Web Services
Annual Report: 2016-2017

I. Web Development Projects
   A. Integration of QuickSearch

The Web Services Department contributed towards **advancing student success** and **enhancing our research and discovery mission** by helping to, customize, launch, and improve the new QuickSearch Service, which allows students and faculty to search across all our collections at once for relevant research publications. There were almost 1 million searches on the QuickSearch service in 2016-17, and nearly 100,000 visits.

QuickSearch is also **freely available to alumni and others throughout the state**, supporting our **Land-grant and flagship responsibilities** to support research throughout Arkansas.

Web Developer Dylan Hurd was able to integrate the QuickSearch service throughout our main website, and as customized versions for various branches and departments.

The University of Arkansas Libraries were the first to implement a new LibGuides integrated search tool which returned results from the Summon / QuickSearch service. Web Developer Dylan Hurd then shared that code with libraries throughout the world, which raised the profile of the Libraries and University throughout the international Summon user community.

“Very cool...” – Summon Product Manager

“I work at Michigan State University Libraries in Web Services, and have been trying to figure out how to set up the Summon custom search source for the LibGuides unified search.... Thank you for any help you can provide!”

“I would love to see the code! I’ve been trying to figure it out, but as a non-programmer its been trial and error for me, and the Springshare setup page is cryptic at best from my perspective. You guys are the first I’ve heard to have figured it out.” –[Buffalo State University]
“Thank you for your generous offer to share code for Springshare’s unified search with Summon. I’d love to take you up on that!” – [SUNY Geneseo]

“We’d love to get the code if you don’t mind....” [City University London]

B. Distance Learning Redesign
Web Services worked with Graduate Assistant Becky Menendez and Distance Learning Librarian Elaine Thornton to refresh the distance education portion of the website. Menendez and Thornton created the inviting, informative design as well as several updated video tutorials for the site; Web Services provided support.

C. Navigation Updates
The Web Development Group reviewed website statistics, site architecture, and best practices recommendations to redesign the main navigation and top “quick links” on our websites. Duplicate and little-used links were removed, while important student services were moved to more prominent positions.
D. Continued Branch / Site Updates
Web Developer Dylan Hurd completed the cycle of site updates begun in 2015-2016, with new, mobile friendly pages for Physics, Fine Arts, Chemistry and Biochemistry, Performing Arts and Media, and Index Arkansas. Special Collections is still a top candidate for redesign and we look forward to that project in 2017-18.
E. Help Page / Ask a Librarian
The Web Group also completed a total reworking of various help / Ask a Librarian pages in the past year. Contact information was merged with inviting new photos of service desks to provide a portal to all kinds and modes of research help. A new Research Consultation page and form was created to better advertise that service. A similar redesign is planned for borrowing and privileges information and for instructional services.

F. Special Collections Finding Aids
Dylan Hurd worked with archivists Katrina Windon and Amy Allen to improve and expand the XSLT (transforming style sheet) for the Encoded Archival Description finding aids produced by Special Collections. In addition to incorporating new XML fields into the transformed finding aids, Mr. Hurd was able to make several tweaks to allow large finding aids to process quickly. The group also devised a system for updating information about finding aids converted from older HTML formats.

G. Storage Project
Both Hurd and Juhl serve on the Storage Facility Software Committee, charged with recommending an inventory software solution to interface with library systems Sierra, Archivists Toolkit, and ILLiad. Initially, we spent several months working with a subcontractor who hoped to build such software from scratch. After this portion of the storage project was reconfigured, the group focused our attention on vendors with existing solutions.

A separate part of the Software Committee’s charge is to improve the requesting experience for users. To that end, we worked with Kathleen Lehman, Tess Gibson, and Lora Lennertz to reconfigure the requesting buttons in the library catalog. These additions allow us to use the ILLiad service to manage scan requests and the Sierra system to manage requests for physical items, thus leveraging the capabilities of each service.
Work continues on improving virtual browsing in the catalog.

H. Other Projects
The ScholarWorks Institutional Repository, launched in 2015, saw a 200% increase in traffic in 2016-17. Dylan Hurd assisted Scholarly Communications and Technical Services with XSLT help to cross-walk thesis data from one system to the other.

Mr. Hurd also helped to customize Digital Collections pages for several new collections: including Lives Transformed, the People of Southland College, Arkansas Extension Circulars, Governess Della Hottel, and Cyrus Sutherland: Architect, Educator and Preservationist.

Michele Gibeault surveyed students as to the preferred name for the LibGuides service. At the end of the academic year, the brand name “LibGuides” was changed to “Research Guides,” the more explanatory term preferred by students as well as other peer libraries.

Behind the scenes, Web Services has been working to replace older databases built on the MS Access platform with SQL, XML, or other options. To date, several small databases, such as the Faculty Tenure and Promotion Books and Student Folklore Reports have been replaced by XML files. The home-grown Hours database was converted to the Springshare LibCal system. Perhaps the biggest project to date was Mr. Hurd’s work on replacing the “Artchive” database of past and current exhibits with a SQL version, complete with a slick back end for adding and updating exhibit information. This part of the site receives a lot of interest so it is important that Public Relations and Special Collections staff can easily maintain and update it.

I. Changing Traffic Patterns
Overall visits to the library sites was up 1.8% in 2016-2017, and last year saw a continued decline in visits to the main libraries web site. At the same time, visits to other library sites, such as Digital Collections or LibGuides, grew significantly (by 41% and 52%, respectively). As the number of library sites grows, it becomes even more important that we maintain a consistent look and feel across the library web presence for users jumping from one resource to the next. The number of unique visitors grew markedly in the last year, in part we think due to the proliferation of mobile devices. Mobile traffic now makes up more than 13% of all website visits.
Campus Web Activities

Dylan Hurd, Beth Juhl, and Rachel Paul from Cataloging partnered with the campus Digital Design and Development team to work on metadata enhancement for university websites using schema.org ontologies.

Dylan Hurd is currently serving as a member of a forms working group that will be recommending a single online forms solution for campus. Mr. Hurd also participates in monthly campus webmaster meetings.
II. Electronic Resources
   A. New Resources

**North American Indian Thought and Culture**
With biographies, auto-biographies, personal narratives, speeches, diaries, letters, and oral histories, this database represents the largest compilation ever created of biographical information on indigenous peoples from all areas of North America. Covers publications 1784 – 2006.

**Met Opera on Demand**
This streaming service offers more than 575 full-length Metropolitan Opera performances, with more than 90 HD video performances as well as classic telecasts from the 1970s, 80s, and 90s and audio from radio broadcasts back to 1935.

**British Library Newspapers Part 1: 1800-1900**
This collection of 48 newspapers was specially selected by the British Library to best represent nineteenth century Britain. It includes national and regional newspapers, as well as those from both established country or university towns and the new industrial powerhouses of the manufacturing Midlands, as well as Scotland, Ireland and Wales.

This primary source collection documents the political side of the freedom movement, the role of civil rights organizations in pushing for civil rights legislation, and the interaction between African Americans and the federal government in the 20th century. Major collections in this module include the FBI Files on Martin Luther King Jr. and various protest campaigns.
**Historical Statistics of the United States**
Provides demographic, economic, social, and cultural statistics drawn from both U.S. government publications as well as others. Users may download tables in Excel or CSV formats and create tables with data merged from multiple sources.

**Versatile PhD**
Versatile PhD is an online resource that assists graduate students in discovering, consulting, and networking towards their future careers outside of academia after or while they are pursuing terminal degrees in humanities and other disciplines.

**Social Explorer**
Social Explorer is an online research tool designed to provide access to current and historical census data and demographic information. Includes US census history from 1790 to 2010, the American Community Survey (ACS) from 2005 to 2012, and more. (added with support from a History faculty member.)

**Dictionary of Literary Biography Complete Online (DLB)**
This collection of scholarly reference volumes provides more than 16,000 biographical and critical essays on the lives, works, and careers of the world's major literary figures from all eras and genres.

**B. Discovery and QuickSearch**
As mentioned above, there were almost 1 million searches on the QuickSearch service in 2016-17, and nearly 100,000 visits. The QuickSearch platform, Summon, saw several updates throughout 2016-17, several of which extended functionally related to Open Access. These include a new icon indicates when an article is Open Access and a filter to sort for freely available content. Since QuickSearch is open to anyone to search — not only current students, faculty and staff—these features provide real value to our alumni and to researchers statewide.
QuickSearch is driving traffic to the library catalog, as shown by a three-fold jump in catalog searches this year. Some of those searches are automated links between QuickSearch and the catalog but all of them show an increased ability to find our holdings no matter where they are described: in the library catalog, on a website, in ScholarWorks, or elsewhere.

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C. Use of Resources

Online library collections continue to grow in number and reach. While use data is still being compiled for 2016-2017, the preliminary figures indicate that the Libraries are on track to see close to 2 million items requested from library databases, with more than one-half million of those requests represented by ebooks. During 2016-2017, there were more than 10 million remote connections to library databases, ejournals, and ebooks, with undergraduate students by far the most active remote users.

Remote Use by Patron Type, 2016-2017

While large article databases popular with undergraduates, such as Ebsco, JSTOR, and ProQuest, dominated overall remote usage, it is noteworthy that more specialized research tools, such as Web of Science or ScienceDirect journals from Elsevier, are also frequently consulted from off-campus. Newer streaming media service such as Kanopy also see growing use both off-campus and on.
D. Electronic Resource Management (ERM)

The ERM (Electronic Resources Management) module on the Sierra system is designed to streamline the licensing, acquisition, and cataloging of electronic journals. ERM allows us to make our most expensive resources available more quickly and reliably, and to better assess the use of those resources in order to make the most of our materials budget. During 2016-2017, the Serials Department assumed most of the day-to-day responsibilities for running ERM, with Web Services moving into a more consultative role. Beth Juhl assisted with training a new Electronic Resources librarian in Law by providing one-on-one training as well as setting up a schedule of sessions covering different aspects of the system.

One ERM project completed in 2016-17 was a review of updates to the fixed fields in resource records. By adding new fields to track type of coverage and catalog load, statistics availability, load dates, and OpenURL settings, Serials staff was able to cease using external spreadsheets and move all management information directly into the Sierra system itself. Having resources on a set coverage load schedule provides a level of quality assurance with dynamic resources such as aggregator databases and prevents problem reports from patrons.

A goal for the coming year will be to begin to encode licenses once Serials is fully staffed.
E. Troubleshooting and Patron Support
Maintaining accurate holdings and links to our 80,000+ ejournal titles and 500,000+ ebooks is a daily challenge. As the online information environment becomes more complex, with industry consolidation and major vendor platform updates and migrations, links can fail, access can be denied, and holdings can be just plain wrong. During the past year, we introduced several updates to resolve patron questions quickly and to better communicate ongoing issues to all library staff.

1. LibAnswers Technical Services / Web Services Queue
Beginning in July 2016, we added a second LibAnswers “queue” for catalog, link resolver, Summon/QuickSearch, and other technical services or web error reports. Managing these problem reports in a ticketing system, rather than being bounced from one personal email box to another, allows us to quickly route questions to the staff member with the expertise to fix the problem. LibAnswers also gives us an archive of past issues to reference at renewal time or to aid in future problem solving.

At first, only the Web Services Librarian, Beth Juhl, and Mandi Smith, Head of Serials, were assigned privileges to review and answer “tickets.” Over the past year, several staff members in Serials and several catalogers have been added, as well as webmaster Dylan Hurd. Most recently, problem reports or suggestions concerning library websites were moved to this queue.

2. During 2016-17, 257 questions were answered on LibAnswers; of which Beth Juhl answered 194. Out of the total 257 questions, 193 were some type of Catalog Error report (usually online access / holdings or proxy issues), 33 were link resolver questions, and 5 were Summon (QuickSearch) issues.

Together with Mary Gilbertson, Cody Hackett, and Lisa Lindsey, Juhl gave a presentation on the use of LibAnswers for Technical Services departments at the annual Arkansas Library Association meeting in October 2016.

A question for the coming year will be which sorts of tickets should continue to be routed here and which should go into the new general UofA campus ticketing system from Cherwell. From a user perspective, it would be ideal to have all questions answering through the same general system, help.uark.edu, while for staff it is helpful to keep a local system with all our library customizations.

3. Systems Status Page
“Systems Status” is a new LibAnswers function introduced this year that allows us to post product issues and updates and to syndicate those updates to various pages. Beth Juhl set up this service in late fall 2016 and has since incorporated that module into StaffWeb as well as public-facing web pages. This service allows us to keep public and staff posted on ongoing technical issues without overwhelming everyone’s mailboxes.
### III. Integrated Library System

#### A. Sierra Updates and System Administration

During 2016-17, the Libraries installed 2 software upgrades and one operating system upgrade to the Sierra database from Innovative Interfaces. This "integrated library system" drives the acquisitions, cataloging, circulation, inventory, and many other aspects of library operations. Each release brings a number of bug fixes—but also new bugs—resulting in hours of work with Innovative staff to troubleshoot and resolve issues.

This past year saw the introduction of a web-based version of the Sierra staff client. While still limited to only 5 simultaneous users, Sierra Web shows great promise for staff working remotely on tablets and other nontraditional devices.

#### B. Mobile Worklists

The Libraries added a subscription to the new service, Mobile Worklists. Using this iOS app, staff can perform a number of functions in library stacks, without needing a full laptop / scanner setup:

- Scan a list of barcodes with the device’s camera
- Be alerted when a scanned barcode is not in the system
- Send the scanned barcodes as a batch to a list on Sierra.

The records in the list can then be manipulated, updated, etc.

- Work from a paging list in the app to pull needed volumes instead of printing lists off to paper.

User Services staff have made use of Mobile Worklists in a reference reclassification project as well as in shifting and cleanup projects. Anticipating much more use as part of the new high-density storage project, the Libraries ordered more iPad touches for the coming year.

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<th>Current status of library systems and apps</th>
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<tr>
<td><strong>EJournals and EJournal Platforms</strong></td>
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<td><strong>Find it! (360 Link)</strong></td>
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C. Distance Education Enhancements

A particularly satisfying effort completed in early fall 2016 was a combination of several projects to improve the requesting experience of our distant students. Those students enrolled in online classes who live at a specified distance from campus are entitled to have print items mailed to them. Unfortunately, this service was a bit clumsy from both patron and staff perspectives, as the requesting option was not fully integrated into the library catalog, where most requests tend to originate. Instead, patrons had to submit their requests on the ILLiad Interlibrary Loan system, which often meant that information had to be retyped from one system to another.

The Innovative Review Committee worked with the Distance Learning Librarian, Elaine Thornton, Head of Interlibrary Loan, Tess Gibson, and Director for Academic and Research Services, Lora Lennertz, to add a new pickup location, “Distant User – Send it to me.” This flagged requests to be pulled and sent to Interlibrary Loan for delivery to the distant patron. User Services, branches, and ILL collaborated on new procedures for this new “location.” Sherryl Faulkner-Robinson created new notices to alert patrons of these request statuses, and, as part of that project, reviewed all notice texts with Kathleen Lehman, updating many and deleting those no longer needed.

Additional enhancements to improve the user experience for both on-and off-campus users were the wording change from “Check Shelves” to “Available” for items available for checkout and the requesting updates described in section IG, above.

D. Proxy Server Changes

As more and more websites move to the secure https protocol, the Web Access Management (WAM) proxy server has required frequent updates to the secure SSL certificate on the Sierra web server so as not to cause “certificate mismatch” errors for patrons. The Libraries were up to almost 100 entries on our certificate with new hosts needed monthly. Fortunately, Innovative released a new proxy method which Beth Juhl, Cody Hackett, and Judy Robinson implemented in December 2016. This weeklong project required that all 750+ proxied domains, as well as URLs in the library catalog, Serials Solutions, LibGuides, and Blackboard needed to be reviewed and updated for https connections. The project was completed on time and, since converting to the method, the number of proxy / https issues has dwindled remarkably. Two vendors remain that present problems when connecting over a proxied connection.
E. Labels Printing and Print Templates
Beth Juhl and Elaine Roser worked with Serials staff to convert their label printers from balky old dot-matrix models to new Zebra label printers. The next phase of this project will be to implement thermal printers for spine call number labels.

Roser and Sherryl Faulkner-Robinson worked on a new print template for paging lists that includes the item barcode. They also worked with Kathleen Lehman to investigate emailed date due slips. Due to the limitations of the Sierra system, this effort was shelved after extensive testing revealed too many places where staff might accidentally email the wrong patron, or fail to print paper slips for those who desired them. We hope to implement a text-messaging solution for patron notices in 2017-18.

F. APIs and SQL RSS Feeds, Reporting
Dylan Hurd worked with the Sierra APIs and direct SQL queries to implement several new functions. New RSS feeds of recently added books are available for librarians to embed in their LibGuides. We are investigating this method for creating the entire New Books list in future.

Hurd also investigated Sierra APIs as part of the Storage Software team and as a potential process to automate catalog loads to Summon.

G. Network and Hosting
Changes to the campus network infrastructure have posed some challenges during 2016-2017. The campus move to private IP spaces and a router outage over the Labor Day weekend of 2016—in addition to the age of the 2 Sierra servers—have only increased out need to move the Sierra servers out of the library building. The Libraries are in negotiations to move our Sierra instance to a hosted environment, thus ensuring better redundancy and data backups in case of hardware failures.
IV. Personnel Notes and Accomplishments

Grants, dollars, publications, student growth, new faculty, new administrators, awards and honors

Juhl, Beth (Head, Web Services) is primary investigator on a $5000 Arts and Humanities Grant from the University of Arkansas. Martha Parker (Digital Services) and Joshua Youngblood (Special Collections) are co-investigators. The grant provides funds to develop a website and database of Arkansas election statistics.

Unrefereed Publications and Proceedings


Other lectures, Papers, and Oral Presentations


Other

Hurd, Dylan (Web Developer) participated in the annual Innovative Users Group “Hackathon” at the IUG annual conference in National Harbor, Maryland in April 2016. Hurd’s team developed a new book recommender and took first place in the competition.

Juhl, Beth (Head, Web Services) was elected to the Innovative User Group (IUG) Steering Committee. The IUG is an international organization of 1000 member libraries who use the integrated systems Sierra and Polaris. As one of seven members of the Steering Committee, Juhl will serve as a co-coordinator for the enhancements process and help develop shared member resources. Juhl is also serving as Secretary of the Arkansas Innovative User Group.