INTRODUCTION

In the late 1990s, integrated library systems (ILS) managed the ordering, invoicing, and cataloging of e-resources that libraries purchased or accessed freely on the Web. At Kansas State University (K-State), once negotiations for an e-title were completed, it followed a path similar to its print counterparts: a bibliographic record was imported into the ILS and readily displayed “on order” or “in process” in the online catalog. Additional notes about the title might be included in nondisplaying fields in the holdings, bibliographic, or acquisitions records where resourceful staff might discover that information by looking in the staff clients of the library system. However, tracking the licensing process with a vendor or publisher and providing up-to-date, readily accessible information to staff—from initiating contact to negotiations to license terms to activation—was much more elusive.

Although not sacred, licenses for e-resources at K-State are filed in a cabinet located in the libraries’ administrative office, not too far from the individual who negotiates the agreements. The cabinet holds hundreds of folders organized by publisher. Each folder contains printed e-mails, hand-scrawled notes, multiple iterations of marked-up licenses, copies of invoices, and more. The majority of licenses in that cabinet are either completed files or canceled titles. One section contains a few long-term-pending-these-aren’t-going-anywhere items. Access to information in that file cabinet is available to those who might need it—collection development staff, subject librarians, acquisitions and cataloging staff—but it is far from convenient.
By the mid-1990s, K-State had been dealing with e-resources for a number of years, and a variety of individuals were part of the process. Collection development staff and subject librarians selected the resources. An Electronic Resources Coordinating Team determined technical requirements for CD-based databases when that format was prevalent. Team members recorded product information in the license folder and later installed the databases on stand-alone computers or on the few networked computers that existed in the libraries at that time. Technical services staff purchased, cataloged, and provided access to the items through the online catalog and the Web. Licensing seemed haphazard and in a few cases was performed by staff with little formal training and no signing authority. It became clear that this process was not the answer.

Licensing activities were consolidated in 1997 into the hands of the head of technical services in an attempt to formalize all processes and ensure that invoices and renewal information ended up in acquisitions rather than in a subject librarian’s mailbox.

**THE PAPER TRAIL**

The availability of free-with-print e-journals and the advent of “big deal” packages created a flood of paperwork and an ongoing barrage of questions from staff about activation of and access to e-resources. As noted in a workshop given by Emery and Ramirez at North American Serials Interest Group (NASIG) in 2001, “responding to questions and problems related to licensing agreements can become overwhelming.”

Requests from subject librarians and general reference staff to add links to increasing numbers of e-journals drove the need to provide up-to-date information to staff. The paper trail prohibited easy access to updates about titles in the e-resources process. There was no easy way to keep everyone aware of the status of each title.

The licensing coordinator realized that the same questions were repeated time and again:

- Had the publisher/vendor been contacted?
- Were there sticking points in the license that required negotiation or compromise?
- Was the vendor or publisher responding to e-mails?
- Had activation information been received and acted upon?
• Had information been forwarded to acquisitions? To cataloging?
• When would the title appear on the A-to-Z Web pages?
• Could articles be interlibrary loaned? Used in course reserves?
• What volumes did the library have access to?
• Why wasn’t my title accessible yet?

License processing for e-resources began, ironically enough, with paper forms. Collection managers developed “add e-resources” forms for subject librarians to complete when requesting a new resource or adding “e” to an existing title. Questions on the forms included not only justification for purchase of a resource but also the title or package and publisher information, cost, hardware and software requirements, and vendor contact information—the type of data that might be useful to share for future purchases from the same publisher/provider or for maintenance issues. Subject librarians submitted the forms and included copies of the license in a folder that, once approved by collection management staff, traveled to the license coordinator.

The license coordinator reviewed and negotiated changes to the license and worked out the invoicing details. Once those issues were resolved, the folder traveled to the acquisitions librarian, who created a purchase order and paid the invoice (if necessary). The serials cataloger was the last in line to deal with the license information. Both acquisitions and cataloging staff had to sift through the paperwork to verify the titles included in a particular package and the conditions of the agreement in order to record notes in the purchase order or in bibliographic or holdings information.

Sharing information with a wide variety of individuals—who had legitimate reasons for wanting status information—was impossible. The only record that existed, at least until order information was routed to acquisitions or cataloging, was in the license folder. Pending titles sat on the license coordinator’s desk awaiting resolution of licensing negotiations and activation information. In-process items were either in acquisitions or in cataloging, and until a holdings record was created no one knew the status of a particular item. Details of the license other than number of simultaneous users, which were added to the bibliographic record in a public note, were buried. Interlibrary loan (ILL) data was coded in the holdings field (MARC 008), where only catalogers would know to look for it.
THE HOMEGROWN CONTRACT DATABASE

When the head of technical services left K-State in 1999, problems with the paper trail were already evident. The libraries’ associate dean assumed responsibilities for licensing and formal discussions began regarding creation of a database to track the status of e-resources and to maintain licensing information. The E-Journal Title Database, known in-house as the “contract database” (or affectionately as the “conDB”), was created.

The associate dean wanted a resource that staff could use to find the answers to questions about the status of a particular product or title. The dean had grander plans than a simple Excel or Access database sitting on the libraries’ local area network. K-State was a member of a statewide group involved in consortial purchases. The dean envisioned a Web-based database where individual institutions could enter their own metadata and share appropriate information. Rather than duplicating information regarding publisher packages and titles, data applicable to all institutions could be maintained in one centralized database and institution-specific data could be entered by multiple users from multiple locations across the state. Staff at all institutions would access and edit the database through a Web browser and could see, depending on their level of access, a wealth of information about a particular title.

In 1999, no vendors provided a product that stored licensing-tracking information and the licensing details that we envisioned sharing with our own staff, let alone across multiple institutions. Electronic resource management (ERM) systems were not visible on the horizon as ILS vendors were focusing on digital library modules, federated searching, and link resolvers. Subscription agents were recording information regarding print-plus-online availability but had limited licensing information. A 1999 presentation at NASIG by John Blosser of Northwestern University suggested that vendors could be the middleman and provide this type of value-added service to libraries. Phillip Neie and Heather Steele of Swets Blackwell noted the changing role of subscription agents in their 2001 NASIG presentation—changes that included licensing support and increased information management regarding e-journal options. So what was a library to do? Create its own in-house version of a system that would track licensing
information in a Web-based environment so that data could be accessible at any time by anyone.

**PARTICIPANTS IN THE DISCUSSION**

There were a number of stakeholders involved in the discussions about data elements that would be needed in the contract database. Conversations were held informally with individuals rather than in a group at the licensing coordinator’s discretion. Collection management staff and subject librarians were consulted to identify information that should be recorded beyond those already included on the libraries’ “add e-resource” form. The serials cataloger, who found the paper processes cumbersome and time consuming, wanted a one-stop shop for title and holdings information, access method (purchase or free), restrictions on access, and other information that would be reflected in the bibliographic record for the online catalog and/or on the e-journals or databases Web pages. Interlibrary Services staff wanted ILL data at their fingertips.

**THE DESIGN**

The Oracle-driven database is designed so that contract information can be created at the package (e.g., JSTOR), platform (e.g., SilverPlatter), publisher (e.g., American Chemical Society), or individual title level. The package option allows the administrator to enter all titles within a package at one time. A separate contract or “holdings” information is then created at the package level. Conversely, the “add new title” feature provides a way to either create an individual publisher record or to link to an existing one. Once the title record is saved, its contract record can be created. K-State chose to use the latter method sparingly, often opting to add a package record even when adding access to only one title from a given publisher.

The advantage of entering data by package is obvious. It is keyed only once when it applies to all subscribed titles from a given publisher. Many publisher sites provide title lists, which may be copied and pasted directly into the title entry form, minimizing the potential
for typographical errors. Adding new titles to a package is simplified since the publisher data already exists.

However, publisher subscription models have changed over the last few years and this highlights one of the drawbacks of the database design. There is no visual way—at the package record level—to easily distinguish free and paid-for titles within a given package, to denote the status of new titles added, or to reflect titles that are backfiles only versus current or rolling issues. A logo—in our case, K-State’s mascot—is used to denote that a title or package is in or has completed the licensing process, whether an individual title has specific contract information or whether the contract applies to all titles. The user must click on the logo to retrieve the contract data to determine the status and license aspects of a specific title. Public notes on the package level contract (usually used for e-journals by publisher package) provide information about titles that are paid for, titles that are backfiles only, or other holdings-related information. Title-specific contract data is generally provided only on records for aggregator databases, such as SilverPlatter or Gale products, where each title may have been licensed for a different number of simultaneous users.

The database may be searched by individual title, package title, or publisher, or browsed in an A-to-Z listing by package or by title. Search results for the individual title retrieve all associated package level records when applicable so that identification of a particular title is easy. Unlike other homegrown systems, such as Penn’s ERLIC, there was no intent to use the contract database to generate a public A-to-Z list.

**ELEMENTS USED IN THE DATABASE**

Remarkably, many of the data elements chosen for use in K-State’s contract database reflect standards that have emerged from the work of the Digital Library Federation Electronic Resource Management Initiative (DLF ERMI) in recent years. The database does not contain the level of specificity of metadata that can be reflected in vendors’ ERM modules, but it does contain free-text space in the generic “contract notes” and “administrative notes” fields.

Package and title level data include the option of providing an abbreviated title or acronym, publisher data, linking to addresses, e-mails,
and phone numbers, and a link to a publisher homepage or an informational URL. The addition and deletion of titles is done at the package level. When a package is retrieved, all titles associated with the package are listed. Had the database been adopted by the state consortia members, titles held by their institutions would be denoted by their own logos.

Both package and individual title level contract records include fields for data such as maximum users and licensor—with links to that body’s contact information as well as information about access method (Web, locally mounted, etc.)—in addition to contract status (pending, in process, completed). There are check boxes to reflect canceled titles and fields to enter effective dates of cancellation or information about whether print is required.

Each contract record includes a drop-down menu to simplify keying of ILL information. A free-text field provides space where information is recorded regarding use for electronic reserves, coursepacks, or restrictions on ILL.

There are also free-text fields for public notes, contract notes, and administrative information, the latter two viewable by appropriate staff. The public notes field has been used inconsistently. Frequently, it is used to record changes to a package, for example, that title X is no longer part of package Y, or that certain titles are no longer free. The notes field might also be used to indicate problems with access to a resource, free-with-print status, or a decision regarding subscription options.

Separate data elements are provided to record a publisher Web site’s administrative client username and password. These fields are not repeatable, so additional usernames/passwords are recorded in the free-text administrative notes field. This field might also include usage statistics availability, account numbers, customer numbers, or invoiced-by information. The name and contact data for a customer representative or for technical support is occasionally recorded in this area even though separate data elements exist for this purpose.

The contract data field is entirely free text and has not been heavily used except to record information about packages or titles that are not free with print. Information on multiyear contracts and cost information, termination clauses, breach remedies timeline, and perpetual access may be recorded in this notes area.
One unique data element requested by cataloging staff was a package code. Catalogers recognized that change is a constant in the serials and e-worlds and that bibliographic record maintenance would be a nightmare in large packages. The idea of retrieving one title at a time to update URLs, to suppress Web access information, or to make other changes was not acceptable. Therefore, catalogers wanted an easy way to retrieve all titles associated with a package. A code is assigned and input into each package record and into all bibliographic records for titles licensed by the publisher. The code is a clickable link in the package contract record, which performs a canned search into the library’s online catalog. Integration with the cataloging and acquisitions modules has not been possible so the code must be keyed separately into those clients and repeated there. Nonetheless, the code has been deemed invaluable by everyone involved in bibliographic record maintenance and verification of e-journals. Recently, catalogers began inputting the OCLC record number into this field for titles entered at the individual title level.

**ADMINISTRATIVE FEATURES**

The contract database’s administrative section allows the administrator to add and edit users, and provides four levels of access from view/edit/input all to view public-only information. The design allows appropriate individuals to see and edit information for their own institution or to view everything except administrative (username/passwords) and contract data.

The administrator may also add and edit publisher data, contact information, and institutions data. Additional access types and ILL conditions may be added to the existing drop-down menus by the administrator.

Reporting features were deemed essential for e-resources maintenance. Five reports were designed:

- Packages with associated titles by institution
- Packages by holdings status (pending, in process, completed) for each institution
- Packages by contact name
- Packages requiring that print subscription(s) be maintained
- Packages by package code
The most useful of these has been the holdings status report, which is generated once or twice a year to follow up on pending or in-progress packages.

**ENHANCEMENTS LIST CREATED**

Within a year of its inception, individuals using the contract database identified a number of fields that would enhance the usefulness of the database. The requested changes included information that was hard to find in the ILS or was included in the administrative or contract notes field as free text in the database. Placing this information in distinct fields would allow the generation of useful reports. The enhancements list included the following: purchase order number, renewal date, cost for online (a yes or no checkbox), invoiced through, and customer or subscription number.

As staff gained more experience with issues surrounding e-resources, the need for additional reporting capabilities was recognized. Reports that would aid collection development required fields such as denoting print-plus-online titles, free-with-print titles, backfiles purchased, perpetual access, and multicampus or single-site access. The ability to link a scanned license for each package was also added to the enhancements list.

A number of events impacted our intent to pursue enhancements to the contract database. The programmer who created and maintained the database resigned in late 2002. A serials acquisitions specialist with programming experience expressed an interest in assuming responsibilities for maintenance and enhancement. Then Endeavor Information Systems announced Meridian, its ERM system, and the decision was made to shelve any development of our own homegrown system.

**LESSONS LEARNED AS WE MOVE INTO THE FUTURE**

The contract database’s accessibility by any staff member from any computer with Internet access reduced the number of simple, routine questions routed to the licensing coordinator and serials librarian. Catalogers, collection development staff, and staff in Interlibrary
Services agree that the contract database is a lifesaver. At the same time, they admit that it has its limits and is far from perfect.

As used at K-State, the homegrown contract database provides very basic information about individual titles and publisher packages. Beyond listing titles that are part of a specific package, it contains minimal licensing details on free-with-print titles. It does a slightly better job on those titles where cost is involved. The database serves as a useful starting point to deal with questions regarding licensing status of a given title or publisher. It is regularly consulted to determine ILL rights, to troubleshoot access problems to e-journals and databases, to activate new titles via an existing licensed publisher or platform, and to shed light on invoicing questions.

K-State will prepare for the installation of Meridian in fall 2006. We anxiously await implementation and hope to utilize some of the existing data in the contract database to populate the ERM system. The value of our experience with a homegrown contract database cannot be overstated. As more of our subscriptions for online access move to a paid model, we recognize the need to include more specific data about those titles to have ready access to information about renewal dates, termination rights, breach clauses, holdings data, perpetual access, and more in addition to ILL data. Populating licensing data in the ERM will not be effortless, but it certainly will be a more straightforward process because we understand what information is necessary to allow us to do our jobs more effectively and to provide timely responses to questions from library staff more efficiently.

NOTES

4. The terms “package,” “platform,” and “publisher” are used interchangeably throughout the rest of this chapter because they refer to similar entities.