

# RETROSPECTIVE CONVERSION AT SAC LIBRARY - A CASE STUDY.

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## ABSTRACT

*Machine readable conversion is the process of putting records into a form which can be stored and accessed by a computer. The major commitment in most library automation Projects is conversion of files i.e. library's inventory holdings and the serials holdings which present the greatest challenge in conversion, sometimes it becomes an obstacle to automation. The present paper discusses various retrospective services offered by OCLC. It also highlights several available and adopted techniques for retrospective conversion. Major recommendations by NISSAT/DSIR/INSDOC for retrospective conversion are presented in the paper. SACLIS database is a computer aided catalogue system for books, scientific and technical reports, articles, etc. Detailed discussion is made on the SACLIS database design for storage and retrieval facility and method adopted for retrospective conversion at SAC Library. Manpower training programmes at SAC Library are also elucidated.*

## INTRODUCTION :

ALA, Glossary of Library and Information Science defines 'retrospective conversion' as the "process of converting to a machine-readable form the records in a manual or non-machine-readable file that are not converted through day-to-day processing." This conversion should be according to some standards and policies. It involves a considerable amount of work like keyboarding all the existing entries of records, error checking, etc. SAC library aims to establish information infrastructure to keep the increasing needs of the Scientists, Engineers, Managers and other users. Emphasis was given for the strong collection development, and input of bibliographical information regarding books, reports, journal articles, maps, standards and other non-book material. To provide regular notifications of current literature and SDI Service. To develop information service including online information service. To prepare specialized bibliographies, printed catalogues by author, subject, etc.

SAC library project of automation was arised from a real need to bring about fast improvements in library operations and information services. Several factors

like increased work load, Need for greater efficiency, Development of new services and improvement over the conventional services, Co-operation and centralization, etc prompted automation of information services at SAC Library.

## NEED FOR RETROSPECTIVE CONVERSION :

The objectives of converting existing catalogue records to machine readable are to:

- create complete database which can be accessed in interactive mode as per user requirements
- improve information services to users
- improve internal library procedures
- generate subject products
- create an integrated file and thereby to eliminate the cost of maintaining parallel systems.
- provide flexibility in changing systems
- maximize return on automation expenditures
- ensure security to library files
- contribute to union lists
- share bibliographic data, resources of city networks and other national databases.

## RETROSPECTIVE CONVERSION :

Retrospective conversion is the process of converting manually produced catalogue records (usually on cards and sometimes on book form, occasionally on microfilm or microfiche) of libraries and information centres to a machine readable form according to specified policies and standards. It is an important step to undertake the job of retrospective conversion of the existing bibliographical records of R & D libraries. In order to participate in a network, it is essential to have a machine readable catalogue for the entire collection. Generally for retrospective conversion following points are recommended by NISSAT/DSIR/INSDOC (1981).

## RECOMMENDATIONS BY NISSAT/DSIR/INSDOC

- \* Conversion of bibliographic records entails conversion of both current and retrospective bibliographic data.
- \* Entire catalogues need not be converted. For the purposes of conversion, prioritization by **Subject area, Type of materials** (books, report literature, standards, conference proceedings, etc) **Active collection** (in circulation, current acquisitions, patents and standards when these get into the circulation, frequently used materials in-house, reference works, etc.) could be adopted and individual libraries have the choice to set up their own priority areas.
- \* Recataloguing would be essential. There are not short cuts to conversion. The data would be as per AACR II, Level seconded Descriptors are essential in conversion.
- \* Immediately consolidate MARC data generated within the country.
- \* If required, for data capture and data entry, libraries may use commercial agencies/vendors. NISSAT was urged to arrive at rate contracts for data capture/data entry including a panel of such contractors.
- \* NISSAT shall help to procure MARC data on tape or CD-ROM format from overseas. However, this service for down loading MARC data will be provided to the participant institutions at a cost.

## RETROSPECTIVE CONVERSION METHODS :

The options available to libraries for retrospective conversion are many and varied. Each has advantages and disadvantages and the library must consider its options carefully.

Following are the methods for retrospective conversion.

1. In-house retrospective conversion
2. Capturing data by machines
3. Commercial vendors
4. Retrospective conversion by OCLC

## 1. IN-HOUSE RETROSPECTIVE CONVERSION

By employing additional staff or student trainees or getting the existing staff engaged for extra time after office hours on remuneration basis. In this process apart from operational expenses, equipments, etc it involves management also. As staff resources usually remain limited what after results is that the overall conversion project time stretches over a long period.

## 2. CAPTURING DATA BY MACHINES

There are two methods (i) **Optical character recognition** where image is obtained by scanning the data using an optical scanner. (ii) **Voice data input** : Single speaker speech recognition systems without continuous speech and a moderately sized vocabulary are available commercially. For data preparation work, the data will be read out.

## 3. COMMERCIAL VENDORS

With the emergence of computers in Indian market during the last 8 or 9 years, commercial data processing services have been developing rapidly. Presently enough data processing vendors are available in the country. They are very much interested in accepting the retrospective conversion jobs.

## 4. RETROSPECTIVE CONVERSION WITH OCLC

OCLC RETROCON service is a customized retrospective conversion service in operation since 1976 with a proven record of satisfaction to libraries. OCLC offers five retrospective conversion services, any of which can be used to convert as few or as many titles as a project requires. One of those options are **RETROCON, MICROCON, MICROCON\*PRO, TAPECON, Online retrospective conversion service**. Online Retrospective Conversion performs one's own retrospective conversion using OCLC

Cataloguing subsystem and Online Union Catalog at less than full-use charges.

## GENESIS AT SAC LIBRARY

A proposal for designing and developing computer based information system was prepared in the beginning of 1982 and that was enthusiastically supported by the authorities. Later the proposal was discussed and endorsed by the Library Committee, SAC. It was suggested to create a database in the library by scanning and indexing of new literature and to develop the requirements like input procedure, user profiles, ascertaining feasibility, accessibility to the computer and availability of equipments, personnel and software.

To design and develop a totally integrated system that includes all major library functions is a major task which involves a suitable system development, programming, personnel and money which may not be possible in the beginning. Therefore, on priority basis, it was decided to undertake the most important function of current information storage and retrieval, but that should be within an overall design. Once the process of the development of current awareness service is established, scanning and input of relevant literature from the old collection can also be started.

The function identified immediately for computerization was Information Storage and Retrieval. For this purpose machine readable file has been created for books, journals articles, technical reports, etc. This file has been used as DATABASE for providing Current Awareness Services, production of catalogue, indexing, effective SDI (Selective Dissemination of Information) and retrospective search services, etc.

## METHOD ADOPTED AT SAC LIBRARY

Database for books, reports, etc. was made ready in machine readable form from mid 1987 only on a regular basis using DBASE III. Bibliographical standardization format was prepared using AACR II. **Annexure A** represents the worksheet for the data preparation. Retrospective conversion was necessary for previous to mid 1987 collection. SAC library decided **prioritization by type of materials**. Retrospective conversion for **books** was managed from vendor. **Reports** conversion was partly from vendor and partly through library staff. The **bound volumes** database was built up inhouse by library staff, etc. SAC library database consists of Books (composite books, serial books, conference proceedings,), Reports, Standards, Maps/Charts, Microdocuments, Reprints, Trade literature,

Miscellaneous (Hindi language books, Rule books, etc.) Retrospective conversion of each was managed one by one.

SAC library adopted commercial vendor method. Quotations from various vendors on a large scale were invited.

Requirement of the average character length of a record was mentioned against the following categories of records.

- |                           |                   |
|---------------------------|-------------------|
| 1. Books                  | -400 characters.  |
| 2. Technical Reports      | -250 characters.  |
| 3. Articles from journals | -250 characters.  |
| 4. Abstracts              | -1250 characters. |

Provisions have been made for control system provide support for certain catalogue operations, such as subject terminology control, shelf-list inventory control and other listings and also search mechanisms for accessing the catalogue data by various search elements like author, subject, title, call No., keywords or combination of keywords. To achieve above objectives and to have efficient operation it is necessary to adopt bibliographical standardization. AACR II for cataloguing rules, UDC for classification, NASA Thesaurus for providing subject descriptors and ISO standards for entry format, etc. have been followed.

In the same manner various other files, structures are developed for Periodical Holdings, Periodicals Articles Database, Acquisition module, Newspaper clippings, Microforms, etc. Requirement of each fields, their length and total number of characters per records were decided and proper structure for each record were developed using dbase III.

The 25 sample retrospective records of above categories for preparing sample entries were provided on request. Vendors furnished data entry of 25 sample records in each format on floppy. A **comparative statement** was prepared from the widely circulated quotations and the sample entries received. Keeping the criteria of accuracy, efficiency, price, etc. the work was managed for Retrospective Conversion of books by appointing vendor.

Shelflist cards of books were xeroxed for our record and cards were directly given to the vendor for data entry. Vendor use to bring data on floppy and download the data at SAC library. After taking print of the records, library staff use to edit each record with the shelflist cards. Vendor completed his task after the final editing of complete database in machine

form.

SAC library report collection was used by its report numbers. Hence, these reports were not accessioned. In order to have computerized database we initiated its accessioning and then alongwith its one catalogue card they were given to vendor for data entry. Retrospective conversion of reports was discontinued due to several reasons like utility of reports were to be decided, staff constraints, etc. Finally retrospective conversion of reports was managed partly by library staff and is still continued.

In SAC library when software entitled 'LIBSYS' an integrated Library Management Software, was purchased by 1991, the data conversion of existing database (for books and articles) from dbase to LIBSYS was carried out by LIBSYS, M/s. INFOTEC Consultants Pvt. Ltd., New Delhi. after the LIBSYS procurement, professional staff working with the periodicals section managed the Accessioning of complete bound volumes records.

#### **PROBLEMS SOLVED DURING THE RETROSPECTIVE CONVERSION :**

Through commercial vendors :

1. Shelflist cards were given to vendor for Retrospective Conversion of books. Hence, utmost care was necessary.
2. Initially it was difficult for vendor to understand the format and to decide data from shelflist cards to each field.
3. Many typographical mistakes as well as data of different fields were entered at irrelevant fields.
4. Method was slow and time consuming.
5. Editing was to be managed with the library staff which was again time consuming task.
6. Previously ISBN numbers were not used while preparing shelflist cards which was not even

corrected at the time of data entry in dbase. Now it is thought that while stock verification we may simultaneously add ISBN against each relevant book. After the LIBSYS procurement the ISBN number is entered for newly processed books.

7. Problems of data from each books entry in different fields was rectified more with the conference proceedings, corporate entry and with the multivolume type of books.

8. Database for books & articles in dbase was

managed in uppercase, while today after the procurement of LIBSYS a normal format of entry is managed in lower case. Hence, while generating particular search or specialized bibliography we get two different format of entries for several records. Some in upper case and some in lower case, which requires a special programme for uniform printout.

#### **CONCLUSION :**

Retrospective conversion of databases is a major issue in automation. In most cases, due to shortage of staff, library professionals find it difficult to cope with their normal day to day work and therefore can think of database creation only with special efforts in a team spirit. Availability of ready made databases for downloading could alleviate much of their problems. However, with the availability of microcomputers, growing enthusiasm of library staff and also with the promise of communication technology the future of retrospective conversion program seems to be bright.

#### **ACKNOWLEDGEMENT :**

We are thankful to Dr. George Joseph, Director, SAC for his encouragement, guidance and support for implementing Automation in SAC library. We are also thankful to Dr. S. B. Sharma, Chairman, Library Committee, SAC for his support, guidance and kind cooperation.

# ANNEXURE A

## WORKSHEET FOR DATA PREPARATION

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Sr.No.	Bibliographical elements
1.	ISBN/ISSN/L.C. No.
2.	Report No./Patent No./Standard No.
3.	Class Number
4.	Author/Book Nos.
5.	Title
6.	Uniform Title
7.	Author/Jt. Author/Editor
8.	Corporate Author
9.	Edition
10.	Imprint
11.	Language
12.	Collation
13.	Series
14.	Thesis Note
15.	Other Notes
16.	Subject descriptors/Key words
17.	See References
18.	Accession No.
19.	Part statement
20.	Physical description
21.	Abstract
22.	Location Code. (Useful at the time of Union catalogue preparation, etc.)

## ANNEXURE B

### LIST OF VENDORS FOR RETROSPECTIVE CONVERSION

1. Library of Congress Processing Services,  
Cataloguing Distribution Service,  
Washington DC 20541 (202) 287—1308
2. OCLC, 6565 Frantz Road,  
Dublin, OH 430170702 (800) 848-5878 (USA)
3. RLIN, Research Libraries Group,  
Jordan Quadrangle, Stanford, CA 94305(415) 328-0920
4. UTLAS International U.S., Inc.  
8300 College Blvd.,  
Overland Park, KS 66210 (800) 338-8527
5. Western Library Network (WLN)  
Washington State Library, AJ-IIW  
Olympia, WA 98504-0111 (206) 459-6518
6. Auto Graphics, Inc.  
3201 Temple Ave., Pomona, CA 91768 (800) 828-9585 Calif.
7. Blackwell North America,  
6024 S.W. Jean Road, Building G,  
Lake Oswego, OR 97035 (800) 547-6426
8. Broadart automation,  
500 Arch Street, Williamsport, PA 17705-9977  
(800) 233-8467 (Eastern USA), (800) 643-0523 (Western USA),  
(800) 821-1117 (California)
9. Information Transform Inc.,  
502 Leonard St., Madison WI 53711 (608) 255-4800
10. Library Technologies, Inc.,  
1142E Bradfield Road, Abington, PA 19001 (215) 576-6983
11. Retro-Link Associates Ltd.,  
175 North Freedom Boulevard, Suite 202,  
Provo, UT 84601 (801) 375-6508
12. SAZTEC International,  
975 Oak St., Suite 615, Eugene, OR 97401 (503) 343-8640

13. SOLINET, Southern Library Network, Inc.  
Plaza Level, 400 Colony Square, 1201 Peachtree St., N.E.,  
Atlanta, GA 30361 (404) 892-0943
  
14. The International Thomas Organisation  
Recently acquired UTLAS and also Carrollton Press, Inc.  
the owner of the REMARC Database,

ABSTRACT

1. INTRODUCTION

The paper emphasizes the importance of retrospective conversion of bibliographic data to CD-ROM databases. It discusses the development of the International Thomas Organisation's System for Collecting and Archiving Bibliographic Information (SACABI) and the role of SACABI in the conversion process. The paper also discusses the importance of data integrity and the need for a systematic approach to data conversion.

The first step in the conversion process is the identification of the data to be converted. This involves a thorough review of the existing data and the identification of any data that is missing or incomplete. The next step is the design of the CD-ROM database structure, which involves the selection of appropriate fields and the establishment of a consistent naming convention.

The third step is the actual conversion of the data to CD-ROM format. This involves the use of a conversion program that reads the existing data and writes it to the CD-ROM database. The final step is the verification of the converted data, which involves a comparison of the converted data with the original data to ensure that all data has been accurately transferred.

The conversion process is a complex one, but it is essential for the preservation of bibliographic data. By converting data to CD-ROM format, we can ensure that the data is preserved for future generations and that it is accessible to a wide range of users.

The International Thomas Organisation is committed to the preservation and dissemination of bibliographic data. We are currently working on a number of projects to improve our data collection and conversion processes, and we are looking for partners who share our commitment to this important work.

- (a) Variable length of fields in a record.
- (b) Variable length of character strings.
- (c) Variable length of records, and
- (d) Use of the codes (like that of OCLC).

LIBRARY (sic) instead of field names. The conversion program will handle the following pointers: