule 7.7B6 Statement of Responsibility:

List featured players, performers, narrators, and /or presenters.

Presenter: Chris Lewis

Cast: Jack Robinson

Credits : The persons who have contributed to the artistic/or technical production of a motion picture or video recording whose name(s) are not named in the state of responsibility.

Credits : Screen play, A. Ronaldo; music, Robin Smith and followed by name for camera, editor, etc.

Rule 7.7B10 Physical Description:

It consists of sound characteristics, length of the film, technicolour, video recording system (laser optical CAV, VHS Hi-Fi) and three-dimensional film.

Rule 7.7B11 Accompanying Material:

The information like 'cast list and credits on box'; 'with shot list' be provided in this note area.

Rule 7.7B14 Audience :

Make a brief note of the intended audience.

Intended audience : Elementary grades.

Rule 7.7B16 Other Formats :

Give the details of other formats in which the content of the item has been issued.

Issued also as cassette (VHS or Sony U-Matic).

Rule 7.7B17 Record a brief objective summary of the contents of an item.

Rule 7.7B18 Contents:

Give the titles of individual works contained in, or the parts of a motion picture or video recording. Add to each title, if any statement of responsibility area and the duration if indicated.

Example

Nutritional Snacks and Fast Food. A film. Director: Johnny Lever. National Film Board of Canada.

International Film Bureau. 1989. One film reel. 52 minutes. Teacher's guide also attached. For primary and intermediate students. Produced to show that snacks fulfill nutritional needs of students and cannot be equated with junk food.

Nutritional	Snacks and fast foods [motion picture]/National Film Board of Canada;
Children	<p>Director, Johnny Lever.- Toronto: International Film Bureau, 1989.</p> <p>1 film reel (52min.); sd, col.; 16mm. + 1 teacher guide.</p> <p>Title from data sheet.</p> <p>Technicolour.</p> <p>Intended audience: Primary and Intermediate Grade.</p> <p>Summary: Shows that snacks fulfil all the nutritional need of the and can not be equated with junk food .</p>

8.5.6 Graphic Materials

Rule 8.0A. Scope

It covers the description of graphic materials of all kinds whether opaque (e.g. two dimensional art originals and reproductions, charts, photographs, technical drawings) or intended to be projected or viewed (e.g. filmstrips, radiographs, slides) and collections of such graphic materials.

Rule 8.0B1. Chief Source of Information:

It is the item itself including any labels, etc. that are permanently affixed to the item or a container that is an integral part of the item. If the item being described consists of two or more separate physical parts (slide set, etc), treat a container that is the unifying element as the chief source of information if it furnishes a collective title and the items themselves and their labels do not. If the information is not available from the chief source, take it from the following source (in order of preference) :

Container (box, frame, etc.)

Accompanying textural materials (manuals, leaflets, etc.)

Other sources

Rule 8.4: Publication, Distribution etc. Area.

Rule 8.4 F2

Record the date of creation of an art original, unpublished photograph, or other unpublished graphic item.

Portrait of Charles Dickens – 1964

Garden flowers [GMD]/Geoff Arnold. — [1898 ?]

Fair Resemund. — [1910-1973]

(Unpublished photographs)

Rule 8.4. G : Place of manufacture, name of the manufactures, date of manufacture.

Rule 8.4 G 1 : If the name of publisher is unknown, give the name of place and manufacturer as instructed in 1.4 G, if they are found in the item and have not been recorded in a statement of responsibility.

Fig. : (s.l. : s.n. , 1966 ?) (London: Allen press)

Rule 8.5 B 1 : Record the number of physical units of a graphic item.

4 wall charts 1 filmstrip cartridge

200 slides 6 stereograph reels

Rule 8.5 B 2 : Add to the designation for a filmstrip, filmstrip, etc. like

1 filmstrip (26 fr.)

1 flip chart (6 sheets)

Rule 8.5 C : Other physical details.

Rule 8.5C 1: (a) Art originals. Give the medium (Chalk, Oil, Pastel etc.) and the base

**Cataloguing of
Non-Book Material**

(board, canvas, fabric, etc.)

1 art original : Oil on canvas.

(b) Art prints: Give the process in general terms (engraving, lithograph, etc.

(c) Charts and flip charts e.g. 1 flip chart (8 sheets) : double sided.

(d) Filmstrips and filmstrips. Give an indication of the sound if the sound integral.

1 filmstrip (30 fr., 2 title fr.) : sd., col.

(e) Flash cards: 12 flash cards : col.

(f) Photographs. If the photograph is a transparency not designed for projection or negative print, indicate this. Give an indication of the colour.

1 photo : negative, b & w

(h) Slides. Give the indication of the sound if the sound is integral. Add the name of the system e. g. (3 M talking slide) after the indication of the sound.

10 slides : sd. (3 M Talking Slide), col.

(j) Technical Drawing. Give the method of reproduction if any (blue print, photocopy etc.)

1 technical drawing : blue print

Rule 8.5 D : Dimensions.

Give for all graphic materials except film strips, filmstrips and stereograph the height and the width in centimeters to the next whole centimeter up.

1 Technical drawing : blue print, 87 X 87 cm.

28 photographs : b & w; 13 x 8 cm.

Rule 8.5 D5 : Slides.

Do not give the dimensions if they are 5 X 5 cm (2 x 2 in.)

1 slide : col.

1 slide : col. ; 7 x 7 cm

Rule 8.5 E : Accompanying material.

Rule 8.5 E 1 : 30 slides : col. + 1 sound disc

(30 min. analog 33 1/3 rpm. mono. ; 12 in.)

Rule 8.7 B 1 to 8.7 B 19 : Refer for various kinds of notes.

Example

Department of Navy. United States. Modern Warfare and Navy. Coloured film. 2 reels, 40 frames. 35 mm. Accompanying booklet.

Describes the strategic role of missiles in defence and attack by a country.

	Modern war	fare and missiles[film strip]/produced by U.S.Department of Navy.-
	attack by a	New York:[s.n],1983. 2reel (40fr.):sd.col.;35 mm.+1 Boklet. Summary: Describes the strategic role of missiles in defence and country. 1. U.S Department of Navy.

8.5.7 Computer Files*Rule 9.0A SCOPE**Rule 9.0A1*

The rules in this chapter cover the description of files that are encoded for manipulation by computer. These files comprise data and programs. Computer files may be stored on, or contained in carriers, available for direct access or by remote access.

The rules in this chapter do not cover electronic devices such as calculators etc. ; see chapter 10 for such materials. Programs residing in the permanent memory of a computer (ROM) or firmware are considered to be part of the device and should be described in conjunction with the device (e.g. the programming language of a particular computer, such as : Applesoft in ROM).

Rule 9.0B1. Chief Source of Information.

The chief source of information for computer files is the title screen (s). If there is no title screen take the information from other formally presented internal evidence (e.g. main menus and program statements).

If the information required is not available from the internal sources or the sources existed above, take it from the following sources (in this order of preference) : Physical

Other published description of the file and other sources

Rule 9.3 File Characteristics Area

Rule 9.3B1 Designation:

When the information is readily available indicate the type of file. Use one of the following terms:

Computer data, Computer program (s), Computer data and program (s)

Optionally, if GMD are used (see 1.1 C1), omit computer from the file designation.

Rule 9.3B2. Number of records, statements, etc.

If a file designation is given and if the information is readily available, give the number of approximate number of files that make up the content (use file or files preceded by an Arabic numeral) and /or these other details :

- a) Data. Give the number or approximate number of records and/or bytes.

Computer data (1 file: 600 records, 2400 bytes)

- b) Programs. Give the number or approximate number of statement and/or bytes.

Computer program (1 file : 200 statements)

- c) Multipart files. Give the number or approximate number of records and/or bytes, or statements and/or bytes, in each part.

Computer data (2 files : 800, 1250 record) and programs (3 files : 7260, 3490, 5076, bytes)

Rule 9.5 Physical Description Area

Rule 9.5 B1

Record the number of physical units of the carrier by giving the number of them in Arabic numerals and one of the following terms as appropriate.

Computer cartridge, Computer disc, 3 computer cassettes, 2 computer laser optional card

Rule 9.5 C1

If the file is encoded to produce sound, give sd. If the file is encoded to display in two or more colours, give col.

1 computer disc : sd., col., single sided, single density, softsectored.

Rule 9.5 D 1 Give the dimensions of the physical carrier

1 computer disk : col. ; 5 ¼ in.

- a) Cartridge.

1 computer chip cartridge ; 3 ½ in.

Rule 9.5E1.

Give the details of accompanying material as instructed in 1.5E. 1 computer disk; 5 ¼

in. +1 user manual and addendum. (accompanying materials title : user manual and addendum)

Rule 9.7 Note area:

The cataloguer is free to provide any one of the notes.

Example

Wizard master. computer programme. Conceived and designed by Edward Miller. 4 files.

Santa Clara, CA. Activision. 1999.

1 basic game. Along with a manual. S y s t e m
requirements: Atari 2600, left joystick container .

Miller,Edward	
Miller.- ([63p.]:col.ill. Left joystick	<p>Wizard master[computer file]/conceived and designed by Edward computer programme (4 files).-Santra Clara, CA, Activision,1999.</p> <p>1 computer chip cartridge: col.;3 1/4in.+1 base game manual ;18cm.)+1 updated game manual system requirements: Atari 2600;container.</p> <p>Title from cartridge lebal. I.</p> <p>Title.</p> <p style="text-align: center;">○</p>

8.5.8 Three Dimensional Artifacts and Realia

Rule 10.0A *Scope*

Rule 10.0A1

The rules in this chapter cover the description of three-dimensional objects of all kinds (other than those covered in previous chapter), including models, dioramas, games (including puzzles and simulations) , braille cassettes, sculptures and other three dimensional artworks, exhibits machines and clothing. They also cover the description of nature all/occurring objects, including microscope specimens (or representations of them) and other specimens mounted for viewing. For the description of three-dimensional cartographic materials (e.g. relief models, globes), see chap. 3 of AACR2R.

Rule 10.0B1 Chief Source of Information:

The chief source of information for the materials covered in this chapter is the object itself together with any accompanying textual material and container issued by the publisher or manufacturer of the item. Prefer information found on the object itself (including any permanently affixed labels) to information found in the accompanying textual material or on a container.

Rule 10.4 . Publication, Distribution, etc. area.

Rule 10.4 C. Place of Publication, Distribution etc.

Rule 10.4C2.

Do not record a place of publication, distribution, etc., for a naturally occurring object (other than on mounted for viewing or packaged for presentation) or for an artifact not intended primarily for communication. Do not record s.n. in such a case.

Rule 10.5 Physical Description Area

Rule 10.5 B Extent of Item (including specific material designation)

Rule 10.5B1 Record the number of physical units of a three dimensional artifact or object by giving the number of parts in arabic numerals and one of the terms listed below, as appropriate.

Art original, Art reproduction, Braille cassette, Diorama, Exhibit, G a m e , Microscope slide, Mock – up, Model, if non of these terms is appropriate, give the specific name of the item or the names of the parts of the item as concisely as possible.

1 Clockwork toy train, 2. Jigsaw puzzles, 3. quilts

Rule 10.5C. Other Physical Details

Rule 10.5C1. Material, When appropriate, give the material (s) of which made. If the material (s) cannot be named concisely, either omit the statement or give it in a note. Give the material of which a microscope slide is made if it is other than glass. Such as
2 models (various pieces) : polystyrene

1 diorama (various pieces) : Polystyrene

1 statue : marble

1 quilt : cotton

Rule 10.5D Dimensions

Rule 10.5D2 If the object is in a container, name the container and give it's dimensions either after the dimensions of the object or as the only dimensions.

1 model 10 pieces : col. ; 16 x 32 x 3 cm. in case 17 x 34 x 6 cm.

1 Jigsaw puzzle : wood, col. ; in box 25 x 32 x 5 cm.

Rule 10.5D3 If, in a multipart item, the objects and/or their largest or larger size, separate by a hyphen.

3 sculptures : marble; 150 – 210 cm. high.

Rule 10.7 Note area

Rule 10.7B1 Nature of the item.

Give the nature of the item unless it is apparent from the rest of the description.

Study of a figure on motion

Section of fetal pig mandible

Rule 10.7B10. Physical Description.

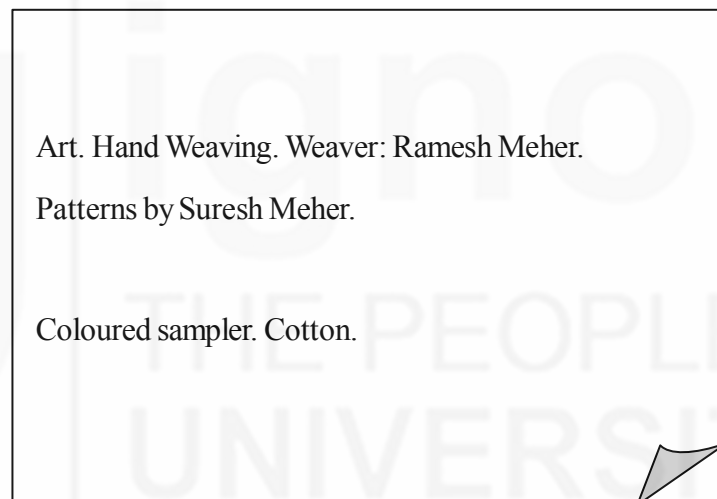
Make notes on important physical details that are not included in the physical description area, especially if these affect the use of the item. If the physical description includes various pieces and a description of the pieces is considered to be useful, give such a description.

Four times actual size – The parts of the ear are painted to show anatomical structure.

Includes headdress, beaded shirt, trousers, and moccasins pattern : Pennsy lvania wild goose.

Contains 1 small stage, 5 foreground transparencies, 2 backgrounds, 5 story sheets, and 1 easel.

Example:



Meher,Ramesh	
	<p>Hand weaving [art original].-[s.l:s.n].-1968.</p> <p>1sampler: cotton, ccol.;125x30cm.</p> <p>Woven by Ramesh Meher.</p> <p>Pattern: Suresh Meher.</p> <p>I.Meher,Suresh. II. Title.</p> <p style="text-align: center;">○</p>

8.5.9 Microforms

Rule 11.0A Scope

It includes microfilms, microfiches, microopaques and aperture cards. Microforms may be reproductions of existing textual or graphic material or they may be original publications.

Rule 11.0B1 : Chief Source of Information

The chief source of information for microfilms is the title frame (i.e. a frame, usually at the beginning of the item, bearing the full title and, normally, publication details of the item.) The chief source of information for aperture cards is, in the case of a set of cards, the title card, or, in the case of a set of cards microfiche, and microopaques is the title frame. If there is no such information or if the information is insufficient, treat the eye-readable data printed at the top of the fiche or opaque as chief source of information.

If information is not available from the chief source, take it from the following sources (in order of preference) :

The rest of the item (including a container that is an integral part of the item)

Container, Accompanying eye-readable material, Any other source

Rule 11.3 :

Special data for cartographic materials, music and serials

Rule 11.3A : Cartographic materials

Rule 11.3A1 : Give the mathematical data of a cartographic item in microform as instructed in 3.3.

Rule 11.3B : Music.

Rule 11.3B1 : Give the physical presentation of music in microform as instructed in 5.3.

Rule 11.3C : Serials

Rule 11.3C1 : Record the numeric and /or alphabetic chronological or other designation of a serial microform or a serial reproduced in microform as instructed in 12.3.

Rule 11.5B1 : Record the number of physical units of a microform as : 20 aperture cards ; 3 microfilms reels, 4 microfiches, etc.

Rule 11.5C1 : If a microform is negative, then indicate as : 1 microfilm : negative.

Rule 11.5C2 : If it consists of, illustrations, then indicate as 3 microfiche : ill. 2 microfilm reels : col. ill.

Rule 11.5D2 : Aperture card. Give the height and the width of an aperture card mount in cms.

e.g. 10 aperture cards 9 X 19 cms. 16 aperture cards. 6 x 16 cm.

Rule 11.5D3 : Microfiches. Give the height X width of a microfiche in cm.

e.g. 2 microfiches ; 10 x 15 cm – 14 x 17 cm

Rule 11.5D4 : Give the width of a microfilm in millimeters.

1 microfilm reel, 16 mm.

1 microfilm cartridge, 35 mm.

Rule 11.5E :Accompanying material

1 microfilm reel, 16 mm + 1 pamphlet (30 p. : ill., 20cm.)

Rule 11.7B :Notes

Rule 11.7B1 :Nature, scope, or artistic or other form of an item,

Rule 11.7B2 :Language

French, with English translations

Rule 11.7B3 :Source of title proper. Make notes on the source of the title proper if it is other than the chief source of information.

Title from container.

Rule 11.7B14 :Audience. Make a brief note of the intended audience.

For high school students.

Rule 11.7B17 :Summary

Rule 11.7B18 :Contents.

Example:

Sixth Conference on Alternative to Fuel. Held at Mumbai.
2007. Proceedings.

Editor: Ray and K. Rao. ONGC.

4 microfiches : negative

Conference	on Alternative to Fuel(6 th :2007:Mumbai)
2007/edited	Conference on alternative to fuel: no.6[micro form]: proceedings,by s. Ray and K.Rao.- Mumbai: ONGC, 2007. 4 microfiches: negative. I.Ray,S. II.Rao,K.III.ONGC.

8.5.10 Electronic Resources

Scope

The rules in chapter-9 of AACR2R cover the description of electronic resources. Electronic resources consist of data (information representation numbers, text, graphics, images, maps, moving images, music, sounds, etc.) programs (instruction, etc., that process the data for use), or combinations of data and programs. (Rule 9.OA1)

Prescribed Sources of Information:

Information issued by the publisher, creator, etc., container

The title and statement of responsibility, GMD, parallel titles, other title information, Edition are same as other NBM.

But if an electronic resource lacks an edition statement but is known to contain significant changes from other editions (e.g., changes in the data involving content, standardized coding, etc.; changes in the programming including changes in the program statements, programming language, and programming routines and operation; the addition of sound of graphics; improvement of graphics), supply a suitable brief statement in the language and script of the title proper and enclose it in square brackets. (Rule 9.2B3)

[Windows 95 ed.]

Types of Resource: The term for the electronic resource to be catalogued be indicated.
e.g. Electronic data and program (s)

Extent of Resource: The number of records be given

Electronic data (1 file: 500 records, 180,000 bytes)

Electronic program (1950 statements)

Electronic data (2 files: 800, 1250 records) and programs (3 files: 7260, 3490, 5070 bytes)

Publication, Distribution, etc. Area

The bibliographic description of the above areas are exactly same as other materials. However do not record the place of publication, distribution, publisher, distributor for an unpublished electronic resource, so do not record s.l. and s.n. in such cases.

Extent of Item: The number of physical units of the carrier be given

e.g. 1 computer disk

2 Photo CDs

Other Physical Details

e.g. 1 computer disk: sd., col., single sided,. Single density, soft sectored

1 computer optical disk: col. ; 4 ¾ in.

1 computer tape cassette ; 3 ½ x 2 ½ in.

For accompanying material:

1 computer disk; 3 ½ in. + 1 demonstration disk.

Rule 9.7B Note Area

There are 22 types of notes are provided for the benefit of the cataloguer. Most of the notes are just same as other non-book materials. However some of the notes are different are provided below:

Rule 9.7B1. Nature and scope, system requirement, and mode of access

Rule 9.7B8 Type and extent of resources.

e.g. File size: 520,300,280,400,320 records

File size unknown

Rule 9.7B19 Numbers.

Give important numbers associated with the item other than ISBN or ISSN. e.g. APX-10050

Rule 9.7B22. Item described.

For remote access resources, always give the date on which the resource was viewed for description.

e.g. Description based on contents viewed June. 16, 2008.

8.6 CHANGES IN AACR 2R AND AMENDMENTS 2002

There are significant changes in the 2002 revision which are discussed below:

Chapter 3 (Cartographic Materials)

The changes to chapter 3 are of three major types:

- Additional rules or additions to existing rules for the description of cartographic materials in electronic form;
- Miscellaneous changes to existing rules to bring them into line with current practice;
- Editorial changes.

The first category is the most substantial, involving changes to the mathematical and other material specific details area {formerly: Mathematical data area}. Three new rules were added: rule 3.3E (Type and extent of resources); rule 3.3F (Digital graphic representation); and, rule 3.3G (Numbering related to serials). The overall goal is to enable more accurate description of cartographic materials that are electronic resources and/or continuing resources. Rule 3.3D (Statement of coordinates and equinox) has been changed to allow the recording of coordinates in decimal degrees as well as in degrees, minutes, and seconds. Additional examples have been added to rule 3.7B8 (Mathematical and specific details) to reflect the addition of rule 3.3F and the changes to rule 3.3D changes in the second category include: the changing of “of map section” to “section,” and “relief model” as other physical details in rule 3.5C1. Editorial changes have been made as necessary to match new terminology and to relief changes made in other chapters.

Chapter 12 (Continuing Resources) and other Related Rules

The scope of chapter 12, now called “Continuing Resources” instead of serials, expanded to include resources that have either not been covered in the rules or not adequately covered. Chapter 12 now encompasses:

- Successively issued resources (i.e., serials);
- Ongoing integrating resources (e.g., updating loose-leafs, updating Web sites);
- Some categories of finite resources i.e., reprints of serials, resources with character of serials but whose duration is limited, and finite integrating resources).

General Material Designation for Cartographic Materials

The general material designations “globe” and “map” in list 2 in rule 1.1C1 have been replaced with the single general material designation “cartographic material.”

Chapter 9 (Electronic Resources) and other Related Rules

The revision to chapter 9, now called “Electronic Resources,” fall into two categories:

- Changes to align to the International Standard Bibliographic Description for Electronic Resources (ISBD(ER));
- Changes to accommodate the particular nature of electronic resources.

Changes falling in the first category include: the clarification of the scope of chapter 9 and the provision of a distinction between direct access and remote access electronic resources; the addition of an instruction at new rule 9.4B2 to consider all remote access electronic resources as published; and, changing the name of the file, characteristics area (9.3) to “Type and extent resource area.”

Changes in the second category include: changing of the chief source of information from the title screen to the resource and the removal of the preference given to internal sources; the addition of an option at rule 9.5B1 to allow for the use of conventional terminology to describe a physical carrier e.g., “1 CD-ROM” instead of “1 computer optical disc”; and, the addition of rule 9.7B22 (item described) to instruct the cataloguer to always give the date viewed when describing remote access electronic resources. In addition, more current examples of electronic resources have been included and the glossary has been updated with new and revised definitions.

The general material designation in list 1 and list 2 of rule 1.1C1 has been updated from “computer file” to “electronic resource.”

“Work” in Music

Uniform Titles

Changes have been made in chapter 25 to clarify the use of the term “work” in the rules for music uniform titles, including moving the definition in the glossary for “musical work” to a footnote to rule 25.25A

8.7 RESOURCES DESCRIPTION AND ACCESS (RDA)

What is RDA?

RDA stands for “Resources Description and Access”, the new standard that will be the successor to AACR2R.

Introduction

RDA has been developed as a new standard resource description and access design for the digital world.

It has two parts (A and B) instead of the three parts (Parts I, II, and III) originally proposed. Part A covers description and access elements and part B covers authority control for the form of access point.

It provides:

- A flexible framework for describing all resources – analog and digital
- Data that is readily adaptable to new and emerging database structures
- Data that is compatible with existing records in online library catalogues.

Objectives and Principles for the Design of RDA

The objectives and principles set out in this section are those that govern the overall design of RDA as a standard for resource description and access. They address matters of scope, formulation, currency, etc.

Comprehensiveness, Consistency, Clarity, Rationality, Currency, Compatibility, Adaptability, Ease and efficiency of use, Format, Generalisation, Specificity, Non-redundancy, Terminology, Reference structure,

The Key Features of RDA

The first key feature is that RDA will be designed as an online product for use in a web environment. This will allow different views of the rules to be presented, for example to present a concise version of the rules, or rules of particular interest to, say, those cataloguing music. The second key feature is that the structure will be aligned more directly with the FRBR and FRAR models. This more flexible framework will help address the challenges of describing digital resources. The data that is produced should also be more readily adaptable to newly emerging, more efficient, database structure.

The third key feature is that instructions for recording data will be presented independently of guidelines for data display. This will provide more flexibility, enabling the records to be used in a variety of online environments with different structure of syntax for data storage or display.

The final key feature is that RDA will contain clear general instructions, written in plain English. The instructions will be supplemented by detailed rules or by references to other standards as needed, and they will be backed by guidance on the principles behind the rules. This will enable the code to be used more readily beyond the library world. Together these changes will pave the way for improved catalogue design and a greater user focus.

Purpose of RDA

RDA – Resource Description and Access will be a new standard for resource description and access, designed for the digital world.

Built on foundations established by the Anglo – American Cataloguing Rules (AACR), RDA will provide a comprehensive set of guidelines and instructions on resource description and access covering all types of content and media.

RDA will enable users of library catalogues and other systems of information organisation to find, identify, select, and obtain resources appropriate to their information needs.

Need of a New Standard

AACR2 was first published in 1978. Although it has been updated many times through the revision process that was established by the JSC, it is largely designed for an environment dominated by the card catalog. The International Conference on the Principles and Future Development of AACR that was held in Toronto in 1997 identified substantive problems with AACR2. Although the updates issued in the years following that conference addressed some of these problems, it became clear that a fundamental rethinking of the code was required to respond fully to the challenges and opportunities of the digital world.

FRBR and its Relationship with RDA

The acronym “FRBR” stands for Functional Requirements for Bibliographic Records. FRBR was developed by an IFLA Study Group (1992-1997), and IFLA continues to monitor the application of FRBR and promotes its use.

FRBR includes a conceptual model of entities and relationship and attributes; identifies specific user tasks that bibliographic records are intended to fulfill: find, identify, select, obtain; and recommends a set of elements for inclusion in national bibliographic records.

FRBR provides the conceptual foundation for RDA. RDA includes the FRBR terminology when appropriate (for example, use of the names of bibliographic entities: “work” “expression”, “manifestation”, and “item”), will use the FRBR attributes as the basis for specific data elements to be included in bibliographic descriptions, will address FRBR relationship, and will use the FRBR user tasks (find, identify, select, obtain) as the basis for defining a set of mandatory data elements. RDA will also use FRAD (Functional Requirements for Authority Data) as the basis for instructions on authority control.

Each section contains general guidelines and a chapter for each entity. Each chapter is associated with an FRBR user task. The chapters on recording attributes and relationships for concepts, objects, and events are placeholders for completeness in mapping to FRBR and FRAD and may be developed further in future releases of RDA. The instruction on recording attributes and relationship for places will not initially go beyond the scope of AACR2 – chapter 23

Outline of the RDA Structure

There are 10 sections which focus firstly on recording attributes for FRBR entities, and then on recording relationship between these entities.

Recording attributes (Section 1- 4)

Recording relationships (Section 5-10)

RDA does not include instructions on how to create or format subject headings, it does refer to them with regard to their relationship to Group 1 FRBR entities. One of a number of key elements in RDA is that it establishes a clear line of separation between the recordings of data and presentation of data. The ISBD order of areas, data elements and punctuation will not be required. Information on presenting data RDA data in an ISBD display have been provided separately. The concept of main entry as used in a card catalogue is no longer applicable in online catalogues, and this term will not be

used in RDA. That records created by using RDA would be compatible with AACR2 records.

AACR 2 and MARC 21 are two different standards designed for two different purposes. AACR 2 is largely a content and display standard while MARC 21 is largely an encoding standard. RDA is being developed only as a content standard rather than as an encoding standard.

Self Check Exercise

- Note:** i) Write your answer in the space given below.
 ii) Check your answer with the answer given at the end of this Unit.
- 4) State the physical description of microform.

.....

.....

.....

.....

8.8 SUMMARY

In this Unit, attempt has been made to describe the cataloguing rules item-wise for each of the non-book materials as laid down in AACR-2. Also many appropriate and relevant examples are provided along with each area of bibliographic description for easy understanding. Besides, the physical description of each type of non-documentary resource which differ from one another are also mentioned exhaustively after explaining rules vividly and clearly. The 'Entry Format' providing all the necessary items of bibliographic descriptions provided at the end of description of various types of non-book materials are discussed from 2.3 – 2.10. Even in many cases, entries are prepared citing the information about a non-book material following the rules for cataloguing (including the choice of access point and areas of description) for quick and easy understanding. There is also a discuss in about electronic resources, FRBR and RDA.

8.9 ANSWERS TO SELF CHECK EXERCISES

- 1) 1) Bringing direct solution to the space problem in the libraries felt world over, it saves 70 to 90% less space than the books.
- 2) 2) Transporting these documents easily from one library to other, having the quality of portability.
- 3) 3) Saving the documents from its decay as felt in case of conventional documents of hard copies on paper.
- 4) 4) Requiring special storing devices, which makes it possible to store the collection of a large library in a limited space.
- 5) 5) Audio-visual documents require the help of machine process to read which increase the reading interest of the users.

2) Types of NBM

There are various types of non-book materials which are mentioned as under:

Cartographic Materials:

- Ariel Chart.
- Ariel Remote Sensing image.
- Atlas.
- Celestial Globe.
- Chart.
- Globes
- Map.
- Plan.
- Relief Model.
- Remote Sensing Image.
- Space Sensing Image.
- Topographic Drawings.

Motion Pictures and Video Recordings: Computer Files:

- Film Catridge
- Cassette.
- Video Cassette
- Video Disc
- Video Reel
- Data Files.
- Program File.
- Object Program

Graphic Materials:

- Art Original.
- Art Print.
- Art Reproduction.
- Chart.
- Film Strip.
- Kit.
- Photograph
- Picture.
- Post Card.
- Slide.
- Technical Drawing
- Transparency

Manuscripts:

- Leaf.
- Item (For Collection of Mans.)
- Box.

Music:

- Score.
- Condensed
- Minature Score.
- Chorus Score.

Sound Recordings:

- Sound Catridge
- Sound Cassette.
- Sound Disc
- Sound Track Film Reel. (Cassette)

Three-Dimensional Artefacts and

Realia:

- Art Original
- Realia.
- Game
- Diorama
- Model

Microform:

- Aperture Card.
- Microfiche
- Micro Film Catridge Cassette Reel

- 3) ➤ Information collected from one source in the NBM may differ with that obtained from another source of the documents.
 - It may be harder to reach the cataloguing decisions with reference to choice of access point i.e. determination of heading or in other words to decide the person who is chiefly responsible for the intellectual content of the document, which is less experienced in case of books and serials.
 - Information about physical description of different types of NBM definitely creates problem for cataloguer rather than that of conventional documents.
 - Very difficult to obtain information through the naked eyes as it requires special equipments.
- 4) The chief source of information for motion pictures and video recordings as it is for other library items, is the work itself. As you know, when a book is catalogued, the title page is the chief source of information. Likewise the item itself, its container (and container label) if the container is an integral part of the piece. However, if the information is not available from the chief source, then the following sources can be consulted :
 - c) Accompanying textual material (e.g. scripts, shot lists, publicity material).
 - d) Container (if not an integral part of the piece.) and Other sources.

The chief source of information for computer files is the title screen (s). If there is no title screen take the information from other formally presented internal evidence (e.g. main menus, program statements).

- 5)
 - 11.5B1** : Record the number of physical units of a microform as : 20 aperture cards ; 3 microfilm reels, 4 microfiches etc.
 - 11.5C1** : If a microform is negative, then indicate as : 1 microfilm : negative.
 - 11.5C2** : If it consists of, illustrations, then indicate as 3 microfiche : ill. 2 microfilm reels : col. ill.
 - 11.5D2** : Aperture card. Give the height and the width of an aperture card mount in cms.
e.g. 10 aperture cards 9 X 19 cms. 16 aperture cards. 6 x 16 cm.
 - 11.5D3** : Microfiches. Give the height X width of a microfiche in cm.
e.g. 2 microfiches ; 10 x 15 cm – 14 x 17 cm
 - 11.5D4** : Give the width of a microfilm in millimeters.
1 microfilm reel, 16 mm.
1 microfilm cartridge, 35 mm.
 - 11.5E** : Accompanying material
1 microfilm reel, 16 mm + 1 pamphlet (30 p. : ill., 20cm.)

8.10 KEYWORDS

Access Point	: A name, term, etc under which a bibliographic record may be searched and identified.
Accompanying Materials	: Material issued with and intended to be used with, the item being catalogued.
Artifact	: Any object made or modified by one or more persons.
Art Original	: An original two – or three – dimensional work of art created by the artist (e.g. a painting, drawing or sculpture).
Audio Tape	: A generic term designating a sound recording on magnetic tape.
Computer File	: A file (data and / or programs) encoded for manipulation by computer.
Digital	: Refers to the use of discrete signals for representing data in the form of numbers or characters. Most forms of digital representation in data processing have been done on the basis of binary numbers.
Film Strip	: A length of film containing a succession of images intended for projection one at a time, with or without recorded sound.
Microform	: A generic term for any medium, transparent or opaque, bearing micro-images.
Realia	: An artifact or a naturally occurring entity, as opposed to a replica.
Score	: A series of staves on which all the different instrumental and/or vocal parts of a musical work are written.
Sound Recording	: A recording on which sound vibrations have been registered by mechanical or electrical means so that the sound may be reproduced.
Title Frame	: A frame containing printed or written material not part of the subject content of the item.
Video Recording	: A recording on which visual images, usually in motion and accompanied by sound, have been registered; designed for playback by means of a television set.

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