
Cataloguing of Articles in Periodicals : Database Approach Model in A Biomedical Library

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Abstract

A separate catalogue/database of articles in periodicals are made available to Users for more comprehensive search and retrieval, to solve the difficulties faced by the users during search in the Internet and downloading the selected records. A methodology developed towards cataloguing of articles available in periodicals and to cover the entire journals collection of both current journals and back volumes for any year in the Library. The downloaded materials from PUBMED collection are sent to WINISIS package, after different stages such as separate programme, FANGORN etc.

Keywords : Database, Article Database

0. Introduction

Integrating bibliographic records of certain types resources in to the Library catalogues are not new. Serials emerged as important sources of information especially in Science and Technology. In the case of Life Science journals, many journals now publish only online. Tools such as indexing and abstracting periodicals as services to enhance the bibliographic information are essential to meet the challenges. It is doubtful whether all indexing and abstracting periodicals are available in the Library. Libraries may or may not make any attempt to create and integrate records for papers in periodicals into their main catalogue/OPAC. Similarly, while searching the Internet through any search engines, Users get many hits as retrieval. After the Internet search, still users come to Library with a lengthy list of references and asking for books / articles related and searching the entire Library. To avoid time delay, a work on separate Library catalogue/database of articles published in periodicals is being undertaken in the Department Library, School of Biotechnology, Madurai Kamaraj University. The present database/cataloguing work covers the entire journals, both current and back volumes collection of the Library.

1. School of Biotechnology Library

Department Library in School of Biotechnology receives about 80 current journals and around 130 titles of back volumes in the field of Biotechnology, Bioinformatics, Plant Molecular Biology, and Genetic Engineering etc. This department library is the only library has many good journals and caters the Users need in the Southern parts of Tamilnadu as well as visitors from other states also. The present database work covers entire journals collection both current journals and back volumes and also annual reviews series. As all the data are available in the WINISIS, the same data can be accessed using WWWISIS or can be downloaded in the CDS/ISIS of LINUX platform for WEB access/OPAC.

2. MEDLINE, PUBMED, PUBMED Central

- a. MEDLINE : National Library of Medicine, USA was started in 1836 as a library attached to Army Surgeon Generals in Bethesda. In 1956, NLM came under the Act of Congress of USA and was declared as apex library in the field of medical sciences. In 1964, MEDLARS was introduced providing

services to all medical professionals in the world. MEDLARS used sophisticated computer for indexing and computer and manual literature searching, keywords development, SDI search, systems analysis etc. MEDLARS – ONLINE was introduced in 1972 on BPL 370 computer, which is a permanent database, which is latter called MEDLINE. The products in MEDLINE include MEDLINE in CD as well as MEDLINE in online.

- b. PUBMED : PUBMED, a electronic archive of biomedical journals and other life science journals, established in 1988 as a national resources for molecular biology information, NCBI creates public databases, conducts research in computational biology, develops software tools for analyzing genome data and disseminate biomedical information – all for the better understanding of human health.
- c. PUBMED CENTRAL: Pubmed Central implemented in 2000, was built on the twin standards of a permanent archive and free access. National Library of Medicine (NLM) has been collecting and preserving the medical literature for more than a century. Extending this stewardship to the electronic literature is a natural and responsible role for the NLM to play. Both permanent archive and free access is now being stretched to allow users to directed to a publisher's site for full text. Now, Pubmed Central is an electronic archive of full-text articles from life science journals and has 1 lakh full text articles from 130 journals are available for free access. Pubmed Central is a separate entity from PUBMED, the version of Medline also provided by the NLM, but all the articles in Pubmed Central have a corresponding entry in PUBMED.

Life Science Publishing, like any other consumer industry, has had to respond to the technological change brought about by the INTERNET. A large and growing proportion of science journals now publish online versions of their articles and several journals now even take online submissions and peer review.

In PUBMED CENTRAL, content is submitted by participating journals which handle article submission from scientists, peer review and editing in normal way. The journal articles are supplied to PMC either at the time of publication of the issue or after a delay of anything from one month to a year or more after publication. PMC archives the articles and makes them available for readers. The articles aubmitted by the publisher to PMC can be searched in PMC itself or manipulated in other ways, such as to create links to Gen Bank resources, but the publisher can now stipulate that full text may only be seen at its own site. The publisher submit their full text articles in SGML or XML files confirming to a publisher's document type definition (DTD) for journal articles. Along with XML files in PMC, PDF files and supplementary data files may also be included.

Full details of website of PUBMED and its coverage given below.

1. Website address : www.ncbi.nlm.nih.gov
2. PUBMED has collection of 14 million citations from biomedical articles backfrom 1950's
3. Upto December 2003, 4192 journals are covered with links to other sites and back years
4. around 1 lakh full text articles from 130 journals available free in PMC
5. After search in PUBMED, it is possible to have links to many other sites including full text articles and other related sources.
6. PUBMED has 26 different formats for any output record
7. Similarly, PUBMED CENTRAL has 15 different formats for any outputrecord, but all the formats are listed in the PUBMED also.

3. Work in PUBMED : After opening the PUBMED site, (figure – 1)

- go to PUBMED database search engine
- apply ISSN number, volume number and YYYY/MM/DD as keywords related to particular journal
- the above said keywords will only fetch the articles related to particular journal and issue wise retrieval with full contents
- after search and display of records in summary format, there are other formats given separately.
- Click MEDLINE format only and then display entire record as per MEDLINE format
- Save the entire records in floppy disk or hard disk as text mode. (ie) .txt

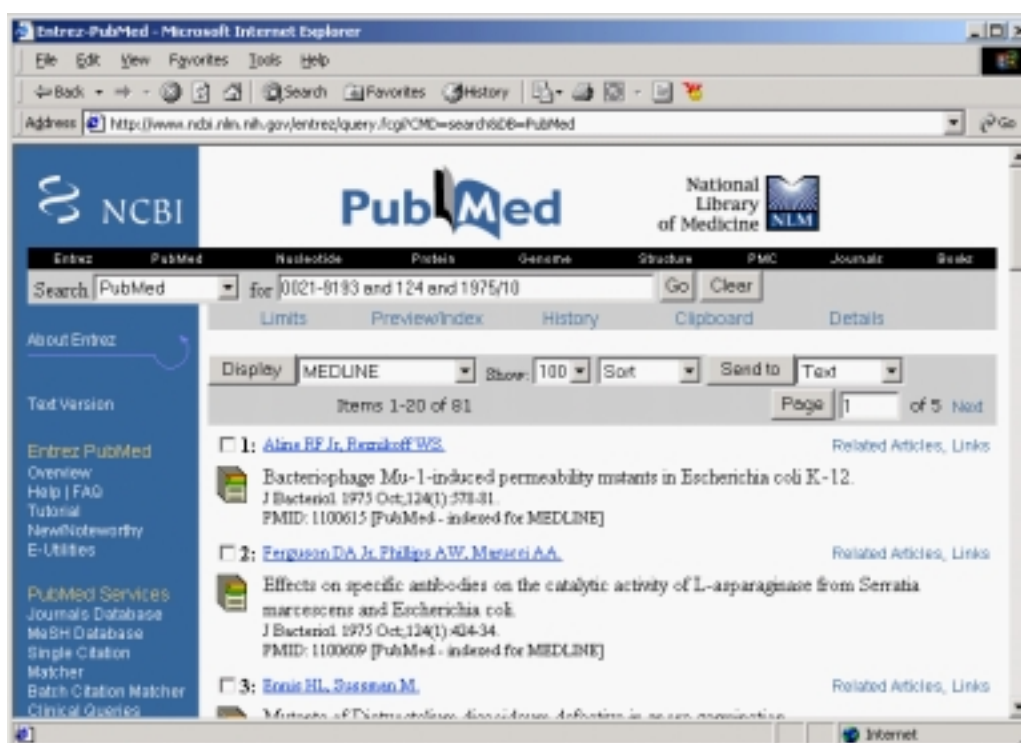


Figure 1

3.1 Separate programme developed in Visual Basic

Visual basic is an ideal programming language for developing sophisticated professional applications for Microsoft Windows. It makes use of Graphical User Interface for creating robust and powerful applications. VB 6.0 for windows, is a powerful enterprise edition, requires more than 250 MB of hard disk space.

The present programme written in VB 6.0 under the file/directory name TXTCHK along with EXE and programme file. Once open the TXTCHK programme, it gives the following options. (figure – 2)

- a. a frame having file names
- b. click the required file and immediately the complete text of that file will appear in the next window.
- c. Click icons for getting the output record with % or without %
- d. Click the with % icons, then next window will appear asking for output file and subdirectory details
- e. After complete work, the output file will directly go to the directory as mentioned above
- f. The output file has only eight fields.

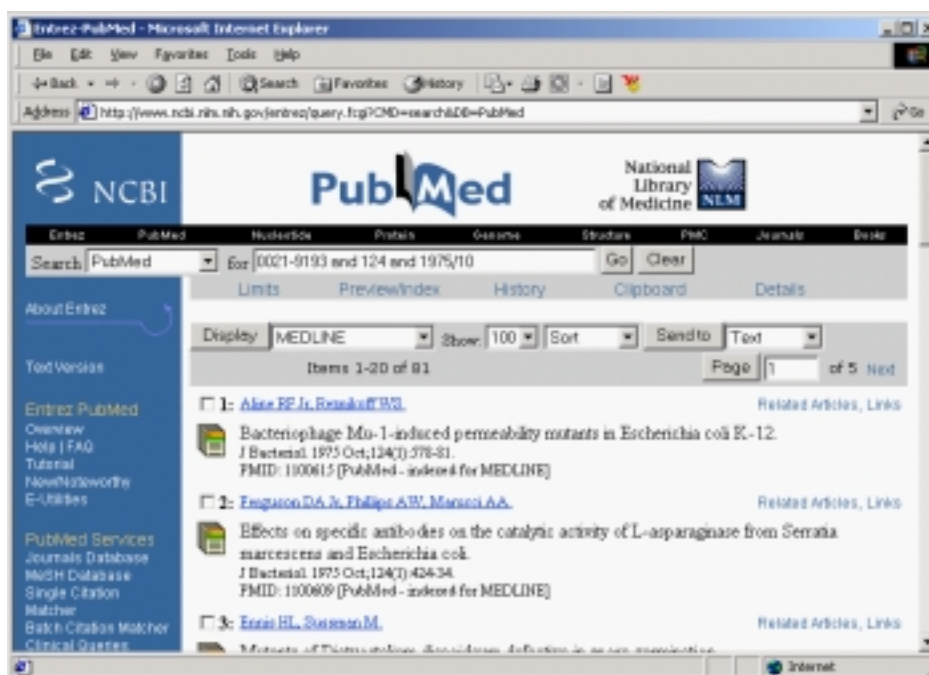


Figure 2

3.2 FANGORN

FANGORN was written in BASIC by Hugo Besemer (the Netherlands) and Paul Nieuwenhuysen (Belgium) and was sponsored by UNESCO, which accepted it as the official conversion tool for CDS/ISIS. The first aim of the developers was to convert tagged ASCII text files and FANGORN was introduced in 1992. The FANGORN program can be downloaded from WWW.

For conversion of data taken from PUBMED and later through the VB programming, the output records has to be converted to ISO file. For that FANGORN is being used. FANGORN needs a specification file. This is an electronic form to be filled in. It can be generated by the programme in English or French, but it must be filled in with an editor. In it, User must specify how a record, and each of its fields can be recognized and how occurrences of repeatable fields and how sub fields can be distinguished and which strings must be replaced. The specification file name MEDC.FAN is given separately.

3.3 WINISIS

The unique characteristic of CDS/ISIS for windows is that it is specifically designed to handle fields of varying length, thus allowing, on the one hand, an optimal utilisation of hard disk storage, a complete freedom in defining the maximum length of each field.

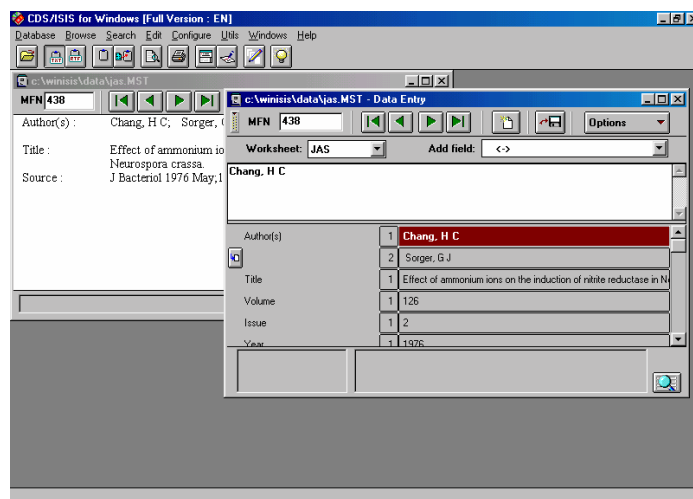
It is a menu-driven generalized information storage and retrieval system designed specially for the computerized management of structured non-numerical databases. One of the major advantages offered by WINISIS is able to manipulate an unlimited number of databases each of which may consist of completely different data elements. Major advantage in this package is that once an application has been designed the system may be used by persons having had little or no prior computer experience. Besides, WINISIS offers an integrated programming facility allowing the development of specialized applications and functional extension of the software. The windows version of CDS/ISIS is fully compatible with DOS version of CDS/ISIS. Hence databases created in DOS version will operate without change under the windows version.

Fields available in this database are

- 10 - volume
- 20 - issues
- 30 - year
- 40 - title
- 50 - pages
- 60 - author
- 70 - journal name
- 80 - source

Total fields listed above is only for articles without address and keywords

WORK in WINISIS:



1. open the database namely JAS.MST
2. click the FILE and get the frame
3. go to IMPORT/EXPORT option
4. put all the ISO files in the WINISIS- WORK area
5. in the I/E screen, click the xxxxx.iso file for downloading and give the current MFN number and update command –U
6. all the records in the file will go to WINISIS and it is automatically being updated
7. now, entire records are ready for search and retrieval.
8. Search all fields available in FDT except source.

4. References

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