# SCELC's Consortial Approach to Electronic Resource Management

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SCELC is the Statewide California Electronic Library Consortium, a nonprofit organization comprised of 96 private academic and nonprofit research libraries across the state of California. Founded in 1986, SCELC grew rapidly over the past 10 years, more than tripling the number of member libraries, and exponentially increasing the volume of licensing business with publishers and vendors of library electronic resources. Due to its volume of licensing activity, SCELC's total pass-through subscription revenue has more than doubled what it was just two years ago.

With this growth came the need to manage SCELC's many electronic resource subscriptions and purchases. Working with more than 40 vendors and over 750 different iterations of their various databases and other products became increasingly complex. The number of transactions grew from a few hundred to over 3500 per year. Much like a subscription agent has to manage multiple titles for multiple clients, SCELC was faced with the challenge of doing the same in the electronic resource environment.

Most library consortia go through an initial phase of coping with their business information by creating spreadsheets and managing all communication and billing via email, based on the information contained in those spreadsheets. Spreadsheets are inefficient however, as one repeatedly has to enter redundant information (library name, instructional FTE, IP ranges, etc.) and to create multiple types of spreadsheets with different formulas to accommodate the variety of pricing models presented by the vendors. Often vendors with multiple products will have different pricing models for different products, requiring multiple spreadsheets for the same vendor.

As the organization grew, SCELC was becoming mired in too many spreadsheets and multiple mail merges with Microsoft Word in order to create invoices. The system was too cumbersome, and early on SCELC identified efficient management of our business information as key to our future success. A Request for Proposal to build a relational database was submitted, and FileMaker Pro

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software chosen as the platform on which to build this database. FileMaker Pro runs on both Windows and Apple platforms, allows relatively easy publication of data and forms onto the Web, and provides tools to create attractive and user-friendly interfaces. Several programmers were interviewed and two hired. These are the owners of Biscuit Technologies, an information and graphic design company based in Los Angelses which, under SCELC's guidance, created SCELC's internal operations database, known as "WISDOM." Their artistic inclination was significant, because it enabled them to create an interface that is not only very functional but also aesthetically pleasing and very easy to use.

Using SCELC's WISDOM database as an example, what are the key ingredients to an effective consortial information management system? WISDOM's design divides the database into the following components, all of which are linked, interact with one another, and drastically reduce the need to input redundant information:

- Membership
- Vendors
- Databases
- Subscriptions
- Contacts
- Invoices
- Reports

Briefly, here is what each component provides:

**Membership**: This component tracks current and past subscriptions/purchases, institutional data, and a history of all invoices issued to that institution. A key element is the institutional or "member" information, which includes contacts, FTE (Full Time Equivalent) enrollment figures, budgets, and IP ranges, (for access to online electronic resources). WISDOM also tracks which integrated library system the library uses, other types of FTE (i.e. Science FTE, which is used by some vendors to determine price), degrees issued, etc.

**Vendors**: This component covers vendor information, which includes contact information, essential license information and links to our Electronic Resource Management (ERM) system. It also contains the names of all the electronic resources available from that vendor, providing a hierarchical linkage of one vendor to many resources.

Databases: The term "database" is used to refer to our electronic resource subscriptions and purchases, as the majority of our transactions are for subscriptions to online databases. In this component, Databases link back to the their parent vendor, but, when needed, this link provides direct access to information about the databases without having to go through the extra step of accessing the vendor section. In addition to listing all subscribers to a database, this is where you will find product information such as the URL for access, whether it is a purchase or a subscription, subject coverage, whether there is any linkage to print (as in many e-journal offers), product descriptions, title holdings, etc. A third section covers database pricing, and this is a key component of the system. This is where cost model information resides. Cost models can be based on various FTE-based models, concurrent user models, or a variety of other approaches. WISDOM currently stores 19 different cost models. These models link to information stored in the Members section about each institution, so that pricing can be quickly and automatically calculated for a particular offer, eliminating the need to enter a cost for each subscriber. This does not always work, however, as many offers lack a specific cost model. In that instance, a "custom quote" cost model is used. Finally, a section in the Database component allows identifying all the subscriptions processed for a specific database in a particular year.

**Subscriptions**: This component lists all current subscriptions, provides quick access to creating a new subscription, and another path to the Database screen, where you can renew numerous subscriptions with one click.

Contacts: This component provides fast access to both member library contacts as well as vendor contacts, providing a full contact management system. Check boxes are provided for identifying a contact's specific job role in relation to their work with SCELC, which is utilized in a number of ways. For example, if a contact has the role of principal responsibility for invoices and billing, WISDOM will automatically address the invoice to that contact. Likewise, many of the screens (Database, Vendor, and Member) provide a quick email tool to send messages to all contacts holding a particular job role.

**Invoices**: This provides fast access to viewing specific invoices for each institution and the status of those invoices. (That is, whether the invoice has been printed or exported for delivery to the institution.).

**Reports**: Divided in three sections, Member Reports, Vendor Reports, and Administrative Lists, these reports produce a variety of information. For example:

- 1) Vendor Reports: One example is when a new resource is first offered, an order form can be generated, which is then distributed to our member libraries. When the order forms are returned, data is entered in the Database component for the subscribing member libraries. A Database by Vendor report is run and the results sent to the vendor for processing all the orders.
- 2) Member reports: Other reports help maintain internal consortial governance, such as committee rosters, Board rosters, and members contacts. A particularly useful report is the Institution Savings report, where for a given institution in a particular fiscal year, one can instantly compute and print a list of their SCELC subscriptions and their net savings versus having ordered those resources direct at list price (Fig. 1). Other most oft-used reports are the IP range and FTE reports, which are regularly provided to vendors when an offer is initiated so that costs can be calculated and trial access established.
- 3) Other reports include a list of all the current cost models, an aged receivables report, other cost comparison reports, and many more.

ings Report - Library X							
Database Provider	Database Name		ELC Cost	List Price	Net Savings		% Savings
Provider A	Provider A - Database 1	\$	938.00	\$ 1,208.00	\$	270.00	229
Provider B	Provider B - Database 1	\$	250.00	\$ 340.00	\$	90.00	269
Provider B	Provider B - Database 2	\$	5,792.00	\$16,156.00	\$	10,364.00	649
Provider B	Provider B - Database 3	S	4,736.00	\$14,290.00	\$	9,554.00	679
Provider B	Provider B - Database 4	\$	240.00	\$ 300.00	\$	60.00	209
Provider C	Provider C - Database 1	\$	630.00	\$ 700.00	\$	70.00	109
Provider D	Provider D - Database 1	\$	139.10	\$ 214.00	\$	74.90	359
Provider D	Provider D - Database 2	\$	408.38	\$ 544.50	\$	136.12	259
Provider D	Provider D - Database 3	\$	206.25	\$ 275.00	\$	68.75	259
Provider D	Provider D - Database 4	S	226.88	\$ 302.50	S	75.62	259
Provider D	Provider D - Database 5	S	124.80	\$ 192.00	S	67.20	359
Provider D	Provider D - Database 6	S	268.13	\$ 412.50	S	144.37	359
Provider D	Provider D - Database 7	S	107.25	\$ 165.00	S	57.75	359
Provider D	Provider D - Database 8	S	321.75	\$ 495.00	\$	173.25	359
Provider D	Provider D - Database 9	S	107.25	\$ 165.00	\$	57.75	359
Provider D	Provider D - Database 10	\$	353.93	\$ 544.50	\$	190.57	359
Provider D	Provider D - Database 11	\$	196.63	\$ 302.50	\$	105.87	359
Provider E	Provider E - Database 1	S	389.58	\$ 500.00	S	110.42	229
Provider F	Provider F - Database 1	S	8,905.00	\$ 9,894.00	S	989.00	109
Provider F	Provider F - Database 2	\$	35,442.00	\$35,442.00	\$	-	09
Purchase							309
	Provider A Provider B Provider B Provider B Provider B Provider B Provider C Provider D Provider E Provider F	Database Provider   Database Name	Database Provider   Database Name   SC	Database Provider   Database Name   SCELC Cost	Database Provider	Database Provider	Database Provider

Figure 1: Sample institutional savings report exported from WISDOM (all names have been changed for confidentiality).

WISDOM also provides the basis for SCELC's billing system, as noted in reference to the Invoices component above. SCELC has no central funding, so the majority of its operating budget comes from a 5% surcharge on most subscription

transactions. Since WISDOM contains all the data for a member and their subscriptions, surcharges are easily calculated for each member. A "master renewal" invoice is generated for the beginning of each new fiscal year, where each member is billed for their past year's subscriptions at the past year's rates. In place of central funding from an external source, the master renewal payments are placed in a bank account where they earn interest until expended on the subsequent year's subscriptions. The libraries only pay for any incremental increases in the subsequent year, having already pre-paid for their SCELC acquisitions. In addition, the interest earned on those payments that were deposited is considerable, and is used to provide further member benefits. This entire billing system is administered very effectively by the WISDOM relational database, and to date has enabled SCELC to operate from a very sound financial basis without having to seek central funding elsewhere. In addition, our WISDOM master renewal billing system provides each library an annual summary of all their SCELC commitments, and eases the effort they have to make in order to budget annually for their electronic resources.

As noted above, the SCELC billing system results in some interest income being generated, which is in turn allocated to additional member benefits. This past year SCELC partnered with a major library vendor, Serials Solutions, to create a consortial ERM system. SCELC covered the cost for purchasing the consortial ERMS for all SCELC member libraries.

### The SCELC ERM System

Why an ERM system and what does it do that the internal WISDOM database does not? Principally, WISDOM is an internal system containing a wealth of information on our members, vendors, and resource offers. For security and privacy reasons, that data is kept internal for SCELC administrative use. However, there is information contained in WISDOM that can and should be shared with our members, as well as specific license information that the libraries and their end users need to know that is not stored in the WISDOM database.

Thus, SCELC has worked in partnership with Serials Solutions to develop a system that provides specific information on each license, its terms and conditions of use, and which members in SCELC are subscribing to a particular vendor's products.

Essentially, the ERM system does the following:

- Displays member subscriptions for various vendors' products, so that the ERM system serves as a rudimentary collaborative collection development tool for member libraries
- Serves as a ready-reference tool for member librarians to view which products are offered through SCELC
- Provides a means of meeting vendor requirements for publicizing to end users the terms and conditions of their licenses

SCELC chose to use Serials Solutions for its ERM system (now renamed "360 Resource Manager" but referred to in this paper as the Serials Solutions ERM system) because it is a hosted option requiring very little configuration and administration. It was only a matter of three months subsequent to the date the ERM system was purchased that it was implemented! This quick implementation cycle is what distinguished the product for SCELC, as it enabled rapid deployment to the members without any local configuration or staff time. The downside to such a turnkey solution, however, is that SCELC is dependent on Serials Solutions for any customization, and the development cycle for meeting SCELC's "wish list" for features does not necessarily coincide with Serials Solutions' priorities.

# Overview of the SCELC ERM System Functionality

The ERM system provides a number of tools for managing electronic resource data, including Contact management, License management, Notes management for incident reports, Vendor statistics management (still under development), and Alerts management, as illustrated in the screenshot of the ERM system "home screen" below (Fig. 2). In addition, the ERM system provides direct access to Serials Solutions' powerful AMS (Access Management System) for tracking individual electronic journal titles, in which database those titles are held, and direct links to the license terms for those titles. This also includes powerful collection development tools, such as overlap analysis for comparing electronic resource content between similar products. The ERM system also provides a snapshot view of the total holdings, unique titles and databases in the consortial database.

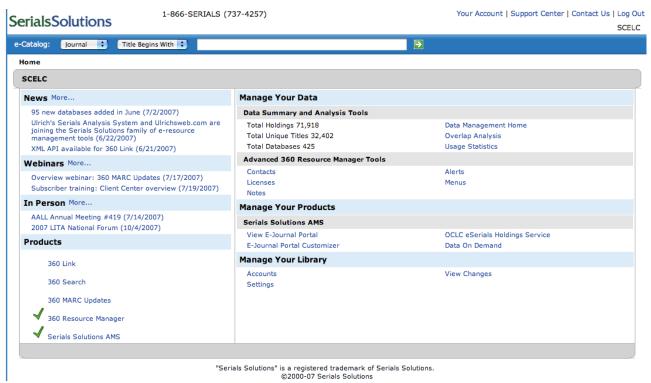


Figure 2: "Home Screen" for the SCELC ERMS.

## Data Management in the ERM System

At a glance, the ERM system displays each database in alphabetical order, with a notation as to the subscription status of the particular database, the provider (publisher/vendor) of the database, and the number of titles held in the database (Fig. 3). When a particular database is selected, the specifics of the license status are presented. Licenses are entered into the ERM system in a hierarchical relationship, where most licenses are entered at the provider (publisher/vendor) level. The license status (subscribed, trial) is also displayed here.



Figure 3: Overview of library databases.

#### Individual License View

The screen below (Fig. 4) provides a single provider license view, and the panel on the left links to quick access to various levels of detail about the license. In addition, as noted above, the level of the license (provider vs. database) is noted.



Figure 4: Single Provider-level license view.

### Authorized Users

Once "Values" is selected in the side panel (Fig. 5), you can view all who license from this vendor. As noted earlier, this provides a means for consultation among members about a particular vendor's products. A library interested in this

Human Relations Area File (HRAF) product can readily identify another SCELC library that subscribes and consult with them accordingly.

This example also illustrates one of the few instances in the SCELC ERM system of a Database-level license. Human Relations Area Files (the vendor) provides separate licenses for their products, so the licenses are not entered at the Provider level. As most licenses are entered at the Provider level, what is currently lacking in the Serials Solutions system is a database level view of authorized users, but this will be possible in a forthcoming version.

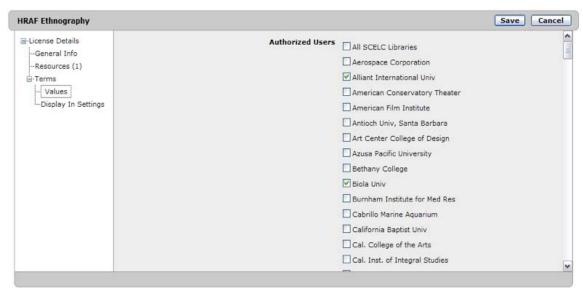


Figure 5: View of authorized users for a licensed resource.

#### License Terms

The next two screenshots (Figg. 6 and 7) illustrate how the ERM system stores license terms and conditions according to the Digital Library Federation's Electronic Resource Management Initiative (DLF ERMI) format. Each field defines a particular element commonly found in vendor licenses. Drop down menu selections provide standard responses to most elements. In addition, one is able to enter further details for a particular data element, including quoting text directly from that portion of the license in order to provide context. Ideally, in a future version one might be able to link from the ERM system directly to the full text defining a specific data element. Perhaps the ONIX initiative will help solve this problem.

IRAF Ethnography		Save	Cancel
⊞-License Details	Fair Use Clause Indicator	Present v	•
General Info	Database Protection Override Clause Indicator	Absent 💌	
Resources (1)	All Rights Reserved Indicator	Absent 🕶	
⊟-Terms	Citation Requirement Detail		
- Values	Digitally Copy	Permitted w	
- Display In Settings	Digitally Copy Note	AUTHORIZED USERS AND USE FOR eHRAF 2, par.4; "1	
		Permitted v	
	Print Copy Note	AUTHORIZED USERS AND USE FOR eHRAF 2, par.5: "1	
	Scholarly Sharing	Silent	
	Scholarly Sharing Note	- Second	
	Distance Learning	Silent	L
	Distance Learning Note		
	ILL Print or Fax	Prohibited v	
	ILL Secure Electronic	Prohibited v	
	ILL Electronic (email)	Prohibited v	
	ILL Record Keeping		
	ILL Record Keeping Note	AUTHORIZED USERS AND USE FOR eHRAF 2, par.11:	

Figure 6: License terms – Screen #1.

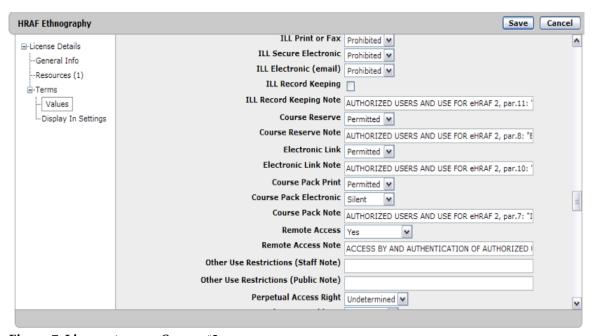


Figure 7: License terms – Screen #2.

### **Alerts**

As noted above, WISDOM provides an internal tracking system for the SCELC office, enabling timely and rapid renewals of the licensed resources. The ERM system adds an additional element: alerts that go directly to the library for both trial database offers and renewals, as illustrated below (Fig. 8). In addition, as viewed in the second screenshot (Fig. 9), one can custom configure alerts, including the timing of the alert.

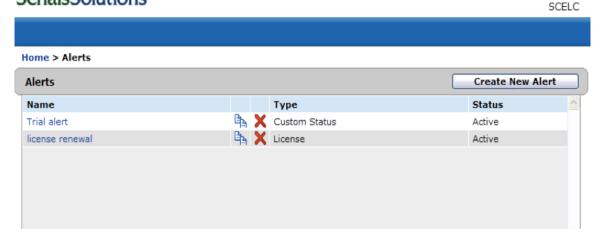


Figure 8: Alerts screen.

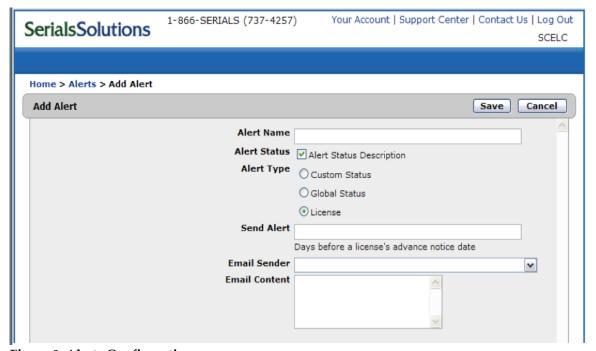


Figure 9: Alerts Configuration screen.

## Account Permissions

Every user of the ERM system is assigned a custom set of permissions, using standardized pull-down menu selections (Fig. 10).

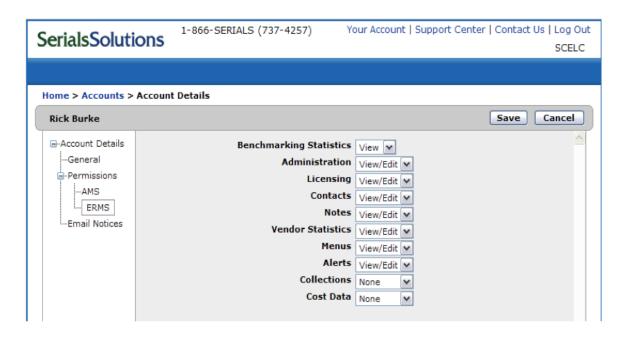


Figure 10: Account Permissions configuration screen.

## Access to Serials Solutions Knowledgebase

Another feature that distinguishes the SCELC ERM system is that it is fully integrated with Serials Solutions' very large and comprehensive knowledgebase of electronic resources. The knowledgebase is Serials Solutions' collection of holdings data and URLs for approximately 5,000 resources. The foundation of the ERM system is this knowledgebase, and the Serials Solutions knowledgebase is one of the largest (if not the largest) authoritative collections for electronic resource management. The ready availability of the Serials Solutions knowledgebase is very advantageous to the libraries, as they do not have to expend resources, money and staff time to build their own local knowledgebase for most of their electronic resources.

In addition, because this is Serials Solutions' inaugural implementation of a consortial ERM system, SCELC is contributing to the knowledgebase by providing information for licensed resources that are not e-journal centric, as much of Serials Solutions' knowledgebase was created to track e-journal titles.

The three screenshots below illustrate how the ERM system searches the knowledgebase and displays information from it. The first (Fig. 11) illustrates how easy it is to locate a particular database or e-journal titles within the ERM system, helping a library to identify more specific information on that resource or title. The second screenshot(Fig. 12) includes a snapshot of the pull-down menu of resources found in the knowledgebase. One has to scroll through many

windows to view the entire list of resources. The third screenshot (Fig. 13) shows information for one vendor selected from the knowledgebase.

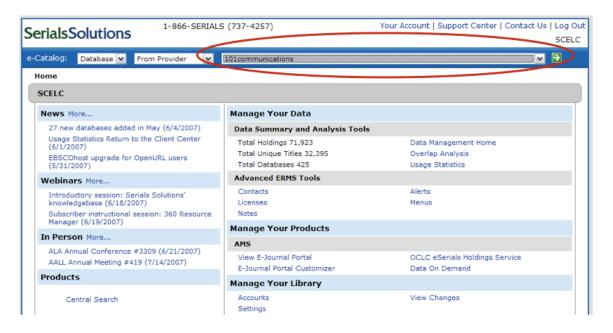


Figure 11: Search a resource by database name, provider, or an e-journal title.

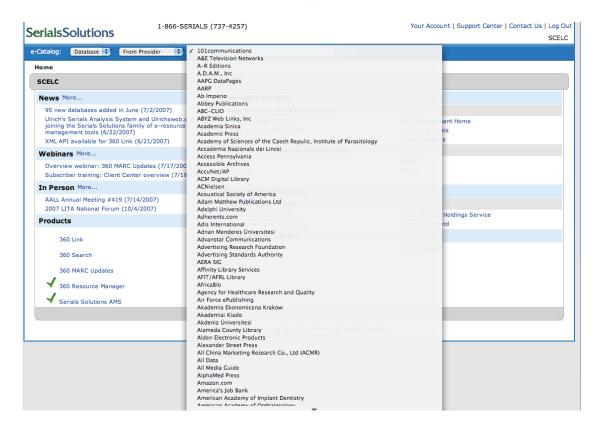


Figure 12: Use the pull-down menu to scroll the list of resources in the Serials Solutions knowledgebase.

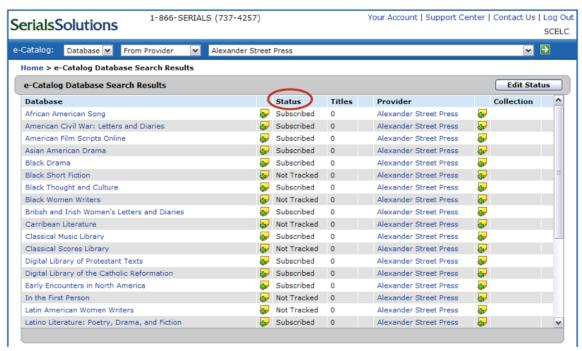


Figure 13: Results Screen for a search for a specific vendor, Alexander Street Press. Note that each database for Alexander Street is listed, including those not licensed by SCELC (noted as "Not Tracked"). This provides another avenue for a more comprehensive approach to consortial collection development, as one can quickly ascertain those titles not yet offered that might be of interest to member libraries.

### E-journal Portal

The first of the three screenshots below (Fig. 14) illustrates e-journal title and database-level access to the licensed resources. This is also the Public View that an end user will see. Clicking on a database will take the end user to the resource's web page, and clicking on "View Terms of Use" will open summary screens of the license terms for that database. In most instances, the ERM system will display terms of use at the Provider level, even though the link is at the database level, as most licenses are entered at the Provider level in the SCELC ERM system. In these instances one license governs the entire family of resources offered by that Provider.

In addition, if one accesses an alphabetical link under the "Browse e-journals by title," an alphabetical list of titles presents itself, including links to the various databases in which that title appears. The second screenshot (Fig. 15) illustrates individual e-journal titles and the different provider database platforms on which they are available through SCELC. And, as with the databases in the first

screen, the "View Terms of Use" link appears for each individual journal title. This screenshot also points to the collection development functionality of the ERM system at the title level, as library staff can easily access this in the public view (no need to log in) and compare holdings for that title in the various database platforms. The third screenshot (Fig. 16) is the public view of the actual license terms and conditions once the end user selects "View Terms of Use" from a journal title in the second screen.

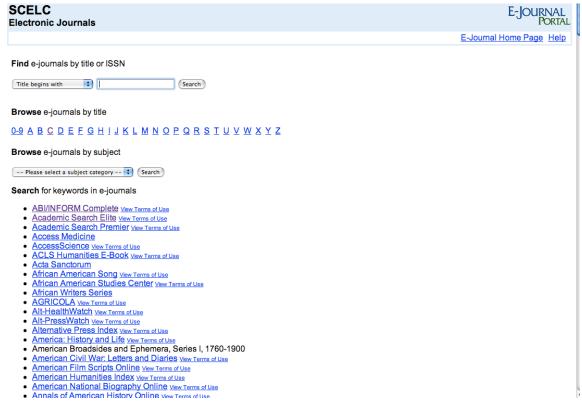


Figure 14: Database-level view. Browse E-journal titles or Databases here, and link to terms of use.

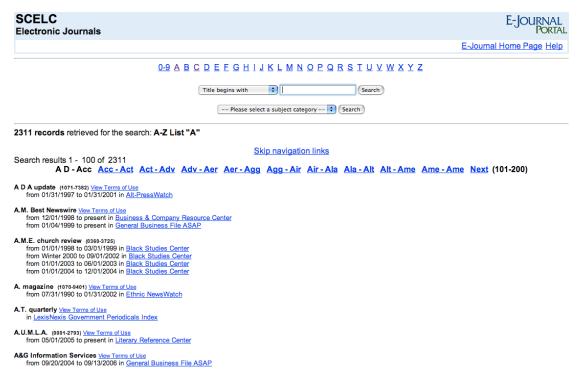


Figure 15: Public view: Individual e-journal titles with links to their respective databases and license terms.

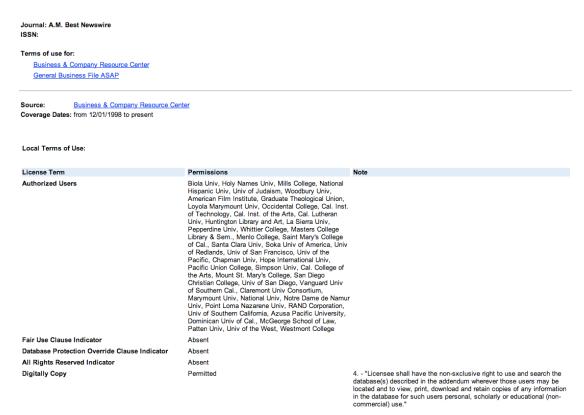


Figure 16: Public view of license terms once "View Terms of Use" is selected for an individual e-journal title.

### Conclusion

The combination of a custom internal database, WISDOM, for administrative use by SCELC staff, and the SCELC ERM system for access by member libraries, provides SCELC with an effective framework for managing a myriad of resources at the consortial level. As SCELC maintains the software functionality and interface of WISDOM, it is constantly being improved to SCELC's specifications. As noted earlier, the ERM system presents a different challenge, as Serials Solutions has to balance the program development needs of a consortial iteration against those for a larger user base of individual libraries.

WISDOM has attracted the attention of other library consortia, and SCELC has sold WISDOM at a very reasonable price to three other consortia for them to customize and use at their locations. Using an open source-like approach, WISDOM is sold as a one-time purchase, and the purchasing consortium has full access to customize WISDOM for their use as they see fit. SCELC requests only that WISDOM not be resold by that consortium, and that all purchasing consortia join SCELC in a virtual "user group" where each will share their improvements and changes with the other consortia. With this approach SCELC endeavors to spearhead a movement to improve consortial information management for the benefit of all.

The SCELC ERM system is Serials Solutions' initial foray into a consortial iteration of an ERM system. Some features that are particularly beneficial to a local library installation of the ERM system can actually be problematic in the consortial version. For example, a recent upgrade to the Serials Solutions ERM system was centered on cost management. In SCELC cost management is handled effectively by WISDOM, in combination with the Peachtree Accounting system employed by SCELC, to which WISDOM exports invoice data. This made the need to utilize the ERM system cost management features less critical from SCELC's perspective. More critical is that in the consortial ERM system iteration, other competing vendors' data is stored in the ERM system. Serials Solutions is owned by ProQuest, and other vendors are reluctant to have their pricing information stored in a competing vendor's ERM system without strong privacy assurances that that cost data won't be used to provide the parent company, in this case ProQuest, a competitive advantage. Serials Solutions does provide the ERM system customer the ability to restrict via account permissions what Serials Solutions staff can access and view in their particular ERM system installation, which does make it feasible to make private all cost or other information. Also, Serials Solutions has issued a privacy policy to assure other vendors of their strict and careful neutrality in this arena. Nevertheless, as of this date, SCELC has not deployed the cost management features of the ERM system, in the interest of maintaining good relations with all vendors. In the long term this issue of price confidentiality needs to be resolved, as it is an impediment to providing the full technological benefits of the ERM system.

There are several other planned improvements in the SCELC ERM system. SCELC is working with Serials Solutions to create greater integration of information between the WISDOM database and the SCELC ERM system. Seamless export and import links between WISDOM and ERM system are under consideration, and the goal is to implement these by early 2008. Two primary goals are the ability to move contact data for vendors and libraries from WISDOM to the ERM system, as well as database-level subscription information. WISDOM already incorporates the various SCELC ERM system provider codes in its data profile.

Another goal is to improve the portability of information in the SCELC ERM system. While SCELC provides its libraries a consortial iteration of the ERM system, if a library wants to track non-SCELC resources, it must purchase a local version of an ERM system. They can do this with a consortial discount from Serials Solutions, and Serials Solutions will provide complementary migration of that library's SCELC resource data from the consortial ERM system to their local installation. Alternatively, a library may have already purchased, or may choose to purchase, an ERM system more closely linked to their integrated library system, such as those made available by Innovative Interfaces or Ex Libris. In that instance, SCELC is hopeful that those vendors and Serials Solutions can cooperate to create the ability to transfer essential data from one ERM system platform to another. In the current environment, it is to a SCELC member library's advantage to use the Serials Solutions ERM system locally, as it does provide a migration path of all data from the consortial level to the local level, but it would be ideal if this data migration could take place between ERM systems from different vendors, much like how bibliographic data is easily shared among a variety of integrated library systems.

Usage data and statistics is another key area awaiting improvement. The vendor statistics module in the ERM system directs a library to where usage statistics can be retrieved, but there are no analysis tools yet in place to actually gather the usage statistics, analyze them, and provide a variety of reports. As noted below, the SUSHI initiative will certainly help with the harvesting of usage statistics, but in the instance of the Serials Solutions ERM system, a separate usage statistics

package, now under development, will have to be integrated into the ERM system as a separately priced product.

Finally, SCELC hopes to enhance the collaborative collection development possibilities of the ERM system by being able to provide database-level subscription information for each member, as noted earlier. With Serials Solutions help, enhanced contact management and analysis tools could be developed to help libraries make informed decisions on which SCELC resources to license.

Despite some of these issues, the overall intent of the SCELC program to provide both internal and external management of electronic resources has gone well. Future improvements in technology are on the horizon that should streamline the processing license term data (ONIX), streamline the delivery of usage statistics data to an ERM system (SUSHI), and further standardize usage statistics (Project COUNTER). In the meantime, in addition to ongoing improvements to the ERM system, SCELC remains focused on promoting greater inter-consortial collaboration and networking via the development and acquisition of WISDOM by fellow consortia around the world.