



MANAGING E-BOOKS IN NIGERIAN ACADEMIC LIBRARIES USING CALIBRE SOFTWARE: A CASE OF FEDERAL UNIVERSITY OF TECHNOLOGY MINNA LIBRARY

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ABSTRACT

Federal University of Technology, Minna library is one of the first adopters of calibre e-book management software in Nigeria. The library started using calibre because of the challenges encountered while manually managing its e-book collections. This article describes the different features of calibre software that has been used by the library and other features that can be used in Nigerian libraries to effectively automate the management process of electronic books. This article will be very useful to electronic librarians in Nigerian libraries seeking information on how to manage their e-book collections in a 'GOOGLE' world.

Keywords: *Calibre, E-book management, Academic libraries*

Introduction

Academic libraries have integrated e-books into their collections and research studies have shown that librarians are keen to expand their e-book holdings (Anson & Connell, 2009; Research Information Network, 2007). Electronic books are the electronic version of traditional print books which in the opinion of Thomas (2011) have the same characteristics and outlook of the traditional print books but the main difference lies in the fact that the e-book can be accessed digitally using a personal computer, a Personal Digital Assistant (PDA) or on a specially designed electronic device called eBook reader. Electronic books according to Noh (2009) refer to those e-texts that are accessed with digital machines as if they were paper books. According to him, in their digital form, these books may be read on various types of electronic machines such as computers, PDAs, specialized personal computers for e-books and mobile phones. In addition, there is a widespread reporting of the increasing importance of e-books to academic communities (Mckiel, 2007; Nelson, 2008). In the opinion of Armstrong et. al. (2002) E-books provides many advantages, there is no need of physical space and hence the problem of shelving or re-shelving doesn't arise. E-books cannot be damaged or mutilated; stock taking or missing books will not be a problem.

In Nigeria, the emergence and integration of e-books has been at a slow pace, but in the last few years electronic books are gradually representing an increasingly important component of the resource collection of academic libraries which is evident in the accreditation requirements for libraries by the Universities Commission. This could be linked to the fact that e-books are been widely acknowledged as a solution to the paucity of textbooks which is most pronounced at the tertiary level of education in Nigeria. (Thomas, 2011). However, the emergence of E-books has not come without its attendant challenges. Academic libraries have had to provide access to e-books in the different formats in addition to the conventional book lending (Jameer, 2013). This emergence and their integration into the collections

of academic libraries although have created opportunities for librarians but have also generated a wide range of issues and challenges (Anson & Connell, 2009; Armstrong & Lonsdale, 2003; Mckiel, 2007). This is because unlike print books, electronic book's acquisition, organization and access differ from the print books. Issues related to technicality, functionality and reliability are paramount for any library that wants to create an e-book portfolio. Hardware and software compatibility & capability, storage & maintenance, search & retrieval functionality, interface usability amongst others are issues a librarian is likely to face when managing e-books manually.

Attesting to this fact is Mulholland & Bates, (2014) study that reported accessibility and functionality issues as some of the challenges associated with use of e-books by academic staff of Further Education Colleges throughout Northern Ireland. These perceived negatives according to them re-appear often and compare with other e-book studies (Vasileiou, et. al. 2012; Pant & Jindal, 2013; Muir & Hawes, 2013). Jamsheer (2013) also stated that there were many applications for managing music, pictures and documents online or at one's desktop, but that e-book management applications are very rare. Popular digital and open access library management softwares available also do not have an effective management module for e-books or even e-journals. Connaway and Wicht (2007) study confirmed this as the study stated that there were no standards for the development and distribution of e-books; therefore libraries must support multiple formats, software, hardware, and acquisition, purchasing, and usage models which presents daunting challenges in integrating e-books into academic library acquisition, discovery, and delivery systems. Libraries usually organise their e-books as files or folders in computer or storage devices and as the E-book collection increased, searching and retrieval became difficult.

E-book Types, Formats and Devices

Scholars have defined e-books in a number of ways (Walters, 2013). Most definitions include several elements: digital format, online delivery, text (with or without audiovisual content), monographic rather than serial publication, and accessibility through an optical display (Rao, 2005; Soules, 2009). Armstrong et. al (2002) defined e-books as pieces of electronic text regardless of size or composition, excluding journal publications, made available electronically (or optically) for any device (handheld or desk-bound) that includes a screen. Many free e-books are available through open access and digital rights management books (DRM). Open access e-books are available on the public Internet free of charge. Gutenberg, a pioneer of free e books through its Project Gutenberg makes information, books and other materials available to the general public in a vast majority of the computers, programs and people can easily read, use, quote, and search. On the other hand, some digital rights management e-books cannot be accessed without subscription or payment. Examples of these types of e-books are those managed by big publishers like ProQuest. These books are managed and can only be assessed using Adobe digital editions. However, some publishers offer single e-books for sale, some of which are DRM free. E-books come in different formats and for each format a different type of software is needed to be able to view them.

Major E-book formats

Format	Filename Extention	Open Standard
Kindle	.azw	No
DjVu	.djvu	Yes
EPUB (IDPF)	.epub	Yes
Multimedia e-book	.exe	Yes
FictionBook	.fb2	Yes
HTML	.html	Yes
Microsoft Reader	.lit	No
eReader	.pdb	No



Plucker	.pdb	Yes
Portable Document Format	.pdf	Yes
Mobipocket	.prc,.mobi	No
PostScript	.ps	Yes
Tome Raider	.tr2, .tr3	No
Plain text	.txt	Yes

Source: Jamseer (2013)

E-book reading devices are also available and for each of these devices comes a different format of e-book. These varieties make it difficult for libraries to manage e-books effectively because it means they have to support multiple formats, soft and hard ware, acquisition and usage models which can be quite challenging for libraries.

Federal University of Technology, Minna Library and Electronic Books

Federal University of Technology, Minna library integrated E-books into their collection in late 2011. During this time, electronic books were saved and organized in folders on the computer desktops by Faculties and Departments. The problem however encountered with this organization method by the e-librarians was effective retrieval and access. When a user wants a particular eBook he/she would have to scroll through all the books in a particular folder. More challenging is when the user does not know the title of the book he/she wants; it is always difficult to search by keywords and so users preferred to use GOOGLE to get their e-books rather than relying on the libraries. Salau (2014) study on undergraduates' use of E-books in an academic library corroborated this when she found out that undergraduates in Federal University of Technology, Minna used GOOGLE more than the University Library to access e-books. In addition to this problem was also the issue of multiple formats of electronic books. The library had only Adobe reader installed on its computers which made it possible for users to read only e-books in PDF format. Other good e-books in formats such as EPUB, MOBI could not be read by users. It was against this background that the library sought to automate the management process of its e-book collection as better support services in the use of e-books are important because tech savvy users have realistic expectations of e-books and as corroborated in the opinion of Cassidy et. al. (2012), that users naturally expect the digital environment to lend added value over a print book.

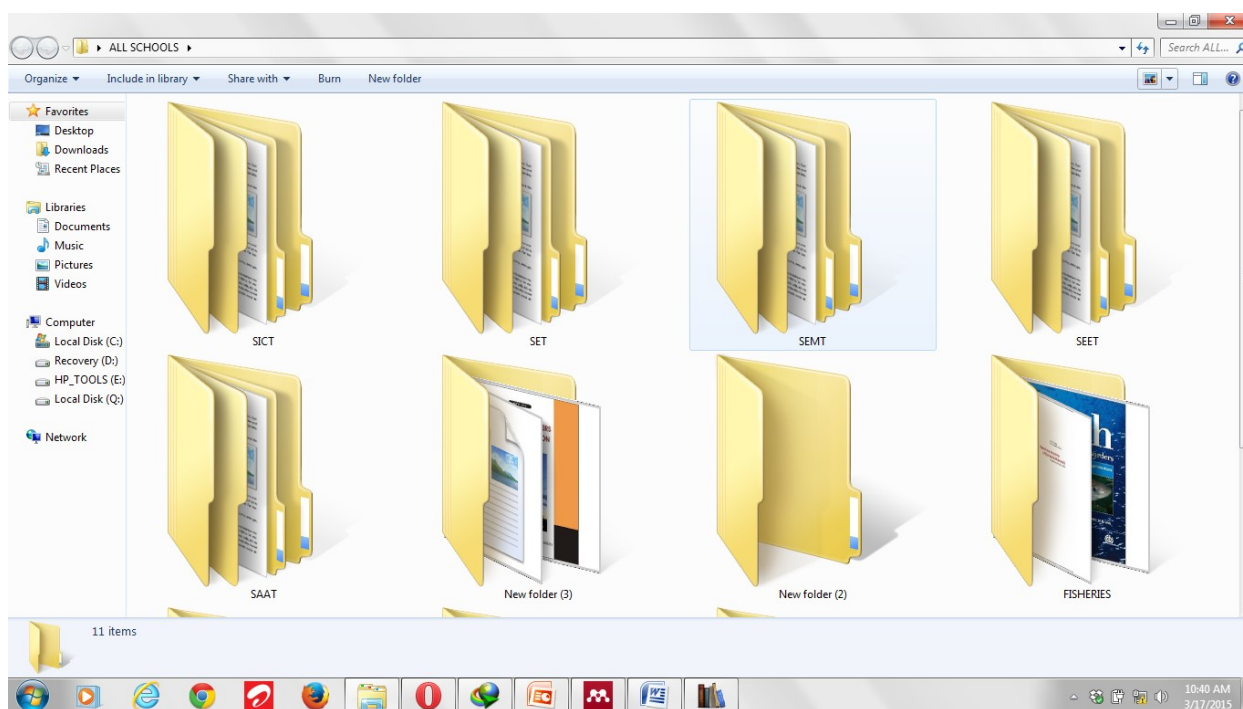


Fig 1: E-books manually arranged in folders

Calibre Electronic Book Management Software

Calibre is a free and open source e-book management application developed by Kovid Goyal. Although calibre was initially developed as a personal e-book manager, it has however rapidly evolved over the years since its initial release in October, 2006 to include features that now make it a good resource discovery tool for libraries. It currently has about 4 million users who have used the application at least once. Calibre is very simple with an attractive graphic user interface design with almost all the major options accessible right from the main window. It is available for Windows, Linux and Mac operating systems.

Features of Calibre E-book Management Software Used in IBB Library

i. E-Book/E-Journal Management

Calibre manages your e-book collection for you. It was designed around the concept of the logical book, i.e., a single entry in your library that may correspond to actual e-book files in several formats (<http://calibre-ebook.com/about#features>). calibre managed thousands of e-books in different format the IBB library had by sorting the e-books by Title, Author, Date added, Date published, size, Rating, Series etc. It also supports extra searchable metadata like Tags (a flexible system for categorizing the e-book collection; tags makes searching faster) and Comments (a form of entry used for book description, notes and reviews). calibre can also go out onto the internet to find book metadata based on existing title/author or ISBN information. It can download various types of metadata and covers for your books, automatically. The metadata system according to Kovid Goyal is written using plugins so that different types of metadata sources can be supported in the future. This feature has enabled our users to easily search our electronic library for e-books on their own similar to what is obtained using GOOGLE. Calibre also adds aesthetics to the arrangement of your electronic books by using the cover browser. This has helped to attract the tech savvy undergraduates to access more electronic books.

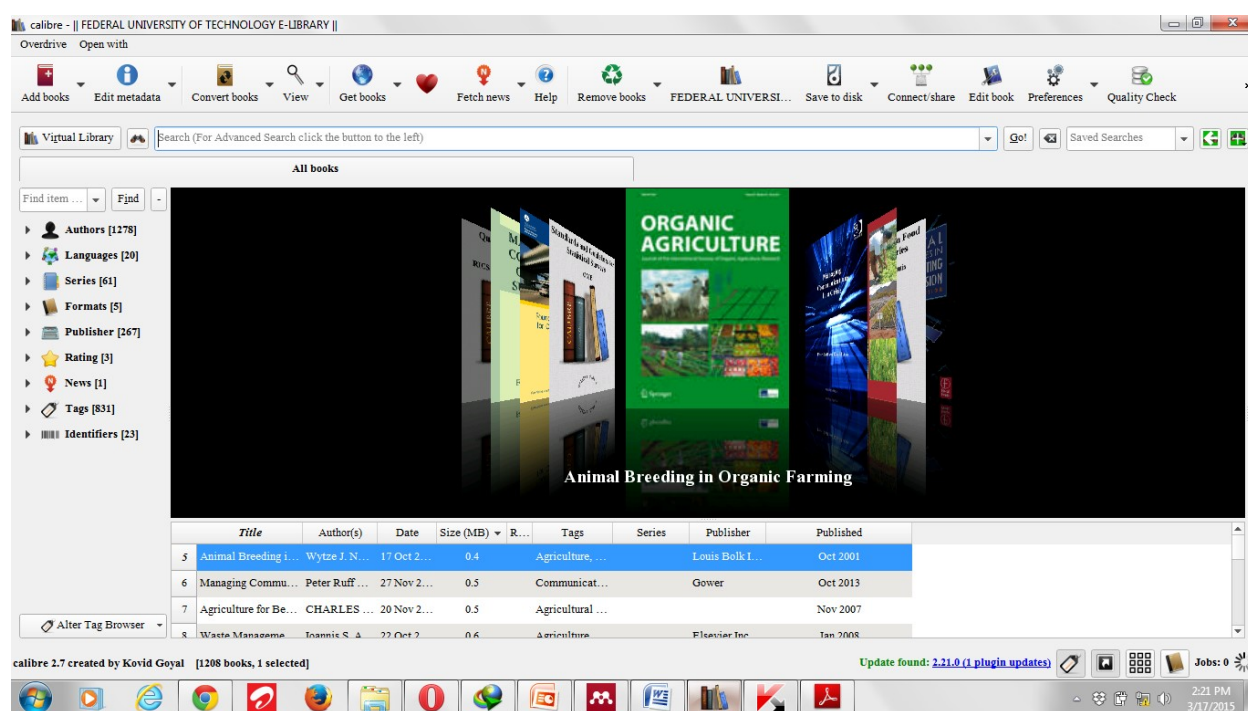


Fig 2: Calibre interface on display using the cover browser

Searching and Retrieval

Calibre has a search feature that makes searching faster depending on how the resources metadata have been classified using the 'Edit Metadata' feature which is similar to the traditional library catalog card. Searching for a particular electronic, video or audio book is easier using the search interface on calibre which is similar to what is obtained in GOOGLE. A user can search by author, title or publisher and can also use specific keywords depending on the tags used to categorise the book. Advanced search queries are also constructed by clicking the helpful "Advanced search" button to the left of the search bar. IBB library has just one 'library' of e-books, but several libraries can be created based on faculties or genres and a user can switch libraries to view e-books in different libraries.

Electronic journals can also be organized and added to the library. Most academic libraries in Nigeria subscribe to e-journals from popular databases. They (libraries) however archive these articles for immediate use and for unforeseen circumstances like light and internet connectivity failure. A major problem however is in organizing these articles. They are usually arranged in folders the same manner e-books are organized but with archived e-journals, the retrieval process is even worse because e-journals don't come in single titles, they are in volumes and issues. With calibre however organizing archived e-journals becomes very easy for libraries. Calibre has the ability to edit e-books; however, the e-book must be in EPUB format. Most of the e-journal articles come in PDF, again Calibre can convert them to EPUB and then edit.

The major challenge however with calibre's PDF conversion to EPUB is that it usually does not come out as desired. Libraries can then get Nitro Pro to edit these e-journal articles by adding together all articles in a particular issue or volume depending on the number of articles. This puts the E-journal articles together in an E-book form which can then be added to the calibre library. Using the calibre download cover feature to download a suitable journal cover and edit the tags metadata using all the keywords and authors from the journal articles. Article titles can also be added to the extra searchable metadata comments column. A separate catalog or library for complete journal titles can then be created

using calibre; when a user wants a journal title, issue or volume, the search interface returns it with just one click using the appropriate keywords.

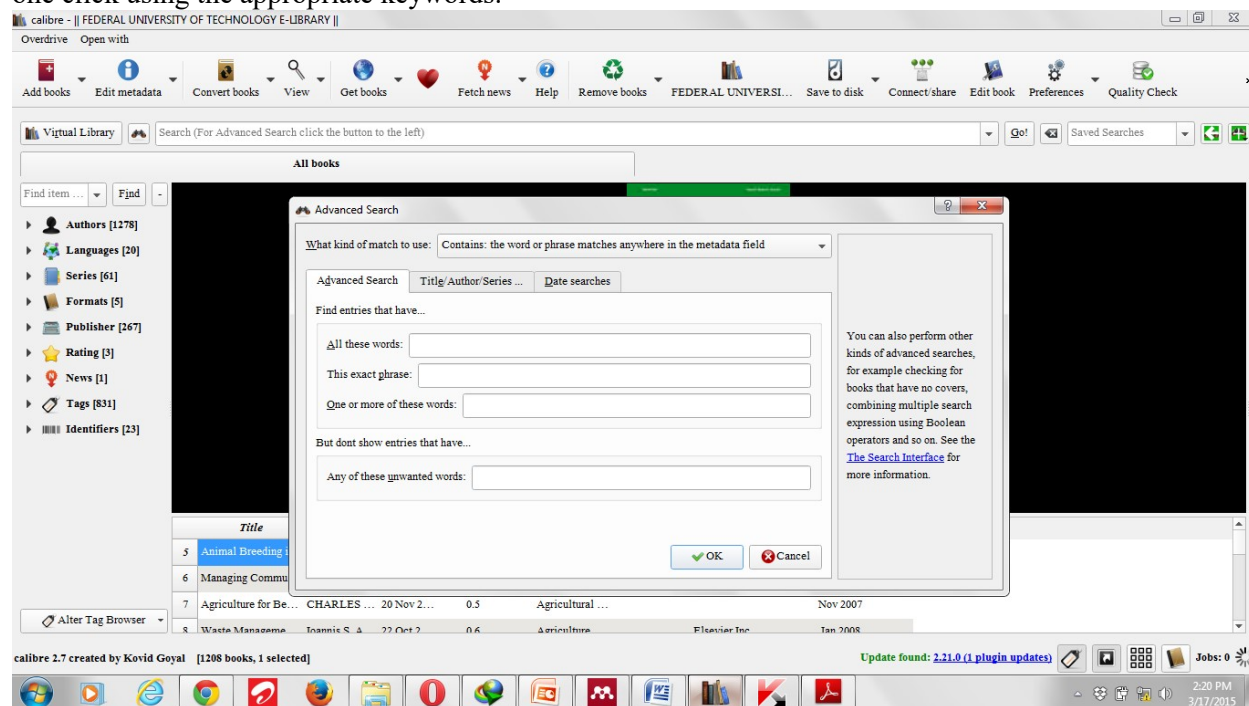


Fig 2: Calibre interface showing the advanced search function

Saving Searches

Calibre also allows a user to save a frequently used search under a special name and then reuse that search with a single click. To do this, create your search either by typing it in the search bar or using the Tag Browser. Then type the name you would like to give to the search in the Saved Searches box next to the search bar. Click the plus icon next to the saved searches box to save the search. Now you can access your saved search in the Tag Browser under “Searches”. A single click will allow you to reuse any arbitrarily complex search easily, without needing to re-create it and also give the library an idea of the frequently used e-books for rating.

ii. Sharing of E-books through E-mail

Calibre has a setup for email based sharing of books. This feature allows sharing of books and news feeds by email. The software has inbuilt support for Gmail and Hotmail e-mail services. After setting up email addresses for this option, calibre will send news updates and book updates to the entered email addresses. You can configure how calibre sends email by setting preferences at Preferences->Sharing->sharing books by email. Once you have set up one or more email addresses, this menu entry will be replaced by menu entries to send books to the configured email addresses. This feature also works for news feeds but it wasn't effective for the library because the news feeds calibre downloads are not indigenous, although indigenous online newspapers like punch, guardian and the sun can be added. If your news source is simple enough, calibre may well be able to fetch it completely automatically; all you need to do is provide the URL. This feature enabled the library to carry out current awareness service. Currently added e-books were sent to the e-mails of selected frequent users.

Other Features of Calibre that can be used by Libraries in Nigeria*i. 'Get Books' (Acquisition/Collection Development)*

This feature of calibre links a library to several e-book vendors like Amazon, Google Books etc. calibre helps a library find e-books they want by searching the websites of various commercial and public domain book sources for you. One can easily find which store has the book one is looking for and also get Digital Rights Management status and other useful information. A library can also search for particular author or title of e-books and get useful information from different stores.

ii. News and Magazines Downloads

Online newspapers and magazine can be downloaded from websites or RSS feeds using calibre and converted into E-book formats in not only summaries but full articles. RSS feeds stands for Really Simple Syndication. It is also called web feeds; RSS is a content delivery vehicle. It is the format used when you want to syndicate news and other web content. When it distributes the content it is called a feed. Although, the popular newspapers and magazines from Nigeria are not available yet on calibre, there is a provision for adding these online newspapers using plug-ins. One interesting feature about this is that one does not have to download these news items manually; the download can be scheduled daily or weekly at a preferred time delivered to the calibre library (Folder where all the resources are stored. It can be changed to the name of the library) and also delivered to individual users email address.

iii. Content Server for LAN and Internet Access to Book Collection

Calibre was developed with a web browser which can be used for converting it to a content server. This means users can access e-books library through the Local Area Network (LAN) of an institution 'wirelessly' without cords. The content server of main computer with the calibre library is started (this can be started with any of the computers with a calibre library). Start up a browser on the connecting computer or tablet, once this is done, the IP address of the main computer is entered in the URL (Universal Resource Locator) space of the computers or tablets that is to be connected. Note that once you start the content server, the IP address pops up with it courtesy of calibre. The search interface provides a simple interface to search a book using title, author, publisher or any other attribute of the eBook. Another important thing to take note of is that the IP address is just to identify devices within a library's local network so that other computers, tablets and Smartphone can see the eBooks of the library. The external IP address is usually different. Access to the content server can be restricted by user id and password authentication if the library doesn't want to provide entire collection through web. For libraries having large level installation, the calibre content server can be managed using the inbuilt command line tools through terminal. The Calibre icon can be used on library websites, this way users can access the electronic books available to them from the library.

Challenges encountered with Calibre

The first challenge the library faced using Calibre to automatically manage its electronic books was with Digital Rights Management (DRM) books. Calibre works only with single purchased or free e-books without digital rights management. Electronic books from most commercial databases/vendors like Ebrary from ProQuest could not be managed using Calibre especially if the library subscribes for the whole database and not individual electronic books. Calibre was thus used to manage only the DRM free electronic books. Also, calibre only searches for keywords according to how the books have been categorized apart from the Author, Title and Publisher tag. Calibre cannot automatically search all the e-books for a specific keyword if the book has not been categorized using that keyword. Another challenge with calibre is that it does not support cataloguing standards like MARC because it was not initially developed for libraries. Any library that wants to adopt its usage must develop its own in-house cataloging and sorting scheme to enable easy search and retrieval.



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