Development of documentation, library and archives infrastructures

Introduction of Machine-Readable Cataloguing at the National Information and Documentation Centre

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INTRODUCTION OF MACHINE-READABLE CATALOGUING AT THE NATIONAL INFORMATION AND DOCUMENTATION CENTRE

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I. INTRODUCTION

1. The consultant was sent under Unesco's Regular Programme for 1975-1976 to the Cairo National Information and Documentation Centre (NIDOC) from 29 December 1976 to 26 January 1977.

2. The task of this mission had been specified as follows:

the consultant shall in full co-operation with the authorities of the National Information and Documentation Centre advise on introducing a machine-readable catalogue.

3. Before undertaking his mission the consultant had received the report of Mr. A.E. Jeffreys concerning the mechanization of the National Library Catalogues. (1) This report was of considerable assistance in the work of the consultant.

4. Mrs. Nawal Beyali, Deputy Director of NIDOC, was the counterpart at the National Information and Documentation Centre.

5. The work of the consultant was composed of three tasks as follows:

to study the prerequisites for the automation of cataloguing routines;

to make recommendations for future activity;

to train the library staff.

II. PREREQUISITES FOR THE AUTOMATION OF CATALOGUING ROUTINES

6. Problems to be resolved before using the computer in processing bibliographical data can be found in the following areas:

cataloguing;

ADP (Automated-Data Processing) staff;

computer programmes (software);

equipment (hardware).

7. The prospects for starting the automation of cataloguing are good at the NIDOC. The cataloguing is based on the Anglo-American Cataloguing Rules. That is why even the retrospective conversion of bibliographic data from the catalogue cards can be done without difficulties. The Universal Decimal Classification is used. During the training course held by the consultant it also became obvious that the cataloguing staff has sufficient background to quickly learn the necessary new cataloguing routines.

8. At present there is no one at NIDOC who is specialized in the problems of library automation (format, character sets, recording). During discussions between the consultant and the systems analyst, Mr. Mahmoud Hendi, it became obvious that Mr. Hendi is both interested and has the required knowledge about ADP to be able to assume responsibility for programming questions. However, further training for Mr. Hendi should be arranged. At the very beginning this training could be based on reading the literature in the field of library automation and on establishing regular contacts with Mr. Abdel Rehim Sabry from the National Library. Later on thought should be given to granting a fellowship for him to become acquainted with library systems abroad.

9. The problem of acquiring computer programmes can be solved either by buying a ready package or making programmes at NIDOC. Since the cataloguing system of the NIDOC has no special features which could not be satisfied through a ready programme package this would be the cheapest and the quickest solution. Although there are today several programme packages available for libraries the Library Software Package (LSP) from the British Library has several advantages, such as the following:

- it is a ready and well-tested package;
- it is flexible both in its format and in its output forms;
- the documentation on the programmes is clear and detailed;
- with the help of LSP it is possible to handle directly the material in MARC-form bought from abroad;
- the programming package is available both in an IBM and ICL version.

The price of the package is £600. Documentation about the package is available for £5.

10. The consultant discussed the equipment problems with Dr. Ahmed Aziz Kamal, Director of the Cairo University Scientific Computation Research Centre. The Computation Centre has an ICL 1905 computer. The configuration fulfils the requirements of the LSP. According to Dr. Kamal the Computation Centre is willing to rent computer time to the NIDOC.

The most difficult problem on the equipment side is the lack of a suitable data-capture device. The Computation Centre has at its disposal only card punches. These, however, are not well suited to library use. The small quantity of different characters available forms one problem. The LSP uses about 100 different characters which can be considered quite sufficient also for NIDOC. The experience with using cards at the National Library is not very favourable. Therefore the possibilities of acquiring an input device based on using magnetic cassettes or so-called floppy-discs should be considered. Before acquiring the equipment it should be confirmed that servicing for the equipment is available in Egypt and that the cassettes or the discs can be converted into a 1/2 inch magnetic tape.

III. TRAINING OF THE LIBRARY STAFF

11. The training offered consisted of discussions with librarians and the systems analyst of NIDOC and of a one week training course.

12. A special meeting was held at the Central Library of Cairo University. During it the problems of the format for periodicals were discussed. Special attention was given to the structure of the format, how to define main entry, added entries and references and the use of control numbers. The consultant left the cataloguers a copy of the following publication:


13. The course began with a lecture on the use of computers in library work with special reference to MARC. The aim of the lecture was to give a general picture of international co-operation in automation of cataloguing routines and to describe the benefits resulting from automation. The lecture was intended for everyone interested in library automation and on the other hand for cataloguers participating in the training course. About 40 persons from different libraries in Cairo attended the lecture.
14. The purpose of the course held for the cataloguers from NIDOC and from the Central Library of Cairo University was to advise at the practical level on how bibliographic information could be structured for computer processing. About 15 persons attended this course.

15. The course was based on the UK Marc Manual (First standard edition). The most important bibliographic areas were explained and examples were given. Then every participant filled in his own input forms using sample catalogue cards from the Science Library.

16. The Finnish input form Finmarc was used as an input form during the course. The participants also received copies of the following forms:

- BLCMP monographs general data input form;
- BLCMP monographs local data input form;
- BNB input form;
- East Sussex libraries local catalogue input form;
- LIBRIS - katalogiseringsuppgift (input form).

17. The consultant left copies of the following publications at NIDOC:

- Ravilious, C.P. A survey of the existing systems and current proposals for the cataloguing and description of non-book materials collected by libraries, with preliminary suggestions for their international co-ordination.
- Swindley, L.R. Cataloguing in publication: an international survey.
- Mrs. Beyali gave copies of the following publications to the consultant:

IV. RECOMMENDATIONS

18. A. The National Information and Documentation Centre should undertake a project for mechanization of the NIDOC catalogues.

B. The aims of the first stage of this project should be as follows:

- to convert the catalogue data of the Science Library of NIDOC into machine-readable form and establish a bibliographic data-base for NIDOC;
- to produce different kinds of catalogues from this data-base;
- to offer bibliographic data on machine-readable form to the National Library for Union Catalogues.

C. A special working group should be formed for the project.
D. The working group should co-operate closely with the National Centre for Bibliographical Services of the National Library.

E. The cataloguing system should be compatible with MARC-format and with the International Standard Bibliographic Description for Monographic Publications (ISBD-M).

F. Selected books and journals, in the field of library automation, should be made available to the working group.

19. In the following section, these recommendations will be described in more detail and some practical advice will be given. It should be added that before leaving Egypt the consultant had an opportunity to discuss these recommendations with the directors of NIDOC.

The project for mechanization of the NIDOC catalogues (Recommendation A)

20. Making a decision to use the computer for the basic routines of a library involves being aware that it is not a matter of work for a one or two-year period but the starting of a new type of activity. The efficiency of this activity is based on the fact that it will continue without interruption in the future.

21. Mechanization of cataloguing and establishment of a bibliographic data-base will serve as a good basis for the automation of acquisitions, circulation control, information retrieval, etc.

The aims of the project (Recommendation B)

22. NIDOC now has two libraries - the main library called the Central Library and a new one called the Science Library. The collections of the latter consist of about 10,000 monographs published in 1974 and thereafter and about 100 periodicals. It was Mrs. Beyali's suggestion that automation activities should start with the collections of the Science Library since a collection of this size could retrospectively be converted to machine-readable form and because of the importance of these collections consisting only of new material. The consultant agrees fully with the proposal of Mrs. Beyali.

23. It has to be possible to produce all the catalogues needed, both alphabetical and classified, from the data-base which will be created. The physical form of the catalogues can be that of a book, microfiches or catalogue cards. However it should be considered whether the producing of catalogue cards could not be given up entirely since the production of the cards is quite troublesome and expensive.

24. It was found in the discussions with Mr. Sabry from the National Centre of Bibliographical Services that there is a plan to produce a Union Catalogue of the research libraries in Egypt. NIDOC could participate in this Union Catalogue by offering its own material directly on magnetic tape. Co-operation from the beginning in this enterprise is assumed.

Working group (Recommendation C)

25. The formation of a working group for the project is suggested to take on responsibility for carrying out the aims of the project. The group should be limited to 4 or 5 persons. The composition of the group could be as follows:
the leader of the group, who would at the same time take responsibility for the progress of the project, 2-3 cataloguers and a systems analyst. At a later stage some special problems could make it desirable to form other working groups.

26. The first task for the working group should be to get acquainted with the subject with the help of literature, meetings and through correspondence. At the same time the prerequisites required to carry out the project should be cleared up. Matters which will need further light would be for example: the supply of cataloguing staff, financial resources, problems concerning programming and equipment.

27. When the working group has organized the prerequisites needed it should:

- define the format to be used;
- define the level of cataloguing which will be used;
- acquire the programmes needed;
- create the input form.

Co-operation with the National Centre for Bibliographical Services
(Recommendation D)

28. The National Centre for Bibliographical Services of the National Library has up to the present converted to machine-readable form its collection of the Arabic books from the years 1870-1969. The material of this so-called "100 years catalogue" has been punched and the check-reading and testing of the output forms is in process.

29. Now the planning of a computer-based catalogue of books in the Latin alphabet from the years 1870-1969 and the library's legal deposit bulletin has started. In addition the National Centre for Bibliographical Services has also planned publishing the Union Catalogue of research libraries in Egypt. All these plans have in common that they would use the same MARC-compatible format. The exact definition of this format, however, has not yet been made.

30. In processing the material of the "100 years catalogue" of Arabic books the ICL computer has been used. This is going to change because the National Library is installing a Nova/9D 96K computer acquired by the General Egyptian Book Organization. The intention is that this computer should be used in carrying out the above-mentioned new plans. The card punches in the input side should be replaced by terminals with help of which the information should be stored directly on the discs of the computer. For output the National Library can use a line-printer or computer typesetting unit (Monephoto 400/8 Filmsetter).

31. The programmes now used in the ICL computer are made in the National Library. There is no intention to use these programmes in the Nova. Mr. Sabry is investigating whether the Library Software Package from the British Library could be used in the Nova.

32. The National Centre for Bibliographical Services has much experience in the automation of cataloguing work. It would therefore be natural that NIDOC should work in close co-operation with it.

33. On 11 January 1977 at a meeting arranged in the National Library possibilities for co-operation were discussed. Mr. Beyali from NIDOC, Mr. Sabry from the National Library and the consultant attended this meeting. It was found during the discussions that both parties were willing to co-operate. This co-operation could include at least the following areas:
format;  
input and output;  
computer programmes;  
training of library staff.

34. Even if both the National Library and NIDOC should use MARC-format as a basis for their own format the full compatibility between these formats is not guaranteed. MARC-format is a frame which can be used in different ways. Therefore the aim should be to define one format for all research libraries in Egypt. Special attention should be given to ensure that different fields, subfields and indicators should be understood and used in the same way in both libraries.

35. If NIDOC and the National Library could agree to use the same format the input form could be designed together. On the output side it is possible to a certain extent to use the same programmes because both NIDOC and the National Library have the Monephoto 400/8 Filmsetter. The common use of other programmes depends on the later choice of programmes in both libraries.

36. Provided that the libraries co-operate in defining the format, common training efforts could be carried out. This would ensure that the cataloguers are interpreting the format in the same way.

37. In the conclusion of the meeting it was noted that it would be most efficient to begin co-operation by establishing personal contacts between the ADP-persons and those responsible for cataloguing in both libraries.

Compatibility with MARC and ISBD (Recommendation E)

38. The compatibility of the NIDOC system with the MARC format and the International Standard Bibliographic Description is highly recommended for two reasons. In the first place NIDOC would be able to use without difficulty bibliographic material available from bibliographic agencies in different countries. So NIDOC could use the same programmes for both its own bibliographic material and that from abroad. In addition NIDOC can provide its material to the National Library for Union Catalogues directly on magnetic tapes.

Providing the working group with publications in the field of library automation (Recommendation F)

39. A good way to get information on international development in library automation is to read articles on this matter. The following three journals are among those which would be found useful:


Also useful for the working group would be such a bibliography on this matter as:


This bibliography would serve as a good basis for choosing other literature for the working group.
APPENDIX A

List of persons with whom the consultant had discussions

1. Dr. Ahmed GAD, Director, NIDOC
2. Mrs. Nawal BEYALI, Deputy Director, NIDOC
3. Dr. Mbe FAYEZ, Secretary-General, Academy of Scientific Research and Technology
4. Dr. Ahmed BADR, Director, the Central Library of Cairo University
5. Dr. Ahmed Aziz KAMAL, Director, Cairo University Scientific Computation Research Centre
6. Mr. Abdel Rehim SABRY, Director, National Centre for Bibliographical Services, National Library