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**SCHIN, SEND AND NAND: Sharing is Not a Four-Letter Word for these Interlibrary  
Loan Networks Based on the National Library of Medicine's DOCLINE System**

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**PROACTIVE PARTNERSHIPS FOR RESOURCE SHARING**

In 1986, the Upper Savannah AHEC Medical Library requested about 500 items annually, while loaning a couple hundred items. Requests went in the mail on the typed American Library Association interlibrary loan forms. In 1997, the library received almost 1,200 items through interlibrary loan, and it loaned more than 1,000. Almost all requests were sent and received electronically using the National Library of Medicine's interlibrary system, DOCLINE. During the AHEC fiscal year 1994/95, a record 1,959 items were borrowed and 1,486 items were loaned. In the past decade, the number of articles photocopied from the journal collection has increased, approaching the 4,000 mark in 1997.

As demands for budget dollars increase, libraries are called upon to transform themselves to facilitate the delivery of information, to communicate measurements of accomplishments, and to support our partners' research needs. A proactive transformation lead to the remarkable numbers listed above. This has also been the decade when the United States National Library of Medicine (NLM) has instituted its automated interlibrary loan (ILL) system, DOCLINE, and encouraged libraries and individuals to use technology developments as partners in meeting information needs.

**Figure 1. Upper Savannah AHEC Interlibrary Loans Using DOCLINE**

## Decline increase



We can identify four reasons for the dramatic increase in the AHEC library use:

1. Using the personal computer; 2. Adjusting the journal collection to meet patrons' uses and needs; 3. Maximizing the use of the DOCLINE routing tables; and 4. Establishing cooperative agreements among libraries.

While briefly commenting on the first two items, we will look at items three and four as a means to improve interlibrary loan activity. Our experiences may be useful as models for similar transformations among other libraries. During this era of intense interlibrary loan activity, our library has kept in mind the four "essential ingredients" of Total Quality Management and the need for measurements that our senior managers can understand (St. Clair, 1993). The four essential ingredients of TQM are:

- \* An intense focus on customer satisfaction;
- \* Accurate measurements;
- \* Continuous improvement of products and services; and
- \* New work relationships based on trust and teamwork.

In the late-1980's important changes took place among the health science libraries in South Carolina . In 1985, the libraries of the Medical University of South Carolina and the University of South Carolina School of Medicine participated in a grant from the National Library of Medicine to create the South Carolina Health Information Network (SCHIN). SCHIN's purpose was to provide access to library information among the institutional and personal members who

joined the network (McKeehan, 1985). The computer resources of the two medical schools were used to create a union catalog of health science libraries holdings, and "dumb terminals" (keyboard, monitor and printer) were provided to participants to access both medical school libraries and the National Library of Medicine (NLM) DOCLINE system. Participant libraries continue to submit holdings information to the union catalog. They regularly update journal holdings as part of NLM's SERHOLD program, submitting serial holdings to the USC School of Medicine Library, the regional coordinator.

By 1991, SCHIN included 33 full and associate members. Among them were the libraries in hospitals, the state's public health agency and drug abuse center, a college of nursing, several military hospitals, the Area Health Education Centers (AHECs), the state's psychiatric hospitals, and a few individuals. However, the concept of a formal membership agreement and expansion among health care providers did not prove popular, so it was agreed to disband the formal SCHIN agreement. SCHIN continues in name and as an informal, working arrangement among the health science libraries.

At its inception, SCHIN provided free interlibrary loans among the libraries. At the conclusion of its formal agreement period, the two schools of medicine libraries and one hospital library decided to collect minimal fees for interlibrary loan services. The remainder of the hospital and AHEC libraries continue to provide free interlibrary loan reciprocal services. Two interesting developments also occurred. The governor's office closed the state's central public health library, dispersing the collection. And as has occurred elsewhere in the country, hospitals have merged or become "for-profit" and military bases have down-sized or closed. These changes would play a role in the development of other networks and the use of the DOCLINE routing table.

Of course, the early 1990's also saw the advent of the personal computer. The 300 baud acoustic coupler and the "dumb terminals" of the early SCHIN days have been replaced by faster and more powerful machines. Software to handle the repetitive work of data entry for a DOCLINE request (called QuickDOC) became available, and the Upper Savannah AHEC library purchased it. Interlibrary loan transactions among the SCHIN libraries vary from year to year for Upper Savannah AHEC, but they are eye-opening compared to the pre-SCHIN years. In 1995, the Upper Savannah AHEC Medical Library borrowed 852 items and loaned 863 items to SCHIN libraries. In 1997, we borrowed 573 and loaned 499 to our SCHIN colleagues.

**Figure 2. Upper Savannah AHEC Interlibrary Loans Using South Carolina Health Information Network (SCHIN)**



## **NATIONAL NETWORK OF AHEC LIBRARIES**

In 1989, AHEC librarians met as part of the AHEC National Workshop in Louisville, Kentucky. Participants agreed that a national interlibrary loan network of AHEC libraries would be of value. Guidelines were drawn up and agreed upon, and a fully-functioning trial period for the year 1990 was proposed. The National AHEC Network via DOCLINE (NAND) encourages free reciprocity for interlibrary loans and fax transmissions whenever possible. NAND functions as a "consortium of last resort," with participant library ID's placed in the DOCLINE routing tables immediately prior to fee-for-service libraries.

At the 1993 National AHEC Workshop in Las Vegas, Nevada, it was agreed that a group of NAND "fee-for-service" libraries would be created. Guidelines for DOCLINE routing table placements were published. At that time, DOCLINE consisted of eight cells. NAND specifies that cell 1 is for local consortia members, cell 2 for state consortia members, cell 3 for NAND libraries of free reciprocity with fewer than 200 current subscriptions, cell 4 for NAND libraries of free reciprocity with more than 200 current subscriptions, and cell 5 for NAND libraries who charge for interlibrary loan services. Cells 6 through 8 were for resource libraries and the National Library of Medicine.

These cell placement guidelines generally hold true today, although the DOCLINE routing tables have been expanded to 10 cells. The number of libraries participating in NAND has fluctuated over the years, but in 1997 there are about 40 free reciprocity and 15 fee-for-service libraries. The important elements of NAND are that librarians were willing to devote the resources to create a national network, predominately free of service charges and building on teamwork and trust.

Our data show that NAND, too, supports our customers. In 1995, Upper Savannah borrowed 405 items through NAND and loaned 175. In 1997, we borrowed 150 and loaned 114. Several situations account for the 1995 numbers and the differences between 1995 and 1997. In 1995, we were responsible for the interlibrary loan activity of a local genetic research center. They also had a heavy publishing commitment that year, and a NAND library with a major genetic emphasis was in cell 3. So, many of our requests went to that library. In 1997, the local genetic center has its own library now and the librarian participates in the next network to be discussed as well as the South Carolina networks. We have also moved the NAND genetic library that was in cell 3 in 1995 to the much higher cell 8. Since DOCLINE routes requests from cell 1 upwards, most of our requests are routed to another library before they reach the NAND library in cell 8.

**Figure 3. Upper Savannah AHEC Medical Library Interlibrary Loans Using National AHEC Network via DOCLINE (NAND)**

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**REGIONAL NETWORK FOR FREE INTERLIBRARY LOANS BASED ON COLLECTION SIZE**

The South Eastern Network on DOCLINE (SEND) is a unique partnership among Southern Chapter of the Medical Library Association libraries. It is unique for several reasons:

- \* It is designed to provide free interlibrary loans among all its participants;
- \* SEND is a regional network covering many states and one territory; and

\* It groups libraries by the number of journal subscriptions.

SEND began in 1992 when 41 libraries in seven states in the Southeastern/Atlantic Region of the National Network of Libraries of Medicine began a pilot project to maximize the use of DOCLINE routing tables. The idea was to investigate whether DOCLINE tables could be structured so that interlibrary loan traffic among participants would be balanced in terms of number of loaned items approximating number of borrowed items. All librarians agreed to provide services to SEND colleagues at no cost. In effect, we wanted to create a system so that collections of similar sizes and strengths would share the burden of an interlibrary loan network.

For the initial project, libraries were divided into three categories based on the number of subscriptions:

1. Category I, under 100 current subscriptions;
2. Category II, 101-200 subscriptions;
3. Category III, 201-300 current subscriptions.

A model DOCLINE table was constructed and followed by libraries. It placed category I libraries in the lower numbered cells and category II libraries in the middle cells and category III libraries in the higher cells. SEND also would complement and extend any existing local or state agreements, not replace them in the DOCLINE routing tables.

Analysis of the 1,700 interlibrary loan transactions from April-June 1992 sought to determine the extent to which the routing table placement by collection size had achieved lend/borrow balance. Only seven of the 41 participants were identified as needing routing table adjustments to improve their lend/borrow ratio. Approximately 18% of the total interlibrary loans of the participants were filled by his initial cohort of SEND libraries. All respondents wished to remain network members and to expand the project.

**Table 1. SEND Traffic by Library Category, April-June 1992**

	<b>Lent</b>	<b>% Lent</b>	<b>Borrowed</b>	<b>%Borrowed</b>
Category I	497	65	269	35
Category II	786	42	1071	58
Category III	446	56	353	44

Since the initial project of 1992, SEND has been expanded to include almost 90 libraries in seven southeastern states and the U.S. Virgin Islands. The categories of libraries have been expanded to four to accommodate many libraries with around 200 subscriptions and to provide a category for libraries with highly specialized collections. It remains a network for free, reciprocal loans. Members are discussing the routine use of telefacsimile ("fax") to improve the turn around times for requests. 1997 data are being collected to again analyze the lend/borrow balance. With the recent merger and acquisition of hospitals and the transfer, in some cases, to "for-profit" status, the participation of libraries continues to evolve. DOCLINE routing table adjustments are anticipated in mid-1997 to delete non-participants and add those waiting to join.

Upper Savannah AHEC Medical Library's data for 1995 and 1997 show some of the variation in SEND activity. As previously mentioned, the new genetic library in Greenwood has reduced the number of items borrowed from SEND by us.

**Figure 4. Upper Savannah AHEC Interlibrary Loans Using the South Eastern Network on DOCLINE (SEND)**

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## **THE FUTURE OPPORTUNITIES**

In 1990, a preliminary report concluded that DOCLINE did not produce major change in ILL volume or pattern among health sciences libraries in Michigan (McGaugh, 1990). Four years later, other articles looked at the journals and types of articles used in interlibrary loans (Lacroix, 1994) and at the trends in the use of DOCLINE and OCLC (Prendergast, 1994). Prendergast documents a substantial increase in ILL requests using DOCLINE, from 3,889 in 1986/87 to just over 12,000 in 1991/92. He also records a growth in OCLC interlibrary loans

from 1986 through 1990, but then a dramatic drop from 10,000 requests via OCLC in 1989/90 to 7,752 in 1991/92. And the Bulletin of the Medical Library Association published a short piece describing the expansion of DOCLINE to include nonmedical libraries in the state of Nevada (Potter, 1993). Our experience is that DOCLINE has enabled us to vastly improve both the number and the variety of articles we provide our customers. Using our ILL statistics and a year-long journal usage study, we have added to and discarded from our journal subscriptions to meet the needs of our clients.

We might make these observations about the present level of service sustained by the Upper Savannah AHEC Medical Library. While we believe our state, regional and national networks provide us with free loans for which we might otherwise pay, it seems present resources will not enable us to go much beyond the 1,500 loaned 1,500 borrowed per year presently sustained. Our networks operate, of course, because of the DOCLINE system. Should the nature of DOCLINE change, either involving fees or the number of libraries accessible, then the operation and perhaps the existence of the networks will change.

The state of Nevada presents an interesting case. Our attempts to interest the local academic libraries in a DOCLINE-based network have not been successful. They seem content to use OCLC and existing academic library loan agreements. Of course, this has an almost unnoticed benefit for the health sciences library. We are not asked to do the work to provide loans for the academic students or faculty that would be the case were we participating in a local DOCLINE-based ILL network. These students and faculty do use our collection, but when faced with the need to acquire articles from other health sciences libraries, they encounter the delay inherent in the academic library's network.

Drawing upon our experience, we encourage the academic and specialized libraries that support health sciences programs to join in networks to improve interlibrary loan delivery. SCHIN, SEND and NAND can serve as successful models.

### **Endnotes**

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