

A Comparative Study of CDS/ISIS And Soul Library Software

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Abstract :

This paper discusses the library management software's over the past decades, traces out the characteristics, feature, merits and demerits of software's with special reference to packages available CDS/ISIS & SOUL software a comparative study use library myself opinion. The paper describes in short how to useful library management software. Simplify the steps of software selection with the comparison in between some leading software's. Helps in training and assistance for library professional. Provides the options for choosing the configuration of computer hardware based on the size of the library.

Keywords: Library Automation, Library Computerization, Library Software's.

Introduction:

In recent years, a large number of software packages for information storage and retrieval as well as for library automation have become available in India. Today information managers have to take appropriate decisions regarding the choice of software package. Two of the most widely used software packages in India are the Micro CDS/ISIS and LIBSYS. While the former is essentially a package for information storage and retrieval, the latter is a complete library automation package containing facility for information storage and retrieval. The commercial library software packages are very costly and are beyond the reach of many libraries. The only solution for small libraries is that they should prefer the low cost of free Software Package for automation of their libraries. SOUL-Software for University Libraries, which is developed by INFLIBNET Ahmadabad, can be used to automate the library house keeping operations both at university and the college levels.

Library Automation Software:

Today there is numbers of commercially developed both national and international, library software packages available. Even if a library can afford a commercial library software package, it becomes difficult for a library to sustain the commercial package as the recurring cost involved by way of maintenance and newer versions of the same package will make the commercial packages beyond the means of many small libraries. An alternative to commercial package is freeware and open source software freeware refers to software or software packages that the software copyright owner gives away for free. It can be used by anybody for non-commercial purpose. CDS/ISIS, developed by UNESCO, is one such freeware, specially designed for handling bibliographical information. CDS/ISIS is not a turnkey tool for the automation of libraries. However, it provides a set of tools, which can be used to develop library software packages.

Majority of the existing library software packages have been developed using CDS/ISIS. SANJAY is one such application, developed by NISSAT in collaboration with DESIDOC. CDS/ISIS is available from the national distributors of respective countries.

Methodology :

Any research that should be methodolog the comparative study between these two software will be done through this research? The subject "A Comparative Study of CDS/ISIS and SOUL Software" have to comparative study. In the present methodology demo of the computer software can

be downloaded from internet and can be studied with descriptive method after meditative observation. The handbook and manuals of both the software could be used for the both the software could be used for the research along with the help of primary devices, tools. Most of the time, the software could be studied through the work and experience.

The present study will check whether the present software will be able to provide the service with all facilities. Besides, the present study will evaluate the software as their relation with library. The study of working method of the software, data entry and provocation of various services is limited. There are various types of libraries the present study will comparatively so try to focus on in which library the present two software CDS/ISIS & SOUL are convenient and appropriate.

Objective of the Study:

- 1) To know the facilities available in CDS/ISIS package
- 2) To find out how for CDS/ISIS is useful for small libraries
- 3) To observe or compare the facilities of CDS/ISIS and SOUL for implementing in small and medium libraries.
- 4) To find out what type of software are used.
- 5) To find out what type of operating systems used.
- 6) To find out the modules used in the software.
- 7) To find out the option included in Acquisition, Circulation, Serial Control OPAC Modules.
- 8) To find out how the software are maintained.
- 9) To find out how the backup of the database done.
- 10) To find out the type of Network connection used.
- 11) To find out method of data entry.

Scope of the Study:

Though there are different types of software are available, only CDS/ISIS and SOUL these two software will be comparatively studied with the consideration of their aspects, facilities, services and their use in library management and managing the records in the library.

Limitations of the Study:

In the present study, only two software will be studied that's why the study area is limited to these software functions their utility and use to everywhere.

Data Collection of the Study:

The data collection will be done as the following way.

- a) By visiting and observing such libraries where CDS/ISIS & SOUL software are used.
- b) By interacting with these software users and technologies.
- c) By utilizing, using primary tools, devices and from the internet.
- d) By studying handbook/manuals of these software.
- e) By studying research paper and articles which are presented and published in different types of seminars, symposiums and conferences.

Review of Literature:

In the present study, different types of devices can be used. The information data can be collected by directly visiting the libraries, by handling their software and by taking the information from skillful and experienced users of this software. The information can be collected with first hand

experience be collected with first hand experience because the demo of these software are got from the internet. At last, the study of many articles and books can be done the list of these articles and books

Areas of Library Automation:

Acquisition, Cataloguing, Circulation, Serial Control, Budget, Administration, SDI, CAS, OPAC.

Areas of Computer Application:

The software package of CDS/ISIS & SOUL may be grouped as under for Library and information science .

- 1) Library Operations _ Acquisition, cataloguing, Circulation, Serial Control.
- 2) Management Support _ Acquisition, Budget Control, Library Statistics.
- 3) Information Services- Information Search, Production of CAS/SDI, indexes, bibliographies, the sour as constriction and its maintenance.

Computer Hardware:

Selection and purchase of a computer is a complex procedure. The university library should decide first what type of computer it wants for its work. There are variety of computers and makers. There are mini-frame computers to main frame computers.

A university library would require a computer system rather than a single PC-XT. In computer systems there are LAN, WAN etc. A university library would at least require a LAN with facilities for e-mail and internet.

There are different types of firms and organizations to supply computer hardware and parts such as:

1. Computer manufactures
2. Independent terminal and peripheral manufacturers
3. Selling companies
4. Brokers
5. Leasing companies
6. Retail shops

There are many computer manufacturers such as IBM, Macintosh, Apple, UNIX, wipro, HCL, etc. There are many indigenious makers and suppliers in India today. Standardization in the hardware is an important factor. Otherwise it would become obsolete in no time. Fast changes are taking place in this area. Hence the libraries have to be cautious and think ten times before they decide about the computer hardware.

Computer Software:

Software is the general term. Software design determines the level required for the system user. A set of software written for performing one or more than one well defined tasks is called the software package.

The university libraries are having large collection of data, having complex university libraries system. In keeping the view information acquisition, processing, retrieval and communication, the information technology for library information search is the INFLIBNET centre (Ahmedabad) which developed “SOUL” based on Windows, library management software and it provides total solution for library automation. And CDS/ISIS software is developed by the computer division of UNESCO,

is one such freeware, specially designed for handling bibliographical information. CDS/ISIS is not a turnkey tool for the automation of libraries. However, it provides a set of tools, which can be used to develop library software packages. Majority of the existing library software packages have been developed using CDS/ISIS. CDS/ISIS is available from the national distributors of respective countries.

Inflibnet:

Information and Library Network (INFLIBNET) is the major IUC of the University Grant Commission (UGC) started in 1991 with its Headquarters located at Gujarat University Campus, Ahmedabad. The Programme is directed towards modernization of libraries and information centers, and establishment of a mechanism for information transfer and access, to support scholarship, learning and academic pursuits. It is also aimed at established a national network of libraries and information centers in universities, institutions of higher learning and R and D institution in India. It is basically a cooperative endeavor in resource development, sharing and its utilization at national level.

The automation of University Libraries is a major activity of INFLIBNET. It is also a prerequisite for networking of libraries and resource sharing under the INFLIBNET centre though University "Grants Commission has been providing fronts to the university its identified under the programme. The given grants have been used for purchase of machines, retrospective data conversion and other consumable items. INFLIBNET has given tremendous boost to the automation activities at the participating universities. INFLIBNET is co-coordinating with UGC to provide grants to upgrade the existing infrastructure.

To facilitate automation functions of the participating libraries, SOUL Software has been developed. This software works in Client/Server mode in Windows environment using MS-SQL server as backend tool. It also provides web access. SOUL software supports barcode technology to generate labels. It supports international standards such as MARC21, CCF, AACRII, ISO 2709 ETC. This software is attracting many libraries and has crossed more than 500 installations so far, and many installations are in pipeline. The software is very economical as it is developed and distributed by not-to-profit motto and the features of the software suit any type of library. INFLIBNET has also established SOUL service centers at five different places viz. Mumbai, New Delhi, Ahmedabad, Hyderabad, Bangalore

SOUL:

Software for University Libraries (SOUL) is a state-of-art library automation software designed and developed by the INFLIBNET centre based on requirements of college and university libraries. It is user-friendly software developed to work under client-server environment. The software is compliant to international standards, bibliographic formats, networking protocols, and typical functions of all types and sizes of libraries, particularly at university level, have been taken into account. The functions have been grouped into six categories, looking into the functional divisions of Indian University Libraries.

After a comprehensive study, discussions and deliberations with the senior library professionals of the country, the software was designed to automate all housekeeping operations in a library. The software is suitable not only for the academic libraries but also for all types and sizes of libraries, even school libraries. The first version of software i.e. SOUL 1.0 was released during CALIBER 2000. The database of the SOUL 1.0 was designed on MS-SQL and was compatible with SQL server 7.0 or higher. The latest version of the software i.e. SOUL 2.0 has been designed for latest version of MS-

SQL and MySQL (or any other popular RDBMS). SOUL 2.0 is compliant to international standard such as MARC 21 bibliographic format, Unicode-based Universal Character Sets for multilingual bibliographic records and NCIP 2.0/ SIP2 based protocols for electronic surveillance and control.

Features and Functions of SOUL2.0 :

Major features and functionalities of SOUL 2.0 are as follows,

- UNICODE- based multilingual support for Indian and foreign languages.
- Compliant to international Standards such as MARC21, AACR2, MARCXML.
- Compliant to NCIP 2.0 and SIP2 protocol and RFID and other related application especially for electronic surveillance and self check-out & check-in.
- Client-server based architecture, user-friendly interface that does not require extensive training.
- Support multi-platform for bibliographic database such as My SQL, MS-SQL or any other RDBMS.
- Support cataloguing of electronic resources such as e-journals, e-books, virtually any type of material.
- Support requirements of digital library and facilitate link of full-text articles and other digital objects.
- Supports online copy cataloguing from MARC 21 bibliographic database.
- Provides default templates for data entry of different type of documents. User can also customize their own data entry templates for different type of document.
- Provides freedom to users for generating reports of their choice and format along with template and query parameters.
- Supports ground-level practical requirements of the libraries such as stock verification, book bank, vigorous maintenance functions, transaction level enhanced security, etc.
- Provides facility to send reports through e-mail, allows users to save the reports in various formats such as PDF, Excel, MARCXML, etc.
- Highly versatile and use-friendly OPAC with simple and advanced search, OPAC user can export their search results into PDF, Excel, MARCXML, etc.
- Support authority files of personal name and corporate body.
- Support data exchange through ISO-2709 standard.
- Update form software as well as offline update.
- Global Search and replace.
- Provides simple budgeting system and single window operation for all major circulation functions.
- Strong region-wise support for maintenance through regional coordinators. Strong online and offline support by e-mail, chat and through dedicated telephone line during office hours.
- Available at an affordable cost with strong institutional support.

SOUL – Standards:

The SOUL Software included MARC21, ISO-2709, AACR-II & CCF Standards details given below.

Modules of SOUL:

The SOUL 2.0 consists of the following modules. Each module has further been divided into sub-modules to cater to its functional requirements.

1. Acquisition

2. **Catalogue**
3. **Circulation**
4. **OPAC**
5. **Serial Control**
6. **Administration**

The in-built network feature of the software will allow multiple libraries of the same university to function together as well as access to the distributed databases installed at university libraries and union catalogue mounted at INFLIBNET using VSAT network.

UNESCO :

The history of CDS/ISIS goes back to 1971 when UNESCO begin to be involved in the development of the information processing s/w needed for its own newly created computerized documentation service (CAD). Already in 1960's the ILO had developed a s/w known as ISIS. UNESCO adopted ISIS of ILO and began to develop the same for use of its IBM mainframe computer. The first version of CDS/ISIS come out in the year 1975.

By the end of 1983 after and investment of over 15 man years in system development, UNESCO brought out the fully developed versio4 of the CDS/ISIS. UNESCO has been the mini and micro computer versions of the CDS/ISIS which comes out in 1986. This version can run 0 a relatively in expensive equipment and was developed with a view to help smaller libraries and documentation centers, especially in developing countries, in having access to the computerized information processing technology. The mini-micro version can run on IBM compatible micro computers running on MS-DOS operating systems. The version 2.3 was released in march 1989. The latest version 3.0 'Network Sensitive' of CDS/ISIS provides full LAN support, that is simultaneous access to a given database, by two or more users for searching and data entry. This works on two or more users for searching and data entry. This works on two or more types of networks and has been successfully tested on NOVEL, 3 COM and BANYAN VINES networks.

Version 3.0 marginal improved the capabilities of Pascal programming routines. April 1993 was the release of version 3.05 with some more improvement on Pascal programming, and fixing a few networking problems. Version 3.07 which was released on 24th Nov, 1993, incorporated Microsoft rich text format files for printing records. Version 3.071 released on 18th May 1995 has enhanced network security and indexing and formatting capabilities. As on date number official UNIX version of CDS/ISIS has been released, but the Beta version is becoming common place among major CDS/ISIS users who work UNIX platforms. Before having a closer look at Micro-ISIS it is essential to familiarize certain simple terms which are very special to database management.

CDS/ISIS Software:

CDS/ISIS is a generalized information storage and retrieval system designed specifically information storage and management of structured non-numerical databases. It is a menu driven software written in PASCAL language especially designed for textual or bibliographic databases. In another words we can say that CDS/ISIS allows us to build and manage structured non-numerical database, whose major constituent is text.

CDS/ISIS For WINDOWS:

Since 1989, when most new microcomputers were supplied with a new operating system called Microsoft Windows, it was inevitable that the users of CDS/ISIS would call for a Windows version, and UNESCO began to develop one in 1995. Unlike the DOS version, ISIS for Windows is not

written in Pascal but in a combination of languages, primarily C and C++. Following the philosophy of the DOS version, a program library is available of programs which can be utilized in the user's own routines in a similar way to that in which Pascal was used in the DOS version. BIREME (the Latin American and Caribbean Center for Health Sciences Information) has cooperated with UNESCO in developing this 'library' and a Dynamic Linked Library (ISIS_DLL) is available containing these routines.

CDS/ISIS for Windows is, as its name implies, a **Windows-based system**. Windows programs have many distinctive features as a result of the Windows operating system. Microsoft Windows is described as a **graphical user environment** which gives you more control over the way you work as well as enabling you to use more of the power of the computer. It allows you, for example, to run more than one program at the same time. Thus it allows you to have more than one CDS/ISIS database open. Your work appears in a *window* which may be enlarged, diminished, activated or put on hold whilst other windows are opened and programs there run. Because more than one program may be available on the screen it is possible to transfer data or images from one to another. As well as using the computer's keyboard, the user can employ a mouse to move windows around the screen and to activate or de-activate windows. Within a Window there are **drop down menus** also activated by the mouse. A number of drop-down menus are accessible from the bar at the top of each window. They are accessed by a single click of the mouse with the pointer controlled by the mouse on the relevant word at the top of the window. Alternatively pressing the {Alt} key and keying the underlined letter in that word will 'open' the menu. From the early development of the DOS version, CDS/ISIS was developed for **bibliographic information**, i.e. information about documents such as books, journal articles or conference proceedings. Usually each record in the database contains information about one document. Many of the features of CDS/ISIS are different from those in database management systems which have been designed for general purposes.

Features of CDS/ISIS:

The major features of the CDS/ISIS software are:

- The handling of variable length records, fields and subfields, thus saving disk space and making it possible to store greater amounts of information.
- A data base definition component allowing the user to define the data to be processed for a particular application.
- A data entry component for entering and modifying data through user-created data base specific worksheets.
- And information retrieval component using a powerful search language providing for field-level and proximity search operators, in addition to the traditional and or not operators, as well as free-text searching.
- A powerful sort and report generation facility allowing the user to easily create any desired printed products, such as catalogues, indexes, directories etc.
- A data interchange function based on the ISO 2709 international standard used by leading data base producers.
- An integrated application programming language (CDS/ISIS pascal), allowing the user to tailor the software to specific needs.
- Functions allowing the user to build pseudo-relational databases.
- The MS-DOS version, which supports local area networks as of version 3.0 released in June 1993.

- The UNIX version, initially developed to provide multi-user remote access especially through the internet.
- The windows version.

Modules:

Browse Menu, Search Menu, Edit Menu, Configure Menu, Utilities Menu, Window Menu, Help Menu.

Merits & Demerits of CDS/ISIS:

Merits:

- The features of the CDS/ISIS software ranks high when grouped but when detailed shows a spread of different features, with the ability to interface with other software being an important feature.
- The versatility of CDS/ISIS rank second and was thus considered as important by users.
- The third Advantages of CDS/ISIS is the fact that it is free software. This factor is especially important for developing countries where the cost implication is often critical. CDS/ISIS has enabled many developing countries to contribute to and join the information society.
- The OPAC function of CDS/ISIS as this makes it easier for then to find and retrieve information. The ability to share data should have ranked a bit higher because CDS/ISIS makes it easy to exchange information and data, although the catalogues of institutions can be accessed through the web.
- The flexibility of the software allows users to develop bibliographies, databases and registration of almost any kind.
- The output function refers to the printing function which is reported to be complicated, but when mastered makes it easy to format output lists.

Demerits:

- The printing function, which is complicated, the program slows down when using large databases, the fact that the database is not relational, the set-up of a database is complicated and that the interface programs unstable on the LAN.
- UNESCO does not have to provide in depth training, seminar.
- Some users seen that CDS/ISIS was limited in what it could do and that as it was not a total library automation system it was not a completely suitable solution and this was seen as a disadvantage.
- The management of electronic documents seemed to be disadvantages for one user, since CDS/ISIS does not offer full-text strong, hence the size if the CDS/ISIS record is limited.

Comparative Study of SOUL & CDS/ISIS Software:

Though the SOUL software is in its infancy stage it is very much useful to university library and college library as its cost as compared to other software is very low though it has some problems at the beginning. But the updating of this software is distributed free of cost to those who have purchased earlier SOUL 2.0 version of this software.

The following comments relating to the CDS/ISIS software were provided by users:

- The use of the software should be encouraged.
- Further developments should be communicated to users.
- Training workshops should be held.
- Additional features should be developed.

- Local user groups should be established.

In the present scenario CDS/ISIS package is the ideal one to start with as it uses the international standard i.e. ISO2709 for import/export of data so that in future there would absolutely be no problem in migrating this the existing data. But in my opinion the Dream Destination of every college librarian should be to have SOUL in his library that has been developed by INFLIBNET. If all the college libraries in India adopt the same international standard like CCF or MARC the free flow of data will be possible on the internet which is the ultimate aim of the INFLIBNET.

The SOUL is a total solution for library automation. It is built by comprehensive study of university libraries. CDS/ISIS also solves the major problems of library automation. Because CDS/ISIS packages design prepare for development of database of library automation the format CCF supports to SOUL and CDS/ISIS also.

Application of computer in libraries is becoming very common these days. This has made enormous changes in the operations of the libraries in our country. CDS/ISIS is the most popular library automation software package in our country as per the statistics available. One of the reasons for this popular is its available at a nominal compared to other software packages. The possibility data retrieval procedures make it a very effective data bases management software. The provision for variable length fields in contrast to the fixed length fields which is used in other DBMS packages is an added attraction of CDS/ISIS.

The use of CDS/ISIS in special libraries can be attributed to features such as versatility, cost effectiveness and a supportive e-mail user group. Many of the small and special libraries do not have the funds to purchase commercial software and have turned to CDS/ISIS as an affordable solution. When used in developed countries it appears to be used by choice or in co-operative with developing countries. The fact that it is free of charge software should contribute

Several approaches have been taken to comparison of information management systems. Some focus upon analysis of information retrieval features of the search interface and include search functions, user assistance and output flexibility.

Others look more broadly at the software packages in their environment and include criteria such as input and maintenance of data, indexing of stored information, interactive searching, output features, and use of the program, special versions and security, and technical requirements of software.

The evaluation indicates that the packages are powerful software for structured textual information management. They have many similarities in their basic features while having a number of distinguishing features.

Features Common to Both Software Packages are:

- Suitability for the management of structured textual information with variable record length.
- Users define their own databases.
- Powerful search facility, with use of Boolean and proximity operators allowing flexible and diverse search combination.
- Customization of output formats, especially formats that are specific and characteristic for library and information work like indexes and sorts.
- Editor capacity allowing users to enter new data and edit existing data.
- CDS/ISIS is used CCF standard and SOUL is used CCF and MARC21.
- SOUL and CDS/ISIS and WINISIS accommodate international standard bibliographic transfer format.
- Information retrieval facility is available.

Distinguishing Features Include:

- SOUL have more extensive on-line help and are more user-friendly, particularly when comparing CDSISIS
- SOUL handle more data types, which make them more flexible to use for purposes (e.g., administrative) other than conventional bibliographic databases.
- Some searching features are more powerful than that in CDS/ISIS, for example range search and comparison.
- SOUL can produce reports in tabular formats that are not available with standard CDS/ISIS systems.
- CDS/ISIS and WINISIS have strong and diverse indexing techniques that can meet various requirement and a programming facility enabling customization to meet specific needs including interfaces
- The Thesaurus searching module written with CDS/ISIS PASCAL gives the software the ability to use a Thesaurus for information searching.
- Serial Control Module is working in SOUL but it is not available in CDS/ISIS.
- CDS/ISIS and WINISIS provide comparable search and report facilities, and have the advantages of permitting customized language interfaces, and being freely available and supported by UNESCO. The DOS version has seen wide implementation in developing countries, and it is to be expecting that the Windows version will follow suit.
- CDS/ISIS or WINISIS is available free to users.
- SOUL software is not free from INFLIBNET. Two versions are available to users; there are University and College Versions.

Conclusion:

The SOUL is a total solution for library automation. It is built by comprehensive study of university libraries. CDS/ISIS also solves the major problems of library automation. Because CDS/ISIS packages design prepare for development of database of library automation the format CCF supports to SOUL and CDS/ISIS also.

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