

Catalogue Interfaces of Integrated Library Management Systems (ILMS): Experiences in a Proprietary and Open Source Software

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ABSTRACT

The Central Library of Cochin University of Science and Technology (CUSAT) has been automated by proprietary software (Adlib Library) since 2000. After 11 years, in 2011, the university authorities decided to shift to an open source software (OSS), for integrated library management system (ILMS), Koha for automating the library housekeeping operations. In this context, this study attempts to share the experiences in cataloging with both type of software. The features of the cataloging modules of both the software are analysed on the basis of certain check points. It is found that the cataloging module of Koha is almost in par with that of proven proprietary software that has been in market for the past 25 years. Some suggestions made by this study may be incorporated for the further development and perfection of Koha.

Keywords: Integrated library management systems, Adlib library, Koha, cataloging modules, automated catalogue, library automation

1. INTRODUCTION

Computerisation of library operations in developing countries began in the 1970s with the automation of Catalogue records. Library automation gathered momentum in the 1990s¹ with the increased availability of software and affordable hardware. Indian libraries also started automation of library operations by converting their card catalogues to machine readable forms. Software such as CDS/ISIS was used widely for this. By the mid 1990s many improved integrated library management software (ILMS), viz., Libsys, Alice for Windows, Tech Lib Plus, etc., became common in Indian libraries. Along with these, software packages developed in India such as Sanjay, Granthalaya, Maithrayee, etc., too became popular. Lot of studies have been conducted by library and computer professionals to analyse and compare the performances of these software and more improved versions as well as new advanced software occupied the market place.

The new millennium witnessed the arrival and success of open source software (OSS). People especially professionals all around the world are now aware of the concept, importance and need of OSS. Librarians are always enthusiastic about such developments in the field of information technology and are ready to embrace it. A lot of OSS for ILMS,

digital libraries, e-learning, virtual reference services, etc., are now available for libraries. In Kerala, by the end of 2010 many libraries—university, college and public have shifted to OSS for ILMS. Since the concept of OSS is based on the enthusiasm of several voluntary groups of people scattered around the world, in many cases there lacks an approachable authority to clear a problem identified with such software. This makes many library professionals to be doubtful about getting authoritative technical support for clearing future problems.

2. BACKGROUND

The Central Library of Cochin University of Science and Technology (CUSAT) is the first university library in Kerala, to automate its complete housekeeping operations using an ILMS, viz, the 'Adlib Library'. The automation of library was done as a part of a project for computerisation and networking of the campus in collaboration with the Government of Netherlands. The official inauguration of the library automation was done in 2000. The library continued to use the software with not much problems identified till 2010. As the case with any library software the need for updation/new version of the software arouse which in turn required a huge amount for purchasing the latest version.

Trends and advances in the OSS environment prompted the authorities of the University to explore its features and feasibilities and a decision at the top-level was made to experiment an OSS for library automation. 'Koha' was selected for the purpose and was found successful. Then the records from the Adlib Library software were migrated to Koha. Now all the housekeeping operations in CUSAT Central Library are carried out in Koha.

3. OBJECTIVES

This study intends to share the differences in working with a proprietary (Adlib Library) and an open software (Koha). Librarians are aware that a problem/drawback identified with proprietary software may or may not be cleared in its next version. Even with technical expertise in clearing such problems, the rigid license agreements do not permit it. On the other hand, open software provides a lot of space for adding, editing and customising features in the software. A comparison of both the type of software on different aspects may help to identify the problems associated catalogue interfaces of ILMS with them and suggests improvements. In this juncture, the objectives of this study are formulated as follows:

- (i) To compare the cataloging modules of both the software
- (ii) To compare the Online Public Access Catalogue (OPAC) interfaces of both the software with respect to their search features and display of Catalogue cards
- (iii) To propose suggestions to improve the cataloging module of Koha.

Since an exhaustive coverage of the complete modules of the software is of large scope, the study is limited to the cataloging modules of these software.

4. SOFTWARE PACKAGES

4.1 Adlib Library

Adlib Library is developed by Adlib Information systems, Netherlands. As its developers claim the software is centered on the catalogue module. Other modules are: (a) Circulation management, (b) Serials, and (c) Acquisition.

All the modules are integrated with the catalogue and thesauri, so that data entered is immediately available across the whole system. Adlib complies with international standards—ISBD/AACR2 and Z39.50. The latest version of Adlib provides facilities for online reservations and selective dissemination of information (SDI) alert services. It has multilingual capabilities and data is stored as UNICODE². An important feature of the cataloging module of Adlib

is that it provides the 'Administrative data' regarding the date of creation of a particular record and the dates of editions made to that record. The screens are clearly structured with intuitive menus and context related help text.

4.2 Koha

Koha, the first OSS ILMS, was developed initially in New Zealand by Katipo Communications Ltd and first deployed in January 2000 for Horowhenua Library Trust. It is currently maintained by a team of software providers and library technology staff from around the globe³. CUSAT Central Library uses Koha version 3.00.00.107. Different modules in the software are: (a) Acquisition, (b) Cataloging, (c) Circulation, and (d) Serials.

The software supports uploading of images and value-added content such as reviews, comments, etc. It also facilitates more advanced user services like tagging, online reservation, renewal, etc.

5. ANALYSIS

An automated Catalogue has two interfaces: (a) Librarian interface and (b) Public interface (OPAC). Data is being entered through the librarian interface and output can be viewed in both the interfaces. As far as librarians are concerned they accustomed more to the librarian interface. But OPAC interface is also important since it is the service face of the library. The features of both the catalogue interfaces of these software are compared with respect to certain check points which are as follows:

5.1 Librarian Interface

5.1.1 Access Points for Searching

Access points are the different metadata elements like author, title, keyword, etc., by which search queries can be made. Adlib provides 18 access points for searching a record. An item can be searched by clicking any one of these access points. In other words, the librarian interface of Adlib facilitates a search by only one access point. The librarian interface of Koha provides 20 access points under 14 broad categories for searching a record. It can be noticed that there is no provision to search records by 'Class number' which is an important point of access as far as a cataloger is concerned. A combination of upto 3 access points can be made to search records. Different access points provided by these software are shown in Figs.1 and 2.

5.1.2 Record/Data Entry Format

Adlib provides a simple data entry sheet with 2 pages. All the necessary fields required for the ISBD presentation of a Catalogue are present in

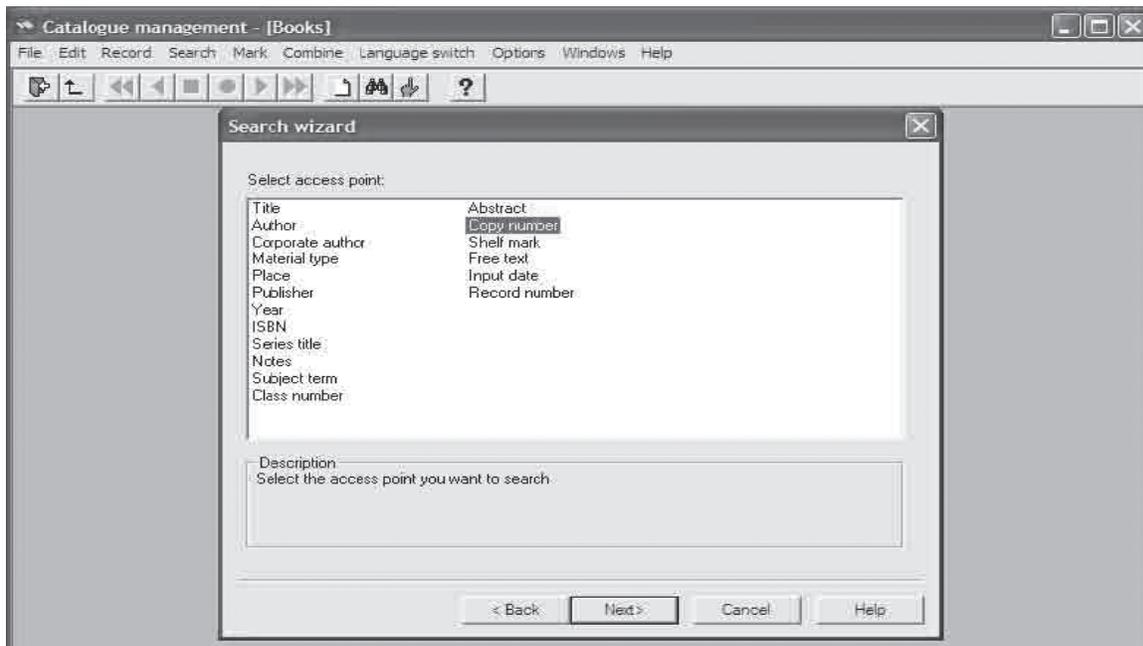


Figure 1. Access points for searching in Adlib.

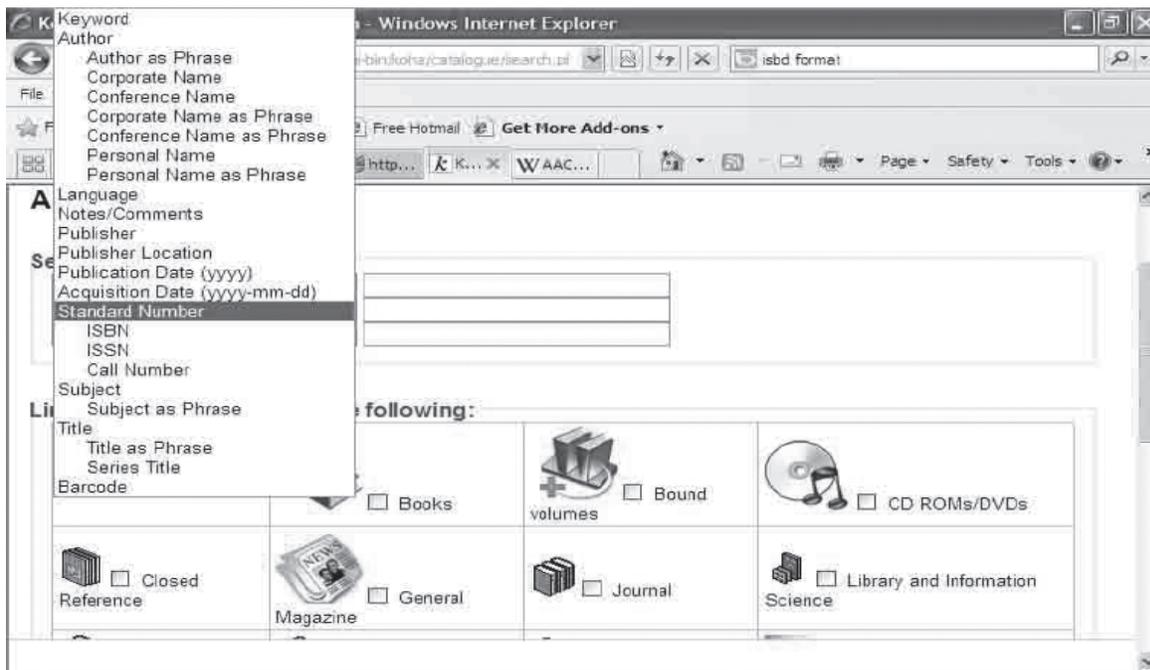


Figure 2. Access points for searching in Koha.

the worksheet. The menu bar provides links to the list/thesauri of subjects, authors, publishers, etc. With respect to compatibility of record structure, Adlib doesn't support any international standard and so data migration from Adlib to other software is really difficult. Koha uses MARC21 as record/data entry format. Even though the default MARC format is spread over 10 pages, Koha provides facility to customise the format and create convenient frameworks for books, journals, electronic documents, etc., there by limiting the number of pages of the data entry worksheet to 2 or 3.

5.1.3 Import/Export Data

Adlib has the facility of data import. But that feature was not been explored by CUSAT. And so the problems, if any, associated with it has not been experienced. Koha is efficient in importing records to its database. One can download MARC records from other library catalogues and upload it in Koha and make necessary additions with respect to class number, barcode, etc., and thereby save a lot of work. But this option cannot be applied for editing existing records. Data exporting facility is there in both the software. But in Adlib, as mentioned

earlier, exporting data to an international standard requires an intermediate step.

5.1.4 Authority Files

Adlib has a strong indexing base and the authority files are the backbone of an indexing system. Adlib maintains authority files for class numbers, authors, corporate authors, publishers, locations, series, and material types. As soon as a fresh entry is made in the above mentioned fields the systems automatically stores an authority record of the same. Catalogers depend on these authority file/thesauri for indexing of various fields at the time of preparing the catalogue cards. Koha also provides facility for maintaining authority files. If the feature is kept on, the cataloger will be required to create the authority file first and then only he/she can add entries in the respective fields. At the time of migration of records from Adlib to Koha, this was found difficult and the feature was clicked off. Right now in CUSAT Koha database, authority files are not maintained. Only the index files are there for reference.

5.1.5 Display of Catalogue Cards

Adlib displays the catalogue card in the ISBD format. Whereas, in Koha there are three modes of display of Catalogue, viz, normal, MARC format and ISBD. The default display is in the normal mode. One can view the record in other formats by clicking the respective buttons.

With respect to ISBD format, Adlib is perfect and in Koha the ISBD punctuations are not displayed properly. Koha facilitates the addition and display of enriched content such as images of book jackets, table of contents, reviews, etc.

In the catalogue card, Adlib displays details regarding the accession number, call number, status, type and location of the title. Whereas in Koha no such details except the class number are displayed. For viewing the items/copies one has to click the items button on the side bar. The ISBD view of the catalogue for a particular title in both the software is shown in Figs. 3 and 4.

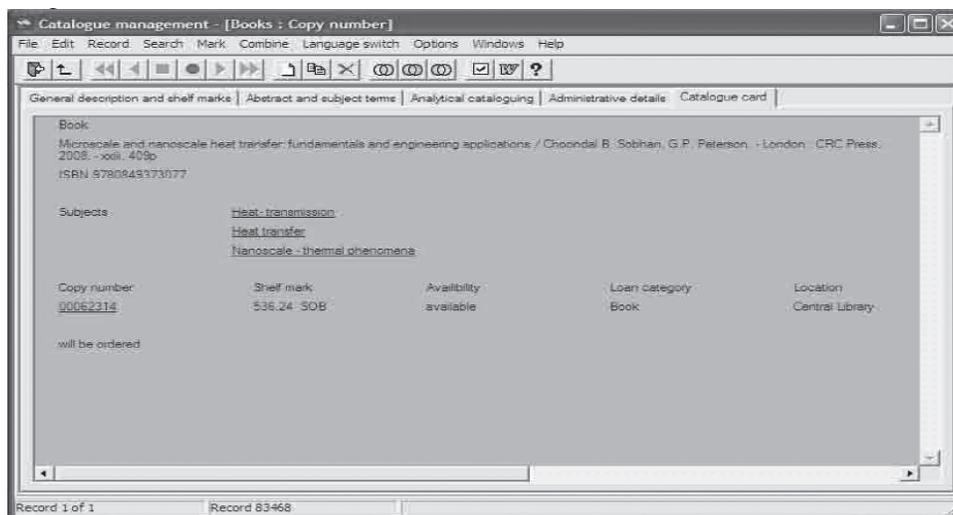


Figure 3. Catalogue card in Adlib.

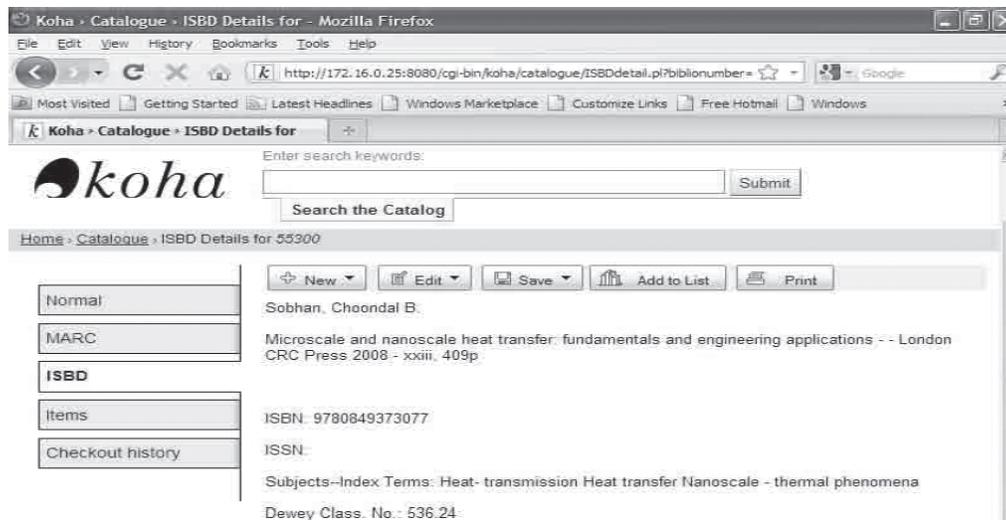


Figure 4. Catalogue card in Koha.

5.1.6 Printing of Catalogue Cards and Barcode

Adlib doesn't provide facility to print catalogue card directly. So while using Adlib software the catalogue cards are prepared separately by typing in Microsoft Excel and printing it from there. Even though Koha provides facility for developing and printing catalogue cards, this facility is not been used in CUSAT. Cards are prepared as it was done earlier.

CUSAT Cental Library has been using separate software and hardware for printing barcodes since 2000. Even though Koha provides facility for developing and printing barcodes of accession numbers, the CUSAT library continue with the software and hardware in use for developing barcodes.

5.2 OPAC Interface

The OPAC of both the software is web-enabled. The OPAC of Adlib is easy to use with 'instructions/help for searching' displayed on the right hand side. A user can go through it first and makes searches appropriately.

5.2.1 Simple Search Interface

Adlib provides 6 access points in the simple search form. A search can be done either with a

single access point or with more. On using more access points, the software automatically convert it as a BOOLEAN 'AND' search. The OPAC interface of Adlib provides facilitates to truncate the search term on all access points, limit the search by item type such as book, serials, etc. An important feature of the Adlib OPAC is the provision of links to the authority files of authors, organisations and subjects against the respective search fields. A user can use these links to choose the search terms which in turn helps to reduce errors of typing. In the simple search form there is a button 'Expert Search form' providing link to the advanced search interface.

The simple search interface of OPAC of Koha also provides 6 access points for searching. In Koha, a simple search can be made only by a single access point and there is no option for limiting the search by item type or other entities. But one can refine the search results by availability, location, series, author, publisher, class number, and topics.

Koha also provides a link to the Advance search interface from the simple search interface. The simple search interface of both the software is given in Figs 5 and 6.

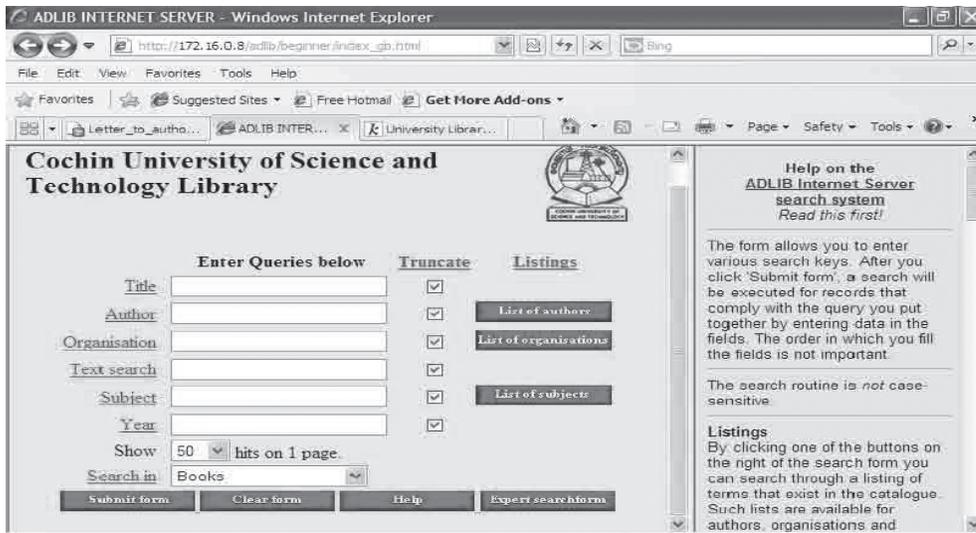


Figure 5. Simple search interface of OPAC of Adlib.

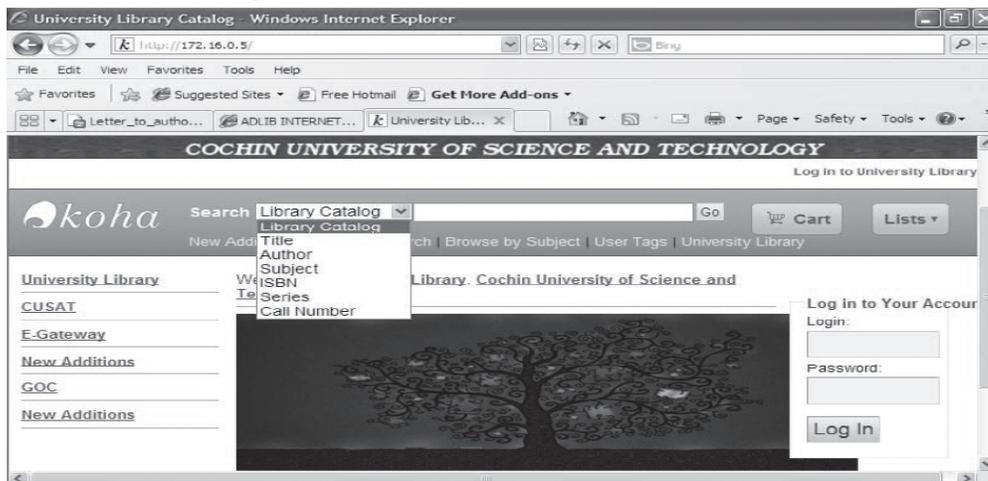


Figure 6. Simple search interface of OPAC of Koha.

5.2.2 Advanced Search Interface

The expert search form of Adlib provides facility to use Boolean operators for different combinations of the above mentioned 6 access points. Links to the authority files of authors, subject, and organisations can also be used to assist the searching. All other features are same as that of the Simple Search form. One can go to Simple Search, form by clicking the respective button in the Advanced search interface.

The advanced search interface of Koha contains 3 search boxes for combining the different access points. The access points provided by Koha for advanced search are not the same as that in the simple search interface. Also a user can make an advanced search only with 3 access points. This interface of Koha facilitates to limit the search by availability, location and item type. There is no link named 'Simple Search' from the 'Advanced Search' interface. One has to click the 'back' button or the 'Koha' icon in the page to go to

the simple search interface. The advanced search interfaces of both the catalogues are displayed in Figs. 7 and 8.

5.2.3 Display of Search Results

A search made in Adlib retrieves and displays 50 numbers of records per page. One can select the number of hits as 20, 50, 100, etc., to be displayed in a page by clicking the concerned button in the search form. The first search result of Adlib OPAC is a list of records with the titles displayed in a single line. One can click the relevant title to view its detailed ISBD view. The 'tooglemarking' button provided at the end of the page helps to mark the items in the list and view the detailed presentation of the group. The detailed presentation displays the location and status of an item. Value added services like online renewal, online reservation, cart and list facilities, saving previous search, etc., are totally absent in Adlib OPAC. (The latest version provides facilities for online reservation and SDI alerts).

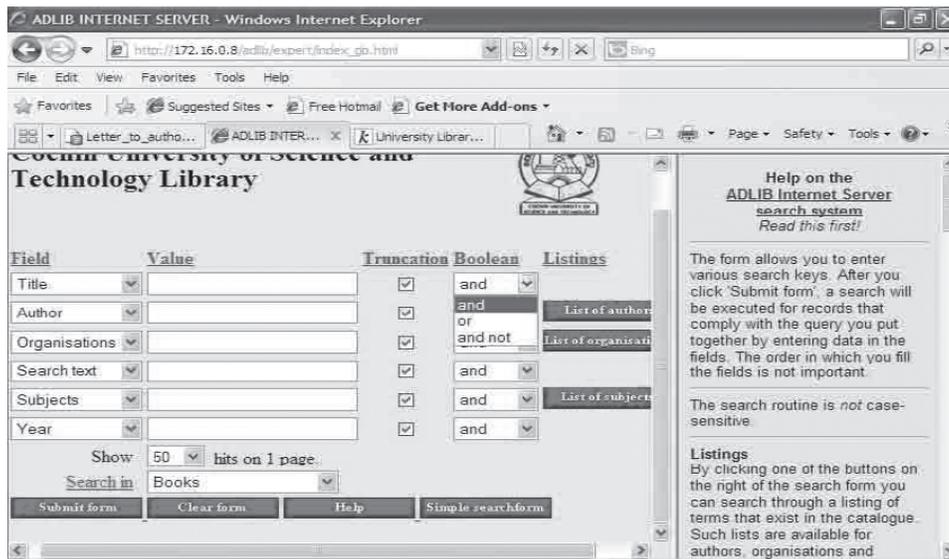


Figure 7. Advanced search interface of Adlib OPAC.

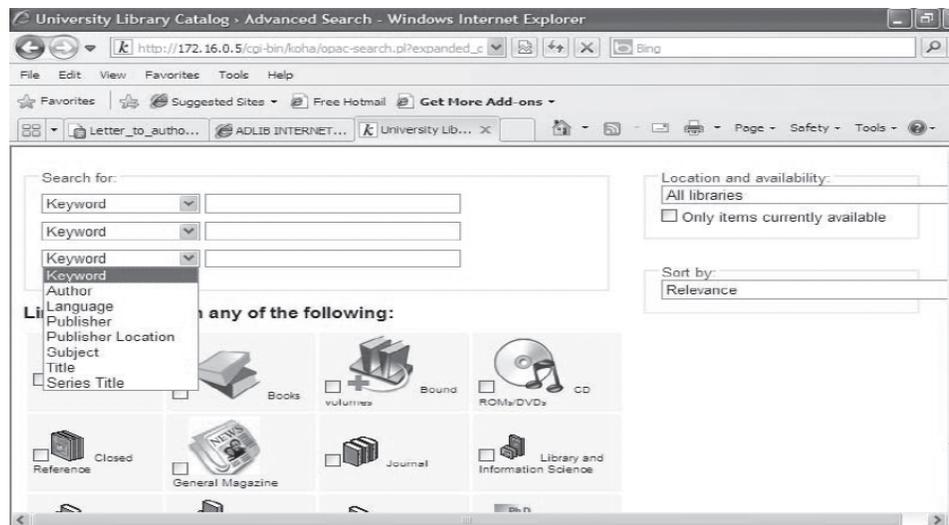


Figure 8. Advanced search interface of Koha OPAC.

In Koha, the search results are displayed as 20 items per page. The presentation of results is much detailed as compared to Adlib. One can view almost all the metadata elements in the first display itself. The detailed presentation can be viewed by clicking individual titles. By default the display is in normal mode. Here, the details of items/copies for the title along with its location, status and due date (for checked out items) are also displayed. There is provision for the online reservation of items by authorised users. Authorised users can also post comments, tags and use the cart facility. The OPAC interface of Koha displays the records in MARC and ISBD formats also.

6. SUGGESTIONS

Based on the analysis, the following improvements for the OSS 'Koha' were suggested:

- The list of access points of the librarian interface should be made precise with respect to the most sought of metadata elements with 'Class number' being included in the list.
- In a university library system like CUSAT, creation of a record ('Biblio' in Koha) starts at the time of ordering an item from the acquisition section. A cataloger can only edit an existing record. If the import MARC data option is used, a duplicate of the biblio will be created and this may create practical difficulties. So the MARC import and upload facility may be enhanced to edit/update an existing record.
- Authority files are the backbone of any indexing system. Catalogers have been using standard, indexing systems/ thesauri for decades. Right now the authority file system of Koha is made optional and if opted, the system prompts to create the authority of an entry before adding it in its respective field. The study recommends that preparation of authorities of personal names, corporate names, publishers and keywords should be made mandatory. Instead of prompting to create the authority of an entry first, the system may be prompted to create the authority when a fresh item is being entered in the database.
- In the ISBD view, the punctuations may be displayed properly so that catalogue card printing can be made perfect.
- Instead of using the term 'barcode' for referring to an accession number in Koha, a standard term such as 'accession number' or 'copy number' may be used.
- The 'simple search' interface of OPAC of Koha may be made little more user-friendly with help/instructions displayed some where within the page. Options for limiting the search with respect to item type, location, etc., should be provided in the simple search form itself.

- A direct link to the simple search form may be provided in the advanced search interface.

7. CONCLUSIONS

Efforts have been made to compare the software and the study reveals that the cataloging module of the OSS is almost at par with that of proven proprietary software that has been in market for the past 25 years. The strengths and weaknesses of both the software are highlighted. As seen in the analysis part the OPAC interface of 'Adlib Library' is a perfect one and can be made as a model for the further improvements of Koha. By incorporating the suggestions made by this study, Koha can be made the best ever ILMS that cater the needs of any type of library.

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