The History of the Online Public Access Catalog and Integrated Library System and Their Use at

Don C. Locke Library of Asheville-Buncombe Technical Community College

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Abstract

This paper discusses the history and evolution of OPAC (online public access catalog) and ILS (integrated library system) as well as their relevant applications in a specific library, the Don C. Lock Library located on the campus of Asheville-Buncombe Technical Community College. The research for this paper also includes open source software and issues with migration between systems. For the paper, cataloging librarian Erica Hennig was interviewed through the discussion of Locke Library's practices on cataloging and their ILS, Horizon through SirsiDynix. The information obtained throughout the research process for this paper has been compiled and discussed to display practical cataloging applications through the use of OPACs and ILSs.

The History of the OPAC and ILS

An online public access catalog (OPAC) refers to an online database in which users can access information about a specific library or consortium's holdings (Husain & Ansari, 2006). An integrated library system (ILS) usually refers to the software used by the library that connects all the moving pieces of the collection and the circulation thereof, including information on resources, materials, patrons, finances, and collection development (Rubin, 2016).

What used to be known as an automated library system has morphed into the integrated library system, a system that comprises any and all functions relative to the operation of the library. The automated systems were formed in the 1970s and 1980s on what would now be considered archaic hardware and software, and they were not designed to be interactive or user-friendly (Kinner & Rigda, 2009). This is to say that the systems made life easier for librarians but not for the patrons that wanted to be able to search the catalogs and use the "front end" of the system. Librarians eventually realized that they could possibly use one system that both patrons and library staff could use to simultaneously catalog and search the library's holdings.

During the 1990s, vendors of ILSs seemed to appear quite often as it was a growing marketplace and the number of vendors peaked in the early 1990s. By the year 2000, things had began stabilizing as libraries knew exactly what they wanted and needed out of an ILS, and by 2007, the number of vendors had been consistent for several years (Kinner & Rigda, 2009). Many of today's technologies have made it more difficult for these vendors to keep up, as many of their systems were built to deal with print materials rather than electronic materials. ILSs today have to be integrated for the use of electronic resources to remain competitive. In other words, the reasons for the very competitive ILS market that exists today are "constant demands from the academic community and systems professionals for better integrated library systems" as

well as a world in which exists constantly changing innovative forms of technology (Wang,

2009).

      The foundations for OPACs and ILSs lie at the intersection of card catalogs and the

invention of the internet. OPACs advance the card catalog in many different ways. Through

OPACs, the user has a great deal more access points, users can broaden or narrow search results

through Boolean operators, and search results can be limited by language, dates, and more

(Husain & Ansari, 2006). The 1950's saw the first computer hard drives appear and the 1960s

saw the emergence of Machine Readable Cataloging (MARC) and international bibliographical

collaboration (Chan & Salaba, 2016). The concept of what is known today as the internet came

to fruition in the 1970s which led to the transference of card catalogs to OPACs as early as the

1980s, although at first they were limited to on-site collections. In the later 1980s, OPACs started

to offer more sophisticated search options including keyword searching with Boolean operations,

improving access points. There were also provisions for truncation, index browsing, and more

display options for search results (Chan & Salaba, 2016).

      The first OPACs were prominent in academic libraries and spread through the academic

sector much faster and earlier than they were introduced to public libraries, and these early

OPACs were very limited as their search options may have simply included title, class number,

or combination of author and title (Bowman, 2007). This is mind boggling to think about as

today's society is so reliant on the use of search engines that could seem like other-worldly

magic to citizens during the time of early OPACs. What seems obvious to users and librarians in

today's world was new and yet to be invented during this time. These earlier OPACs also

provided access to books, journals, and their descriptions, but it did not have the ability to access

specific journal articles. To retrieve journal articles, users had to consult other tools such as

indexes to periodicals and journals as well as abstracting services which were developed outside the library community (Chan & Salaba, 2016).

Today however, through the use of MARC records, a bibliographic record which contains cataloging records can be created and this is the record with which a user interacts in the OPAC. These records include more detailed information and allows the user to find specific journal articles rather than entire journals. This is because the bibliographic record is created from resource description, bibliographic descriptions, determination of bibliographic access points, subject analysis, assigning subject headings, classification, and the assignment of classification numbers and book numbers. Somewhat more behind the scenes is the authority record which is created from authority work and is not used by library patrons. Authority work includes descriptive and subject cataloging. This procedure normalizes and standardizes access points to bibliographic records for all works by a given author or all works on a given subject

In the 1980s, not only did OPACs start to offer more sophisticated search options including keyword searching with Boolean operations, but there were also provisions for truncation, index browsing, and more display options for search results (Chan & Salaba, 2016). The authority record is established under the name of the author or the subject itself. This allows for standardization and bibliographic national and international collaboration through the OPAC. Through the use of these records, the OPAC provides many access points and therefore many differentiating ways in which a user can search and be presented with the library's resources.

Today, OPACs boast advanced technology such as discovery layers, which provide a one-stop shop to search for resources, such as the One Search through the website of Joyner Library at Eastern Carolina University. It combines articles, books, journals, and more into one easily searchable place, which is a great breakthrough for libraries when it comes to providing

services to students who are used to using Google. It prevents them from having to go to different places to search for articles and books, for example. It has changed the OPAC to stay relevant in a world with users that are used to typing in a search term and receiving all the different kinds of media available on the subject, rather than having to know what type of material they are looking for before searching.

Open source software (otherwise referred to as OSS) describes software that can be obtained non-commercially. It is usually formed through the work not of a software company but by everyday citizens with software development skills. OSS can come in the form of a simple program or an entire operating system, such as Linux. There are many different characteristics that can be considered to qualify a product as open source, but the general consensus all agree on basic criteria of these qualifiers: distribution of the software must be free of charge, the source code must be made available publicly, and the code must have the ability to be changed (Palmer & Choi, 2014).

Cataloging at Locke Library

At the Don C. Locke Library located at Asheville-Buncombe Technical Community College, Horizon, a software provided by SirsiDynix is used. Cataloging Librarian Erica Hennig provided several useful points of information in discussing the application of Horizon through SirsiDynix at Locke Library and the different challenges and benefits the system provides.

The system is not open source, as it is purchased software by the library in which the librarians have sole control over the catalog and have the support of SirsiDynix. Because of this proprietary software, the staff does not have to deal with software that would be free but potentially not as sustainable or dependable. Open source software comes and goes and support can disappear as soon as the creators of the software decide they no longer want to continue

efforts for the production of and update of the software. With proprietary software, this is not a worry as larger software companies that cater to the needs of libraries have systems in place to prevent anything from going fatally awry with the library's OPAC (Palmer & Choi, 2014).

The Don C. Locke library is not specifically part of a consortium or union catalog which means that although many community college libraries do take part in a consortium, Locke Library does not share its records and materials with other libraries. "Most North Carolina community colleges are a part of a consortium…but there are a few of us that remain independent. We have chosen to remain independent mostly because of the expense, but also we like our current integrated library system, Horizon, and if you are part of the consortium, they use North Carolina Cardinal. We also like to have sole control of our cataloging and this would not be possible in the consortium" (E. Hennig, personal communication, April 5, 2017).

The library is a member of Online Computer Library Center (OCLC). This only slightly affects the cataloging process as not all features are fully utilized. While Locke Library is a member of OCLC, this is mainly because the North Carolina Community College System pays for all of the community colleges in the state to be members. Therefore, it is only used for copy cataloging which involves downloading MARC records. OCLC is also used for the library to participate in interlibrary loan (ILL) (E. Hennig, personal communication, April 5, 2017).

Hennig has been a librarian at Locke Library (formerly Holly Library until October 2016) for the past 12 years and in her time there, Horizon and SirsiDynix have been used consistently as the library's ILS. She has never experienced a migration between systems but speculates that it could possibly be done with less difficulty if the library were part of a consortium or through the use of OCLC (E. Hennig, personal communication, April 5, 2017). All migrations are bound to have issues with some records migrating properly. In one study, one-third of the libraries

surveyed reported strong dislike for their new systems and cited complexity and migration issues

as top reasons (Wang, 2009).

The library acquires MARC records from OCLC the vast majority of the time. When it

comes to importing records into the cataloging database for the library, Horizon makes it a

simple process with its advanced importing capabilities. The MARC records are simply

downloaded as files from OCLC and imported as Horizon is set up to receive these records from

OCLC seamlessly. This task is performed whenever items are cataloged for the library. This can

mean a small or large number of records can be imported at a time. New materials are cataloged

every day so this process usually occurs on a daily basis. Hennig is usually the librarian to

complete the importing of records to Horizon; however, she has also trained two of the part-time

librarians that work at the library to help her with the process as it can become overwhelming

with one person (E. Hennig, personal communication, April 5, 2017). Librarian Susan Toole

currently helps with the cataloging of books and librarian Mayo Taylor helps with the cataloging

of DVDs and other media. This does not usually present problems other than things not being

done exactly how Hennig would like at times. Although these occurrences are very rare, Hennig

does have systems in place to prevent problems from arising and to solve them when they occur.

At times, records are not necessarily complete when imported from OCLC. This leads to

the editing of records. When records are discovered to be incomplete, i.e. missing call numbers

or other information, the records are edited, but only in Horizon. When Hennig recognizes that

information is indeed missing, she adds that to the library's records in Horizon, but not in OCLC.

Customization for the catalog at Locke Library does occur, primarily so that information needed

by the librarians can be more easily accessed. This is usually in the form of adding extra

information to the catalog's records. This information ranges from the prices of materials to

more detailed descriptions. Hennig also removes information that is not needed or utilized by the

library. For example, DVDs are the most frequently edited items at Locke Library. This ranges

from the information describing the item to the price to the call number itself as the DVD

collection is sorted in a certain way, unique to this library (E. Hennig, personal communication,

April 5, 2017).

On rare occasions at Locke Library, original cataloging is required. This task is

completed by Hennig mostly for local publications dealing with Asheville or local Appalachia

(E. Hennig, personal communication, April 5, 2017). Hennig does state that she does not add

them to OCLC but only to the catalog at Locke Library as some of these materials are only

significantly available locally in the Asheville area and are not likely to appear anywhere else

other than in other libraries in the area. This is because this has always been their practice,

although she states that they are reconsidering this decision and currently are trying to compile a

list of the library's resources that are not in OCLC so they can be added. Rarely do non-print

materials need original cataloging, but there is the odd DVD for which cataloging records are

unavailable. Hennig always performs original cataloging when it is necessary as this is

something that she wants to ensure is done with absolute accuracy. This cataloging is only

performed in Horizon and not in OCLC, but possibly will be in the future. Hennig also states that

the system does not supply a word labeled form for the MARC record.

According to Hennig, Horizon does allow for the customization of the OPAC display but

only to a small extent. Horizon has a set look but there are some aspects of the OPAC that the

librarians have the ability to change, such as the inclusion of the institution's logo, colors, menu

tab selections, internal and external links, search options, and the amount and type of information

shown on the record for individual materials. When things are changed or customized, this is

usually performed by Peggy Higgins, the systems and access services librarian, as these are things that affect the users and this is Higgins' area of concentration (E. Hennig, personal communication, April 5, 2017).

Using the Library's OPAC

The OPAC at Locke Library is available on specific dedicated catalog computers throughout the library as well as through the library's website on any computer with internet access. The main page has three search boxes that include options to search by keyword, title, or author. At the top of the screen, there are different tabs that take the user to different sections of the OPAC: catalog search, article search, LibGuides (guides that are created by librarians to supplement many of the classes offered at A-B Tech), database search, and an interlibrary loan request page. There are also tabs the provide the user more information about the library as well as a "My Account" page in which users can view and renew their checked out materials as well as view their accrued library fines for overdue materials, view holds, and change personal information, all as a part of the ILS.

The catalog search is the most helpful part of the OPAC for users as it allows them to choose several different options for searching the library's holdings. Within the page for catalog search, the user can choose catalog quick search (the aforementioned home page with the three simple search options), browse search, power search, course reserves search, and search history. Browse search allows the patron to browse through the catalog through a number of qualifier options including title, author, subject, DVD title, Library of Congress call number, serial title, video title, series title, and music title.

Power search is similar to "Advanced Search" options that appear on many other search engine sites. It allows the user to combine multiple search elements through Boolean operators as

well as refine the search by limiting by location and collection. A-B Tech has four campus

locations that can be searched as well as several different collections including reference,

eBooks, eVideos, feature films (R-rated and non R-rated) Audio, Early College, juvenile, North

Carolina, periodicals, and new acquisitions. The search results can also be sorted by authors,

media type, title, and date (newest or oldest first). The course reserves tab allows the user to

search all of the course reserves available at the library either by course title or instructor name.

The search history page allows the user to view all recent searches that have been conducted by

the user during their current session.

EBooks can be accessed through the OPAC and also through the databases that are

available through the library's website. On campus, patrons can browse and check out eBooks

through the catalog and databases seamlessly through their computer. When off campus, students

and staff can log into the library's databases using their student identification number so that

they can access the eBooks and other electronic materials such as films on demand while they

are not at school. This is especially helpful to distance education students, a rapidly growing

section of A-B Tech's student population.

Conclusion

Cataloging itself has evolved a great deal since the inception of OPACs and the

introduction of ILSs. The act of accessing a library's holdings as a patron has improved

exponentially over time. Patrons today have the ability to see much of the information that the

librarian inputs into the system, as well as enjoy a more customized and user friendly search

experience. Locke Library at A-B Tech demonstrates several good practices for an ILS and some

that recognizably have been flagged for improvement. Technology has been a catalyst for this

improvement in cataloging and library services and should be consistently embraced, especially

in such cases as adding absent records into OCLC. Because of the information engaged society of today, it should be that all information is shared equally and globally. As the world ages, the number of resources and materials increases on a daily basis. Proper organization is essential so that the stored information can be retrieved and used by anyone that needs it, thus encouraging lifelong learning and advancing society one cataloged item at a time.

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