

# Kansas Library Association College and University Libraries Section Proceedings

---

Volume 4  
Number 2 *Libraries in Transition*

Article 6

---

2014

## Libraries in Transition: 21st Century Library Systems

Art Gutierrez  
*Emporia State University*

Earl Givens  
*Emporia State University*

Follow this and additional works at: <https://newprairiepress.org/culsproceedings>



Part of the [Curriculum and Instruction Commons](#), [Educational Assessment, Evaluation, and Research Commons](#), [Educational Leadership Commons](#), [Educational Methods Commons](#), [Higher Education Commons](#), [Instructional Media Design Commons](#), and the [Other Education Commons](#)



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](#).

---

### Recommended Citation

Gutierrez, Art and Givens, Earl (2014) "Libraries in Transition: 21st Century Library Systems," *Kansas Library Association College and University Libraries Section Proceedings*: Vol. 4: No. 2. <https://doi.org/10.4148/2160-942X.1046>

This Article is brought to you for free and open access by the Conferences at New Prairie Press. It has been accepted for inclusion in Kansas Library Association College and University Libraries Section Proceedings by an authorized administrator of New Prairie Press. For more information, please contact [cads@k-state.edu](mailto:cads@k-state.edu).

---

## Libraries in Transition: 21st Century Library Systems

### Abstract

Libraries are in a state of flux and the integrated library system (ILS) is no exception. In their quest to provide greater access to resources and remain relevant, libraries are somewhat driving this new innovation in systems. We need systems that provide greater interoperability and flexibility to provide a similar user experience that patrons are seeing online elsewhere such as Google and Amazon. This is where still developing cloud based systems come in. These new 21<sup>st</sup> century systems include OCLC's Worldshare Management Services (WMS). This looks at one 21<sup>st</sup> century library system and also share one library's migration experience.

### Keywords

integrated library systems, system migration, usability

KANSAS LIBRARY ASSOCIATION COLLEGE & UNIVERSITY LIBRARIES  
SECTION PROCEEDINGS: VOLUME 4, ISSUE 2 (2014)

---

**Libraries in Transition: 21<sup>st</sup> Century Library Systems**

ART GUTIERREZ  
Emporia State University  
Emporia, KS  
agutierr@emporia.edu

EARL GIVENS  
Emporia State University  
Emporia, KS  
egivens@emporia.edu

**Abstract**

Libraries are in a state of flux and the integrated library system (ILS) is no exception. In their quest to provide greater access to resources and remain relevant, libraries are somewhat driving this new innovation in systems. We need systems that provide greater interoperability and flexibility to provide a similar user experience that patrons are seeing online elsewhere such as Google and Amazon. This is where still developing cloud based systems come in. These new 21<sup>st</sup> century systems include OCLC's Worldshare Management Services (WMS). This looks at one 21<sup>st</sup> century library system and also share one library's migration experience.

Keywords: integrated library systems, system migration, usability

### **Libraries in Transition: 21<sup>st</sup> Century Library Systems**

Libraries are in a state of flux and the integrated library system (ILS) is no exception. We have seen many mergers and acquisitions during the last decade. Since 2007 (Bahr and Breeding) and assuredly years prior to that, there has been talk of the 21<sup>st</sup> century integrated library system or library platform as some are now being called. Libraries in their quest to provide greater access to resources and remain relevant are somewhat driving this new innovation in systems. We need systems that provide greater interoperability and flexibility to provide a similar user experience that patrons are seeing online elsewhere such as Google and Amazon. This is where still developing cloud based systems come in. These new 21<sup>st</sup> century systems include OCLC's Worldshare Management Services (WMS). This article will take a look at one 21<sup>st</sup> century library system and also share one library's migration experience.

Emporia State University is a small liberal arts college located in Emporia, KS with approximately 6,000 students. The William Allen White Library supports teaching and learning through instruction and providing access to a collection of over 700,000 items. The Library supports six campus resource centers and four off-site campus locations. The previous ILS was Innovative Interfaces, Inc, Millennium. The William Allen White Library utilizes the Dewey Decimal Classification System.

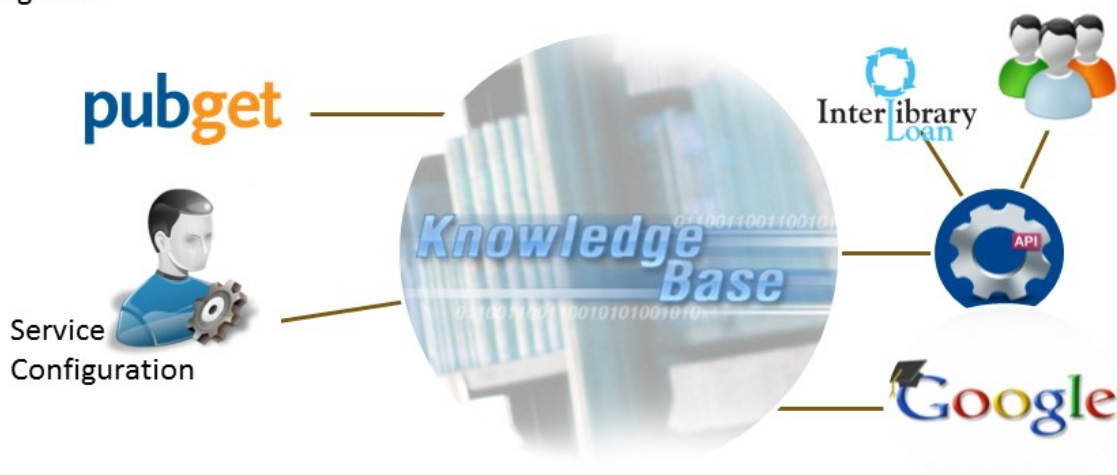
### **What is a 21<sup>st</sup> Library System?**

With the push to make more information available online electronic resources are the name of the game in a contemporary library. As stated by Marshall Breeding (2007) a twenty-first century integrated library system should manage digital collections in a more efficient manner. Enter Worldshare Management services by OCLC. WorldShare Management Services or simply (WMS) is an OCLC twenty-first century Integrated library system (ILS). This ILS focuses less on print materials and more on electronic content, its access, discovery, licensing and delivery. With the ability to take electronic resource management to new levels, WMS manages electronic content in several ways through one central location.

### **E-content and the Knowledgebase**

Within WMS all electronic content lives in one central location called the knowledgebase. Populated daily the knowledgebase gives more accurate results to patrons in a more efficient time frame. To see how this works let's examine the e-resource workflow shown in figure 1. The knowledgebase is initially configured and set up by the electronic resource manager or equivalent. During this process loan rules, OPAC statuses, locations and circulation policies are configured for the end user interface. Likewise the service configuration is where all electronic resource collections reside. Notice that all electronic resources are represented by collections. For example, the journal title 19th Century Music is located in a specific collection that the library either subscribes to or does not. There are many collections that contain this title. The electronic resources manager selects the appropriate collection that an institution subscribes to. An example of this would be the collection, Academic Search Complete. However, the institution may only subscribe to three hundred titles in Academic Search Complete which contains thousands of titles. Therefore, mediation of various collections selected is needed to provide accuracy of holdings to end-users. Enter pubget.

Figure. 1



Pubget, is a third party company that harvests holdings information for all subscriptions that an institution subscribes to. The holdings information is fed into the knowledgebase every twenty-four hours. The data harvested by pubget is populated into the knowledgebase. After the population process is complete, the knowledgebase connects with all the collections that are selected by the electronic resources manager. The knowledgebase then communicates with those collections and activates the appropriate journal titles that an institution subscribes to. This process provides accurate holding information for end-users as they navigate the discovery layer catalog. The knowledgebase not only provides correct holding information for users of library resources, it also gives permission reports to Google Scholar. The data disseminated to Google Scholar brings increased virtual visibility via institutional holdings and delivers information to end-users beyond a single institutional catalog.

Finally, the knowledgebase sends data to a custom Application Programming Interface or (API), which communicates with other OCLC services like Iliad for interlibrary loan. The custom API removes all of the bibliographic data not needed and only sends the end-user the information relevant to their request. The end-user can now see if the item they are searching for is owned by the library. However, if a copy of the item is not available then the item can be interlibrary loaned. If the patron chooses to interlibrary loan the item the API then sends the rest of the bibliographic information of the item searched to Iliad and auto-populates the loan request fields. This ensures that a patrons request has a greater chance of fulfillment based on the loan request form being completed in full.

The entire workflow process of the knowledgebase happens every time a patron sends a request for an item when doing a keyword search. This process takes less than two seconds to complete. The question is why this process is so much faster than a traditional library system? The answer is the days of federated searching are gone. A twenty-first century library seeks to deliver results and accurate information in the most efficient way possible. To increase speed of delivery a twenty-first century system must use a knowledgebase or its equivalent. Federated searching retrieves information from multiple databases. While this information is accurate the speed in which the results were delivered often frustrated users and pushed them back to their favorite search engines thus abandoning library services. The twenty-first century library system moves at the speed of Google and offers vetted content.

### **Our Experience**

The transition to WMS was preceded by an earlier transition to the WorldCat Local Discovery service offered by OCLC. At the time the library was looking for a discovery layer that provided a greater level of searching ability and a better experience for all of our patrons. The library compared many discovery layer products and based on the features and pricing that OCLC offered, WorldCat Local was the best option for our library. We had also considered switching to WorldShare Management Services at that time but were just not ready to migrate at that point. By migrating to WorldCat Local the library had the opportunity to experience the service OCLC offers and also get a first-hand experience using the knowledgebase, which is the tool OCLC provides to manage library resources.

The library in the initial stages of shopping for a new system focused on the functionality that best served our patrons and the library first and considered cost secondary. Upon adding cost into equation we could only feasibly consider OCLC WMS without increasing our current costs dramatically. In this time of declining budgets and OCLC WMS offering the functionality that we wanted the choice was very easy.

### **Timing**

A major factor influencing our decision to consider a new library system was the fact that our ILS server needed to be replaced. When considering the ongoing hardware and maintenance costs associated with hosting a server that really made a cloud based system very attractive not to mention downtime for ILS updates and server operating system updates. We were in the perfect situation timing wise to make a change and save the most money on hardware costs.

The use of WorldCat Local for a year resulted in positive feedback from the student body. The new display and search results screen went over very well with students. I also teach an Information Literacy course and for one assignment I instructed students to search using the online catalog and also WorldCat Local and then compare the two systems and let me know which one they preferred. Overwhelmingly they preferred WorldCat Local. This support for WorldCat Local was a positive factor in whether we should convert to OCLC's WorldShare Management Services.

### **Our Transition**

The training and migration process was completed using the cohort system that OCLC employs for migrating to WorldShare Management Services. This process involves meeting online with eight other libraries that were also migrating to WMS. We met once a week for two hours starting at the end of May and continued for almost three months. We also met with our migration specialist, typically, once a week online and as needed to ensure we met the milestones for the migration. The entire process lasted for a period of six months. The process could have been completed more quickly but our library chose to go live at the beginning of the spring 2014 semester. This time frame was chosen by the library in order to lessen any complications for our students.

The cohort model was intended to provide a built-in support system for all the libraries in the cohort and while it worked somewhat that experience was not as smooth as expected. I felt the process may have been more constructive if all cohort members were migrating from the same ILS. Our cohort consisted of at least two other ILS's other than Millennium. In addition, our library was somewhat ahead of the others as we had previously migrated to WorldCat Local the year before and that change was a main part of the migration that other libraries were dealing with.

Overall, the process went fairly well. We had ample time scheduled to complete our configuration documents and exporting our records from our legacy system went very well. We were able to work with our Implementation Coordinator to work through all the fields in the configuration documentation and also hear how others were handling these decisions during our weekly WebEx sessions. The actual exporting and loading of records went somewhat smoothly. We used the create list functionality in Millennium to create the different records groups and then exported them out of the system so we could ftp to OCLC. We did have one hang-up where a group of our records was not imported and that was not detected until later. This problem was on the library side and OCLC went out of their way to make sure this problem was corrected.

### **Successes**

Circulating our materials from a systems standpoint is the main goal so we can continue to provide resources for all patrons. I consider this to be one of the successes of the migration. What this success really means is that we were able to go in and configure loan policies and loan rules without any major problems. The approach that OCLC took to managing loan rules and policies was different and required more work but this was a project where you put in the work upfront and make small changes as needed from then on. We did run both systems concurrently for a short period while we sorted out the best workflows for our library.

Another success is the process of loading patrons. We were able to work with WorldShare Management Services and our campus IT department to coordinate auto updating of our patrons which is a functionality we had not previously had. This new functionality will allow a more seamless integration for our students and better overall service as updates are done three times each week.

Also, with the switch to a cloud based system we were finally done with tape backups. That should give you a hint as to how old our legacy server was. Knowing that are backups are being done online really provides some piece of mind for this system administrator. We also saved several hundred dollars a year not having to purchase backup tapes.

The searching experience in WorldCat Local was also improved. We now had all of our information in one system so we could take advantage of all the resources that OCLC has. This allowed for better search results as WCL was no longer “sitting” on top of our Millennium database, it was pulling from its native system. Our results were better and there were also changes to the record views in WCL which allowed for more control.

### **Work in Progress**

There are several obvious areas that are still in development and I want to point out the areas that affect our library the most. These have not been major problems but areas that have required the most change in our workflows.

The reporting in WorldShare Management Services is still a big work in progress and the biggest hurdle for us at this point. I do know that OCLC is working to develop this area. The problem with the current reports is they are mainly canned reports and there are so many they are hard to sort through. The other issue is that reports are not all accessible from one place. We may need to login to 2 or 3 different areas to pull everything together. Also, with canned reports we cannot produce these on demand they are for example only created on a certain day each week.

Cleanup of records is another challenge in WMS. The library made the decision to shift some books, 30,000 items approximately. The location needed to be changed manually for each item. This example illustrates why we need certain functionalities in our system. We need to be able to create reports on demand that show all items in a given location. We also need what our previous system called global updates where we could make changes to batches of records in a short amount of time. These functions allow us to provide the best level of service for our patrons.

In the area of serials we have stopped checking in our journals in WMS as we do not like the way this affects the appearance on the public side of the discovery layer. We have heard from other libraries using WMS that they have taken this approach as well. This could be an area where changes will be made and we will start using this functionality but at this point we are not. While not ideal this change has actually led to less work for staff.

The transition to a new library system was a huge change for our staff. As with any change certain individuals are impacted more than others and those impacted the most tend to be the ones most hesitant to change or the biggest critics. This is very understandable. We do however have to face the new reality and embrace it so that we can provide the best level of service for our patrons.

Getting our staff to transition to WorldShare Management Services in their daily workflows was a challenge. The way WMS works to some extent dictates the new workflows. For example, in the acquisitions module in WMS some of the traditional tasks our cataloger would complete needed to be completed earlier in the workflow which required us to move those duties to our acquisition staff. Changes like this can be stressful to staff as we not only change how you do something but also give you less or more work. Helping staff with these changes through training and identifying resources on best practices through the online support center is key.

### Conclusion

In conclusion, the decision to change to a new integrated library system or library platform is one of the most important any library can make. These systems impact everyone who works in the library and also most importantly impact library patrons. With patrons in mind there is never a good time to switch to a new system especially in this era of trying to provide access to library resources 24/7. We do however have to keep pace with changing technology so we can provide the best access and best user experience possible for our patrons. While there is still much work to be done to develop OCLC's WorldShare Management Services into the system we all want, we have to get involved by adopting these new systems and providing input. Advocating for the features and services our patrons need and want in these new 21<sup>st</sup> century systems is our responsibility.

### References

- Bahr, E. (2007). Dreaming of a Better ILS. (cover story). *Computers In Libraries*, 27(9), 10-14.
- Breeding, M. (2009). Next Generation Library Automation: Its Impact on the Serials Community. *Serials Librarian*, 56(1-4), 55-64. doi:10.1080/03615260802679028
- Breeding, M. (2007, November). It's Time to Break the Mold of the Original ILS. *Computers in Libraries*. pp. 39-41.
- Pace, A. (2009). 21st Century Library Systems. *Journal Of Library Administration*, 49(6), 641-650
- Yongming, W., & Dawes, T. A. (2012). The Next Generation Integrated Library System: A Promise Fulfilled. *Information Technology & Libraries*, 31(3), 76-84.