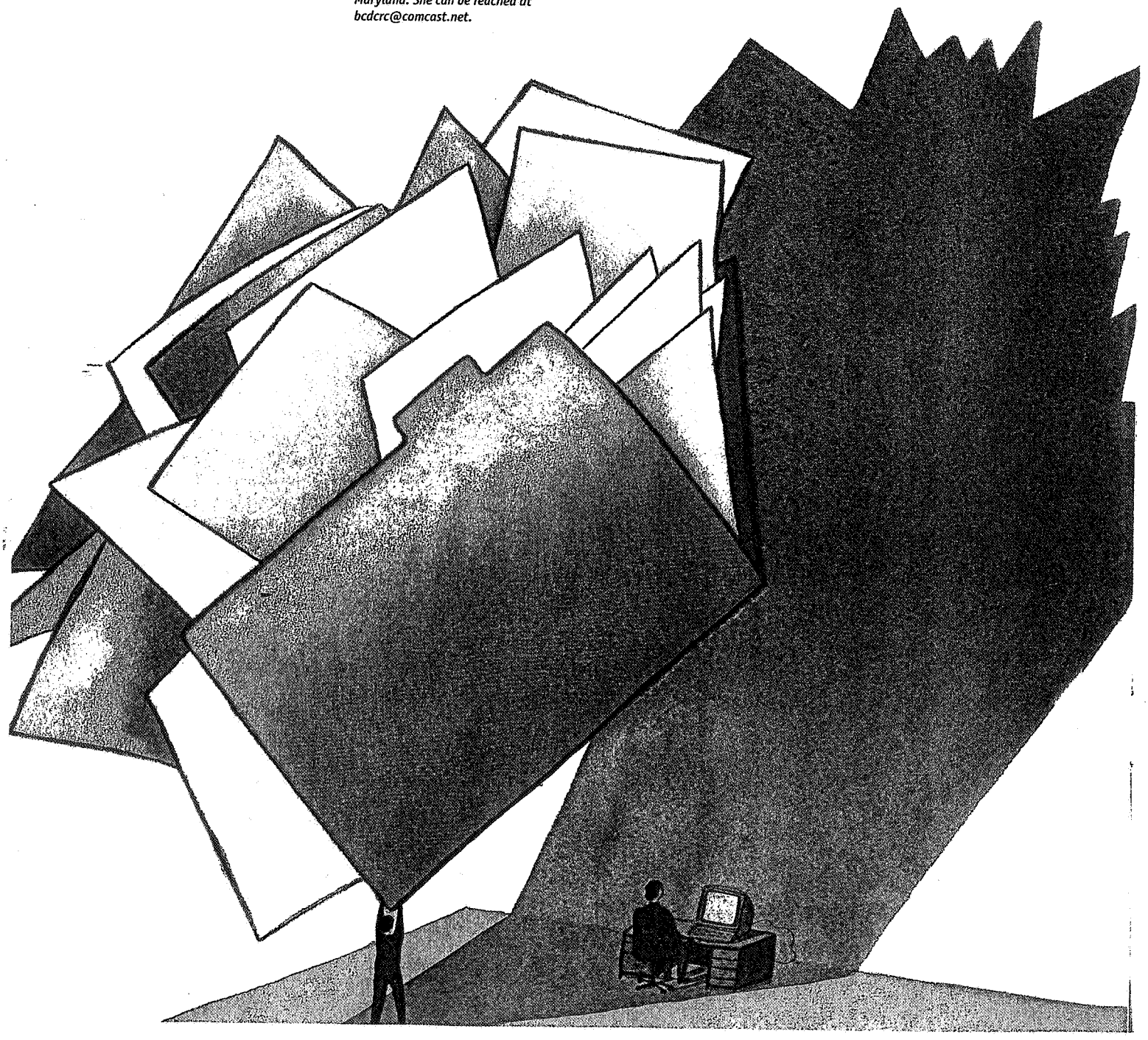
Assessing and Selecting Journals for Your Library's Core List

By Diane Cunningham

Diane Cunningham is a former Reference Librarian at the National Institute of Standards and Technology Research Library, Gaithersburg, Maryland. She can be reached at bcdcrc@comcast.net.



Enhancing Library Services at NIST

In three previous articles, co-authors Barbara Silcox and Paula Deutsch described assessment activities at the National Institute of Standards and Technology (NIST) Research Library and their role in decision making and strategic planning. The development of a core list of journals was a specific response to information from the library's customer survey. It laid the groundwork for improving the collection and enhancing relationships with library customers. This article addresses how the library conducted the core journal activity.

Introduction

Journal literature is very important to research organizations. The library of such an organization must try to be as comprehensive as possible in selecting relevant, high-quality journals. The library must also weigh whether to acquire new journal titles that may have limited lifespans or continue with long-standing titles that can be counted on to have a lifespan of 50 to 80 years. Given the rising costs of library resources, coupled with necessarily limited budgets, libraries must be selective in the types of materials they purchase and retain. Materials must meet the greatest need across a diverse customer base (Goehner 1984).

Developing a core list of journal titles for the major scientific organizational units (OU's) of the National Institute of Standards and Technology (NIST) seemed to be a natural first step in focusing the Research Library's most relevant journal resources on researcher needs. The NIST Research Library decided to develop such a list, with the help of the researchers.

National Institute of Standards and Technology

Founded in 1901, NIST (known for most of its 10 decades as the National Bureau of Standards) is a nonregulatory federal agency within the U.S. Department of Commerce. Located in Gaithersburg, Maryland, and Boulder, Colorado, NIST is a center for physical science and engineering research focused on advancing the nation's technology infrastructure and supporting industry. More than half of NIST's scientists and engineers focus their work on the fastest moving and most commercially attractive areas of science: advanced materials, electronics, superconductivity, quantum computing, nanotechnology, automation, information technology, and biotechnology. A common thread of much of the research is precision measurement. NIST develops the standards, measurement techniques, reference data, test methods, and calibration services that help to ensure national and international measurement capability and compatibility for diverse technologies.

NIST carries out its mission through four programs: the NIST Laboratories, the Baldrige National Quality Program, the Manufacturing Extension Program, and the Advanced Technology Program. The principal scientific NIST Laboratories, the core of NIST's research, are the Electronics and Electrical Engineering Laboratory, the Manufacturing Engineering Laboratory, the Chemical Science and Technology Laboratory, the Physics Laboratory, the Materials Science and Engineering Laboratory, the Building and Fire Research Laboratory, the Information Technology Laboratory, and Technology Services.

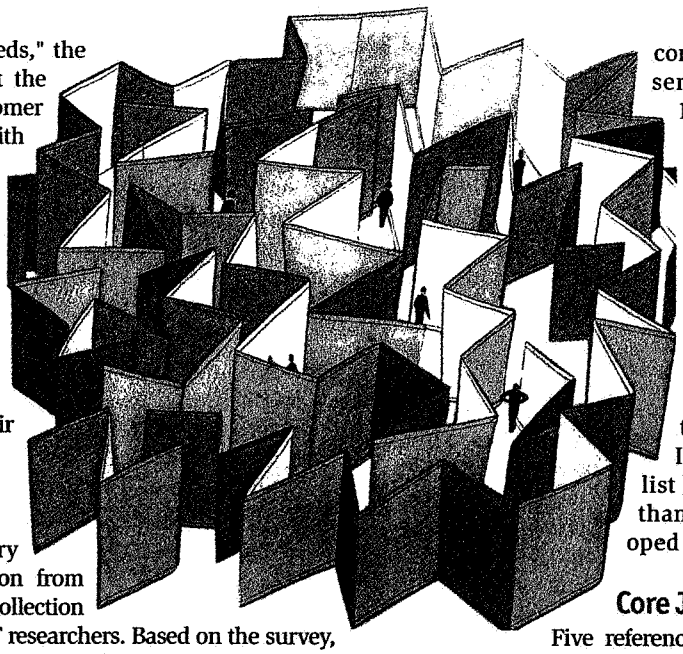
Laboratories are organized into divisions. The Information Services Division (ISD), including the NIST Research Library, is part of Technology Services. The library is responsible for creating, maintaining, and disseminating a knowledge base that supports the research and administrative needs of NIST's technical mission, which is to support U.S. industrial, economic, and scientific communities. The principal areas of research covered by the library collections are chemistry, physics, engineering, electronics, computer science/information technology, manufacturing, materials research, building research, mathematics, and special subdisciplines.

Customer Survey

Declining library budgets combined with rising prices have caused many libraries, including the NIST Research Library, to face the difficult task of identifying titles for cancellation (Stein 1992). In April 2001, the NIST Research Advisory Committee (RAC), an internal group that makes recommendations to management on scientific issues and research activities at NIST, voiced concern in its annual report to the NIST Director about the declining state of the NIST Research Library's collections. The RAC believed that the NIST Library's function and service were being adversely affected by inadequate and stagnant funding and stated that, at the current rate of decline, the NIST Research Library would soon be unable to meet the needs of the scientific and technical staff.

In response to the RAC recommendations, the acting director of NIST asked the Research Library to undertake several assessment activities to determine if additional funding for the collections was warranted. These activities included (1) developing mechanisms for gauging the overall impact on the NIST research environment of recent journal cancellations; (2) conducting a survey of NIST scientists and management to assess research needs; and (3) benchmarking itself against scientific and technical libraries in other government agencies and the private sector. It was clear that the Research Library had to demonstrate the value it brings to the NIST community. It was also being asked to demonstrate that it was responsive to customer needs and was making wise, well informed purchasing decisions.

In July 2001, the NIST Research Library contracted with two consultants from the University of Maryland's College of Information Studies to develop a survey, conduct focus groups, and analyze survey results. While its broad mandate was "to conduct an electronic survey of NIST scientists and management every few years to better assess and coordinate



library and research needs," the library decided to limit the survey to assessing customer needs and satisfaction with the collection. This decision was based on the specific concern expressed by the RAC and other members of the NIST research community that the library's collection lacked many information resources deemed critical to their research.

Customer Response

The Research Library gained useful information from the survey. The journal collection is very important to NIST researchers. Based on the survey, 90 percent of library customers use it. Over 80 percent of customers considered journals to be of very high value to their research, but only 63 percent surveyed were very satisfied with the library's existing journal collection.

The Research Library was not considering journal cancellations during the survey year, but comments submitted in response to the survey's open-ended questions indicated that NIST researchers want to be more involved in collection development decisions and revealed misperceptions about how past cancellations had been handled. Every librarian knows how emotional researchers can become when journals in their discipline are slated for cancellation. Such decisions should not be made lightly nor subjectively. Researchers have every right to be deeply concerned about the library's cancellation procedures (Miller & O'Neill 1990). While the library used a variety of methods for announcing and soliciting input from the NIST researchers in previous journal cancellations, it was clear that the library needed to improve its communication with the researchers and involve them more in collection development activities.

Library Response

Survey comments indicated that NIST researchers preferred being consulted about which journals the library should acquire and maintain rather than which ones should be cut. Identifying core journals that should be protected from cancellation is a natural first step (Hughes 1995), so the library launched a project to identify core titles for each NIST laboratory. This activity also laid the foundation for establishing regular communication with each of the NIST labs. The library intends to use the core journal list as a first step in evaluating the journal collection for future cancellation activities. Other journal titles will be cancelled before titles on the core list to the extent possible. Prior to the 2001 customer survey, the library had compiled a list of the 100 most widely used journal titles in connection with a former journal cancellation activity. The library was hoping to save valuable time in the future by flagging heavily used journal titles that would be exempt from any future journal cancellation activity. Use studies are the most commonly employed tool for serials evaluation (Segal 1986). The short list developed on the basis of past usage did not involve the NIST scientific community in any direct or interactive way. The list resulting from the core journal activity conducted in 2002 addresses some of the concerns of NIST researchers regarding their involvement in collection development decisions. It also is a more balanced list in terms of subject coverage than the list previously developed based on usage data alone.

Core Journal Project Protocol

Five reference librarians took part in this project. The first objective was to build an expanded core journal title list by visiting the laboratories and asking the NIST researchers to identify current journal titles most important to them. Twenty-eight of 32 NIST divisions contacted took part in the core list effort. Each librarian was responsible for two laboratories and the multiple divisions in those laboratories. The more the librarians knew about the divisions, the easier their assignment would be, so they kept up with each division's technical and research activities by monitoring their websites, reading the NIST Technical Calendar, which lists division talks and meetings, and tracking what and where the researchers were publishing.

The next step was to compile lists of journals by subject matter to take to the division meetings to help the researchers make their selections. The Institute for Scientific Information's (ISI) Journal Citation Reports was used to compile lists of journal titles by subjects for each division. An impact factor was included for each journal title. Impact factor (Garfield 1994) is a measure of the frequency with which the "average article" in a given journal has been cited in a particular year or period. It represents a ratio of citations to recent citable items published. Specifically, the impact factor of a journal is calculated by dividing the number of current year citations by the number of source items published in that journal during the previous two years. In 2001, the impact factors of journals rated ranged from 0 to 46.233. The purpose of including impact factors was to give the researchers a quasi-objective idea of the relative importance or citability of a title. As a final step, the list was annotated to indicate which journals the library currently subscribed to and those that the library did not subscribe to at all.

Next, library staff contacted each division director about participation in this activity. To be consistent, the participating librarians' talking points were pooled to yield a consistent set of questions and approaches. To keep the core list at a manageable size, each division was asked to submit a list of 10 to 20 titles considered absolutely essential for its research.

The library staff recommended that the divisions consider including those titles that division researchers routinely publish in or cite in their research. Publication in a journal implies that division members both read and respect the journal (Hughes 1995). The divisions were also asked to rank the importance of the 10 to 20 titles that they included on their lists. The rankings would be used to arrange the core titles from all divisions in order of importance in one large list. A tentative deadline of two weeks was set for completing the division's core journal list; however, most of the divisions submitted their lists two to four weeks after the first contact with the division director.

Compiling the Core List

When the librarians received the core journal lists, they were merged into a single list sorted alphabetically by title and numerically by impact factor. There was some overlap among division lists, which was noted next to each affected title. Titles cited as "core" by multiple divisions were given high priority. Also noted was the rank each division gave to duplicate journals. Separate lists by division were stored on the library's shared network drive for future access.

The library subscribes to 1,151 journal titles. Of those, 650 appear on the newly formed core journal list. This new list was compared with the established top 100 journal list ranked by usage statistics. All but 15 titles from the old list were on the new list. Titles on the new core list that the library does not have were placed on a separate list for possible future purchase. A few have already been added to the collection. The completed alphabetical core journal list was posted on the NIST Virtual Library (NVL) and advertised in the Information Services Division newsletter. A copy of the core list was sent to the RAC and to the participating divisions to ensure that the NIST Research Library communicated the results of this project directly to its customers.

An expanded core journal page for the library's website has been completed. This page includes a list of the core journals by subject and alphabetically by title, and links to electronic journals. Holdings are listed for both hard-copy publications and online versions.

Conclusion

Through our customer survey, NIST Research Library users told us what they wanted, and the library responded. Thanks to the Core Journal Project, the Research Library has established closer communication with NIST divisions in the laboratories. Moreover, there is now a list of 650 recommended journal titles that are considered core by NIST researchers. Both NIST researchers and the library will reap benefits in the long run. This process helps the Research Library know its customers better and understand the resources that are important to them. The Research Library now knows which journals are most important when considering any future journal cancellations.

Because most technical divisions participated in this project, the core journal list reflects subject areas from across NIST, which would enable the library to have a more complete journal collection if all the recommended titles could be purchased. There were 87 titles (14%) on the core list that the library either did not subscribe to currently or had never subscribed to. The next step will be to check interlibrary loan records to determine if these titles have been borrowed heavily from other libraries in the past. If they have, the library should try to obtain these titles in the future if funds permit. The divisions and the librarians will review the core list annually for possible additions and deletions, checking circulation records to determine how heavily these titles are being used.

At a minimum, the Research Library has a more detailed tool to guide future collection development decisions. A core list of protected journals can be used for several successive serial reviews and can be a valuable part of a serials evaluation procedure (Hughes 1995).

In the future, the library intends to contact researchers on an ongoing basis through a formal Library Laboratory Liaison Program. Librarians serving as laboratory liaisons will use the core journal list as the first step in developing a thorough knowledge of their customers.

References

Corrall, S. 1994. Biting into the Core? The Question of Balance in Collection Management. *Serials* 7(2): 123-128.

Garfield, E. 1994. *The Impact Factor.* [Online]. Available: http://sunweb.isinet.com/isi/hot/essays/journalcitationreports/7.html [June 20, 1994].

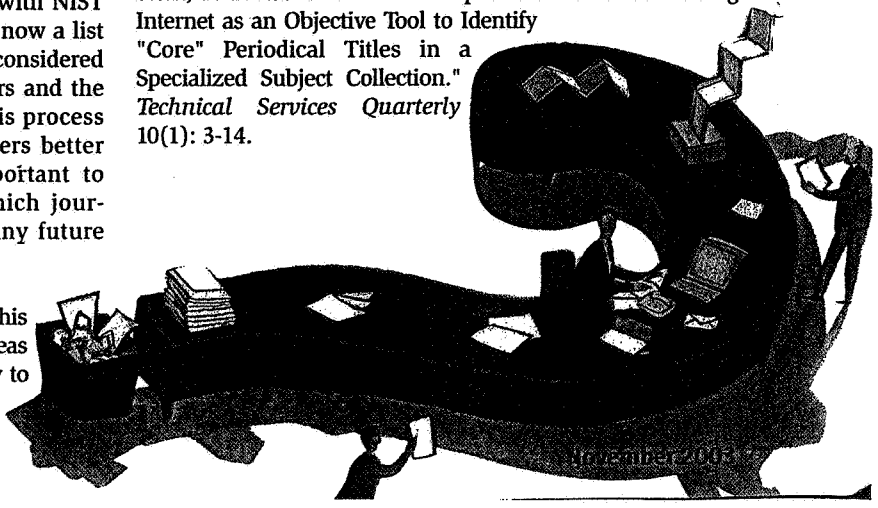
Goehner, D. M. 1984. "Core Lists of Periodicals Selected by Faculty Reviewers." *Technical Services Quarterly* 1(4): 17-38.

Hughes, J. 1995. "Use of Faculty Publication Lists and ISI Citation Data to Identify a Core List of Journals with Local Importance." *Library Acquisitions: Practice & Theory* 19(4): 403-413.

Miller, E. P. & O'Neill, A.L. 1990. Journal Deselection and Costing. *Library Acquisition: Practice & Theory* 14:173-178.

Segal, J. A. 1986. Journal Deselection: A Literature Review and an Application. *Science and Technology Libraries* 6(3): 25-42.

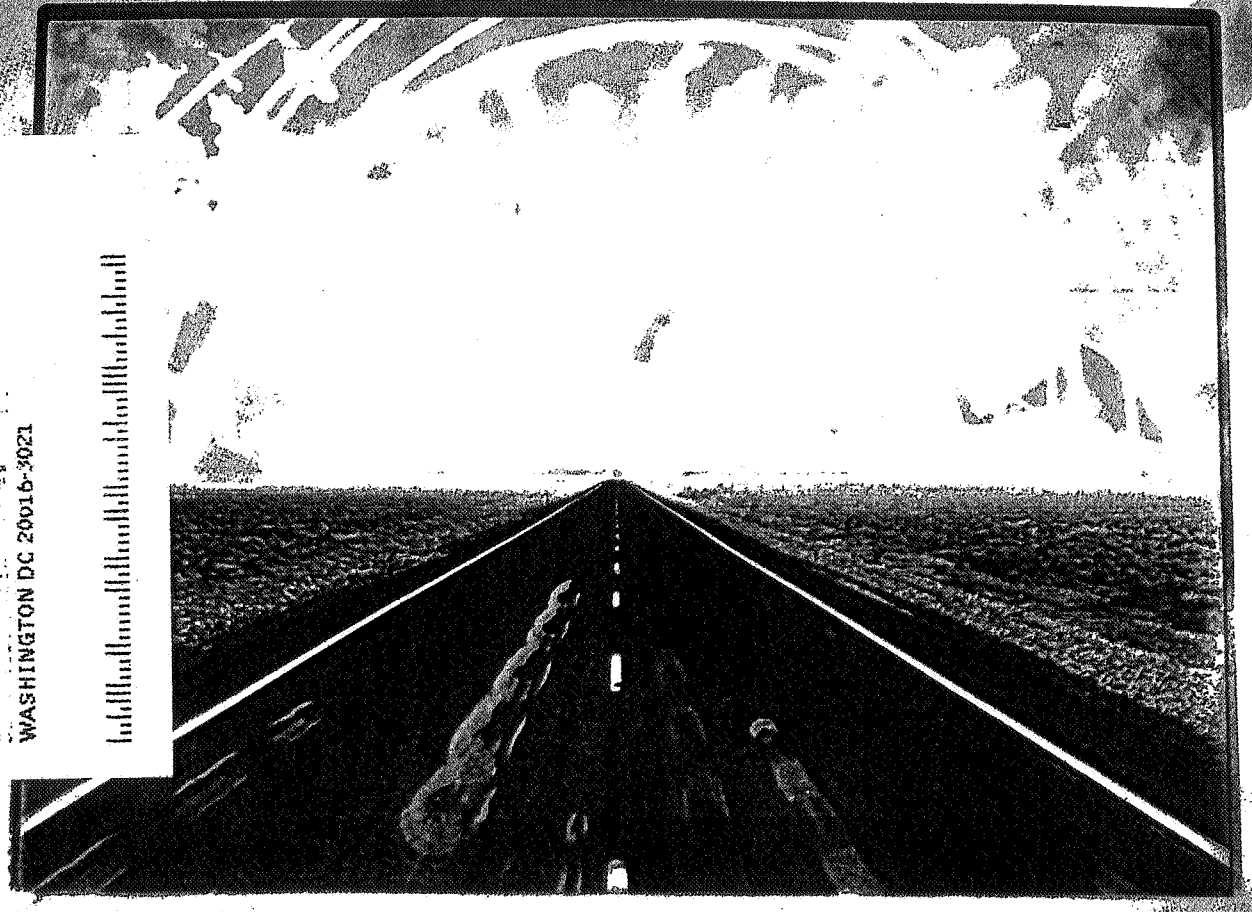
Stein, L. L. 1992. "What to Keep and What to Cut? Using Internet as an Objective Tool to Identify "Core" Periodical Titles in a Specialized Subject Collection." *Technical Services Quarterly* 10(1): 3-14.



www.sla.org

information outlook®

the monthly magazine of the special libraries association
vol. 7, no. 11
November 2003



inside this issue: