

Simultaneous Remote Search: A Technique of Providing MEDLARS Services to Remote Locations*

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IN 1979 THE administration of Tucson Medical Center (TMC) encouraged the library staff to explore the possibility of assisting rural Arizona hospitals in developing medical library services. One of the greatest obstacles encountered in establishing effective rural hospital libraries was the absence of trained reference personnel to provide on-site service. Another considerable problem was the delay in document delivery using normal interlibrary loan techniques. In an effort to improve reference service to rural hospitals, the TMC library staff developed a new on-line computer information retrieval technique, which we have named Simultaneous Remote Search.

Using Simultaneous Remote Search, Tucson Medical Center can provide faster reference and interlibrary loan services to remote hospitals. Immediate access to the MEDLARS data bases can be provided to any facility in Arizona or elsewhere in the United States as long as the facility has access to an ASCII-compatible terminal. Any hospital, however remote, can now provide to its users the most sophisticated level of medical library service presently available, at reasonable cost, without hiring specialized personnel.

SEARCH TECHNIQUE

A typical search using this technique would proceed as follows: A physician, nurse, or other professional in a rural hospital would contact the designated library manager or liaison within that institution. This contact person would call the TMC Library search center on a toll-free number. The librarian at the search center would then conduct the reference interview with the requesting party over the phone, clarifying the parameters of the search to be performed.

When the reference interview is completed, the terminals at the remote and central sites are connected to a local Telenet or Tymnet line by making a conference call through an electronic

phone switching system, such as Bell's Dimension or Centrex systems. (Tucson Medical Center uses the Dimension system with a privacy function programmed on lines used for computer searching.) As the search is run at Tucson Medical Center, an identical copy prints out at the remote location. MEDLARS allows the use of special "hedges," or lists of journal holdings, to be run against the main search. This produces a "first" search, listing only those citations available immediately in the requesting institution's collection. A second search can follow, listing items that would need to be obtained through interlibrary loan.

When the print is complete, the Telenet or Tymnet line is dropped and verbal conversation can be resumed. The search can then be discussed or even rerun, if necessary, and interlibrary loan requests can be made at once by print-out number, as both parties will have a copy of the search results. Confirming interlibrary loan forms can be sent later to comply with copyright regulations.

We have found that it is best to have identical terminals when using this technique over local phone lines. Over long-distance lines, any ASCII-compatible terminal seems to work. We have logged in terminals at a distance of approximately 2,000 miles. By dropping to ten characters per second (110 baud) even the most difficult "noise" can be cleared from the phone lines.

BENEFITS

The availability of immediate reference service should considerably improve user attitudes toward rural hospital libraries. Not all requests may require such speed, but on other occasions speed may be critical. In addition, the presence of a terminal on-site may have other advantages for the rural hospital in providing computer-assisted instruction for continuing education and access to other data bases using similar remote search techniques.

The Tucson Medical Center Library realizes the importance of careful establishment of follow-up services when such reference services are introduced. We have concentrated on developing useful core collections relevant to local needs and reliable liaison personnel with each hospital interested in working with us.

At present several rural libraries are participating in a cooperative program with Tucson Medical Center. In addition, two urban Tucson hospitals with well-established collections and professional librarians contemplate accessing MEDLARS

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through TMC using Simultaneous Remote Search.

This urban application has important significance for the MEDLARS system, as it can enable libraries to centralize MEDLARS searching without losing on-site delivery. One or two trained searchers working frequently with MEDLARS can perform searches for over fifteen hospitals. Searchers who frequently access data bases develop greater expertise and speed, which can result in better, faster, and, therefore, less expensive searches. Such search centers would also effect more efficient use of MEDLARS lines by reducing connect time per search, and would actually allow more users to access the MEDLARS system than is possible with present techniques. Librarians in established hospital libraries would gain on-site access to any number of data bases for which they need not be trained and would still be free to devote more time to patron and collection development services. Finally, in subject areas such as oncology where reference searching is particularly difficult, it may soon be possible to request the services of a "master searcher" in a special field from some remote facility, while still providing instantaneous delivery of the search.

STATEWIDE PROJECT

The significant benefits that Simultaneous Remote Search can provide for the hospital community have prompted TMC to undertake a major statewide project for the development of hospital library services. The project will offer Simultaneous Remote Search reference services on a fee-for-service basis to all Arizona hospitals. Special consultation services on core collection development and on initiating library services will also be available on a separate fee-for-service basis. The cost to join the network will be \$100 per month per institution for up to twenty-five searches. Total yearly costs for participating subscribers would be \$1,200 in direct fees, plus the cost of purchase or lease of a terminal. In addition, participating institutions must make a commitment to maintain core collections. Continuing advances in computer technology should reduce both fees and hardware costs in the very near future.

In addition to providing critically needed services to Arizona hospitals, this project will serve as a pilot program for an entirely new information services industry. In the review of the literature after our discovery of this technique, we found two reports of similar search techniques by Witiak [1]

and Warden [2]. Both have obtained consistently reliable service over extended periods of time.

CONCLUSION

The application of remote search techniques on a larger scale has the potential to change the very nature of library practice in all fields. The "electronic library" of science fiction can be fact today using technology that is already commercially available. The introduction of Simultaneous Remote Search to hospital libraries provides an opportunity to bring a new level of information service to all hospitals, however isolated or remote, with the distinct possibility of improving the delivery of health care throughout the United States.

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REFERENCES

1. WITIAK JL, PREWITT BG, DESCHERE R. Online database searching via telephone conferencing. *Online* 1979 Apr; 3:21-3.
2. WARDEN CL. Update on conference call searching. *Online* 1979 July; 3:34.

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Developing a Collection of Government Documents through Cooperation with a Depository Library

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INCLUDING government documents in a health sciences collection will add to its quality and comprehensiveness. No really adequate substitutes, for the *Vital statistics of the United States*, *Registry of toxic effects of chemical substances*, *Federal register*, or the reports of the Surgeon General exist in a nongovernmental format.

Government documents can be difficult to identify, acquire, and organize when they are not received automatically on deposit. Particularly in a