Chapter 5

Migrating Electronic Reserves to Springshare at PSU

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Penn State University Libraries developed an in-house electronic course reserves system in the mid-1990s to supplement traditional print reserves. As at many institutions at this time, the system consisted of a series of authenticated webpages outside of the library catalog that listed readings organized by course number. In 2000–2001, the library migrated to the Sirsi Unicorn integrated library system (ILS). While the ILS did not then offer an electronic reserves component, librarians and staff determined that electronic reserves could be offered through WebCat, the public catalog interface, using the native course reserves module used for print materials.

At the time, the ability to make reserves available through the online catalog rather than separate webpages, the integration of electronic reserves with traditional print reserves, and the single course/instructor search interface were seen as real improvements over the existing system. Simultaneously, Penn State University was introducing its first centralized course management system, ANGEL. The University Libraries were invited to partner with the information technology groups overseeing the ANGEL implementation to bring library services, including electronic course reserves, library subject and course guides, and online reference into the ANGEL courseware as seamlessly as possible.[1]

In 2015, the university announced that it would migrate its courseware platform to Canvas, since ANGEL would no longer be supported by its parent company, Blackboard, after October 31, 2016. Again, the University Libraries were able to collaborate with the Canvas implementation teams to more seamlessly integrate library services within the course management system.

Selecting an Electronic Reserves System

In ANGEL, electronic reserves were linked to course pages through a custom-coded, automated course/instructor ID search in the online library catalog's course reserves module, taking students outside of the ANGEL interface and into the library online catalog. While functional, it was less than ideal from a user perspective, and, because SirsiDynix Symphony (as the system was renamed) had no dedicated electronic reserves module, concerns unique to electronic reserves, like tracking copyright, had to be resolved outside of the system.

Our awareness of the university's search for a new course management system provided both an opportunity and a strong justification for migrating electronic reserves from our ILS to a dedicated electronic reserves management system. As Penn State was investigating alternatives to ANGEL, a library group was charged with investigating different electronic reserves systems, including Dokutek ERES, Ares, and Springshare. Although Springshare's E-Reserves was a relatively new product with little published assessment, we did finally select it on the basis of its

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intuitive user interface, robust LTI and reporting capabilities, and because we could easily integrate the Springshare E-Reserves module into the Springshare services that we already licensed, including LibGuides and LibAnswers.[2] In a course management system like Canvas, all three of these services could be integrated with each course page under a tab we labeled Library Resources.

Springshare E-Reserves Implementation

The first hurdle that we encountered when planning to migrate our current electronic reserves holdings to Springhare's E-Reserves system was that we were migrating from our ILS and not from another dedicated electronic reserves system. So, for example, citation information and reserve-specific information existed in separate records in our ILS. This required assistance from our library technology group (I-Tech) to help us correctly map item information, such as authors and titles, and course information, such as course numbers and instructor names, to the correct fields in E-Reserves. One decision made in 2000, when we implemented electronic reserves in SIRSI Unicorn ILS, proved especially problematic. Because electronic reserves records were shadowed in the online catalog and not retrievable through keyword searches, and to speed processing, we had decided to have staff record citation information other than author and title in a single MARC 500 field instead of breaking out publication date, year, place, and so on into different MARC fields. While Springshare E-Reserves does have separate fields for this information, we determined that trying to populate these fields individually during migration would be too difficult.

A second hurdle was the result of our decision to try to limit the number of electronic reserves records to migrate. In fifteen years, we had created more than 25,000 reserves records, some dating back to 2000, and did not want to migrate potentially thousands of records that were no longer needed. We had used semester/year codes to track when and how often electronic reserves were used, but these were recorded by staff inconsistently in free-text fields, making a determination of a "date last used" difficult. Instead, we filtered on the date the original reserve record was created, which was hard coded, and chose to not migrate anything created before 2005, reasoning that anything created more than ten years earlier was unlikely to still be in use. We quickly discovered that we were wrong and spent a frenzied few weeks manually migrating reserves records dating back before 2005 that instructors still needed.

Those localized issues aside, the tools and support that Springshare provides for migration made the process relatively seamless, and I strongly suspect that migrating from one dedicated electronic reserves system to another would have been simpler.

Supporting Two Course Management Systems

We successfully piloted E-Reserves in the summer of 2016 with a small number of our World Campus online courses that had already migrated to Canvas. This was done with the intention of fully rolling out Springshare E-Reserves for all courses the following fall. As the university's migration from ANGEL to Canvas was phased, however, we were faced with the issue of supporting electronic reserves service in both course management systems. Further, the university was also migrating its student systems software to a product branded LionPath, impacting our traditional course numbering format in such a way as to break the custom-coded, automatic search from ANGEL to our online catalog. This meant that we could not continue to support electronic reserves in ANGEL using the system we had been using for more than a decade. And because ANGEL was due to be fully decommissioned the following year, it was determined that any effort spent to develop an LTI solution to integrate Springshare's E-Reserves into ANGEL would be misplaced, leaving us to solve the problem of supporting our electronic reserves service in two different course management systems in two different ways. In the end, we decided to move fully ahead with Springshare E-Reserves implementation, using the LTI tools to integrate with Canvas, and providing direct links to E-Reserves pages to the remaining ANGEL users.

Integrating Springshare E-Reserves with Canvas—LTI

A more complete description of the LTI integration may be found in another chapter of this work, but, briefly, linking Springshare E-Reserves and LibGuides to courses in a CMS like Canvas relies on metadata tags associated with E-Reserves lists and individual course or subject guides and a tool called a "translation table" that maps those tags to information associated with course sections from the CMS. For many course or subject guides, a tag may match part of a course number, like PHIL for philosophy courses.

Many, although not all, LibGuides apply generally to broader subjects, again, like PHIL for philosophy courses. The PHIL tag can be used for a philosophy LibGuide because, unlike a reserves reading list, the study guide can be used by all philosophy courses, and the PHIL tag can be used every semester

since the general course numbers will always begin with PHIL.

For electronic reserves, the situation is more complicated in that different instructors may have different reserves reading lists even if they teach the same course. The custom-coded link originally created to integrate electronic reserves lists into ANGEL performed an automated search for both course numbers and instructor IDs, effectively matching two different elements of metadata to identify a specific course section. While it's possible to add multiple metadata tags to both subject guides and electronic reserves, updating and maintaining those tags, and the LTI mapping, for the large number of course sections at an institution like Penn State proved daunting.[3] Further, when we implemented Springshare E-Reserves and LibGuides, we discovered that the translation table could match only one element of metadata from Springshare to one element of metadata from Canvas. For E-Reserves, the single piece of metadata unique to a specific course and instructor is the section number (SISID), which changes every semester even if the course number and the instructor remain the same.

For LibGuides, the translation table map is a straightforward spreadsheet listing more than 14,000 active course section numbers in Canvas in one column, with each section number's corresponding subject designation—again, like PHIL—in a second column. Each LibGuide was tagged in Springshare with the subject designation, completing the link to each Canvas course page. While course section numbers change each semester, requiring a new translation table, the subject tags in Springshare would generally not require updating.

For E-Reserves, the map is an equally straightforward spreadsheet listing active course section numbers in one column and then listing these active course section numbers again in a second column, with each E-Reserves list tagged with the specific course section number, matching the identical number from Canvas, completing the link to each Canvas course page. Unlike with LibGuides, changing section numbers would require both a new translation table and updated metadata tags in Springshare reserves lists each semester.

In our first semester, one conflict became immediately clear: we were using one set of metadata tags (course number prefixes) for LibGuides and a different set of tags (course section numbers) for E-Reserves; yet, the translation table could match only one tag for each course. In practice, this meant for each of the more than 700 course sections with reserves reading lists, the E-Reserves link overrode the LibGuide link and blocked guides from appearing. For courses with electronic reserves, the only immediate solution was to add course section number metadata to both the E-Reserves lists and the LibGuides, resulting in a significant workload issue and multiplying the chances for error.

A more permanent solution was a translation table that matched on at least two metadata elements, the subject designations for LibGuides and the course section numbers for E-Reserves. We suggested this enhancement to Springshare in fall 2016 and, fortunately, Springshare was able to implement it in time for the following semester.

Moving Forward

One critical advantage Springshare E-Reserves offers over our previous electronic reserves system is the ability to extract actual use statistics for reserves readings, something we lacked previously. And although we don't have pre-Springshare numbers to compare, our number of page views for E-Reserves doubled from more than 65,000 in fall 2016, our first semester with E-Reserves, to more than 130,000 in fall 2017. Overall feedback from both students and instructors is largely positive, and having a suite of library services under the same umbrella and incorporating the same tools, like LTI integration, simplifies management and offers a consistent interface for staff and users.

Springshare E-Reserves offers additional functionality that we continue to explore. A configurable online request form is available but not currently suitable for our needs. The University Libraries offer electronic reserves service at all twenty-five Penn State campuses, and our workflow is distributed, so that some E-Reserves processing is performed by campus staff. Our current request forms allow us to direct requests to the appropriate campus automatically, a feature not currently available in Springshare. More intriguing, too, are tools that would allow us to track the status of requests and, perhaps, more closely collaborate with other university partners, such as instructional designers working in different colleges, by giving them access to Springshare. And Springshare's copyright management features suggest possibilities for streamlining our current processes. Overall, however, we feel this implementation has been successful, and we look forward to other opportunities to bring library services and content to our students.

Notes

1. Britt Fagerheim, Kacy Lundstrom, Erin Davis, and Dory Cochran, "Extending Our Reach: Automatic Integration of Course and Subject Guides," *Reference and User Services Quarterly* 56, no. 3 (2017): 180–88, http://dx.doi.org/10.5860/rusq.56n3.180.
2. Fagerheim et al., "Extending Our Reach."
3. Fagerheim et al., "Extending Our Reach."