RECENT ADVANCES IN DOCUMENT DESCRIPTION AND REPRESENTATION: ISBD AND PRECIS

B Guha
Indian National Scientific Documentation Centre
New Delhi-110012

The circumstances leading to the adoption of the new method of document description viz. the ISBD and also the new system of subject indexing viz. PRECIS are discussed and explained. The far-reaching consequences of these two developments are also brought out.

In any type of library and information service, ultimately two things are most important. In fact the effectiveness of the service depends largely on them. These two vital jobs are, in modern terminology, document description and document representation. By document description we mean largely that aspect of describing a document which brings out its authorship, distinctive title, edition, imprint and particulars about the physical make-up of it, in fact everything that clearly distinguishes a particular document from all other documents. By document representation, we mean describing or representing the other aspect of a document i.e., its subject content or 'aboutness'.

Whenever we think of document description and representation in a systematic way, we actually think in terms of some surrogates, like a catalogue entry, an entry in bibliographical list or similar bibliographic records. Most of the surrogates that are created in library and information centres are actually a combination of both - description and representation. Various groups of people have worked in the field and it has a long history. In this paper two recent developments of far-reaching consequences, one on the document description side and the other on the document representation side, viz ISBD (International Standard Bibliographic Description) and PRECIS (Preserved Context Indexing System) respectively, are being discussed and the general background leading to their development brought out.

Perhaps, the bibliographers as a group had the longest domination in the field, then came the librarians followed by other information workers, like abstractors, indexers, etc. Bibliographers' interest was mainly centred around the aspects of the physical make-up of a document. Thus they accounted for every un-numbered page, indicated the size of the paper, the number of folds, and watermark, gave information about colophon, signature, indication of any peculiarity of the copy being described, and so on. Early cataloguers relied heavily on the technique of book description perfected by the bibliographers. Quite a few items of information recommended by the bibliographers entered into the catalogue entry also. In course of time, when the need to codify the prevailing cataloguing practices was felt, some of the items came for closer scrutiny. As a result, some of them were dropped, as they were found not so essential in the description of a document in the continuously changing context, and a few of them have been modified. Perhaps the last major efforts towards systematisation of rules for document description, along with other more important aspects of cataloguing, were the holding of the International Conference on Cataloguing Principles, 1961 (ICCP) and the subsequent publication of the blue book - the Anglo-American Cataloguing Rules in 1967.

Events seem to have moved faster since then. Just after ten years of the Paris Conference, in 1971 the ISBD has come out in its final form after two years of work. The implementation of the ISBD was so quick in some areas that even some professional librarians were completely taken by surprise. Thus in the Library Journal, we find the following remarks by a professional - "I, for one, wonder how such a far-reaching recommended standard could have reached this advanced stage of development with so little public notice" [1]. However, it is also maintained that ISBD is one
of the products, perhaps the latest, of the train of activity set in motion by the Paris Conference in 1961. The system was actually worked out by a Working Group set up by the International Meeting of Cataloguing Experts in 1969. The text explaining the working and application of ISBD was issued in 1971 by the IFLA Committee on Cataloguing. Almost simultaneously, from 1972 a number of important national bibliographies have started using the ISBD in their published lists. The latest tally is that 8 national bibliographies and other institutions are using and 6 others are thinking of introducing it [2].

It may be mentioned here that this international agreement on a standard method of document description, through the ISBD, was hastened to a large extent with the introduction of projects like MARC by the Library of Congress. It was realised, beyond any measure of doubt, that if the input to a large system is decentralised and if bibliographical information is to be exchanged on an international scale, then document description had to be completely standardised. The requirements of a machine readable file also not only pointed towards this necessity but also demanded even more compatibility with regard to punctuation, format, sections etc.

It is remarkable that the same project viz., MARC was also responsible, to a large extent, in improving the document representation aspect of surrogate making. This happened through the introduction of the PRECIS indexing. To get a feel of the far reaching effects of these two developments let us have a close look at a typical entry of the British National Bibliography (BNB) reproduced below:

620.19233 - Materials: Fibre reinforced plastics. Deformation
Spencer, Anthony James Merrill. Deformations of fibre-reinforced materials [by]
(Oxford science research papers)
ISBN 0 19 851939 7 Pbk: 3.00
(B72-2414)

The BNB is the only bibliography which is using both ISBD and PRECIS which we consider are the two most important developments in the area of document description and representation. Hence, we have chosen an entry from it. The entry, shown above, is actually a surrogate of a document. Let us try to see how this entry has been able to describe and represent the document for which it stands in the bibliography.

If we ignore the heading in the entry, which has been chosen by the cataloguer and rendered according to certain cataloguing rules, we find that the structure of the entry is quite different from what we usually get following the descriptive cataloguing rules of any cataloguing code. Our familiar indentions, separate sections, punctuation etc. are no longer there. In their place have come some new punctuation marks, some new items of information and an apparent new look. To understand the logic of this new structure it is necessary to go into some details of the ISBD.

It is known that a document description is not only required in a catalogue but also in various bibliographical activities, like announcement of new publications, acquisition and distribution of books etc., ISBD actually takes care of all such activities. It therefore includes elements which may be necessary to all. For a particular purpose a selection from the elements comprising the full standard description may be used. This brings out one important characteristic of ISBD i.e., it is not meant for descriptive cataloguing only but for other bibliographical works also.

It was soon realised that a single standard could not cope up with the bibliographical description of all types of documents. Hence, three separate standards were prepared to take care of the main types of documents. They are ISBD(M) for monographs, ISBD(S) for serials, and ISBD(A-V) for audio-visual materials. We are here concerned mainly with the ISBD(M).

The seven broad areas are the elements under them are as follows:

1. Title and statement of authorship area
   1.1 Title proper
   1.2 Parallel titles, other title(s) and title information
   1.3 Statement(s) of authorship

2. Edition area
   2.1 Edition statement
   2.2 Statement(s) of authorship relating to the edition
In the above structure, as had been pointed out earlier, the usual paragraph indentions for each section have been eliminated. From the beginning of the title to the end of the collation element, the whole description is in the form of a single paragraph. But punctuation marks have been used to indicate the starting or termination of an element or group of elements. They are more like 'field tags' i.e., indicator of a field. The main areas are separated by point and dash (, -). But when by paragraphing, typography or indentation, one area is clearly separated from another, only a point (.) may be used.

A completely new element of description has been introduced i.e., the ISBN. It may also be mentioned that three elements viz. ISBN, binding and price have all been provided at the end, as they are not required in all types of catalogues and lists. Where they are not required, e.g., in a library catalogue, they can be easily eliminated. Thus, it would be noticed that if we eliminate the last part, the description can easily fit into a typical library catalogue entry. Similarly, the full description can easily fit into an entry in a national bibliography, publisher's catalogues and similar lists. In fact Chapter 6 (Description-Separately published monographs) of the Anglo-American Cataloguing Rules (AACR) is being revised in accordance with the ISBD prescription.

The logic behind the need and the prescription of ISBD has been explained by Sumner Spalding, who himself had taken active part in the formulation of both the AACR and ISBD, in the following words [3]:

'To avoid duplication in cataloguing of current publication, the following plan was conceptualised.

1. Each country should have a national bibliography or cataloguing service which would be responsible for cataloging all publications of that country for the libraries in that country and for export for use in other countries.

2. All countries should agree to a standard style of making bibliographical descriptions.

3. Each national cataloging service should avail itself of the product of the others in providing catalog entries for foreign books for libraries in its own country.
DOCUMENT DESCRIPTION AND REPRESENTATION

4. Since exchange of this data would eventually be in machine readable form, the potentiality of standardized punctuation as a device to make possible automatic tagging of fields in the description (thereby cutting input costs) should be explored.

It has already been said that ISBD has already got the approval of the ISO. Many people have expressed their surprise at the quick and easy way of this approval because ISO recommendations usually pass through a certain pattern of activities and hence take time which may be anything upto twenty years. This is because standardization has been approached from the other end, so to say. Through the IFLA Committee on Cataloguing, some of the big user groups, like the producers of national bibliographies, like the producers of national bibliographies, had met and accepted a standard practice of bibliographical description which would be acceptable to each of them. Thus, acceptance by the major users and ensuring the compatibility of major systems are already guaranteed. In such a situation it does not take much time for a proposal, already having the sanction of an international agreement, to go to the stage of an ISO recommendation. This is exactly how the ISBD has come.

Apart from meeting the three basic objectives viz. to make records from different sources interchangeable, to facilitate their interpretation across language barriers; and to facilitate the conversion of such records to machine readable form, the use of ISBD in different bibliographical activities is likely to have its influence on our cataloguing practices. It has already been mentioned that the rules of the descriptive cataloguing aspect of the AACR, which has come nearest to an international code, are going to be revised soon to accommodate document description according to the ISBD rules. But there is another aspect where ISBD may have its profound influence in cataloguing practice. This is regarding the main entry itself.

It would be generally agreed that in any cataloguing code most of the rules are regarding correct choice of heading which is actually related to the question of authorship or authorial responsibility. It has often been complained that these rules contribute largely to high cataloguing cost. The AACR is supposed to have rationalised these rules to a great extent. Even then one hears occasional complaints. Here is a complaint which will sound very familiar, "...the cause of high cataloging costs is that quite aside from the intricate cataloging rules, necessitated by bibliographic complexity, in many cases the AACR themselves take a labyrinthine approach to the analysis of authorship responsibilities... To reduce costs we must simplify cataloging rules..." [4]. This simplification, perhaps, cannot come so long as the concept of the main entry is allowed to dominate the catalogue. The main entry is in most cases the author main entry and author approach need not be given more importance than any other approach. There is already an opinion against the concept of the main entry. Perhaps, the chief advocate of this opinion is Jay E. Daily. He believes that the "Main entry turns out, in fact, to be pretty much a will-o'-the-wisp. It is a concept deeply imbedded in our practice, but when we come to inquire into the rationale behind it, it is difficult to discover any... what a vast, complicated, unnecessary bibliographic rigmarole we have raised up in order to provide it" [5].

It is quite possible that the wider use of the ISBD will encourage us to get away from the unnecessary bibliographic rigmarole, centred round the main entry, and accept an ISBD entry, starting with the title element, as the 'basic' catalogue entry. This would be a true unit entry. All entries could be easily prepared by just inserting the appropriate headings according to the different approach points for the document. The catalogue would thus become a true retrieval tool. If this happens then it would, perhaps, be the greatest revolution in cataloguing practice so far.

As said earlier, the development of the PRECIS has been the most important development in the realm of document representation. The necessity arose, in this case also, out of the requirements of MARC tape input preparation. It was felt that the two alternative schemes of classification viz., modified Dewey Decimal and the Library of Congress schemes that were used to represent the subject contents of books, in MARC records, were hardly adequate for the purpose. The BNB computerization project also is said to have made BNB look for an alternative indexing system. All these resulted in the development of the PRECIS and its introduction in the BNB.
It may be said that in the MARC record, the subject representation is provided in the form of a subject string only. In the BNB entry that we have reproduced earlier, the feature heading actually carries this string. But in the printed BNB, a rotated index providing an alphabetical approach to the classified main part is prepared. So the PRECIS indexing system has two important aspects viz., 1) rules for naming the concepts in the analysed subject, putting the concept-terms in a structured sequence and thus the creation of the string, 2) Rotating the concept-terms in the main string in such a way that approach points are created from every important concept of the same subject and preparation of references to guide the inquiries to the appropriate points of approach. It should be mentioned that the PRECIS string is independent of any scheme of classification. The subject is analysed independently and represented according to certain rules. The order of significance of the component terms is determined on the basis of their respective role in the formulation of the subject. For this purpose a set of role operators has been developed and every constituent concept in a compound subject is assigned a role operator which automatically secures its order.

To take an example, a document entitled 'Political aspects of university manpower planning', would be analysed and role operators are assigned in the following way:

Concept analysis:

(5) Education  (4) Universities  (p) Manpower  (3) Planning  (1) Political aspects

In the above example, the role operators indicate as follows:

(5) Discipline  (4) Key system  (p) Subsystem, structure, material  (3) Effect, action  (1) Viewpoint, perspective

The above analysis and the significance formula controlled by the role operators finally give us the following string:

Education. Universities. Manpower. Planning. Political aspects

From the above string, a number of index entries are prepared in the BNB, according to a system of rotation, which is more like shunting. The entries would be:

1. Education  Universities. Manpower. Planning. Political aspects

2. Universities. Education  Manpower. Planning. Political aspects


4. Planning. Manpower. Universities. Education


It must be mentioned that the above is a short description of the PRECIS index as used in the BNB. What is more important is the introduction of PRECIS as a new method of document representation. Since this representation is being incorporated into the BNB-MARC records which in turn are being sent to other countries and organisations, there is every possibility that this may soon become an internationally accepted method of document representation. So far it has not been possible for us to agree to neither an international classification system nor indexing system. The nearest that we can achieve may be a system of document representation like the PRECIS which is neutral of any classification system. In fact, it has been proved that the PRECIS concept analysis helps classifiers and indexers irrespective of the scheme they are going to use.

So, then, through ISBD and PRECIS our dual work of document description and representation has taken very important strides in unison in recent years. That there was a wide gap between document description and document representation and that there was a real need for correcting this anomaly was pointed out succinctly by Hans Wellisch. He said, "Since these subject headings are an integral part of the product [catalogue entries] which both librarians and the public at large have come to regard as a paragon of quality, in the minds of most users it has become an axiom that the LC subject headings are necessarily of the same high standard as the bibliographical..."
data and that the same painstaking care has been extended both in their formation and in their use for the indication of the 'aboutness' of documents. This, I submit, is a grand and dangerous delusion.\[6\]

It is now hoped that the introduction of ISBD and PRECIS analysis of subjects will reduce this gap.

References


[4] MASSOUNEAU, SUZANNE: Bibliographic control and cataloging cost control;

