

7-1-1978

Special Libraries, July 1978

Special Libraries Association

Follow this and additional works at: https://scholarworks.sjsu.edu/sla_sl_1978

 Part of the [Cataloging and Metadata Commons](#), [Collection Development and Management Commons](#), [Information Literacy Commons](#), and the [Scholarly Communication Commons](#)

Recommended Citation

Special Libraries Association, "Special Libraries, July 1978" (1978). *Special Libraries, 1978*. 6.
https://scholarworks.sjsu.edu/sla_sl_1978/6

This Magazine is brought to you for free and open access by the Special Libraries, 1970s at SJSU ScholarWorks. It has been accepted for inclusion in Special Libraries, 1978 by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

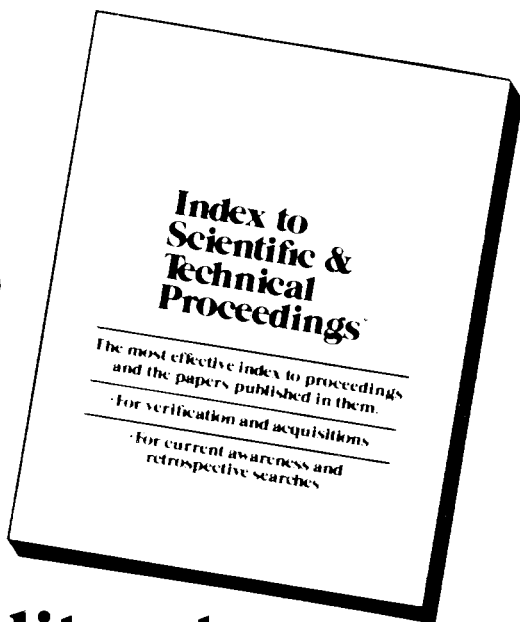
special libraries

July 1978, vol. 69, no. 7

- Population Information Network
- Agricultural Data Base Search
- World Agricultural Information Service
- Guidelines for On-Line Search
- Indexing Laboratory Notebooks

SPLBAN 69 (7) 237-280 (1978)
ISSN 0038-6723

Use this free booklet to learn how to solve your problems of keeping up with the proceedings literature.



This new booklet gives you a complete explanation of ISI's newest service, the Index to Scientific and Technical Proceedings, an in-depth search tool for the proceedings literature of engineering and the sciences.

The booklet shows examples of the easy-to-use, table-of-contents format used for the 3,000 proceedings entries

indexed annually. And there are samples of each of the six index sections which lead you to over 90,000 papers contained in the proceedings literature. The ISTP provides easy access to a formerly difficult area to search.

To convince yourself and your patrons how valuable this information is, write for our free booklet today.

Please send me a free copy of your new booklet describing the Index to Scientific and Technical Proceedings.

Name _____ Title _____

Department _____ Telephone _____

Organization _____

Address _____

City _____ State/Province _____ Zip _____ Country _____

76 1185 ©1978 ISI

ISI Institute for Scientific Information®

325 Chestnut St., Phila. Pa. 19106 U.S.A. Tel: (215) 923-3300 Cable SCINFO. Telex 84-5305

MAP COLLECTIONS IN THE UNITED STATES AND CANADA

A Directory, 3d ed.

1978 / soft cover / 215 pages / 6 $\frac{7}{8}$ × 10 / \$19.75
ISBN 0-87111-243-4 / LC 77-26685

David K. Carrington and Richard W. Stephenson, eds.

The *Directory* describes 745 major map collections in the United States and Canada—a 23% increase in coverage over the previous 1970 edition.

The entries are arranged alphabetically by city within a state or province. A comprehensive index aids the user of this valuable reference tool.

The *Directory* is completely revised, as well as expanded. The data has been compiled from questionnaires completed by responding libraries. It is the first time data about cataloging, classification, and reader services are included. In addition to information about the name and address of the institution, the person in charge, the size and growth of the collections, and major subject and area specializations, the *Directory* gives the date the map library was established, the number of professional and non-professional staff, chronological emphasis of materials in the collection cataloged, hours of service, seating capacity of the reading room, and number of readers served per month.

Order your copy from:

**Special Libraries Association
Order Department
235 Park Avenue South
New York, N.Y. 10003**

NEW Up-To-Date Books From Noyes Data

NOYES DATA has developed two new techniques of vital importance to those who wish to keep abreast of rapid changes in technology and business conditions: 1) our advanced publishing systems permit us to produce durably-bound books within a few months of manuscript acceptance; 2) our modern processing plant ships all orders on the day after they are received.

HARDCOVER BOOKS—LATE SPRING 1978

TOXIC ORGANIC CHEMICALS DESTRUCTION AND WASTE TREATMENT by E.E. Hackman III: Approaches are given for waste treatment and separation of difficult-to-destroy organic chemicals, the so-called refractory organics. The goal is to control all emissions to such an extent that the manufacture of highly useful substances need not be curtailed. ISBN 0-8155-0700-3; \$42

PETROLEUM TRANSPORTATION AND PRODUCTION: OIL SPILL AND POLLUTION CONTROL by M. Sittig: This book is designed to give an up-to-date review of an increasingly vital topic—the control of oil spills and other pollution in the production, storage and transportation of petroleum, crude oils and finished materials. ISBN 0-8155-0701-1; \$48

THE TEXTILE INDUSTRY: ENVIRONMENTAL CONTROL AND ENERGY CONSERVATION by S.G. Cooper: The emphasis in this book is on environmental control and energy conservation in the processing of polyester, nylon, acrylic, olefin and cotton fibers as well as in the finishing of fabrics. ISBN 0-8155-0702-X; \$42

AMINO ACIDS TECHNOLOGY—RECENT DEVELOPMENTS by J.C. Johnson: Microbiological processes play an important role in the synthesis of amino acids and their resolution into biologically active materials for use in foods and food additives, such as sweeteners, and for use in medicine, such as protein hydrolyzates and L-dopa. 263 practical processes are described. ISBN 0-8155-0703-8; \$42

HOT MELT ADHESIVES—THIRD EDITION by D.L. Bateman: Hot melt adhesives have found acceptance and usefulness in many industrial applications. The hazards entailed in using toxic and flammable solvents are eliminated. No curing or drying is required normally. Over 250 processes of making and using hot melts often at increased production speeds. ISBN 0-8155-0704-6; \$42

COATINGS TECHNOLOGY ANNUAL—FIRST EDITION edited by M.T. Gillies: The purpose of this annual publication is to keep the coatings industry advised of new processes and products. This first edition describes in detail over 300 processes which have appeared in the U.S. patent literature during 1977. In addition hundreds of practical formulations are provided. ISBN 0-8155-0705-4; \$40

COGENERATION OF STEAM AND ELECTRIC POWER edited by R. Noyes: Refineries, chemical plants, paper mills and other big energy users can obtain maximum value from their fuel by producing steam and running it through a turbine generator before using the steam for processing operations or vice versa. Fuel savings from 10 to 30% may be realized. ISBN 0-8155-0706-2; \$36

ndc

NOYES DATA CORPORATION
NOYES BUILDING, PARK RIDGE, NEW JERSEY 07656

Letters	7A		
A Worldwide Population Information Network	237	Helen K. Kolbe	
Multi-Data Base Searching in Agriculture	244	Hilary D. Burton	
World Agricultural Information Service	250	John Newton	
Planning for On-Line Search in the Public Library	255	Oscar Firschein Roger K. Summit Colin K. Mick	
Indexing Laboratory Notebooks in a Chemical R&D Environment	261	Donna M. Mendenhall	
SLA News			
SLA Election Returns	267		
Chapter Newsletters and Bulletins	268	Lenore Glanz	
Audit Report Jan 1, 1977–Dec 31, 1977	271		
In Memoriam	275		
Vistas			
Coming Events	277	Reviews	278
Placement	18A	Index to Advertisers	20A

Editor: NANCY M. VIGGIANO *Assistant Editor:* EVELYN SCHREIBER-STECKLER
Circulation: FREDERICK BAUM

Special Libraries is published by Special Libraries Association, 235 Park Avenue South, New York, N.Y. 10003. Monthly except double issue May/June. Annual index in December issue.

©1978 by Special Libraries Association. Material protected by this copyright may be photocopied for the noncommercial purpose of scholarship or research.

Second class postage paid at New York, N.Y., and at additional offices.



PERSONALIZED SUBSCRIPTION SERVICE

Every customer is assigned an experienced "Home Office" representative. You correspond direct; any title needs, changes, cancellations or problems can be handled promptly by letter or phone. This makes your job easier and keeps you abreast of your subscription needs at all times.

With over 45 years experience, McGregor has built a reputation of prompt and courteous service on both domestic and international titles. We prepay subscriptions ahead of time. Our customers, large and small, like the prompt attention we give them. We think you would too! Ask about McGregor's "Automatic Renewal" plan described in our new brochure. Write today for your free copy.

MCGREGOR
Magazine Agency

OUR 45th YEAR

MOUNT MORRIS, ILLINOIS 61054

Subscription Rates: Nonmembers, USA \$26.00 per calendar year; add \$3.50 postage for other countries including Canada. \$8.00 to members, which is included in member dues. Single copies (recent years) \$3.00 except for October issue (Directory) which is \$13.00.

Back Issues & Hard Cover Reprints (1909-1939): Inquire Kraus Reprint Corp., 16 East 46th St., New York, N.Y. Microfilm & Microfiche Editions (1909 to date): Inquire University Microfilms, Ann Arbor, Michigan. Microforms of the current year are available only to current subscribers to the original.

Changes of Address: Allow six weeks for all changes to become effective. All communications should include both old and new addresses (with ZIP Codes) and should be accompanied by a mailing label from a recent issue.

Members should send their communications to the SLA Membership Department, 235 Park Avenue South, New York, N.Y. 10003.

Nonmember Subscribers should send their communications to the SLA Circulation Department, 235 Park Avenue South, New York, N.Y. 10003.

Claims for missing issues will not be allowed if received more than 90 days from date of mailing plus the time normally required for postal delivery of the issue and the claim. No claims are allowed because of failure to notify the Membership Department or the Circulation Department (see above) of a change of address, or because copy is "missing from files."

Special Libraries Association assumes no responsibility for the statements and opinions advanced by the contributors to the Association's publications. Instructions for Contributors last appeared in *Special Libraries* 68 (no. 12) (Dec 1977). A publications catalog is available from the Association's New York offices. Editorial views do not necessarily represent the official position of Special Libraries Association. Acceptance of an advertisement does not imply endorsement of the product by Special Libraries Association.

Indexed in: *Book Review Index, Business Periodicals Index, Information Science Abstracts, Historical Abstracts, Hospital Literature Index, Library Literature, Library & Information Science Abstracts, Management Index, Public Affairs Information Service and Science Citation Index.*

Membership

DUES. Member or Associate Member \$40; Student Member \$8; Retired Member \$10; Sustaining Member \$200; Sponsor \$500; Patron \$1,000.

From the earth to the stars... and points between.

MORPHOGENETICS OF KARST REGIONS

Variants of Karst Evolution

Laszlo Jakucs, *Hungarian Academy
of Sciences*

Proposes a number of erosional agencies contributing to the origin of typical karstic features. (Rights: U.S. & Canada)

"...a complete, modern treatise on the subject
...eminently useful."—*Choice*

(0 470 98952-1) 1977 284 pp. \$40.00
LC# 76-40003 CIP

TRACE ANALYSIS OF ATMOSPHERIC SAMPLES

Kikuo Oikawa, *Hokuto College of Technology*

Describes methods of sample collection, pre-treatment, and metal content analysis of atmospheric particulate matter, discussing in detail the latest advances in techniques.

(Rights: World except Japan)

(0 470 99013-9) 1977 158 pp. \$22.50
LC# 77-3458 CIP

ORIGINS OF PEST, PARASITE, DISEASE AND WEED PROBLEMS

Edited by **J. M. Cherrett & G. R. Sagar**,

*both of University College of North
Wales, Bangor*

Examines the ways in which pest, parasite, disease, and weed problems have originated and how future problems might arise. Emphasizes that a single organism is a *symptom*, not cause, of problem conditions. (Rights: U.S.)

(0 470 99121-6) 1977 413 pp. \$35.00

THE HOUSING OF NATIONS Analysis and Policy in a Comparative Framework

Leland S. Burns & Leo Grebler,
*both of the University of California,
Los Angeles*

Provides analytical material and policy recommendations for countries at various stages of development. Unique in that it formulates and tests causal models which relate housing deficiencies to social and personal disorders.

(Rights: U.S.)

(0 470 98970-X) 1977 255 pp. \$22.50
LC# 76-43023 CIP

AN ATLAS OF REPRESENTATIVE STELLAR SPECTRA

Y. Yamashita, K. Nariai, & Y. Norimoto,
*all of Tokyo Astronomical Observatory,
University of Tokyo*

Gives forty-six plates of spectra of standard stars and nineteen of peculiar spectra of various kinds. Also describes several newly discovered spectral criteria—all obtained with the single-prism Cassegrain spectrograph attached to Okayama Astrophysical Observatory's 91-cm telescope. (Rights: Western Hemisphere)

(0 470 26315-6) 1978 approx. 129 pp.
\$60.00 (tent.) LC#78-535 CIP

PEPTIDES

Proceedings of the 5th American Peptide Symposium

Murray Goodman, *University of California,
San Diego*, & **Johannes Meienhofer**,
Hoffman-La Roche, Inc.

PARTIAL CONTENTS: Analytical Techniques. Brain Peptides. Biological Receptors and Structure-Function Relationships. Hormones of the Pituitary and the Hypothalamus. Antibiotics. Inhibitors. Toxins. Conformations: Theory, X-Ray and Related Studies; Spectral Studies; Polypeptides and Proteins. Synthetic Studies: Advances; Solid Phase; Protection, Deprotection and Coupling.

(A Wiley-Interscience Publication)

(0 470 99384-7) 1977 612 pp. \$30.00
LC# 77-88855

Order from your regular bookdealer, or
directly from:

Dept. 313 SL-56
HALSTED PRESS
a division
of John Wiley & Sons, Inc.
Box 1313, 1 Wiley Drive
Somerset, New Jersey 08873

Prices subject to change without notice and slightly higher in Canada. IN CANADA: John Wiley & Sons Canada, Ltd., 22 Worcester Road Rexdale, Ontario.

313 A 3024-67

Announcing . . . The 40th Edition

Who's Who in America

"Look him up in Who's Who." Sooner or later, students, businessmen, librarians—almost all of us—have need to follow that directive.

The big 2-volume, 40th edition of *WHO'S WHO IN AMERICA* contains more than 72,000 concise, yet complete biographical sketches of men and women of current national reference interest . . . selected by virtue of outstanding achievement or because of positions they hold.

Special Features

- **Regional Index** . . . listing all biographees in the current editions of the four Marquis Who's Who regional directories.
- **Thoughts on my life** . . . written by the biographees; included in selected sketches.
- **Necrology** . . . listing deceased biographees from the 39th edition.

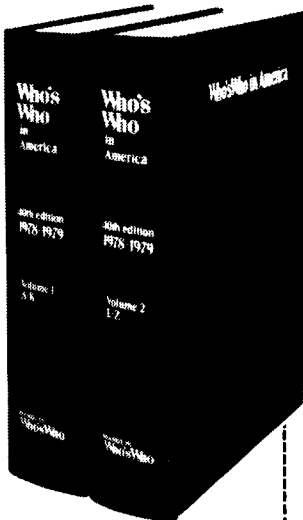
To assure earliest possible delivery, send for your copy now. Books will be shipped immediately upon publication.

Publication Date: June 1978
LC No. 4-16934
ISBN 0-8379-0140-5
\$79.50 — Hardbound

Facts about people

MARQUIS
Who's Who

200 East Ohio Street
Chicago, Illinois 60611 U.S.A.



MARQUIS WHO'S WHO, INC.
200 East Ohio Street
Chicago, Illinois 60611 U.S.A.

Who's Who in America

YES! Please send me _____ copy(ies)
of the 40th edition at \$79.50 each.
Product #030188

Add \$2.00 per copy for postage and handling.
Add state sales tax where applicable.

_____ Payment Enclosed Please bill me

Name _____

Address _____

City _____ State _____ Zip _____

Signature _____

WM/78-24

LETTERS

"Facts" Disputed

I wish to take issue with "Progress in the Philippines?," a letter written by Albert J. Milo of the Chicago Public Library [*Special Libraries* 69(no.1):7A (Jan 1978)].

Julie Bichteler's article, "Special Libraries in the Philippines" in your January 1977 issue is accurate and the impression given is correct. Filipino-Americans like Milo should be less easily disturbed by any "facts" about what's going on in the Philippines. Also, "intellectual freedom" cannot be suppressed—even in jails.

Besides, international lending institutions have been liberal with the Philippines because the country now has a much higher debt-paying capacity than it has ever had before.

Who now has "superficial knowledge of the socioeconomic conditions in the Philippines"?

Simeon Bonzon
Manila, Philippines

Staff Development

LAD PAS/SDC is soliciting staff development plans from all libraries to be placed on file at ALA headquarters and made available to those libraries trying to develop such programs. We request all librarians' assistance and support and urge you to send any programs you have developed to Joel Lee, ALA, 50 East Huron St., Chicago, Ill. 60611.

Alexander C. Crosman, Jr.
Peoria Public Library
Peoria, Ill. 61602

Special Libraries welcomes communications from its readers, but can rarely accommodate letters in excess of 300 words. Light editing, for style and economy, is the rule rather than the exception, and we assume that any letter, unless otherwise stipulated, is free for publication in our monthly letters column.

94 years of engineering literature. Rapid recall: print or microfile.

Since 1884, Engineering Index, Inc. (Ei) has compiled the World's most comprehensive transdisciplinary engineering bibliographic data base for retrospective access to technical literature. Each year Ei's professional editors scan documents published internationally, on engineering and the interrelated areas of science and management. Material of significant and lasting research value is extracted, accurately summarized and published with standard bibliographic citations.

In nearly a century of service to the engineering community, Ei has entered into its total data base more than TWO MILLION concise abstracts, covering the most vital technical articles, proceedings, research reports and books.

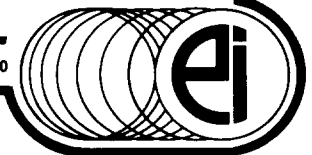
Now, utilizing Ei's broad range of cumulative printed products or microfilm editions, industry, government or academic institutions are provided with ON HAND reference tools to this vast store of comprehensive information.

Annual clothbound print volumes are available from 1959 through 1977. The compact microfilm edition encompasses all years from 1884, on 16mm, 35mm positive or negative film, reel or cartridge, to meet the specifications of most standard readers and reader/printers. A special 10 year (1974-1965) microfilm cumulation is also available.

For detailed information and prices, please write or call: Dept. M

Engineering Index, Inc.

345 East 47th Street, New York, New York 10017 • 212/644-7615, 644-7616, 644-7620



The
**trusted source
of worldwide
environmental
science and
technology
information...**

pollution abstracts

Air pollution, water pollution, energy, solid wastes, waste management, noise, pesticides, radiation, general environmental quality

... are the broad categories of in-depth information gathered, summarized, abstracted, and indexed in **Pollution Abstracts**.

All pertinent literature, carefully selected from the world's primary sources, is accessible to the international subscribers of **Pollution Abstracts** in the following formats:

- **PRINT:** Journal, published six times yearly. Annual subscription: \$99. (\$80 for high schools, junior colleges, and municipally funded public libraries)

Cumulative indexes: Available at nominal cost for years 1970 forward.

- **ONLINE ACCESS**
- **MAGNETIC TAPE LEASE**
- **MICROFILM**

Mail the coupon today for a free sample issue and more information about the **Pollution Abstracts** services.



Mail coupon today for
FREE
SAMPLE ISSUE

pollution abstracts

Another information service of
DATA COURIER, INC., the data base company
620 South Fifth St., Louisville, KY 40202
Phone: 502/582-4111

Pollution Abstracts
Data Courier, Inc., 620 South Fifth St., Louisville, KY 40202

- YES. Send a free, no-obligation sample issue of **Pollution Abstracts** and more information about the services.
- YES. Send a free User Aid for online searching of the **Pollution Abstracts** data base.

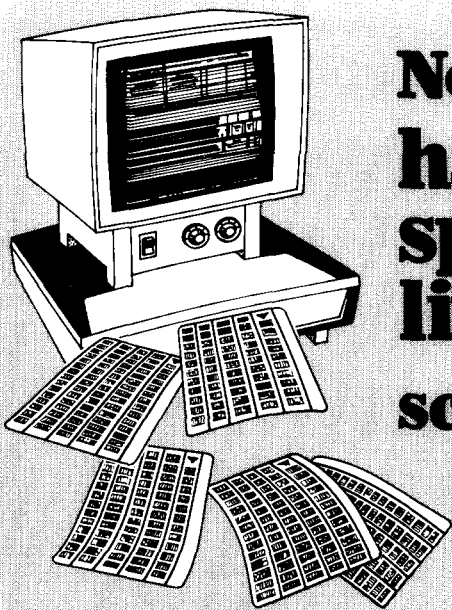
Name _____
Organization _____
Address _____
City/State/Zip _____

HISTORICAL ANNUAL REPORTS OF THE MAJOR AMERICAN COMPANIES

In accordance with an agreement with the Baker Library, Harvard University, Pergamon Press has converted to microform the documents that most widely reflect the growth of American Industry—the Annual Reports of the Major Industrial Companies responsible for the growth of the American economy. Using the Fortune Double 500 Directory 1975 as the basis for its selection, Baker Library at Harvard has compiled a list of companies—the “Fortune 500” industrials and 25 companies from each of the “Fortune 50” lists of top Commercial Banking, Life Insurance, Diversified Financial, Retailing, Transportation and Utility companies. Microforms International Marketing Corporation, the Pergamon subsidiary, has filmed the Annual Reports of these companies through 1973, in many cases beginning with the company’s inception, or its first published report. Pergamon Press is enlarging the Annual Reports’ historical files with current microfilm and, if requested, with current microfiche. Single companies as well as complete sets are available. Important discounts are granted to educational institutions.

For more information please call or write:

**Mrs. Barbara Tilley
Microforms International Marketing Corporation
A Subsidiary of Pergamon Press, Inc.
Fairview Park
Elmsford, New York 10523
(914) 592-7700**



**Now you can locate
hard-to-find
specialty
literature
scattered throughout
370 popular
periodicals**

POPULAR
ART
INDEX

POPULAR
BUSINESS
INDEX

POPULAR
EDUCATION
INDEX

POPULAR
TECHNOLOGY
INDEX

Popular periodical indexes add a new dimension to literature searching

They capture relevant literature usually not indexed elsewhere and they give you immediate access to popular thought and feeling about a subject. You haven't finished a search until you've searched the popular literature.

The largest collection of popular periodicals ever indexed

More than 370 popular and special interest periodicals are subject/author indexed from cover to cover. All articles, news reports, editorials on major issues, reviews, biographical pieces, etc., are included. All book reviews are graded as to the response of the reviewer.

Search by LC Subject Headings or natural language identifiers

The basic controlled vocabulary uses the Library of Congress list of Subject Headings. Identifiers are used wherever LC Subject Headings are inadequate.

Provides unique biographical information

The popular indexes contain much biographical information that is not available anywhere else. You can quickly locate current background information on visiting personnel, VIPs and others.

Every issue totally cumulated — there are no supplements!

These popular literature indexes are produced on 24x fiche in a totally cumulated form every sixty days (or every thirty days at the option of the subscriber). Because there are no supplements, searching is quick and efficient.

Files are up-to-date for all publications

All periodicals received by our indexing staff up to ten working days before publication are included. The latest periodicals in each issue will be only two weeks old.

Copies of articles are always available — fast!

Requests for reprints are fulfilled within 48 hours of our receipt. Postage-free envelopes for ordering reprints are provided with each subscription. There is a nominal handling charge for each reprint ordered, plus a per-page copying fee. This service is provided in compliance with the Copyright Act of 1978 and in cooperation with the Copyright Clearance Center.

Database specifications

Subscribers will receive coverage of all of 1977 plus each month of 1978. By December 1978, the cumulation will contain two full years of coverage and will continue forward to create

Use these new special library indexes to find thousands of citations relevant to your special interests

The citations are selected from the full **MAGAZINE INDEX** coverage of more than 370 popular periodicals.

POPULAR
LAW
INDEX

POPULAR
LIFE SCIENCE
INDEX

POPULAR
RELIGION
INDEX

a constant 2-year "rolling" cumulation. Thus, the user will always search a two year cumulation. Biannual December issues are archival.

Popular literature indexes are very affordable.

Depending upon the subject selected, subscription rates range from \$135 to \$175 per year for six completely cumulated issues annually. Subscriptions consisting of cumulations every 30 days are available for an additional charge of \$80 per subject.

New, more thorough coverage of your subject specialty

These new tools can improve the effectiveness

of every special library. With them you can offer your users more extensive coverage than ever before.

To order use the coupon below

Indicate the number of subscriptions and the frequency of publications desired.

POPULAR LITERATURE INDEXES
are published by

The MAGAZINE INDEX™

For further information call toll free
800-227-8431

THE MAGAZINE INDEX, 885 North San Antonio Road, Los Altos, CA 94022

PLEASE PRINT

Please enter my subscription to the
POPULAR LITERATURE INDEXES indicated below.
 Payment enclosed Bill library/organization later.

Name _____ Title _____

Library/Organization _____

Address _____

City _____ State _____ Zip _____

Authorized Signature _____

- #706 Popular Business Index \$175/year*
- #707 Popular Law Index \$145/year*
- #708 Popular Education Index \$155/year*
- #709 Popular Technology Index \$165/year*
- #710 Popular Religion Index \$155/year*
- #711 Popular Life Science Index \$165/year*
- #712 Popular Art Index \$135/year*

*For 12 issues/year add \$80.

TOTAL AMOUNT OF ORDER _____

Dialog announces



This important new Dialog data base gives researchers access to worldwide biomedical literature, including a number of journals not indexed elsewhere.

Excerpta Medica consists of abstracts and citations covering the entire field of human medicine and related disciplines. It is particularly strong in international journals and provides extensive coverage of drug products. Excerpta Medica covers over 4,400 biomedical journals, (of which 3,500 are medical and 900 are journals providing additional articles for DRUG DEPENDENCE and ENVIRONMENTAL HEALTH and POLLUTION CONTROL), more than any other

medical data base.

Dialog aids researchers using Excerpta Medica with an online thesaurus, in which thesaurus terms are computer-controlled to insure uniform technology. Records in Excerpta Medica are retrievable by Dialog's full-text searching capability. This capability provides key word access to titles, abstracts and assigned in-depth subject terms. Authors and other bibliographic data may also be searched. And Dialog searches can be made on the basis of medical specialties such as neurology, genetics, pediatrics and 39 other fields.

All told, Dialog offers searchers

a healthy addition:



more than 75 data bases and 20,000,000 document references. Many of these data bases also provide valuable information for searchers interested in medical or life science research. These include BIOSIS Previews, SCISEARCH[®], SOCIAL SCISEARCH[®], INSPEC, the Chemical Abstracts family, (CA Condensates, CASIA and CHEMNAME), Psychological Abstracts, NTIS, Foundations Directory and Grants Index, and many others.

All of these data bases are available for searching over 100 hours a

week, Monday through Saturday. Volume discounts are available for heavy users. Moreover, Dialog charges are based only on actual usage. There is no minimum or subscription fee.

For further information, including a free catalog of data bases, write Lockheed Information Systems, Dept. 50-20, 3251 Hanover, Palo Alto, CA 94304. In the U.S., call toll-free (800) 227-1960. In California, call (800) 982-5838. For TELEX communication, the number is 346-409. For TWX, 910/330-9221.

Lockheed Dialog



The CFR Index is on the way!

For the first time, access the entire *CFR* geographically and by subject. We've told you Information Handling Services is indexing the *Code of Federal Regulations*. The first three Indexes—Title 10, Energy (1974-1976), Title 40, Protection of Environment (1972-1976), and Title 10/11, Atomic Energy (1947-1973) have been completed. Additional titles will be ready for delivery on a continuing basis throughout the months ahead, and later merged to create the cumulative Index.

To obtain complete information, call our toll-free number today. Or, use the coupon to receive your free copy of our full-color wall chart (shown above) that visually traces the complete history of each *CFR* title from 1938 to 1976 through name changes and reserved status.

For information, call toll-free: 1-800-821-3424, Ext. 278.

In Missouri: 1-800-892-7655, Ext. 278.

**FREE
CFR
CHART**

Information Handling Services
15 Inverness Way East, Dept. 59
Englewood, Colorado 80150

Please deliver my free 19" x 28" full-color *CFR* Wall Chart.

Please send me information about the IHS™ government documents program.

Name

Title

Organization

Address

City/State/Zip

Area Code Phone

D30-4

© Indian Head Inc., 1978



Information Handling Services

An Indian Head Company

A Worldwide Population Information Network

Status and Goals

Helen K. Kolbe

The George Washington University Medical Center, Paul H. Himmelfarb Health Sciences Library, Washington, D.C. 20037

■ The rapid growth of world population and changes in government policies and programs have combined to bring about many changes in the area of population information. Not only has there been an increase in the amount of population information and millions of dollars devoted to research but also an increase in awareness of the need to improve access to

population information. Information resources in population are located primarily in the developed, or information rich, countries. No adequate information flow has yet been established to and from the developing, or information poor, countries. In response to this need, emerging regional population information networks are already identifiable.

THERE are more than four billion people in the world today (1, p. 1). It took from the beginning of mankind until 1830 A.D. for the world's population to reach its first billion inhabitants. The second billion was added in 100 years, the third in 30 years and the fourth was reached in 1976—an interval of only 16 years (2, p. 8). If the present growth rate of 30 per 1,000 continues, there will be eight billion people by the year 2000. The recent trend toward a decline in birth rates, documented only recently, can be attributed to the availability and use of modern contraceptives encouraged by vigorous family planning programs in many countries of the world (3, p. J-205).

Effect on Population Information

The rapid growth of world population with the resulting changes in government policies and programs have combined to bring about not only an increase in the

amount of population information due to millions of dollars devoted to research but also an increase in awareness of the need to improve access to population information. Information resources in population as in other subject areas are located primarily in the developed countries, often referred to as the information rich countries. There is, it would seem, an inadequate information flow to and from the developing countries, or information poor countries.

Research inevitably stimulates publication and such was certainly the case in the study of population over the past decade and a half. The World Population Conference in 1974 and the studies created in preparation for it led to the United Nations Population Commission's expressed interest in the possibility of computerizing population information to improve access (4, p. 84). An Interim Steering Committee and Technical Task Force organized in September 1975

considered the feasibility and possible design of a worldwide population information system (POPINS) (5, p. 1). The report of the Interim Steering Committee was presented to the U.N. Population Commission in January 1977. The Commission authorized a further two-year feasibility study without commitment to proceed beyond the study.

Prior to and during the landmark POPINS study, numerous components of a worldwide population information system or network were undergoing expansion, development, or planning.

Components of an International Population Information Network

Before considering the components of a future worldwide population information network, it seems expedient to define an information network and distinguish between an information network and an information system. Becker and Olsen have stated:

In an information network, more than two participants are engaged in a common pattern of information exchange through communications for some functional purpose. . . . Telephone and radio networks are essentially communications grids that are independent of the intellectual content or information purpose of the message they carry. However, when the network is devoted to a specified and limited functional purpose and there is interdependence for information among the participants, then it seems logical to call it an information network (6, p. 290-291).

In light of this and other definitions, the development of cooperative arrangements among any, or all, existing or planned population information organizations lends itself best to the network concept.

Emerging regional networks are already identifiable. The most highly developed networks at present are in North America and Europe and cover the biomedical (family planning) and demographic aspects of population information. One is a professional association.

North America and Europe

The Association for Population/Family Planning Libraries and Information

Centers-International (APLIC) was founded in May 1968 by 15 population/family planning librarians and information specialists who met in Chapel Hill, North Carolina under the auspices of the University of North Carolina's Carolina Population Center with a grant from the U.S. Agency for International Development (USAID) (7). APLIC's present membership, in its decennial year, represents more than 80 organizations in 13 countries of North America, South America, Europe, Asia, and Africa. APLIC has made significant contributions to improving the flow of population information. Each year APLIC brings together users, producers, and providers of population information through annual conferences and regular board meetings so that those who need information from other libraries and information centers know whom to contact and how. APLIC publishes the *Proceedings* of its annual conferences and a newsletter, *The APLIC Communicator*. The New York and Washington Chapters have compiled union lists of serials for each of their regions. These lists will be combined to form a North American union list of serials in population.

Aware of its international obligations, APLIC has sponsored training Institutes for population librarians in Asia and South America. The first was held in Bangkok in 1973 [in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Carolina Population Center, Technical Information Service] and the second in San Jose, Costa Rica in 1976 (in collaboration with the International Planned Parenthood Federation, Western Hemisphere Region and the Centro Interamericano de Adiestramiento en Comunicacion para Poblacion y Planificacion Familiar). At the request of the regional organizations, follow-up sessions are being planned for both Asia and South America.

APLIC has encouraged through financial and technical assistance the development of a sister organization in Latin America, the Asociacion Interamericana de Centros de Informacion de Poblacion (AICIP) and

hopes to see a similar organization formed in Asia within the next two years.

Population organizations in Africa have made inquiries about similar kinds of technical assistance which will be acted upon as soon as feasible.

Other APLIC services include the compilation of an *On-Site Orientation Directory*, training and technical assistance to developing country libraries, and regular contributions on population-related meetings to the quarterly publication, *World Meetings*. "In practical terms, the materials held in the collections of APLIC members constitute the bulk of the world's available information in population and family planning, and the experience of its individual members combines much of the available knowledge on the best way to handle this material" (8, p. 4).

The *Population Index*, a publication of the Office of Population Research, Princeton University since 1935, is a major source of population information. The *Index* provides an annotated bibliography of worldwide demographic literature in all languages for which titles and/or abstracts are available in a European language. Each quarterly issue has a maximum of 1,000 entries (5, p. 43-46). There is a cumulative index for the years 1935-1968. Plans to computerize the *Index* have been completed and the initial work began in June 1977. Linking the data base of the *Index* and the major computerized systems in biomedicine and family planning would provide a substantial international population information resource.

POPINFORM is an interactive computerized population information network initiated and coordinated by the Population Information Program, George Washington University Medical Center. The *POPINFORM* network consists of several data bases that can be searched separately or concurrently. The present file size is about 40,000 citations with abstracts and/or index terms. The subject scope is primarily biomedical with comprehensive coverage of contraceptive technology and family planning program evaluation.

The main files are contributed by the Population Information Program, the Center for Population and Family Health at Columbia University, and the Family Planning Evaluation Division of the Center for Disease Control (Atlanta) (9, p. 45-47). The International Statistical Program Center of the Bureau of the Census (Washington, D.C.) and the East-West Communication Institute (Honolulu) contributed small sample files of census data and population communication literature.

POPINFORM is maintained by Informatics, Inc. (Rockville, Md.) and uses the Recon IV software. The files are searchable separately or concurrently using free text or index terms. Each contributing organization maintains its own thesaurus or keyword list. Thesauri developed by the Center for Population and Health (10) and the Population Information Program (11) are based on the National Library of Medicine's (NLM) Medical Subject Headings (MeSH).

George Washington University and Columbia University provide computer searches and hard copy backup without charge to developing country users. Services are available to North American users by subscription through Informatics.

Numerous on-line demonstrations of *POPINFORM* from Asia, Europe, South and Central America since 1974 clearly show the technical feasibility of sharing information through satellite communications and computer technology. The economic feasibility is still questionable (12). A more viable alternative to improve access in the developing countries is the proposed *POPLINE*.

POPLINE is an informal proposal to the NLM sponsored jointly by the Center for Population Research, NICHD and the Office of Population, USAID to add to the NLM information systems a comprehensive population information file consisting of *Population Sciences: Index of Biomedical Research*, *POPINFORM* and *Population Index*. The citations in these three files cover a major portion of the worldwide literature in population including basic research in reproductive biology,

applied research in contraceptive technology and family planning, and demography. The advantage of the proposed POPLINE as viewed by the sponsors are:

- The NLM information system which now reaches developing countries in Asia, Latin America and Africa is the most likely existing system to further expand services to developing countries.

- The location of POPLINE in the NLM system would increase dramatically the potential number of access points to a population data base, since MEDLINE is already available in more than 500 institutions. Many of the potential users of population information are located in the same academic, government and medical institutions.

- It would significantly reduce the cost of computer searches presently available through POPINFORM (\$8-\$15 per connect hour as compared with \$50 per connect hour).

- It would bring into one system all the main bibliographic population information data bases currently being funded by the U.S. Government thereby creating a truly comprehensive North American regional population information resource.

The *Demographic Data Retrieval System* (DDRS) of the International Statistical Programs Center of the Census Bureau is the successor to the International Demographic Data Directory of which a sample file is included in POPINFORM. DDRS is a storage and retrieval system for tabular data. Approximately 95% of the entries are tables and 5% are bibliographic references to data or to articles containing data. Most of the citations refer to developing countries regardless of the geographical source or language. An analysis in May 1976 revealed that 64% of the tables were demographic, and 36% related to economics, education, health, or family planning. File size as of June 1976 was about 20,000. The system uses a mini-computer and microfilm reader-printer for storage and retrieval (5, p. 46-47).

The *Technical Information Service* (TIS) of the Carolina Population Center has been a major population information

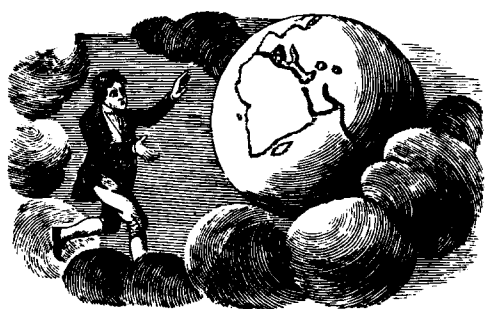
service since 1967. Unfortunately, the service was discontinued as of Jun 30, 1977 for lack of funding.

TIS published numerous library resource tools and a periodical entitled *Overview: The International Journal of Population Libraries*, (5, p. 36-37). TIS was a leader in the population library field, the founding organization for APLIC, and a major assistance agency to population libraries in developing countries. Graduates of the training program staff many of the population libraries in Latin America, Asia and Africa.

The *International Planned Parenthood Federation* (IPPF), founded in 1952, has a decentralized non-computerized information network within its own infrastructure. IPPF is a federation of 91 family planning associations (FPAs) located around the world with a central office in London. There is strong emphasis on providing information about family planning and related services to policy makers, professionals, and lay persons. To accomplish this, IPPF headquarters has organized its publications program, library, and filing system into an Information Department with four subdivisions: the Publications Unit, the Information Flow Section, the Audio-Visual Production Unit, and the Library and Documentation Service. Among the many IPPF information services and publications, the most unique (and useful according to IPPF officials) product is the *IPPF Open File*. The staff of the Information Flow Section scans and selects information on population from letters received from the FPAs and field trip reports from staff people. *Open File* is compiled daily for internal use in London, weekly for use by member associations worldwide, and quarterly for publication and general distribution as *IPPF News* (5, p. 37-40).

Latin America

Two recent developments in Latin America are of particular significance. They are the establishment in 1975 of the Latin American Population Documentation Systems (DOCPAL) and the formation in 1976 of a Latin American popula-



tion library association, AICIP, as a sister organization of APLIC.

DOCPAL is operated by the Latin American Demographic Center in Santiago, Chile with financial support from the International Development Research Centre (IDRC) in Ottawa. DOCPAL began in March 1976 to collect, abstract, index, and store in a computer population documentation written in or about Latin America. The language of the data base is Spanish. An abstract journal will be produced from the computer file and demand searches will be offered with hard copy backup service. The system was designed to serve primarily population information seekers in Latin America, but its resources will also be available to the global population community as needed (13, p. 6-8).

Asia

Most of the population information network activities in Asia have taken place under the aegis of ESCAP. The ESCAP region includes 35 countries and territories reaching from Pakistan to Japan with great diversities in political systems, geographic characteristics, ethnic composition, language, customs, religious beliefs, and economic development. Efforts to plan for the systematic collection and exchange of population information in this region must always take account of these diversities. The need to improve the flow of population information was first recognized at the 1955 Seminar on Population in Bandung, Indonesia; and reiterated at the First and Second Asian Population Conferences (New Delhi, 1963 and Tokyo, 1972).

As of early 1976, the ESCAP Clearinghouse and Information Section had developed two networks, the Population Correspondents Network and the Population Library/Documentation Centre Network. The Population Correspondents Network consists of 296 correspondents and 85 alternate correspondents representing 381 organizations in 29 countries. The Population Library/Documentation Centre Network consists of over 100 population libraries in the region. Both networks entail a two-way flow of information to and from ESCAP which, in turn, provides information to interested institutions in other countries (5, p. 12-21). It is unlikely that an Asian population information network can be developed to meet the needs of the entire region, but it is highly probable that subregional networks will emerge which can eventually be linked into a functional regional network.

Africa

In general, there is a lack of the basic infrastructure necessary to collect, organize, and disseminate population information in Africa although several important demographic research institutions are located in Africa, including the Cairo Demographic Centre; the Council for the Development of Economic and Social Research in Africa, Dakar, Senegal; the United Nations Institute for Demographic Training and Research, Yaounde, Cameroon; the United Nations African Institute for Economic Development and Planning, Dakar, Senegal; and the United Nations Regional Institute for Population Studies based at the University of Ghana. In 1974, the Population Association of Africa was organized for the purpose of initiating and coordinating research and facilitating communication among population researchers in Africa. The Association has been hampered by lack of funds but hopes to be able to publish a journal of demography in the near future (5, p. 28-33).

A Population and Social Sciences Library has been established at the University of Ghana. The library has built

up valuable holdings in population, conducted an inventory of population research activities, planned a training program for African population librarians, and developed a proposal for a Population Information Documentation System for Africa (PIDSA) similar to the DOCPAL model but incorporating a strong training component. Language is a major barrier in Africa but PIDSA proposes to establish a bilingual data base to serve Anglophone and Francophone Africa, excluding the Arabic speaking countries of North Africa. The PIDSA proposal is the first major effort toward networking in Africa, but to date it has not been funded.

POPINS Proposal, the Model, and a Counterproposal

The proposal for POPINS submitted for consideration to the U.N. Population Commission in January 1977 is now entering its second phase—a two year exploratory study of feasibility and system design. The recommendations of the Interim Steering Committee and Technical Task Force have suggested a model having a central coordinating unit, regional centres, and national centres. POPINS, as proposed, would be located in the United Nations Population Division. The Steering Committee recognized the need for adequate infrastructures in participating countries, the need for the strong support of national governments, and the importance of locating the system within a United Nations organization (14, p. 7, 41, 102–103).

The volume of documents in population is small—probably about 25,000 per year. Furthermore, the infrastructure for a population information network is in various stages of development from highly sophisticated in North America to embryonic in Africa. Financial resources for population information are severely limited with IDRC and USAID the principal contributors. For these reasons, a number of North American population information specialists believe that the most practical approach to a worldwide population information network is to continue to encourage and promote the development of local, national, and regional information

resources including the training of documentalists and librarians. As these resources grow, functional regional networks will emerge which can later be inter-connected by a referral center when the need for information exchange among the various components warrants the establishment of a formal coordinating unit. The “building block” approach has been used effectively by the NLM and the referral center concept has been chosen by the United Nations Environmental Program (UNEP). For the next decade “the challenge that faces the [population] information community is to disseminate data and knowledge that are needed appropriately, accurately, and rapidly (15). Given that goal and the present disparate capabilities of the potential participants in a worldwide network, it would appear that the best course to follow is an “evolutionary development responsive to user needs, whether it is simple interlibrary cooperation or a highly technical communication system (16, p. 498).

Summary

A strong North American-European network is coalescing rapidly. DOCPAL shows promise of bringing order to population information in Latin America. Asian network efforts are encouraging. The situation in Africa looks hopeful. The POPINS proposal will receive careful scrutiny during the next two years. Therefore, it seems reasonable to predict that within seven to 10 years a *de facto* worldwide population information network will be a reality.

Literature Cited

1. Population Reference Bureau / *World Population Growth and Response*. Washington, D.C., PRB, Apr 1976.
2. International Planned Parenthood Federation / *Population*. London, IPPF, Aug 1973.
3. Brackett, James W. and R. T. Ravenholt / *World Fertility, 1976: An Analysis of Data Sources and Trends*. In *Population Reports Series J* no. 12, Nov 1976. Washington, D.C., Population Information Program, George Washington University, 1976.

4. Kolbe, Helen K. / Report on POPINS. In *Proceedings of the Ninth Annual Conference of the Association for Population/Family Planning Libraries and Information Centers, Montreal, Canada, April 26-29, 1976*. Judith M. Wilkinson, ed. Washington, D.C., APLIC-Int., 1976.
5. POPINS Interim Steering Committee / *Towards a World-Wide Information System of the Field of Population*. New York, POPINS ISC, 1977.
6. Becker, Joseph and Wallace C. Olsen / Information Networks. In *Annual Review of Information Science and Technology* v. 3. Chicago, Encyclopedia Britannica, 1968.
7. Horowitz, Blanche / APLIC: Innovator of a Population Information Resource. *Bulletin of the American Society for Information Science* (no. 8): 16-18 (Mar 1975).
8. Hankinson, Richard / Population Information Systems: Past, Present, and Future. Presented at the Annual Meeting of the Population Association of America, St. Louis, Mo., Apr 21-23, 1977.
9. Kolbe, Helen K. / POPINFORM: A Computerized Population Information Network. In *Information in Support of Population Activities*. Paris, UNESCO, 1974.
10. Speert, Kathryn H. and Samuel M. Wishik / *Fertility Modification Thesaurus*. New York, International Institute for the Study of Human Reproduction, 1973. 186 p.
11. Kolbe, Helen K. and Rita F. Bergman / *Population/Fertility Control Thesaurus*. Washington, D.C., Population Information Program, 1976. 243 p.
12. Kolbe, Helen K. / Networks. *Bulletin of the American Society for Information Science* 1(no. 8): 23-24 (Mar 1975).
13. Delaney, Frances M. and Arthur Conning / Latin American Population Documentation System (DOCPAL): An Example of IDRC's Information Activities in Population. Presented at the Annual Meeting of the Population Association of America, St. Louis, Mo., Apr 21-23, 1977.
14. DEVSIS Study Team / *DEVIS: Preliminary Design of an International Information System for the Development Sciences*. Ottawa, International Development Research Centre, 1976.
15. Piotrow, Phyllis T. / Population Problems: The Shift from Political Taboo to Government Programs. *Bulletin of the American Society for Information Science*, 1(no. 8): 10-11 (Mar 1975).
16. Knight, Douglas M. and E. Shepley Nourse, eds. / *Libraries at Large*. New York, R. R. Bowker, 1969.

Received for review Jul 5, 1977. Revised manuscript accepted for publication Mar 13, 1978.



Helen K. Kolbe is associate director, Paul H. Himmelfarb Health Sciences Library, The George Washington University Medical Center, Washington, D.C., and president, Association for Population/Family Planning Libraries and Information Centers-International.

Multi-Data Base Searching in Agriculture

A Cooperative, Computerized Service

Hilary D. Burton

U.S. Department of Agriculture, Agricultural Research Service, Data Systems Application Division, Beltsville, Md. 20705

■ A cooperative program to provide selective dissemination of information service to three groups of land-grant university scientists working in the area of sorghum research was undertaken by the Agricultural Research Service and the National Agricultural Library. After one year, analysis of the retrieved citations

and user feedback shows that no single data base is sufficiently comprehensive in coverage. In terms of maximum information yield and relative ease of effective profile construction, BIOSIS Previews and the Commonwealth Agricultural Bureaux file were the most productive data bases.

THE DATA in this paper developed out of a cooperative effort of the Agricultural Research Service (ARS)* to provide Selective Dissemination of Information (SDI) service to a group of sorghum researchers identified and selected by the National Agricultural Library (NAL). The Agency for International Development (AID) funded the library, which in turn contracted to ARS, as well as several other units, to provide the desired services. The following paper is based on data from ARS and an evaluation of the project conducted by a private contractor (1). Because these data did not originate from a controlled test environment, they lack some rigor and should be interpreted accordingly. However, because they

originated out of a real, service environment, they should be more useful in reflecting actual trends and patterns which might be encountered in analogous subject areas. The specific data on retrieval by individual profile are available from the author should anyone wish to review them. Approximations of some of the citation data by data base were made available to the contractor by ARS early in 1977. The data in this paper, however, reflect actual counts and include no approximations or estimates.

Description of Project

Over a 12-month period (June 1976–May 1977), computer based searches were provided by the Agricultural Research Service's Current Awareness Literature Service (CALIS) to selected land-grant university scientists working in the area of sorghum research. Scientists located at Purdue University,

*In a recent reorganization within the U.S. Department of Agriculture, the Agricultural Research Service has become part of the Science and Education Administration which also encompasses the National Agricultural Library.

the University of Nebraska, and Texas A & M University were introduced to CALS by librarians located on their campuses. The librarians had received varying degrees of instruction in the use of CALS; librarians at two of the locations had attended brief training seminars conducted at ARS field locations as well as received copies of the *User's Guide* (2), and personnel at one location relied solely on the *User's Guide*. The librarians' mode of interfacing with the sorghum researchers also varied; in some cases, potential users were given a *Guide* and allowed to develop their own search profiles and, in other cases, the librarian worked closely in developing and revising the profiles. All profiles were then forwarded to the ARS information specialist who edited them for conformity to CALS system specifications (e.g., correct tags and data base codes) and for general accuracy of subject delineation. Because of the variation in training and participation of the librarians, the profiles varied widely in the quality of their composition. However, given the specificity of the area, i.e., sorghum research, retrieval precision was generally high.

The librarians participating in the project were urged to encourage the land-grant scientists to revise their profiles whenever they felt there were problems in their citation output. Because of this policy, which placed determination of retrieval effectiveness on the user, no attempts were made to measure precision on a citation by citation basis.

After gaining some familiarity with the Current Awareness service, many of the scientists made revisions to their profiles directly. In a few cases, where the scientist could not determine what was causing faulty retrieval he would contact either the project librarian or the ARS information scientist.

After the initial start-up period, during which potential users were contacted and profiles were developed, there was a total of 128 data base profiles submitted by 31 individuals. Because of the variation in coverage of the agricultural research literature, no single data base was identified or recommended to users as being

comprehensive. Therefore, all users opted to search a combination of files. Because of arrangements between NAL and the land-grant librarians, subsequent ARS editing of profiles did not include review of data bases selected for search. Since NAL had a fixed amount of money from AID with which to cover ARS computer costs, it was decided by ARS to accept the profiles as submitted and to notify NAL when the predetermined cost limit was reached. Since computer costs were a function of number of profiles, number of data bases searched, and number of times (issues) searched, ARS made no recommendations to land-grant users in order not to affect their (potential) use patterns.

Relevant, available data bases were BIOSIS Previews, Chemical Abstracts Condensates, Food Science and Technology Abstracts, the full file of the Commonwealth Agricultural Bureaux (CAB), and the file of the National Agricultural Library (CAIN/AGRICOLA). [The National Agricultural Library file, originally designated CAIN (Cataloging and Indexing) and now designated AGRICOLA (Agriculture On-Line Access), is referred to henceforth as the CAIN file since the ARS Current Awareness service is not an on-line service but is operated in a batch mode.] Three users elected to search Government Reports Announcements (National Technical Information Service) in addition to several of the other bases.

Search profiles varied in length and complexity from three terms of a general nature, which simply requested anything on sorghum, to the more complex (cytogenetics and breeding of sorghum) and lengthy (164 terms). System parameters allow up to 250 65-character terms per profile with left and right truncation.

Popularity and Productivity of Data Bases

Since all data bases are converted to a common format prior to searching, a given profile can easily be structured to search multiple files. A range of 3-8 data bases was searched by each profile. The most popular selections were BIOSIS Previews (Biological Abstracts and BioResearch Index) and CAIN. The CAB file which

was searched by less than a third of the users had only recently been added to the CALS system. While many librarians are familiar with the individual abstract journals which comprise the file, such as *Review of Applied Entomology* or *Plant Breeding Abstracts*, they have some difficulty accepting the concept of the merged product. Perhaps this lack of recognition of what the CAB data base really was and/or a lack of knowledge of its availability were the reasons so few people included it. It was extremely productive for those who did use it. Table 1 lists the combinations of data bases searched. No limits or charges existed with respect to number of citations retrieved so users were not penalized for sacrificing precision for the sake of recall. [In a follow-up evaluation of the sorghum service project, only two users indicated that they were getting too many citations (1). The users did not specify whether the "too many" citations were non-relevant or relevant but had already been seen before or were not wanted for some other reason.] The average number of citations retrieved varied widely from data base to data base and within the three user groups. Table 2 gives total retrieved citation averages for the group as a whole by data base, while Table 3 shows the considerable variation among user group averages for each data base.

The significant variation among user groups in the average number of citations retrieved seen in Table 3 is primarily due to differences in profile construction rather than subject area differences or differences in coverage. Profiles from Group C were consistently more complete with inclusion of various kinds of synonymy such as common and taxonomic names as well as available numeric codes for each concept. Because both titles and indexing fields were searched, this added enrichment to the profiles and produced much more comprehensive retrieval. This was particularly true in the case of the CAIN file which includes only minimal indexing with the result that dependence on title (where maximum vocabulary variation occurs) is greater than for any of the other data bases.

Table 1. Data Bases Searched

	Profiles	Users
BIOSIS Previews		
Biological Abstracts (BA)	28	24
BioResearch Index (BRI)	24	20
CAIN	30	27
Chemical Abstracts Condensates		
CAO*	16	12
CAE	3	3
Commonwealth Agricultural Bureaux (CAB)	10	9
Food Science & Technology Abstracts (FSTA)	11	8
Government Reports		
Announcement (GRA)	6	5
BA, CAIN	26	
	(most common combination)	
BA, CAO, CAIN, FSTA (3 of 4)	13	
	(next most common)	

* CAO refers to the odd numbered issues of Chemical Abstracts and CAE to the even numbered issues. Each series has different subject areas. For a complete delineation, refer to: *Subject Coverage and Arrangement of Abstracts by Sections in Chemical Abstracts*. Columbus, Ohio, Chemical Abstracts Service, American Chemical Society, 1975.

In terms of overall productivity, BIOSIS Previews is clearly the richest source with more than 50,000 citations retrieved (Table 2). On the basis of individual profile yield, however, the CAB file is the most productive. Had the same number of profiles been run against the CAB file as were run against BIOSIS, using the 148 citations per monthly issue per profile average (Table 3), the adjusted total for CAB would have been slightly greater than 50,000. However, since BIOSIS Previews consists of two issues of Biological Abstracts and one of BioResearch Index each month, the actual monthly average is 155 citations. BIOSIS and CAB appear to be equally productive both by average profile retrieval and total retrievals. Table 4 reflects adjusted averages based on total monthly citations received.

User Findings and Recommendations

Obviously, no single data base constitutes a comprehensive source. It

Table 2. Total Citations Retrieved by Sorghum Profiles

	Citations	Issues	Profiles
BIOSIS			
Biological Abstracts	34,907	27 (biweekly)	28
Bio Research Index	16,507	12 (monthly)	24
Chemical Abstracts			
CAE*	252	29 (biweekly)	3
CAO	21,678	29 (biweekly)	16
CAIN†	27,104	15 (monthly)	30
Commonwealth Agricultural Bureau‡	16,289	11 (monthly)	10
Food Science and Technology Abstracts	12,352	13 (monthly)	11
Government Reports Announcement	296	29 (biweekly)	6

*CAE includes primarily analytical chemistry while CAO includes biochemistry, toxicology, plant nutrition, and related fields and has a much wider agricultural audience.

† Four extra issues of CAIN were included in the search service since issues 75(no. 11), 75(no. 12), 76(no. 1), and 76(no. 2) were received by ARS in April 1976.

‡ Only two months of 1977 data were included for CAB because of search program modifications which delayed processing.

Table 3. Average Number of Citations Retrieved per Issue by Data Base

	BIOSIS Previews		CAB	Chemical Abstracts			CAIN	FSTA	GRA
	BA	BRI		CAO	CAE				
User Group A	18	22	91	11	3	29	24	1	
User Group B	32	31	235	22		28	48		
User Group C	57	77	208	122		78	236	3	
System Average*	46	63	148	50	3	60	73	2	

* The system average was calculated by dividing the total number of citations retrieved from the data base by the total number of profiles run. The user group averages were calculated by dividing the total number of citations retrieved from the data base for each user group by the number of issues searched and by the number of profiles for each group. Therefore the simple average of the three user groups is not equal to the system average.

Table 4. (Adjusted) Average Monthly Retrieval

	User Group A	User Group B	User Group C	System Average
BIOSIS				
BA	36	64	114	92
BRI	22	31	77	63
BA/BRI	58	95	191	155
CAIN	29	28	78	60
CAB	91	235	208	148
Chemical Abstracts				
CAO Only	22	44	244	100
CAE Only	6			6
CAO/CAE	28	44	244	106
FSTA	24	48	236	73
GRA	2		6	4

would have been interesting to determine the proportions of duplicate citations yielded by the various combinations of the data bases. Since no user commented (or complained) of overlapping coverage, one can assume that while its existence is annoying for economical and theoretical reasons, in reality the multi-data base system will probably not be changed due to user needs. For such a broad area like agriculture, however, cooperative efforts among BIOSIS, CAB, and NAL, like those of BIOSIS, Chemical Abstracts Service, and Engineering Index, could result in less overlap and improved coverage of those items which are handled.

Many of the users, as well as some of the librarians, were surprised at the existence of relevant citations in data bases not considered to be "agricultural," such as Chemical Abstracts. Nearly all the users found that the computer-based searches brought to their attention many journals with which they had not been familiar. As has been determined in two earlier ARS user studies,[†] exposure to foreign literature was regarded by equal-size groups as both an advantage and a disadvantage. Perhaps the underlying thinking of those who regarded receiving foreign citations as a disadvantage was that 1) obtaining copies of the journal itself was often difficult and time consuming, and 2) obtaining translations once the article was obtained was difficult, time consuming, and expensive. Unlike Kreilkamp, who paraphrased L. H. Campey and stated "that . . . it (CAIN) appeared to be the best available machine readable data base anywhere in the world, needing, however, to be supplemented by alternative data bases" (3), the sorghum

[†]A questionnaire was distributed to all CALS users in 1973. A portion of it dealt with general suggestions and elicited many comments dealing with foreign journals. In the summer of 1977 a more specific questionnaire was sent to all CALS users at one of the major ARS regional laboratories. Under a general question dealing with problem areas, many users brought up the subject of foreign citations. An equal number brought up the subject under a question dealing with strengths in the system.

project statistics seem to point to a combination of BIOSIS and CAB as making the most effective contribution. To these two core data bases would be added any of the specialty data bases such as Chemical Abstracts or Food Science and Technology Abstracts as the search subject required.

In addition to citation yields, there are two other factors affecting the aforementioned recommendation. First is the in-depth level of indexing given to all BIOSIS citations including keywords and subject and taxonomic codes. This improves retrieval effectiveness while not increasing search difficulty since the printed code lists and indexing rules are widely available. The second factor is the high quality abstracts available with each CAB citation, thus providing the user with considerably more information than a simple citation.

The combination of extensive indexing and therefore "searchability" of the BIOSIS data base and the informative abstracts and superior coverage of the CAB file constitute a recommended core for any agricultural literature search activity. While the BIOSIS data base is already well known in the United States, the CAB file in machine readable form has only become available recently. (ARS introduced the CAB data base in the United States in 1975. Lockheed made the data base available in January 1977.) Hopefully, its user audience will develop in proportion to its demonstrated productivity.

Summary

Within the broad area comprising the literature required by agriculture scientists there is no single data base which is truly comprehensive. For scientists working in specialized areas such as food processing technology or chemical analysis of pesticides, a single data base such as Food Science and Technology Abstracts or Chemical Abstracts might be satisfactory for SDI service. But, for the majority of research areas, a combination of data bases is necessary to insure adequate coverage. On the basis of citation yields, ease of

search profile construction, and information content of retrieved citations (e.g., includes abstracts with the citation), data from a study of sorghum retrieval activity indicates that the CAB and the BIOSIS data bases yield the highest return.

Literature Cited

1. Cales, Thomas W. / "An Evaluation of the Sorghum-Millet Information Project of the National Agricultural Library and the Agency for International Development." Prepared for the National Agricultural Library, U.S. Department of Agriculture. Contract no. 12-14-0605-196. Jun 30, 1977.
2. *Current Awareness Literature Service Users's Guide, 1976*. 3d. ed. Beltsville, Md., U.S. Dept of Agriculture, Agricultural Re-

search Service, Data Systems Application Division, 1976. 158p.

3. Kreilkamp, H. D. / The National Agricultural Library's Data Base: AGRICOLA. *College and Research Libraries* 38(no. 4):298-303 (Jul 1977).

Received for review Sep 22, 1977. Revised manuscript accepted for publication Apr 13, 1978.

Dr. Hilary D. Burton is technical information specialist, Data Systems Application Division, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md.

Commonwealth Agricultural Bureaux' World Agricultural Information Service

John Newton

Commonwealth Agricultural Bureaux, Slough, England

■ The Commonwealth Agricultural Bureaux was founded to meet the need among Commonwealth countries for a world agricultural information service. The structure and development of the organization are discussed, as are the

journals, books, and services offered. Each institute and bureau comprising the organization collects and disseminates information in a particular branch of agricultural science. The identification of agricultural pests is another service.

EARLY this century, a number of Commonwealth countries recognized the need for information and identification services in agriculture. A series of conferences and committee meetings led to the formation of the Imperial Bureau of Entomology in 1913, the Imperial Bureau of Mycology in 1920, and a research centre at Farnham House in Farnham Royal, England, in 1927. The success of these culminated in the founding of the Commonwealth Agricultural Bureaux (CAB) in 1929.

Eight information centres (bureaux) were established at appropriate research stations in the United Kingdom to supply information on subjects such as agricultural parasitology, animal genetics, animal health, nutrition, fruit production, plant genetics, and soil science. Other centres were added through the years, and the Bureaux of Entomology, Mycology and Helminthology became institutes. CAB now comprises 10 U.K.-based bureaux, 3 U.K.-based institutes, and the Commonwealth Institute of Biological Control, based in Trinidad and Tobago. All the units of CAB provide information services; however, the institutes also un-

dertake identifications and taxonomy. All three services are interdependent; the information services benefit from the taxonomic and biocontrol services, the identification services use the information services and cooperate in biocontrol, and the biocontrol services draw on the work of the other two.

Every five years, delegates from the 26 member countries meet in London to review the work of CAB and to determine policies for the next five years. Day-to-day control is vested in an executive council comprising representatives from member countries, and a full-time executive director has responsibility for running CAB. The usual administrative and accounting functions are centred at the CAB Head Office in Farnham Royal, together with the central sales department, a computing control centre, and a printing unit. Like the bureaux, CAB institutes have their own premises away from the head office. Each unit has its own director, professional staff qualified in the appropriate scientific disciplines and/or languages, and supporting clerical staff. CAB as a whole now employs over 350 people.

of whom about 150 are of professional standing.

Information Services

Each institute and bureau deals with its own particular branch of agricultural science and acts as an effective clearing house for the collection, collation, and dissemination of information. The information, compiled from world literature, is published in 24 abstract journals which have a monthly circulation of 30,000 in 150 countries. Since January 1973 the journals have been produced by computer-assisted processes. The consolidated data base now contains over 700,000 records, increasing by 12,000 per month. The complete data base is available in printed journal form, on magnetic tape for SDI or retrospective retrieval purposes, and on-line via the Lockheed DIALOG System and European Space Agency's RECON System. Seventeen specialized journals and over 200 annotated bibliographies per year are produced by CAB from the general data base.

The data base is produced by scientific staff in the bureaux and institutes scanning the world literature in up to 37 languages. English-language abstracts, written, indexed, and edited by scientific staff, are processed by computer to produce the 24 basic abstract journals and magnetic tapes. Each journal, such as *Plant Breeding Abstracts*, contains abstracts with full bibliographic details, including all authors, title in original language, translated title, journal name, year of publication, volume, issue, pagination, language of article and summaries, number of references, and address of first author. Monthly (or quarterly) subject indexes and author indexes are supplied, as well as annual cumulations.

Users' Needs and How They Are Met

Since they began, CAB's documentary services have developed to meet the changing needs of users around the world. Four main needs are recognized: current awareness—not only in the users' main subjects but also in areas around them; retrospective searches—for specific in-

formation on particular topics; state-of-the-art reviews; and advice.

Users' needs are met in various ways. The abstracting services now provide the data base with nearly 150,000 records annually; these are published conventionally and in machine-readable form. A number of specialized products such as distribution maps and descriptions of pests and diseases, one primary journal (in applied entomology), review articles, and card title services are offered. An extensive list of scientific books and reports is maintained. Enquiries by letter or telephone for specific items of information, photocopies of original articles, and aid with translations are met.

Services Provided

The editorial policy of the CAB information service was restated at the last quinquennial Review Conference held in 1975 and includes the following: the abstracting work should aim at covering literature appearing in all publications of sufficient scientific repute in the appropriate fields of interest. Thus CAB has wide subject coverage in all fields of agricultural science. Information is derived from 8,500 scientific journals, as well as conference proceedings, books, annual reports, patents, standards, and theses. Source papers not available firsthand may be obtained by reference to secondary sources. "Grey literature," i.e., printed material not published in the regular way, is processed when available. The literature referenced is in 37 languages. The major portion (57%) is in English. Russian, German, and French material comprise 25.5%. Another 9.9% is from other European languages. Approximately 2.2% is Japanese, the remainder comes from a variety of languages.

The importance of a source paper may be reflected in reference by citation only or by an indicative or informative abstract. Papers of poor accessibility or in difficult languages may be abstracted in more detail. As the number of papers increases worldwide, the need for "front-end" screening must increase if input costs are to be contained at acceptable

Table 1. Subject Coverage

Agricultural economics & policy	Dairy science & technology	Horticulture	Pastures & fodder crops
Agricultural entomology	Development & agrarian reform	Human Nutrition & metabolism	Pesticides
Animal breeding & genetics	Education & extension	Immunology & immunogenetics	Plant breeding, genetics & selection
Animal feeds & feeding	Engineering & field equipment	Irrigation, drainage & water management	Plant growth regulators
Animal health	Environmental pollution, waste disposal & conservation	Laboratory equipment & technique	Plant nematology
Animal physiology & biochemistry	Farm buildings	Legislation	Plant pathology
Animal production & management	Farm management	Marketing & trade	Plantation crops
Apiculture	Fertilizers	Medical & veterinary entomology	Pollination
Control of pests, disease and micro-organisms	Field crops	Medical & veterinary helminthology	Public health & hygiene
Cooperatives	Fish farming & management	Medical & veterinary mycology	Rural development & regional planning
Crop ecology & physiology	Food contaminants & additives	Medical & veterinary protozoology	Rural recreation & tourism
Crop husbandry & management	Foods	Microbiology	Rural sociology
	Forestry & forest products		Soil management
			Soil science
			Storage of commodities
			Taxonomy
			Weed biology & control

levels and scientists are not to be faced with an unmanageable quantum of references at output.

Indexing strings are designed to give users access to information in the printed journals; additional terms may be entered for retrieval from machine-readable versions of the journals. Indexes for the printed journals have evolved to suit the subject area covered by each journal. However, some bureaux already use a controlled or semicontrolled vocabulary for indexing, and a thesaurus based on a word list of about 25,000 terms is in preparation.

Journals. CAB publishes over 40 journals. Its printed products are divided into sections aimed at specific groups of users:

- 1) 24 main journals—broad subject coverage, 7,000–12,000 records each (e.g., *Animal Breeding Abstracts.*).
- 2) 17 specialist journals—narrow subject area, up to 3,000 records each (e.g., *Poultry Abstracts.*).
- 3) over 3,000 bibliographies—especially compiled selections of abstracts for specialists (individuals or small groups).

New journals and new bibliographies are created in response to demand. For example, from 1978, *Forestry Abstracts* has been split into two and has widened its

coverage to embrace all aspects of silviculture, forest products, and wildlife, including freshwater fish and fish farming. Other new journals are also being considered, and especially the proposal to make some of the specialist journals into combined primary–secondary journals of wider interest, especially to growers and producers. Amalgamation with appropriate primary journals is envisaged.

Magnetic tapes. Monthly tapes corresponding to some or all of the journals may be leased from CAB by organizations wishing to run their own SDI services, using their own software.

On-line service. In January 1977 on-line service was launched through Lockheed's DIALOG system. Under the arrangement with Lockheed, CAB receives a royalty based on usage of the data base. Most users (ca. 65%) at present are in the United States, but there are significant numbers in Europe. The connect charge is \$65 per hour plus \$.15 per record printed off-line by Lockheed.

Since the whole record is stored in the computer, including the abstract, searching may be done on the title, index terms, and/or the abstract text. There are 15 other entry points for searching, e.g., author, author's affiliation, serial name, language of original article, language of summary, corporate source, document

type, subject descriptors, publisher, and publication date.

CAB will be running two types of seminars in the United Kingdom and abroad. The first is essentially an introduction to *CAB Abstracts*, to give managers, administrators, scientists, and librarians an appreciation of what *CAB Abstracts* on-line can do; the second will be a one-day teach-in for experienced on-line users who need to know how to use the CAB data base to maximum advantage. Users' panels are to be established so that we can learn of and respond to problems as they arise.

Retrospective searches. Searches in response to enquiries are done at CAB units and Farnham House. The standard charge is £25 for one-off searches plus £0.10 per reference printed out in full.

SDI. Searches may be repeated monthly to provide the latest information on particular topics (profiles).

Reviews. The amount of information available and the rate of progress is now such that many workers require state-of-the-art reviews rather than collections of abstracts. CAB attempts to meet these needs by publication of reviews prepared by experts in their fields. In the past, these reviews have been published in CAB's abstract journals. The possibility of publishing review articles in special journal series or as regular books is now being considered.

Advice. Finally, the attempt is made to meet customers' need for help and advice on a wide range of problems in agricultural information by dealing individually with the many enquiries that reach CAB—ranging from providing the address of someone publishing a paper abstracted in CAB's journals, through obtaining photocopies of original articles and helping obtain translations of articles, to setting up new abstract journals or publishing books on a contract basis.

Relationships with Other Services

Others in the same or overlapping field, include the National Agricultural Library, Biological Abstracts, Chemical Abstracts Service, Information Retrieval Limited,

National Medical Library, and the Food and Agriculture Organization (FAO). There have been studies to determine the overlap between CAB and other agricultural information services. In general, the overlap between CAB and CAIN is found to be 40% and between CAB and BIOSIS about 25%.

CAB is also a partner in the consortium, International Food Information Service, and is closely involved in editing and marketing *Food Science and Technology Abstracts*.

Identification Services

In addition to covering the world literature, the Institutes of Entomology, Helminthology and Mycology offer identification services to agricultural and biological scientists throughout the world. Samples of insects, mites, helminths, plant-parasitic nematodes, microfungi, and bacteria may be sent to the appropriate CAB institute for identification. In a typical year about 50,000 specimens are received for this purpose. Specimens are also catalogued for future reference. CAB publications connected with this identification work include *Bulletin of Entomological Research*, "Dictionary of the Fungi," "Mycologist's Handbook," and "The Genus *Fusarium*."

The Commonwealth Institute of Entomology has available, at the British Museum of Natural History, the world's largest collection of tropical insects. Similarly, at the Commonwealth Mycological Institute, there exists a collection of microfungi, especially tropical.

Biological Control Service

Biological control is a method of controlling pests by exposing them to their natural enemies. Examples include control of cottony cushion scale by *Vedalia* beetles in California, or *Chrysollina* beetles to control St. John's wort on the Pacific West Coast. When successful, this is the most economical method of controlling pests, and it is a method in which the Commonwealth Institute of Biological Control (CIBC) has specialized since 1927. CIBC has its headquarters in

Trinidad, and stations in India, Pakistan, Switzerland, and Ghana. Services are available to all countries and range from the supply of publications and information to the planning, supervision, and supply of full-scale control projects anywhere in the world. All aspects of the biology of pests and their natural enemies are studied, as a result of which the institute can select suitable organisms for a particular project and, if required, can collect or breed them for release in the target area in the numbers needed. Of course great care has to be taken to ensure that the organisms selected will confine their attack to the target pest.

Conclusion

The purpose of CAB is to act as a world agricultural information service, by providing journals and other documentary services, identifications, and biological control services. These services are provided to all parts of the world on a self-support basis.

Received for review Jul 25, 1977. Revised manuscript accepted for publication Mar 31, 1978.

Dr. John Newton is New Services Manager, Commonwealth Agricultural Bureaux, Slough, England.



Planning for On-Line Search in the Public Library

Oscar Firschein and Roger K. Summit

Lockheed Palo Alto Research Laboratory, Palo Alto, Calif. 94304

Colin K. Mick

Applied Communication Research, Inc., Palo Alto, Calif. 94304

■ The DIALIB project involved an experiment in placing retrieval terminals in four public libraries in Northern California. After three years of experience, in which patrons were provided with free search for one year, one-

half priced search for the second year, and full fee search in the third year, the authors delineate the requirements for on-line search and formulate guidelines useful for public libraries contemplating one search service.

THE FIRST year of the DIALIB experiment, which investigated on-line search in the public library, was discussed in an article in *Special Libraries (1)*. The DIALIB experiment, has since been described in several reports (2-5). Briefly, four libraries in Northern California, members of the Cooperative Information Network (CIN), were selected to participate, and Lockheed Information Systems provided the project coordination and the DIALOG retrieval service. The study was evaluated by Applied Communication Research, a nonprofit behavioral research firm in Palo Alto, Calif. Some of the goals of the experiment were to investigate the usefulness of on-line search to the public, to determine the impact of on-line search on the library, and to determine whether the public was willing to pay part or all of the costs. Based on the results obtained, one of the main products of the study was the develop-

ment of guidelines that would be useful for libraries contemplating on-line search service.

Use of On-Line Search

The authors found that the traditionally trained public librarian does have a variety of skills that are directly applicable to the kinds of skills required in on-line searching. These include the ability to form an adequate search query by consulting with the user and encouraging the user to communicate his needs fully. The traditionally trained reference librarian is already expert with complex manual tools—thesauri, indexes, and others—and the skills developed with these tools are transferable to computer data base searching. There is considerable evidence that traditional reference librarians are willing and able to learn data base search techniques. In fact, many librarians involved in DIALIB became skilled on-line searchers.

There appear to be two problems. The first is training on specific data bases and subject skills. The second problem area has to do with subject expertise. For research queries of greater complexity than "simple fact" questions, many people feel that the searcher should be a subject expert. If a library does not have a subject specialist (e.g., science, technology, business), then this problem can be at least partially resolved by having the patron present for the search. (This assumes, of course, that the patron has some knowledge of the search topic area.)

In general, there appear to be few precise reference/information policies in public libraries which establish limits in terms of services offered, topics covered, patron eligibility, and allocation of staff time. Public libraries have been able to live with informal limits because the demands placed upon reference service have not been that great. One major result of the DIALIB experiment has been to focus attention on the reference function in the public library (6).

Key Requirements for On-Line Search

Using the findings given in the Evaluation Annex to the final report (5), a set of guidelines have been formulated for use by public libraries contemplating on-line search service.* Nine key requirements were identified.

Establishing Scope and Limits of Service. The first key requirement for a public library offering on-line searching is to define the scope and limits of service. Every library has some set of rules to define scope and service. Some rules are explicit, such as requiring cards to check out books. Other rules are implicit, for example, decisions as to how much time to devote to a particular type of question, such as a phone question. In addition, the library can also limit service without rules—by not making people aware of the service.

In offering on-line searching, the library must invest significant effort into es-

tablishing the scope and limits of the service. Issues which must be dealt with include:

- What are the goals and objectives of the service?
- Will the service be used to support internal operations, to provide service to patrons, or both?
- What limits should be established in terms of subject areas, costs, and staff time?
- Will user fees be used to limit service?
- Who will be allowed access to the service?
- When will the service be available?
- What kind of service will be provided?
- What level of publicity will be used?

These are major questions. Determining the scope and limits of the service has major impact on other decisions which must be made. It is important that the service should be structured by the goals and objectives of the library and the needs of its patrons, not by the potential of on-line searching.

Staff Time Requirements. The staff time requirements associated with the introduction and provision of on-line searching cannot be overemphasized. Throughout the DIALIB experiment, staff time was perceived by the libraries to be the major inhibiting factor. Searches average approximately one hour of staff time (for query negotiation, search preparation, searching, and post-search activities). In addition, time is required for promotion, accounting, and training of search personnel.

Libraries planning to introduce on-line searching must very carefully consider the impact on their staff. They must be prepared to add staff to support the new service or to divert staff from other activities if and when user demand develops.

Staff Attitudes and Support. Preconceptions and attitudes of library personnel toward fee-based service, and the role of reference services, play a great part in determining the direction and ultimate success of on-line searching.

More specifically, the attitudes and support of the head reference librarian and

*A recent publication by the American Library Association (7) should also be consulted.

Table 1. Monthly Cost of On-Line Searching

(30 searches/month)	(\$26.44 per search)		= \$ 800
(30 searches/month)	(1/4 hour connect time)	(\$8 per hour)	= \$ 60
		communication cost*	
Terminal cost per month, including maintenance			= \$ 125
		Total monthly cost	\$1000 (approx)

*Most major cities in the U.S. have Tymnet or Telenet communications service to the search services at \$8/hour or less.

the library director are crucial to the success of on-line searching. Unless both are firmly committed to work for and support on-line searching, the probability for success is at best marginal.

The attitudes and support of the reference librarians who will serve as searchers are also important. However their reactions toward on-line searching in the public library will be determined, to a large extent, by the activities and opinions of the head reference librarian and the library director.

In developing a plan for on-line searching, it is vital that emphasis be placed on establishing and maintaining the support of the library staff—from the administration to the reference service to the circulation department.

Funding. The financial requirements for on-line searching can be divided into three categories:

1) Capital (startup) costs include initial training, initial purchase of a computer terminal (if the terminal is purchased), purchase of documentation, and initial training costs.

2) Marginal (or variable) costs are those costs that can be associated with a specific search. They include retrieval service costs (based on terminal connect time and printing charges), communication costs, and search-related staff time.

3) Overhead charges are those charges that are specific to the on-line search service but cannot be associated with any specific search. These may include terminal rental (if the terminal is leased), terminal maintenance (included in the leasing cost), staff time for training (and also search-related staff time if not charged as

a marginal cost), maintenance of documentation, and maintenance of training. Errors in searching can also be considered as an overhead cost.

Some specific cost values will clarify the subsequent discussion. The Cooper-DeWath study (5) shows an average cost of a search during the pay period as \$26.44, including off-line and on-line staff time and search service cost (connect time and printouts). If we assume 30 searches per month, we obtain the figures in Table 1.

If we assume an annual budget of \$500 for staff training, \$500 for reference materials, and \$500 for publicity, we see that the *annual* cost of an on-line search service performing 30 searches per month is \$13,500.

A public library has the option of either supporting this cost from the library budget or grants, and offering the service to the public at no cost; or service can be offered at a fee that partially or completely covers the cost. If the service is supported by the library budget, then the library must develop policies which define and limit the services provided. In the free portion of the DIALIB project, the libraries did not place overt limits on the service. When they were confronted by rapidly increasing search requests, they opted for an implicit form of control—cutting off all publicity about the service. The lack of specific policies and rules for the online search service had a continued impact of the DIALIB project. This is an area which should be of prime concern regardless of whether the service is offered on a free or pay basis: the establishment of the scope and limits of service, as discussed previously, is strongly related to the funding question.

Need for Promotional Planning. Promotional planning is an essential part of the development of the on-line search service. Failure to promote the service will keep it from reaching its full potential. Printed signs, brochures and public announcement can be effective. However, demonstrations of on-line searches to potential users has been found to be one of the most effective ways of publicizing the capabilities of on-line searching. Small, portable terminals are now available that allow off-site demonstrations to be given to school, community, and business groups.

Need for Ongoing Staff Training. The library must also invest in ongoing searcher training on data bases. The search services generally offer one- and two-day training sessions in the use of their systems, and training in the use of specific data bases is generally offered by the data base producers.

Lack of specific data base training was a common complaint among librarians across all libraries and all three years of the project. In obtaining specific data base training, the library will confront three problems:

- *Availability of training.* Data base providers generally offer training sessions only a few times a year in various parts of the country.

- *Availability of personnel.* Sending librarians to training presents a staff cost expense to the library.

- *Training costs.* Many data base providers charge for training sessions and, unless the sessions are available locally, training may require travel and per diem costs.

Need for a Critical Mass of Searches. A critical mass of searches is required to maintain searcher competence. Most librarians interviewed agreed that five to 10 searches per month were necessary to maintain search skills for each data base. Certainly it is possible to conduct searches on a less frequent basis; however, the librarians indicated that they felt under these circumstances they were less efficient.

Search competence is concerned with specific data bases rather than general skills required to deal with the search

system. This suggests that rather than have one or two searchers handling all searches, it would be more effective to train a number of searchers and have each specialize in only a few data bases.

Centralized searching for a library network, or a library system with branches, is feasible. Data show little difference in client satisfaction with results when the search is negotiated at a branch rather than the searching library. The data also show, however, that branch libraries in San Mateo County sent in few searches. Thus, although maintenance of a centralized search facility may provide the necessary critical mass, careful attention must be paid to training and working with branch librarians in order to have the branches forward questions to the search center. Training should include familiarity with the on-line search service, an awareness of available data bases, and query negotiation.

Document Support. To provide effective searching, the library must be prepared to invest in and maintain adequate support documentation, such as thesauri. Documentation is required for the search services and for each individual data base. Some of this documentation is available free of charge; however, some must be purchased. Document cost for each data base used ranges from a low of \$10 to \$15 to a high of over \$100.

There is a need for better data base documentation, search service documentation, and summary documentation, and such documentation must be periodically revised and kept up-to-date. In particular, we need: brief data base guides, as well as detailed data base descriptions; guides that show similar search commands in each major service; documentation that compares data base characteristics along common dimensions, such as language, scope, or types of documents included and excluded; tabular and summary documentations and comparisons for at-terminal use. Some work has been done in this area (for example, by the National Federation of Abstracting and Indexing Services and by the American Society for Information Science), but more is needed.

Table 2. A Checklist of Questions for Use as a Planning Guide

- 1) *Should we offer on-line search service?*
 - What goals will we attain by offering this service?
 - Do we have experience in in-depth reference service?
 - Do we have a potential user group?
 - Is the staff positive toward offering such service?
 - Are the data bases offered by the retrieval services pertinent to the needs of our patrons?
 - Can we provide adequate funds for staff, search service costs, and terminal by either library budget or user fees or a combination of both?
 - If user fees seem necessary for budget support, can the fees be persuasively justified to funders, to the library staff, and to library patrons?
- 2) *What level of service should we offer?*
 - How many reference librarians can we devote to this service?
 - Do we want to actively solicit users?
 - What should our policy be for requests that come from outside of our service area, e.g., out of district users, request from other libraries?
 - Should we offer all available data bases or concentrate on just a limited number?
- 3) *What about the details of setting up the service?*
 - Should we place the terminal in an open area or do we want this to be a "back room" operation?
 - How many librarians should we train?
 - What reference aids do we want to purchase in support of the service?
 - What type of publicity should be used?
 - If a fee-for-service approach is to be used, what bookkeeping and billing arrangements are to be used?
- 4) *How can we control the activity?*
 - Do we want to prevent individuals or companies from frequent use of our service, and if so, how can this be done?
 - What records do we want to keep on search time and search activity?
 - Do we want to monitor user reaction to our on-line service?
- 5) *How can we evaluate the effectiveness of the system?*
 - What evaluation techniques can we use to obtain user reactions?
 - Can we develop a means of comparing manual and on-line search activity?
 - How can we evaluate the impact of on-line search service on the library?
 - How can we evaluate the impact of on-line search service on library users?

Management and Evaluation. Another area which libraries should explore carefully is management and evaluation, particularly in accounting for staff time. It is essential that accurate data be collected to allow the library administrator to assess the impact of the search service on the public and on the library. This requires the establishment and maintenance of detailed procedures for recording staff time and activities.

If the service is to be offered on a fee basis, then additional procedures are required to govern the collection of funds. If the service is offered via a network, then it is important that a single, uniform system be developed to transmit requests to the searching library and to transmit search results back to the requesting library or to the patron.

Evaluation is extremely important. This includes evaluation of impact on the library, user impact, and the quality of the

searches produced. It is essential that some procedure be developed to collect user feedback to assist in the evaluation. Unfortunately, procedures for assessing the quality of searches are still ad hoc in nature, and research remains to be done in this area.

Conclusions

A member of the DIALIB Oversight Committee, Douglas Ferguson, has commented on the project as follows:

The same constraints and choices apply to traditional reference service as apply to computer-supported reference service. When the similarities rather than the differences are emphasized, a price-free service structure can be made to work. The false dilemma that plagued the thinking of many of us, and I emphasize that this included myself, was not free vs. fee service, but total vs. balanced access to service. No library offers unlimited access to its

resources or facilities. Every library chooses what sources, how much staff time and talent and what access conditions it will offer to the public—and so does virtually every other public service organization. . . . It seems to me that what results from these choices is a type of service that balances available resources across a spectrum of library services (4, Appendix G).

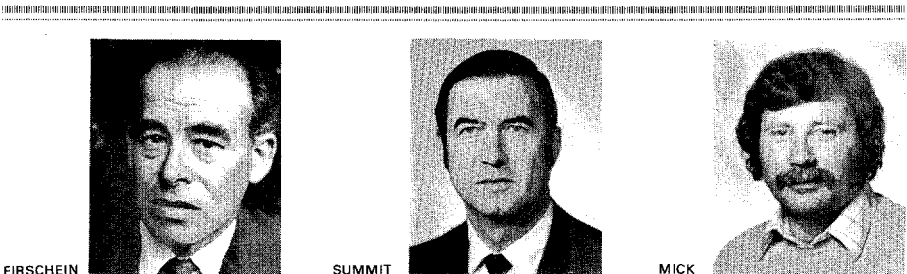
In this paper the authors have tried to indicate the questions that will have to be answered by public librarians contemplating the addition of on-line search services in order to integrate such service into the existing library structure.

Acknowledgments

The project, supported by the Division of Science Information, National Science Foundation, under Grant DSI74-13972-A02, could not have been carried out without the hard work and cooperation of the participating CIN libraries (San Jose Public Library, Redwood City Public Library, San Mateo County Library, and Santa Clara County Library at Cupertino). The authors also wish to thank the Oversight Committee (consisting of Charles Bourne, Forrest F. Carhart, Jr., Douglas Ferguson, Virginia Ross Geller, and Albert H. Rubenstein) for their counsel and guidance.

Literature Cited

1. Summit, R. K. and O. Firschein / *On-Line Reference Retrieval in a Public Library. Special Libraries* 67(no. 2):91-96 (Feb 1976).
 2. Summit, R. K. and O. Firschein / *Two-Year Interim Report, Investigation of the Public Library as a Linking Agent to Major Scientific, Educational, Social, and Environmental Data Bases*. 3 v. Oct 1976. LMSC-D502595. Palo Alto, Calif., Information Systems Programs, Lockheed Palo Alto Research Laboratory. (ERIC ED131857, ED131858, ED131859; NTIS PB-261 858-SET/ST)
 3. Ahlgren, A. E. / *Project Evaluation, Annex to the Two Year Interim Report, Investigation of the Public Library as a Linking Agent to Major Scientific, Educational, Social, and Environmental Data Bases*. Oct 1976. LMSC-D502595. Palo Alto, Calif., Applied Communication Research. (ERIC ED131858)
 4. Summit, R. K. and O. Firschein / *Final Report, Investigation of the Public Library as a Linking Agent to Major Scientific, Educational, Social, and Environmental Data Bases*. Oct 1977. LMSC-D560986. Palo Alto, Calif., Information Systems Programs, Lockheed Palo Alto Research Laboratory. [available from NTIS as PB276726/AS (Final Report) and PB276727/AS (Evaluation Annex)].
 5. Mick, C. K. / *Evaluation Annex to the Final Report, Investigation of the Public Library as a Linking Agent to Major Scientific, Educational, Social, and Environmental Data Bases*. Oct 1977. LMSC D-560986. Palo Alto, Calif., Applied Communication Research. (to be available from NTIS).
 6. Henne, F. E. / Comment. In *The Present Status and Future Prospects of Reference Information Service*. Chicago, Ill., American Library Association, 1967.
 7. Watson, P. G., ed. / *On-Line Bibliographic Service: Where We Are, Where We're Going*. Chicago, Ill., American Library Association, Reference and Adult Services Division, Apr 1967.
- Received for review Nov 2, 1977. Revised manuscript accepted for publication Apr 3, 1978.*



FIRSCHIN

SUMMIT

MICK

Oscar Firschein is research scientist, and Roger K. Summit is manager of Information Systems Programs, Lockheed Palo Alto Research Laboratory, Palo Alto, Calif. Colin K. Mick is president, Applied Communication Research, Inc., Palo Alto, Calif.

Indexing Laboratory Notebooks in a Chemical R&D Environment

Donna M. Mendenhall

Uniroyal Chemical, Naugatuck, Conn. 06770

■ A method of preparing computerized subject and author indexes for R&D laboratory notebooks is described. Wiswesser Line Notation is used as the subject entry capable of listing specifically and unambiguously the compounds described in the notebooks.

A LOOK through the sparse literature on the subject of chemical laboratory record keeping finds general works (1-5) and only one (6) that describes a method of retrieving information from laboratory notebooks by subject. It is common knowledge that these notebooks in chemical firms involved in research and development (R&D) contain the costly daily records of the scientists. The value of each volume has been estimated at about \$5,000 (1963 dollars) in time and materials used to accumulate the record it contains (4). The value has been put into absolute terms by another author (5) who describes information, per se, as the only product of R&D. The Uniroyal Chemical Information Center Library has designed a system where all indexing data recorded by the chemists is rendered readable by optical scanning.

Description

In this library's system, the scientists' notebook records are supplemented by

cards on which they enter the data indicated, with the possible exception of the Wiswesser Line Notation (WLN), which may be entered by a specialist. By examination of the input card (Figure 1) it can be seen that the chemists enter much indexing or retrieval information, which will be described in detail later.

These cards are filed in central locations in the laboratory area by the systematic names of the compound. Retrieval by the cards, then, is predicated upon the chemists assigning the correct nomenclature to the compounds.

WLN is a precise means of expressing in a unique, linear manner the structural formulas of chemical compounds. Its basic idea is the use of letters to indicate functional groups and numbers to express lengths of alkyl chains and the sizes of rings. As an indexing tool, the notation focuses attention on those significant parts of chemical structures that are most important to chemists. When coding compounds, starting points and choice of alternate paths through the structure are governed by the position of the letters in the alphabet, thus making use of a principle familiar to anyone who uses dictionaries, filing systems, and indexes (7). Figure 2 illustrates the use of WLN.

Because of the complexity of the notation, the procedure was to divide the preparation of the indexes into two routes. Figure 3 details the method used to enter all the information into the Bibloscan Indexes. The Bibloscan tapes contain

Figure 1. Compound Registry Card

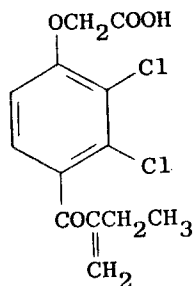
_____ LINC: _____ Amount: _____ Structure: _____
 Can., Naug., Res. Cen. _____
 WLN: _____
 Name: _____

 Chemist: _____ Notebook: _____ pp. _____ Emp. Form: _____
 Form: _____ Odor: _____ SOLUBLE IN: (i, sl, s, v) _____ Water: _____
 M.P. _____ B.P. _____ (_____ mm.) Acetone: _____ Alcohol: _____
 I.R. _____ NMR _____ Toluene: _____ Acid: _____
 Elem. Anal: _____ Base: _____ Other: _____
 Stability: _____ HANDLING PRECAUTIONS: _____
 Prior Art: _____
 Comments: _____ Date: _____

Figure 2. Wiswesser Line Notation

Ethacrynic Acid

[2,3-dichloro-4-(2-methylene-1-oxobutyl)phenoxy]acetic acid
 [4-(methylenebutyryl)-2,3-dichlorophenoxy]acetic acid



QV1OR BG CG DVY2U1
 (Wiswesser Line Notation)

“bibliographic” information or citation related to the chemist’s laboratory notebook. The WLN route has been described elsewhere (8).

Method

The data recorded by the chemists was transcribed by typists using OCR-A typing elements, the pages (Figure 4) being then scanned-to-tape for computer manipulation. The illustration shows the simplicity of typing for optical scanning. Each line is a record. The vertical lines denote the ends of each field. These fields,

to the left of the vertical bars in Figure 4, are sequentially represented by the boxes on the top of the flow chart in Figure 3. If a chemist does not fill in all the information in a given field, it is left empty. This is done by simply striking the vertical bar and proceeding to the next field. The fourth and fifth lines in Figure 4 show how empty fields are handled. To indicate the end of a record, another special character is used, the ‘†’. When a typing error is made, the wrong character may be overstruck with the “blob,” obliterating the mistake and following it with the correct

Figure 3. Flow Chart of Information Input into Biblioscan Indexes

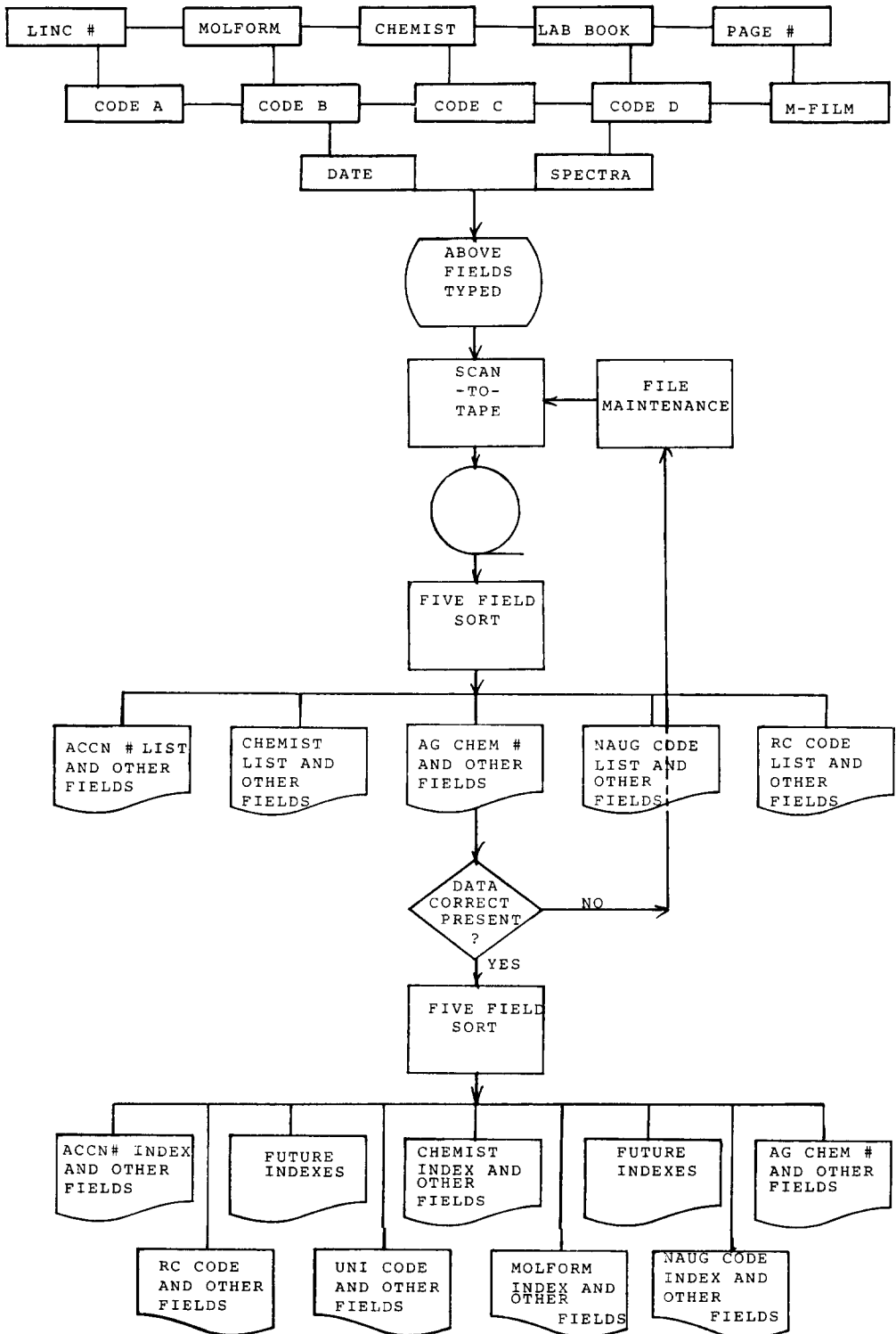


Figure 4. OCR Input Form

```

      ←Field Limiter                               Blob
12345|C13H13BR5|ABLE IM|AB6|112|A139|B201|ABC|H330|170|21MAR66|IRNMR4
12346|C12H12CLN|BAKER HS|GL75|149|A241|B201|DCBA|G101|171|22MAR67|NMR4
12347|C11H11NS|CARTER J|WH101|15|B111|IOUX|H665|205|17MAY64|IR4
12348|C11H11Z2N|DONALDSON DD|HS223|103|A93|U1001|QRST|22|24AUG52|Y
12349|C10H10CU2|EDWARDS EE|GS821|33|A441|DDTX|S75|716|12SEPT75|Y
      End of Record
      Empty Field
  
```

character. Whole records may be eliminated by simply running ink lines through them. There are variations of this procedure, depending upon the optical scanning equipment used (9).

The Fields

- **Linear Input of Naugatuck Compounds (LINC) Number:** This is the connection between the WLN Indexes and the Biblioscan Indexes. It is a serial or accession number. By means of it, the user can go to the Biblioscan LINC Number Index to find the name of the chemist who prepared the compound located by the WLN Indexes, and concomitantly, the laboratory notebook number, page number and the microfilm address, plus indication of any spectra run. In addition, the user can find codes assigned to the compound by other commodities or divisions of the corporation.
- **Molecular Formula (MOLFORM):** This is the field in which the empirical formula, atom count, is entered. This can be used as an index. It is in the Hill order, $C_{12}H_{22}O_2$.
- **Chemist:** The name of the chemist who entered the compound into the system is located here, last name first, e.g., Able, IM.
- **LABID, PG:** The laboratory notebook identification and page number is typed into these two fields, e.g., BC101, PG13.
- **Code A, Code B, Code C, Code D:** These are some of the divisional or departmental codes assigned for screening or other purposes. These are shown as LATL, LW01, A101, C001.

- **MICRO:** This field indicates the address on microfilm of the laboratory notebooks, e.g., 1001.
- **Date:** The date that the chemist synthesized the compound is entered here.
- **Spect:** The Infrared (IR) or Nuclear Magnetic Resonance (NMR) spectra that may have been run are indicated in this field, if the chemist mentioned this routine operation.

Sorting

After the fields just described are typed, they are scanned-to-tape. Then, by means of an in-house multiple field sorting program, several preliminary indexes are generated and printed during the same operation. The primary index produced at this step is the LINC Number, in order, with the remaining fields subordinate; the second, the chemists' names in alphabetical order, and then the various codes in alphanumeric sequence.

Proofing

By comparing all the fields of each index for inconsistencies, errors are located and the corrections keyed and re-entered for multiple field sorting.

The Indexes

The finished products list, in their appropriate orders, each of the separate codes, as seen in Table 1, the LINC Number, and the chemists' names, as in Table 2. If the sorting routine needs to be run more than one time, depending upon the capacity of the sorting program, more

Table 1. Biblioscan Code Index

1512 CODE	A	CHMIST	MOLFORM	LABID	PG	CODE	B	C	CODE	D	DATE	SPECT
ADUG	23579	STOLLAR VV	C13H9N3	PV0073	29	AS71	LW04	L004	C001	22JUL72	IR	
AIED	72248	MURRAY PM	C10H8O	PV491	78	AB15	M913	M913	C010	10AUG54	IR	
DCSN	41972	DONALDSON MM	C11H8O2	BC003	76	BR34	H040	H040	C005	11SEP71	IR	
GASR	66933	BROWN HZ	C10H16	GU137	59	CA13	A542	A542	C009	30MAY69	IR	
ICGE	59542	THOMPSON TT	C11H9NS	DR0121	149	HU55	R010	R010	C003	30AUG76	IR	
LATL	30741	CADDABRA CC	C11H7NS2	BC017	49	WI25	1022	1022	C004	5AUG64	IR	
NCNU	12345	ABRA JJ	C9H7N3	BC101	13	WH01	A101	A101	C001	28MAY71	IR	
ONAL	21421	WILSON WL	C13H11N	GU111	16	TH31	S425	S425	C008	31DEC76	IR	
OLAT	10026	EDWARDS KA	C10H7NO2	BC727	09	MU59	T404	T404	C006	10NOV75	IR	
	88703	HUNTER DM	C10H10N2S2	DR066	93	CM88	H040	H040	C006	7APR69	IR	

Table 2. Biblioscan Author Index

1550 LINC	CHMIST	MOLFORM	LABID	PG	CODE	A	CODE	B	CODE	C	CODE	D	MICRU	DATE	SPECT
12345	ABRA JJ	C9H7N3	BC101	13	LATL	UJAT	LW01	LW01	A101	C001	C001	1001	1001	28MAY71	IR
66933	BROWN HZ	C10H16	GU137	59	DCSN	CA13	CA13	CA13	A542	C009	C009	0110	0110	30MAY69	IR
30441	CADDABRA	C11H8O2	BC017	49	IGCE	WR25	WR25	WR25	H040	C004	C004	1101	1101	6FEB64	IR
41972	DONALDSON 77	C11H8O	HC003	76	CIHE	BR34	BR34	BR34	H040	C007	C007	0010	0010	11SEP71	IR
10026	EDWARDS KA	C10H7NO2	RC707	07	UJAT	MU69	MU69	MU69	T404	C007	C007	1100	1100	10NOV75	IR
88703	HUNTER DM	C10H10N2S2	DR066	93	UJAT	CM88	CM88	CM88	H040	C006	C006	1011	1011	7APR69	IR
72248	MURRAY PM	C10H8O	PV491	M7	AIED	AB15	AB15	AB15	M913	C010	C010	0111	0111	10AUG54	IR
59542	STOLLAR VV	C13H9N3	PV0073	29	ADUG	AS71	AS71	AS71	R010	C001	C001	1011	1011	22JUL72	IR
59542	THOMPSON TT	C11H9NS	DR121	149	GASR	HU55	HU55	HU55	R010	C003	C003	1101	1101	5AUG76	IR
21421	WILSON WL	C13H11N	GU111	16	NCNU	TH31	TH31	TH31	S425	C008	C008	0101	0101	31DEC76	IR

indexes can be produced, i.e., a date index could be generated which, when correlated with the numbers of compounds synthesized, could produce a time/productivity profile of R&D effort.

Summary

A detailed set of R&D subject retrieval tools has been devised. These indexes, when used together, serve as a desk top tool, which can actually be utilized to produce such information as the complete history of a given preparation from the date of first synthesis to its various screening or evaluation tests. This compound index can serve to prevent duplication of effort and provide detailed histories of R&D scientists' studies in a way a list of reports cannot. Stated in another way, these printouts serve as indexes for locating R&D information from the most basic documents, the researchers' laboratory notebooks.

Another less exotic, but equally useful, application of WLN in technical information centers may be as index terms for compound searches being run with increasing frequency on Chemical Condensates and other chemically based files. The standard 3 in. x 5 in. index card or punched card can be the beginning of a system whereby a WLN subject heading can be added for a complete record of searches done, such as the WLN, File Searched, Requestor, Number of Hits, Date Searched, SDI Number, and Search Strategy. Inasmuch as the WLN is easily read and alphabetized, quick reference to the file can be made prior to a search.

Finally, an inexpensive method of word processing which can be adapted to suit any information center or library has been described.

Literature Cited

1. Jones, Stacy V. / *You Ought to Patent That*. New York, Dial Press, 1962.
2. Naimark, George M. / *A Patent Manual for Scientists and Engineers*. Springfield, Ill., Charles C. Thomas, 1961.
3. RCA / *Patent Notes for Engineers*. Princeton, N.J., Radio Corporation of America, 1947.

4. McCarthy, D. E. / How Does the Patent System Affect You; Will your Notebook Stand Up in Court? *Chemical Engineering Progress* 59:12-15 (Jul 1963).
5. Hughson, Roy V. / How to Keep Laboratory Notebooks. *Chemical Engineering* 71:182, 184 (Dec 7, 1964).
6. Bailey, Martha J. / The Laboratory Notebook as a Research and Development Record. *Special Libraries* 63 (no. 4): 189-194 (Apr 1972).
7. Smith, E. G. & P. A. Baker / *The Wiswesser Line-Formula Chemical Notation (WLN)*. 3d ed. Cherry Hill, N.J., CIMI, 1975.
8. Mendenhall, Donna M. / Cost Comparison of Four Data Input Methods. *Journal of Chemical Documentation* 14 (no. 3):109-111 (Aug 1974).
9. Stiles, H. J. and J. M. Maier / Automated Cataloging of Technical Reports Via Optical Scanning. *Special Libraries* 63 (no. 12):576-585 (Dec 1972).

Received for review Sep 20, 1977. Revised manuscript accepted for publication Apr 14, 1978.

**Donna M. Mendenhall is librarian,
Uniroyal Chemical, Naugatuck, Conn.**

SLA Election Returns

Joseph M. Dagnese has been elected to the office of President-Elect of the Association for 1978/79. Fred Roper has been elected Chairman-Elect of the Chapter Cabinet. Patricia Marshall has been elected Chairman-Elect of the Division Cabinet. The two new Directors, elected for 1978/81, are Beryl L. Anderson and Pat Molholt.

The 1978/79 Board of Directors held its first meeting in Kansas City on Friday, June 16. Vivian D. Hewitt automatically succeeded Shirley Echelman as President; Shirley Echelman will serve on the Board as Past

President. Jeannette M. Privat automatically succeeds to the office of Chapter Cabinet Chairman, and Virginia E. Yagello automatically succeeds to the office of Division Cabinet Chairman. Ellis Mount will serve the third year of his three-year term (1976/79) as Treasurer.

Aphrodite Mamoulides and Mary Lee Tsuffis will serve the third year of their three-year terms (1976/79) as Directors. Floyd L. Henderson and Doris Lee Schild will serve the second year of their three-year terms (1977/80) as Directors.

Revision of *Profiles of Special Libraries*

Plans are underway to revise and update *Profiles of Special Libraries*. This very popular brochure was first published in 1966; its compilation was by Prof. Ruth Leonard.

The SLA Board of Directors has asked Dr. Paul Kruse, recently retired from the School of Library and Information Sciences, North Texas State University, to undertake the preparation of a second edition.

The profiles of a number of types of special libraries are described in the first edition. The profiles were developed from a study of actual special libraries. Dr. Kruse asks that each Division suggest one or more libraries which best represent the subject interest and scope of that Division. These need not be the largest or the best; emphasis is on "typical." These sug-

gestions should be sent as soon as possible to:

Dr. Paul Kruse
2207 Jacqueline Street
Denton, Tex. 76201.

If you did not submit your suggestions before the Kansas City Conference, please do so as soon after as possible.

Questionnaires will be mailed by Dr. Kruse to the libraries selected to solicit both factual and descriptive information. Subsequently, some of these libraries will be visited by him to obtain more detailed and pertinent information.

Your assistance is requested in this project—important to all SLA Divisions. Please send your suggestions directly to Paul Kruse at the above address.

Chapter Newsletters and Bulletins

One Editor's Overview

Librarians are doing a lot of interesting things these days, but they are not sharing all the good news. This is one librarian's conclusion, gleaned from several years' perusal of various SLA Chapter bulletins. After reading copies of the 1973-1977 bulletins which were recycled by several Illinois Chapter Presidents, the author formed some overall impressions.

Appearance

The bulletins and newsletters (the terms are used interchangeably) appear as seldom as two times each year and as often as six. Almost all of them are 8½ in. × 11 in., although a few are half that size. They range in appearance from attractive, with well-designed formats and good legibility, to unprepossessing, with manually typewritten pages, helter-skelter formats, and occasionally poor legibility. The Boston Chapter *News Bulletin* for July 1975 came very close to a journal-like appearance, while others missed giving this impression, in the author's opinion, because they were produced via a photographic process such as xerography. Other bulletins used multilith or mimeograph, and some of these looked uninviting because of type show-through, perhaps caused by lack of opacity in the paper. The paper stock is generally good, usually white in color, and the ink is black with only a few exceptions.

More than half of the bulletins have separate covers, either white or colored. Some of these covers use large-size type giving the title, name of the chapter, date, volume, and issue—information which enables the cover to double as a title page. Others use an identifying logo or picture—and here, one cannot help noticing the beckoning appearance of several covers—the San Francisco Bay Region Chapter bulletin uses a photographic view of a mist-shrouded Golden Gate Bridge, the Texas Chapter bulletin uses a Lone Star on a screened background, and the Florida Chapter bulletin formerly used a simple sketch of a lone palm on a windswept beach and now uses gulls flying into a tropical sun.

A few bulletins use mastheads with and without color or logos. Most Chapter bulletins do not have special names, but some do: *Courier* (Toronto Chapter), *Special Collections* (Heart of America Chapter), *Informant*

(Illinois Chapter), *Focus* (Cleveland Chapter), and *Soundings* (Long Island Chapter).

Content

The bulletins contain mostly brief items of information. The items include: minutes of a previous meeting, notices of library workshops or continuing education courses, advance notice of meetings, lists of Chapter officers and committee chairpersons (including library phone numbers), lists of books and materials offered in duplicate exchange (library remainders), reports on the various SLA meetings held throughout the year, Chapter bylaws being considered for revision, profiles of members' libraries or descriptions of new libraries in the area, information about new reference works or notices about new holdings such as Harvard University's acquisition of microfilm copies of books in the University of London's Goldsmith Library, the qualifications necessary for holding a Chapter office, requests that qualified candidates for SLA Chapter offices step forward, notices of awards or news items about members' activities and professional awards, news about regional library systems, messages from the Chapter President, and information about Chapter projects—for example, the Michigan Chapter collected books up to 10 years old for distribution to libraries in the Dominican Republic and Belize, and the Illinois Chapter Special Projects Committee paid the costs and expenses of a seminar on "Dialogue with Management."

Membership Directory corrections, as well as names and addresses of new members, are frequently included in Chapter bulletins. In rare instances, information about the education and work experience of the new members may be given. Sometimes the entire membership of a Chapter is small enough to be listed in the newsletter, thereby making a separate Membership Directory unnecessary. Almost every Chapter bulletin includes a calendar of library-oriented events. These calendars may simply list the dates and names of forthcoming events, or they may give full program and registration information. When the requisite reservation forms are printed in the bulletin, one has to assume that the latter arrives far enough in advance to serve as the sole announcement given to members concerning these meetings. Occasionally, photographs of members, or a map, are included in the bulletins. These are not always necessary, but they are interesting for, as every librarian knows, a picture (or a map) is sometimes worth a thousand words.

One may wonder how some of these bulletins are able to pay their bills. It is obvious that the San Francisco and Texas Chapters defray some or most of their expenses with advertising, for their bulletins average 10 to 14 ads per issue. Advertising helps to fill up blank space, which is considerable in a few bulletins. Some of this empty space seems to be the unavoidable result of reproduction by methods which permit only one side of a page to be printed. Unfortunately, some blank spaces exist because the bulletin editors have difficulty finding sufficient news to report. To avoid this empty appearance, editors have inserted "fillers" such as pleas asking readers to send in news items, notices saying "This Space Available!," graphics, and entire news releases from the Association office or from Conference committees inviting members to Denver, New York, or Kansas City.

Special Features

Occasionally, a quiz game on library topics has found its way into the pages of a newsletter. The Virginia Chapter had one testing the CAQ, or Chapter Activity Quotient of members, and the Rio Grande Chapter devised a Quick Quiz with multiple choice answers to test members' knowledge of SLA organization and structure.

Two popular items in recent issues were comments on the new copyright law as it concerns libraries and information on what to do in a Conference city when not attending SLA meetings. A number of bulletins printed all or part of the PR sheets sent by the Denver Conference Committee—an indication that a committee can get big results with small effort simply by mailing publicity releases to bulletin editors.

Very few newsletters contain a list of advertisers or a table of contents. The size of bulletins ranges from six to 35 pages. More than a fourth of the newsletters are paged continuously from issue to issue.

Impressions Formed by a Reader

By perusing the bulletins, a reader can gain a fair idea of what is going on in the world of special libraries. Certainly, anyone who will want to write a history of the Association for its 100th Anniversary in 2009 will need to have some acquaintance with these bulletins, if only to gain an impression of the topics which were stimulating librarians at different times. The historian would have to read between the lines, however. For example, does the publication of

a telephone number for a library job hot line mean that unemployment among librarians is high and that every opening is publicized? Or, does it mean that job openings are so numerous that applicants may dial a number to find out what is available before selecting the most desirable position?

Some bulletins have hardly any news. Does this mean that the SLA Chapters do little more than have monthly or quarterly dinner meetings? Or, does it mean that the bulletin editors have not gotten reports on the varied activities and concerns of the Chapter and its members? Future historians may have a difficult time deciding what situation is applicable. For lack of personal news in the newsletters, library historians may come to believe that librarians seldom marry and never have children. Otherwise they will have to conclude that Chapter bulletins contain only news of professional concern to members.

Suggestions

Beyond the examples already noted, what suggestions can one make for the bulletins? Include minutes of board meetings; editors should remember that a Chapter's executive board members represent, not an elite group, but the total membership of a Chapter, and that they are elected to conduct business that is more efficiently handled by a few than by the many. Reproduce annual reports of the Chapter President, as well as committee reports, so members can get an overall view of what the Chapter has done during the year. Report news about members' significant personal milestones, such as awards or publications inside and outside the library world. Let some member who has visited a distant library conference write up his or her impressions of the meetings and papers presented. And, be sure to include letters or comments from readers; request some if you never get any.

Ideally, the editorship of a bulletin should extend more than one year. Most bulletins seem to improve along with the editor's experience and growing awareness of what information makes good copy. At present, the bulletins seem to change editors every year, but in the past more than two-thirds of the bulletins had editors who retained their responsibilities for at least two years.

Conclusion

Every Chapter should support a bulletin, however simple, and despite the cost. Bulletins can take the place of mailed announcements for meetings, dinners, and other forthcoming

events. They are also handy reminders of such events. Members who cannot attend a Chapter meeting should be able to find out in the bulletin what took place or was said there. A newsletter can create more professional interest and awareness of what is going on in the library world for all Chapter members in many areas. News of data bases, profit-making

information services, and the new copyright law should alert our readers that the library world is ever changing.

Lenore Glanz
World Book-Childcraft International, Inc.
Chicago, Ill.
Editor, the *Informant*
Illinois Chapter Bulletin

Satellite Transmission of Invitation to Pacific Basin Nations to Participate in the 1979 SLA Conference in Honolulu

The PEACESAT* communication system via satellite in the Pacific Basin was used to link ground terminals in 12 nations for the final session of the Hawaii Copyright Institute in Honolulu March 27-28, 1978.

SLA Executive Director Frank McKenna had been invited to be a participant in several sessions of the Copyright Institute. During the two-hour satellite transmission he spoke on the topic "Librarians Look at the New Copyright Law." At the end of his copyright discussion, he transmitted an invitation on behalf of SLA to the multination participants in the link-up to take part in SLA's "Worldwide Conference on Special Librarianship" in Honolulu June 9-15, 1979. He described the Conference as an opportunity for person-to-person communications.

Such a satellite transmission to invite participation and submission of papers is a *first* for Special Libraries Association. Moreover, it predates the mailing of official announcements by more than two weeks.

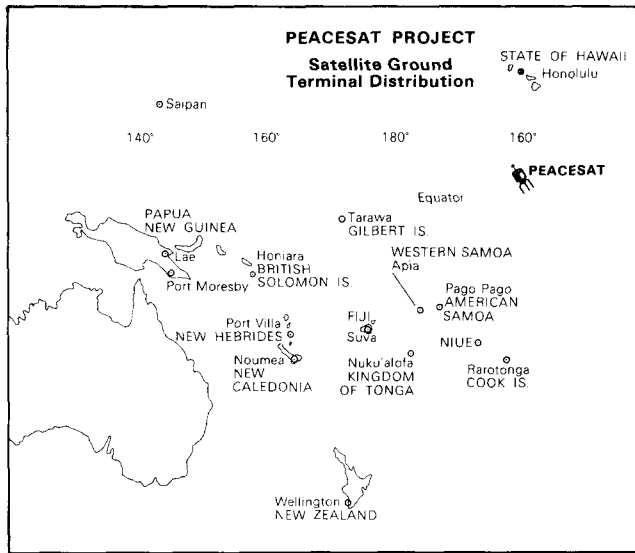
The PEACESAT demonstration project is completing its seventh year; for the exchange of two-way traffic in an area that extends over one-third of the globe. The project is a prototype of a global system for health, education, and community services. Included in the

project are library information uses and searches for printed materials. PEACESAT uses the NASA satellite ATS-1. This satellite was designed for weather experiments, but has, in addition, a limited number of communications channels for educational and similar uses.

Small ground terminals link educational institutions in 12 nations with coordinators at the University of Hawaii in Honolulu. Locally owned ground terminals operate at Wellington, New Zealand; Suva, Fiji; Lae and Port Moresby; Papua, New Guinea; Saipan; Trust Territory of the Pacific Islands; Pago Pago, American Samoa; Apia, Western Samoa; Rarotonga, Cook Islands; New Caledonia; British Solomon Islands; New Hebrides; Tarawa, Gilbert Islands; Niue Island; Kingdom of Tonga; and Santa Cruz, California.

McKenna had been invited to be a participant in the Copyright Institute's sessions concerning the effect of the new U.S. Copyright Act. He was also the discussion leader of a seminar on problems of the Copyright Act for business and industry. Institute participants were Barbara Ringer (Register of Copyrights), Arthur J. Levine (Executive Director, CONTU), Milton Seligman (Professor of Law, University of Hawaii), Patsy Izumo (Hawaii Department of Education Office of Instructional Services Director), Peter F. Urbach (Acting Director, NTIS), Robert

*Pan Pacific Education and Communications Experiment by Satellite.



Derived from *World Health* p. 13 (Jan 1978).

Goodman (Island Heritage Press), Robert Stevens (Chief, Cataloging Division, Copyright Office), and Ira W. Harris (Dean, Graduate School of Library Studies, UH at Manoa).

SLA member Viola G. Furumoto was the discussion leader of a seminar on the problems of the Copyright Act for biomedical sciences. Mrs. Furumoto is head, Science and Technology Reference, Hamilton Library, University of Hawaii.

The Institute was planned by Professor Sarah K. Vann, UH GSLS, who is also an SLA member. The sponsors of the Hawaii Copyright Institute were Graduate School of Library Studies, University of Hawaii at Manoa; the Hawaii Library Association; the Hawaii Association of School Librarians; the SLA Hawaiian Pacific Chapter; UH School of Law; Medical Library Group of Hawaii; and the UH GSLS Alumni Group.

AUDIT REPORT JAN. 1, 1977-DEC. 31, 1977

March 23, 1978

**Board of Directors
Special Libraries Association, Inc.
New York, New York**

We have examined the statement of assets, liabilities and fund balances of Special Libraries Association, Inc. as of December 31, 1977 and the related statement of income, expenses and fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of Special Libraries Association, Inc. at December 31, 1977, and its income, expenses and changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

**Touche Ross & Co.
Certified Public Accountants**

(Notes to Financial Statements are on page 274.)

SPECIAL LIBRARIES ASSOCIATION, INC.
STATEMENT OF ASSETS, LIABILITIES AND FUND BALANCES
DECEMBER 31, 1977

ASSETS	Total	General Fund	Nonserial Publications Fund	Scholarship Fund	Research Grants- In-Aid Fund
Cash (including \$420,186 in savings accounts)	\$440,844	\$386,145	\$ 39,476	\$ 9,047	\$6,176
Marketable securities—at cost (approximate quoted market value, \$205,309)	209,379	134,422	—	74,957	—
Accounts receivable—net of provision for doubtful accounts of \$800 in General Fund and \$400 in Nonserial Publications Fund	37,454	29,324	7,134	996	—
Interfund receivable (payable)—net	—	4,678	(5,538)	860	—
Inventory of nonserial publications and insignia (Note 1)	73,576	—	73,115	461	—
Prepaid expenses and deposits	29,159	29,159	—	—	—
Furniture and fixtures, at cost—net of accumulated depreciation of \$13,134 (Note 1)	2,339	2,339	—	—	—
TOTAL ASSETS (Note 3)	<u>\$792,751</u>	<u>\$586,067</u>	<u>\$114,187</u>	<u>\$86,321</u>	<u>\$6,176</u>
 LIABILITIES AND FUND BALANCES					
<i>Subscriptions, dues, fees and contributions received in advance (Note 1)</i>	\$269,506	\$268,412	\$ 71	\$ 1,023	\$ —
Accounts payable—trade	38,381	38,381	—	—	—
Withheld taxes and accrued expenses payable	12,270	3,332	8,938	—	—
Income taxes payable (Note 1)	3,000	3,000	—	—	—
Commitment (Note 2)	—	—	—	—	—
Fund balances	469,594	272,942	105,178	85,298	6,176
TOTAL LIABILITIES AND FUND BALANCES	<u>\$792,751</u>	<u>\$586,067</u>	<u>\$114,187</u>	<u>\$86,321</u>	<u>\$6,176</u>

See notes to financial statements

SPECIAL LIBRARIES ASSOCIATION, INC.
STATEMENT OF INCOME, EXPENSES AND FUND BALANCES
YEAR ENDED DECEMBER 31, 1977

	<u>Total</u>	<u>General Fund</u>	<u>Nonserial Publications Fund</u>	<u>Scholarship Fund</u>	<u>Research Grants-In-Aid Fund</u>
INCOME:					
Dues and fees	\$387,317	\$387,317	\$ --	\$ --	\$ --
Subscriptions and advertising	107,196	107,196	--	--	--
Net receipts from conference, less allocation below	67,950	67,950	--	--	--
Net receipts from education program	13,004	13,004	--	--	--
Net receipts from mailing list service program	18,198	18,198	--	--	--
Interest, dividends and net gain on sales of investments	30,211	22,911	1,643	4,991	666
Sales of nonserial publications	65,004	--	65,004	--	--
Gifts	18,774	6,405	--	12,369	--
Miscellaneous	3,232	3,142	--	90	--
Total income	<u>710,886</u>	<u>626,123</u>	<u>66,647</u>	<u>17,450</u>	<u>666</u>
COSTS AND EXPENSES:					
Allotment of funds to subunits	66,187	66,187	--	--	--
Salaries, wages and benefits	226,748	226,218	--	530	--
Office services and occupancy costs	114,947	114,947	--	--	--
Professional fees and services	21,133	21,133	--	--	--
Travel and entertainment	21,834	21,834	--	--	--
Member services and promotion	49,139	49,139	--	--	--
Costs of periodical publication sold, including allocation below	182,838	182,838	--	--	--
Costs of nonserial publications sold	31,888	--	31,888	--	--
Scholarships	10,000	--	--	10,000	--
Miscellaneous	1,845	123	--	1,222	500
Depreciation	891	891	--	--	--
Allocation of above expenses to:					
Costs of periodical publication	(63,263)	(63,263)	--	--	--
Conference	(49,273)	(49,273)	--	--	--
Other funds and programs	(21,344)	(37,415)	15,190	881	--
Total costs and expenses	<u>593,570</u>	<u>533,359</u>	<u>47,078</u>	<u>12,633</u>	<u>500</u>
Excess of income over expenses before income taxes	117,316	92,764	19,569	4,817	166
PROVISION FOR INCOME TAXES	4,948	4,948	--	--	--
Excess of income over expenses	112,368	87,816	19,569	4,817	166
FUND BALANCES, BEGINNING OF YEAR	357,226	165,051	97,584	80,481	14,110
FUND TRANSFERS	--	20,075	(11,975)	--	(8,100)
FUND BALANCES, END OF YEAR	<u>\$469,594</u>	<u>\$272,942</u>	<u>\$105,178</u>	<u>\$85,298</u>	<u>\$ 6,176</u>

See notes to financial statements

SPECIAL LIBRARIES ASSOCIATION, INC.
NOTES TO FINANCIAL STATEMENTS
YEAR ENDED DECEMBER 31, 1977

1. Summary of Significant Accounting Policies

The accounting policies that affect the significant elements of the Association's financial statements are summarized below.

OPERATIONS: The Association encourages and promotes the utilization of knowledge through the collection, organization and dissemination of information. It is an association of individuals and organizations with educational, scientific and technical interests in library and information science and technology.

INVENTORY: Inventory of nonserial publications and insignia is stated at the lower of average cost or market, which does not exceed net realizable value.

FURNITURE AND FIXTURES: Depreciation of furniture and fixtures is provided on the straight-line basis at various rates calculated to extinguish the book values of the respective assets over their estimated useful lives.

SUBSCRIPTIONS, DUES AND FEES: Membership in the Association, except for subscriptions to the periodical Special Libraries published by the Association, is based on either a calendar or a July 1 to June 30 year. Dues, fees and subscriptions are credited to income in the year to which the membership or subscription relates.

PENSIONS: The Association has a contributory group annuity retirement program with an insurance company covering substantially all qualified employees. There is no unfunded past service cost to be paid by the Association as of December 31, 1977, and expense for the year was approximately \$10,300.

INCOME TAXES: The provision for income taxes is based on unrelated business income, which consists of net advertising income and net mailing list service income. The Association's remaining activities are exempt from federal income taxes under Section 501 of the Internal Revenue Code.

2. Commitment

The Association occupies offices under a noncancellable operating lease which expires in 1987. The lease provides for minimum annual rentals of \$24,000, plus certain taxes and maintenance costs.

3. General Fund Balance

Total Assets of the General Fund are comprised of the following amounts: \$440,175 for the General Fund, \$136,773 for the Reserve Fund, and \$9,119 for the Equipment Reserve Fund. (This note appears at the request of Ellis Mount, Treasurer, Special Libraries Association.)

IN MEMORIAM

Jim Criswell

Jim Criswell was a hyperactive delight, his mind racing, inventive, with a compulsion to communicate.

He talked exuberantly.

He questioned.

He checked and double checked.

He telephoned.

He sent flowers.

He hated to leave his work.

He hated to leave a party.

He told delightful yarns.

He REALLY listened.

He REALLY laughed.

He exercised a preposterous imagination and made outrageous puns.

Jim loved to entertain, to keep about him a circle of merriment.

He invented the situation of: "Honey, I'm bringing 20 people home for dinner tonight." So sometimes he exasperated, but he never meant to, certainly.

He set no criteria for his friends, so they could always be just themselves in his presence, relaxed and comfortable.

He was proud of his kids, adored his wife, felt secure with his religion.

He was the kind of man who could make lifelong friends of other men, share good times, be around when needed.

He was known to decoy with jokes in order to keep from discussing his illness.

Over 3 years ago he learned he had cancer. A week ago he was still challenging this only enemy —by attending his son's basketball game.

Jim Criswell's life was shorter than it should have been but it was fuller than most. He's gone ahead of us to check—maybe double check—it out for us. And he may be agitated because there isn't a telephone.

Overall, Jim Criswell was a marvelous and noisy fellow. It's going to be hard to get used to all this quiet.

Beverly Harris
Houston Chronicle
Houston, Tex.

Notice: Anyone wishing to make a memorial donation should send it to the Jim Criswell Athletic Fund at St. Anne's School or to Fondren Library at Rice University.

• •

Edith Nisbet

It is with a heavy heart that I announce the passing of our friend and colleague, Edith Nisbet. She was immediate past Chairman of the Public Utilities Division of SLA and librarian of the American Gas Association (AGA).

Edie was a truly vibrant person who loved the great outdoors, so much so that she owned two horses which she loved to ride on weekends.

Born in Paris, France, Edie became a naturalized American citizen. After serving in several positions, she came to AGA as librarian in 1970. Edie served in that capacity until forced by illness to resign in 1978. She was one of those responsible for forming the

Library Services Committee of the Financial and Administrative Division, AGA, and making it into a permanent subcommittee of that division.

Edie was a dedicated worker and no task was too small for her. Her charming laugh and her sparkling personality will be greatly missed.

Steven Jaffe

• •

Pearl Charlet Orlando, librarian, Hewitt Associates, Libertyville, Ill. . . . died Oct 23, 1977. She joined SLA in 1951 and was a former editor of the *Informant*, the Illinois Chapter bulletin.

Helen F. Redman

Helen Field Redman, a founder of the Rio Grande Chapter, SLA, and its first President, died in Santa Fe, N.M. on Apr 25, 1978 at the age of 55.

Born in Boston, Helen was a Phi Beta Kappa graduate of Wellesley College in 1944. She graduated from the Library School at Western Reserve University, Cleveland, in 1947. She had worked at the Houghton Library at Harvard University and at the Western Reserve University Library before moving to New Mexico in 1947. She became assistant librarian of the Los Alamos Scientific Laboratory's Tech Library, then head of the Report Library in 1949, and Head Librarian in 1953, the position she held until 1970.

Her vital interest in her work was reflected in the many related activities in which she engaged, among them serving as chairman of various Atomic Energy Commission (AEC) committees to study corporate author entries, coordinate indexing and purchasing procedures, on the AEC Technical Information Panel from 1956-70, on the joint AEC-Department of Defense Atomic Weapons Technical Information Group, 1951-70, as a member of the American National Standards Institute subcommittee on technical report numbering, and as co-editor of the *Dictionary of Report Series Codes 1962*, 2d ed., 1972, both published by SLA. She served as director of the Technical Information Center *Atomos en Accion* exhibit, San Salvador, El Salvador, in 1965.

Helen was very interested in interlibrary cooperation, and served as chairman of the New Mexico Library Development Council from 1967-70, during the time that the Arthur D. Little Company completed a survey of New Mexico library resources and information needs, and the Coordinated Library System of New Mexico concept was developed. It was she who suggested, partly in jest, that the New Mexico Information System be called NEMISYS, which it is. She chaired the College University and Special Libraries Divi-

sion of the New Mexico Library Association in 1955-56, two years before becoming the President of NMLA. She was New Mexico Director of National Library Week in 1961.

In addition to serving as the first President of the Rio Grande Chapter, 1957-59, she undertook to head the Chapter's first project, compilation of the *Dictionary of Report Series Codes*, mentioned above. She served willingly in many capacities in the Chapter, and last year wrote a Chapter history which was published in the Chapter *Bulletin*. Other SLA activities included service as Chairman of the Engineering Section, 1962-63, and of the Sci-Tech Division, 1964-65. She was Chairman of the Association's Advisory Council from 1966-68, and presented the SLA John Cotton Dana lecture at Texas Woman's University in 1964.

Helen was a dynamic and fantastically capable person, who served as a constant inspiration to her colleagues, both older and younger, in the decades of the 1950s and 60s. Her loss will be felt by many whose lives and profession she touched deeply with her many constructive contributions.

Her years of interest in libraries and librarians in the state have prompted her colleagues and husband to choose as a memorial, contributions in her name to the New Mexico Library Association, P.O. Box 25084, Albuquerque, N.M. 87125, which will be used for scholarships, grants, or continuing education; the just-beginning era of interlibrary cooperation and networking in New Mexico will be her continuing memorial.

Lois E. Godfrey

• •

Rose S. Sugar, retired in 1976, formerly librarian at Ernst & Ernst, Detroit, Mich. . . . died Jul 11, 1977. After retirement, she served as consultant for J. K. Lasser Company and Doeren Mayhew & Company. She had been a member of SLA since 1939.

COMING EVENTS

Jul 2-26. UNISIST/FID/IFLA International Summer School for Teachers and Workers in the Information Field . . . Sheffield and London, England. Contact: Mrs. A. Schurek, Division of the General Information Programme, Unesco, 7 Place de Fontenoy, 75700 Paris, France.

Jul 2-Aug 5. TWU International Summer Abroad Program . . . Birkbeck College at the University of London, England. Sponsor: Texas Woman's University in cooperation with the American Institute for Foreign Study. Visits to British libraries, presses, bookbinderies, and publishing firms. Contact: Dr. Samuel Marino, Librarian and Professor of Library Science, Texas Woman's University, Denton, Texas 76204 (817-387-3444).

Jul 3-26. 6th Annual International Graduate Summer School in Librarianship and Information Science . . . College of Librarianship Wales, Aberystwyth, Wales. Co-sponsor: University of Pittsburgh Graduate School of Library and Information Sciences. Write: Director, IGSS 1978, College of Librarianship Wales, Llanbadarn Fawr, Aberystwyth, Dyfed SU23 3AS, Wales, U.K.

Jul 6-7. The On-Line Revolution in Information, Seminar . . . Paris, France. Sponsors: International Council of Scientific Unions Abstracting Board and Bureau National d'Information Scientifique et Technique. Contact: ICSU-AB Secretariat, 17 rue Mirabeau, 75016 Paris, France.

Jul 9-27. Computer Applications in Libraries . . . London, England. Sponsor: The British Council. Contact: The British Council, local representatives, or 65 Davies St., London W1Y 2AA, England.

Jul 10-14. International Council of Scientific Unions Abstracting Board, Annual Meeting . . . Toulon, France. Write: ICSU-AB Secretariat, 17 rue Mirabeau, 75016 Paris, France.

Jul 16-21. 23rd Seminar on the Acquisition of Latin American Library Materials . . . University of London, England. Theme: Latin

American Studies in Europe and the U.S. Fee: \$20 for members, \$30 for nonmembers. Write: Anne H. Jordan, Executive Secretary, SALALM, Benson Latin American Collection, University of Texas, Austin, Texas 78712 (512-471-5056).

Jul 24-Aug 18. Georgia Department of Archives and History, 12th Annual Institute . . . Atlanta, Ga. Co-sponsor: Emory University Division of Librarianship. Fee: \$225 for non-credit, \$576 for 6 quarter hours graduate credit from Emory University. Application deadline: May 15. Write: Training Officer, Archives Institute, Georgia Department of Archives and History, 330 Capitol Ave., Atlanta, Ga. 30334.

Aug 2-3. International Conference on Data Bases: Improving Usability and Responsiveness . . . Haifa, Israel. Contact: Allen Reiter, Technion, Department of Computer Science, Haifa, Israel; or Ben Schneiderman, University of Maryland, Department of Information Systems Management, College Park, Md. 20742.

Aug 6-12. Executive Development Program for Library Administrators, Course . . . Miami University, Oxford, Ohio. Sponsor: Center for Management Services, School of Business Administration, Miami University. Fee: \$295 (includes tuition, course materials, room and board). Application deadline: Jul 20. Contact Harry F. Brooks, School of Business Administration, Miami University, Oxford, Ohio 45056 (513-529-4129).

Aug 7-18. Institute on Federal Library Resources . . . Washington, D.C. Sponsor: Graduate Department of Library Science, The Catholic University of America. Fee: \$245. Write: Director of Continuing Education, The Catholic University of America, Washington, D.C. 20064.

Aug 8-17. Det Danske Selskab (The Danish Institute), Summer Seminar . . . Copenhagen, Denmark. In cooperation with the Royal School of Librarianship, Copenhagen. Theme: Libraries in Denmark: Structure and Extensive Activities. Write: Det Danske Selskab,

Kultorvet 2, DK-1175 Copenhagen K, Denmark.

Aug. 28–Sep. 9. 51st Congress of IFLA . . . Strbské Pleso (High Tatra), Czechoslovakia. Theme: Universal Availability of Publications. Write: IFLA, P.O. Box 82128, 2508 EC The Hague, Netherlands.

Sep 20–22. Aslib, 52nd Annual Conference . . . Edinburgh, Scotland. Theme: Information:

Presentation, Politics and Power. Write: Aslib, 3 Belgrave Square, London SW1X 8PL, England.

Sep 24–27. Bank Librarians Conference . . . Water Tower Hyatt House, Chicago, Ill. Sponsor: Bank Marketing Association. Registration fee: \$135 for BMA members, \$200 for nonmember institutions. Write: BMA, 309 W. Washington St., Chicago, Ill. 60606 (312-782-1442).

REVIEWS

Art Library Manual: A Guide to Resources and Practice, edited by Phillip Pacey. London and New York, Bowker, 1977. 423 p.

I wish that this book had been around when I became an art librarian over a decade ago. At that time, established art libraries faced problems of selection and acquisition of items from the onrushing torrent of visual arts materials. New art libraries and art librarians faced not only the problem of selecting, controlling, and making accessible the current material but also of acquiring the older back-up publications required by their clientele. There was a considerable time lag before scattered articles on the special problems confronting art librarians began to appear in library literature, and in the meantime art librarians were coping as best they could, learning on the job, searching for scattered gems of information and advice, looking for brains to pick, and finally forming their own self-help art libraries societies. Now here they are, just the right brains for picking, those of experienced British and two American art librarians, whose knowledge and expertise has been assembled in one package by Phillip Pacey with the sponsorship of the Art Libraries Society in the United Kingdom

There will still be a certain amount of effort involved in picking these brains for this is not exactly a manual in the North American sense, organising the library into its various programs and services and providing a guide to appropriate procedures in each case. It is, rather, a guide to the collections of library materials that should be included in art libraries, arranged in chapters dealing with different categories of material. Some of this material will be found in many general libraries, some of it should be found in all art libraries, some of it will only be found in some specialized art libraries; but all of it has been the responsibility of some art librarian at sometime. From the art bibliographies and the quick reference ma-

terial that every art library should have, to photographs both as study collections of reproductions of works of art and as art objects in themselves, to loan collections of works of art, and to trade literature needed by designers and commercial artists—it is all there, almost all that any practicing art librarian could ever need information about. It is always possible to find something to quibble about, but in view of the long outstanding need for this volume, and the value of its contents, it would seem invidious to criticise.

The fact that most of the contributors are British and that the emphasis is on the collecting practices of the studio art and design college library in the British Polytechnic should not seriously hinder the North American librarian in making use of the manual. There is no problem of translation from British English to American English, proving perhaps that the language of librarianship is international, and certainly that art library collections must be international. The information on procedures and practices is given at the end of each chapter, where acquisition methods, handling, housing and the use that can be made of each category of material are dealt with, in some cases briefly, in some cases extensively. In fact, so exhaustive is the detail in some chapters that North American librarians are going to be convinced that the burgeoning of the British Polytechnic was accompanied by an equivalent burgeoning in the numbers employed in their libraries. Some of the instruction does seem unnecessarily deatiled—such as that given in the chapter on out-of-print materials on the need to telephone a second-hand dealer if anxious to obtain an item in his list! But perhaps it is better to put too much in, than to risk leaving out something that might be helpful to some librarian somewhere.

The editor has recognized the problems inherent in presenting the information on procedures at the end of each chapter on a spe-

cial category of material, by adding an appendix which pulls together all the information on the conservation of library materials, a topic of particular concern to all art librarians, because of the nature of their collections of older imprints, and ephemeral and illustrative materials. In addition to the individual chapters on other specialized art library materials such as exhibition and auction catalogues, slides, artists' books, museum and gallery publications, there are also separate chapters on these materials reproduced in particular forms such as reprints and microforms which are also found in non-art libraries. The chapter on microforms, by Virginia Carlson Smith, one of the two North American contributors, would be valuable in any general library manual. The availability of the other categories of materials on microform has already been touched on in the chapters on each category, and in more detail in those where microform reproduction is becoming increasingly important, that is, periodicals, auction catalogues, and exhibition catalogues.

Alexander Ross, the second North American contributor, is already familiar to readers of the *ARLIS/NA newsletter* for his articles on the various periodical abstracting and indexing services. He provides here a useful analysis of all the well-known indexes and indicates the existence of lesser known indexes and listings of periodical articles. There is a chapter on theses, a topic not frequently covered, giving valuable information about access to the theses of different countries and the current and retrospective bibliographies available. Phillip Pacey, the editor, provides the introduction, the chapter on the art book, and an appendix on other libraries and organizations as sources of information, and he is always interesting, erudite, and informative. In addition to publications commented on or analysed in the text of the essay, each contributor provides a list of references which is printed at the end of the chapter. These lists are destined to become bibliographies which will not only be invaluable to anyone new in the art library field or starting a new art library, but they will also probably start a flurry of title checking in established art libraries. Only the chapter on loan collections or original works of art has none, in keeping with its conclusion that in these times of budgetary restrictions these collections may be doomed to extinction.

At the back of the volume, there is an alphabetical index which includes the names of institutions and individuals mentioned in the text and titles of publications to which reference is made, though not the names of the authors.

The librarian looking for a quick answer to a specific problem will be able to find in which chapter to locate it by referring to the subject entries in this index.

This publication is by any standards a valuable contribution to the body of library literature and, such is the dearth of publications in this specific subject area, there is no way that it can avoid becoming the bible of practicing art librarians, of teachers of courses in art librarianship in library schools, and of art bibliography in university art departments, at least until the immense feat of bettering it can be accomplished.

M. N. Balke
The National Gallery of Canada
Ottawa, Ont., Canada

Library Budgeting: Critical Challenges for the Future, edited by Sul H. Lee. Ann Arbor, Mich., Pierian Press, 1976. \$10.00.

The correspondence between the content of this book, essentially the proceedings of a conference on no-growth budgets, and its title, is not one-to-one. This is unfortunate. The reader looking for a book on budgeting in a library context will find most of the book not particularly relevant, though interesting, while those who would enjoy and benefit most from the work are likely to be deflected by the title.

The book might better be titled: "Fiscal Austerity and Library Planning," for that is the thrust of most of the contributions of this volume. The chapter by Jerome Yavarkovsky, "The No-Growth Budget—Bitter Pill of Opportunity," deserves wider dissemination. It is an excellent brief compendium of many of the ways in which libraries manage to waste money and dilute their efforts. The contribution by Robin N. Downes, "Critical Challenges in Steady State Financing: a Perspective," is precisely what it says it is, the best perspective this reviewer has seen on the issue of financial support for university libraries, and succeeds in clearly making the point that the recent past is not necessarily the norm.

For those interested in library budgeting, the book contains two pertinent contributions, one on zero-base budgeting, and the second on formula budgeting. The former, by Richard W. Denham is a brief, informative introduction to the subject. The latter presents a description of the Washington State Library formula budgeting system, a description that could benefit from additional context—it seems largely composed of graphic material for an oral presentation.

The contributions that comprise the balance of the book are innocuous. They have not weathered well the transition from oral presentation to book chapter. As springboards for discussion they may have served well, as contributions in and of themselves they lack meat.

In summary, this slim book contains a few good nuggets which the reviewer hopes will appear separately as journal articles.

Michael Koenig
Institute for Scientific Information
Philadelphia, Pa. 19106

Publishers and Libraries: A Study of Scholarly and Research Journals, by Bernard M. Fry and Herbert S. White. Lexington, Mass., D. C. Heath and Company, 1976. \$14.00.

This book is the result of a research effort sponsored by the National Science Foundation and directed by Professors Fry and White of the Graduate Library School at Indiana University. The research team was assisted by consultants, a reactor panel, and an advisory committee, which included the Executive Director of Special Libraries Association as well as representatives of publishers and other professional associations.

The purpose of the study was to investigate the viability of the present system of journals in communicating scholarly and research information. Studies were conducted of libraries and publishers by questionnaire and interviews. In order to gain perspectives on libraries, a stratified sample which consisted of 1,402 special, public, and academic libraries was asked to provide data on funding, budget reallocations, periodical titles added and cancelled, activities to counter decreasing budgets, and the impact of borrowing and lending on subscription decisions. These and other data gathered are presented in text and in tabular form for the years studied, 1969-1973.

Publishers were similarly surveyed to gain needed information on their operations for the years noted. In this manner, the commercial, society, and university publishers revealed the current state of periodical publishing, sources of income, actions taken to reduce costs, and other sources of revenue.

Fry and White conclude that the relationship between publishers and libraries is unstable and that some action is needed to augment the system before it collapses. Libraries, the authors argue convincingly, do not now, nor will they in the foreseeable future, have the revenues to support the publishers of our scholarly and research journals. On the other hand, publishers cannot be accused of reaping huge, or even substantial, profits from their publications. It is suggested that federal support to the libraries, the publisher, or the author will be necessary. Findings and conclusions on the number of new journal titles, cost reduction activities of libraries, subscription practices of publishers, and various other areas are presented, as are recommendations for additional research.

While a number of reports of the results of this investigation have appeared in the periodical press, this volume is highly recommended to the special library community, not only for the interesting and useful data presented but also for the details on the actions and practices of special libraries. Unlike other studies, the special library community is well represented in the sample and in the presentation of findings. Indeed, the comparisons of budget growth, periodical holdings, subscription trends, and the like for special, academic, and public libraries, as well as the in-depth look at the scholarly periodical press, are an excellent source of continuing education. This book is not entertaining, but it is informative and clearly written.

James M. Matarazzo
Simmons College
School of Library Science
Boston, Mass. 02115

We know you're Special

A special library isn't like any other library. It's a specialized research center with patrons who often demand *immediate* access to up-to-date information. To provide this information, a special library relies on its periodical collection, and, in turn, on its magazine subscription agency to insure that its holdings are current and complete.

F. W. Faxon Company provides domestic and foreign periodicals to special libraries throughout the world. Sophisticated computers insure accurate records and fast service; regional representatives give personal attention to all our customers.

Faxon understands the needs of special libraries. After all, we've been doing business together for almost 100 years!

Library business is our only business — since 1881.



F.W. FAXON COMPANY, INC.

Library Magazine Subscription Agency

15 Southwest Park, Westwood, Massachusetts 02090 • Tel: 800-225-7894 (toll-free)
617-329-3350 (collect in Mass. and Canada only)

LIFE
SCIENCE
LITERATURE

...all the pieces
from BIOSIS

TYPE OF LITERATURE	BIOLOGICAL ABSTRACTS	BIORESEARCH INDEX*
Annual Reports		•
Bibliographies		•
Book Chapters		•
Book Reviews (New Books)	•	
Data Reports		•
Letters	•	
Nomenclature Rules		•
Notes	•	•
Review Journals		•
Research Journals (Serials, including Original Russian Language Journals)	•	•
Russian Language Journals (English Translation)		•
Symposium Abstracts		•
Symposium Papers		•



In 1978, **Biological Abstracts**® will provide 149,000 abstracts; **BioResearch Index**® will provide 113,000 citations.

For up-to-the-minute reports in all life science research areas, consult BOTH **Biological Abstracts**® and **BioResearch Index**®.

For details, write BIOSIS Marketing Bureau, 2100 Arch Street, Philadelphia, Pa. 19103 U.S.A.

Engineering Index, Inc. announces

A new transdisciplinary index to a half decade of engineering information

For over ninety years researchers have turned to Engineering Index, Inc. (Ei) for published bibliographic references to the world's technical engineering literature.

In that time Ei has developed a vast and comprehensive data base of references to more than 2 million technical articles, proceedings, research reports and monographs.

This data base is unparalleled in its capacity to provide efficient and rapid retrospective access to the most important engineering and related information during the last nine decades.

Now Ei introduces, for the first time, a Cumulative Index to the last five years of published research in engineering and the interrelated areas of science and management.

The new 1973-1977 Ei Cumulative Index contains nearly 450,000 entries derived from more than 2,500 serials and more than 4,500 conferences in 15 languages. It consists of subject and author indexes and translation tables reflecting Ei MONTHLY to Ei ANNUAL book numbers and vice versa.

The subject portion is arranged by Main Heading/subheading following Ei's MONTHLY and ANNUAL format. Entries consist of the item's title and the year-ANNUAL book number, pointing to the complete bibliographic citation and abstract. The Author Index provides references to all papers for which an individual has been either a primary or secondary author.

The Ei MONTHLY/Ei ANNUAL number translation table will be especially useful to online searchers. "Hits" can be recorded by monthly book number only. The table rapidly translates the Ei MONTHLY book number to the appropriate Ei ANNUAL book number leading to the complete bibliographic citation and abstract in the appropriate Ei ANNUAL. The Ei ANNUAL/Ei MONTHLY number translation table will be useful for libraries having back issues of the Ei MONTHLY only.

This new Ei Cumulative Index should prove an invaluable tool for librarians and researchers in engineering organizations, universities, government agencies.—anywhere maximum technical awareness is essential.

The Ei Cumulative Index will be published in January 1979. Prior to July 31, 1978 the price, including the number translation volumes is \$1,050. After July 31, 1978 the price will be \$1,200.

Call or write **now** for complete information to:

Engineering Index, Inc. 212/644-7615
Department MCV 644-7616
345 East 47th Street, New York, N.Y. 10017

Please send me complete details on the Engineering Index 5-year Cumulative Index.

Name _____ Title _____
Organization _____
Address _____
City _____
State _____ Zip _____



Predicasts Terminal System (PTS) - 1978 Seminars

Circle day(s) you wish to attend:

LOCATION	PTS LITERATURE		PTS
	INTRODUCTION	RETRIEVAL TRAINING	ADVANCED TRAINING
St. Louis	Sept. 7	Sept. 8	-
Ottawa	Sept. 19	Sept. 20	-
Atlanta	-	Sept. 26	-
Cleveland	Oct. 3	Oct. 4	Oct. 5
New York	Oct. 16	Oct. 17	Oct. 18
Washington, D.C.	-	Oct. 31	-
Chicago	Nov. 8	Nov. 9	Nov. 10
San Francisco	Nov. 27	Nov. 28	Nov. 29
Philadelphia	-	Dec. 8	-
Houston	Dec. 18	Dec. 19	Dec. 20
Check enclosed	<input type="checkbox"/> Free	<input type="checkbox"/> \$60	<input type="checkbox"/> \$60
Please bill	<input type="checkbox"/> Free	<input type="checkbox"/> \$75	<input type="checkbox"/> \$75

Name _____
 Title _____ Tel _____
 Company _____
 Address _____
 City _____ State _____ Zip _____

Predicasts, INC.

Dept. SL
 11001 Cedar Avenue
 Cleveland, Ohio 44106
 Tel: (216) 795-3000
 Telex: 985 604

SWETS MEANS COMPLETE LIBRARY SERVICES

SWETS NORTH AMERICA, INC. provides a **FULL SUBSCRIPTION SERVICE** for periodicals, serials, and continuations, both domestic and foreign - through our home office in North America and our offices in Europe, South America and Great Britain.

<p>SWETS Service for Monographs with Bi-Monthly Updated Reports on Order Status</p>	<p>SWETS Service for Continuations with Bibliographic Report Supplied Annually</p>	<p>FAST[®] A Journal Delivery Service with Automated Kardex Check-In, Claim Control, and Air Freight or Surface Mail Options</p>
---	--	---

Doesn't Your Library Deserve SWETS Service?

CALL COLLECT (215) 644-4944

SWETS NORTH AMERICA, INC.

BOX 517 • BERWYN, PA. 19312

TELEX 084-5392



BOOKS FROM UNITED NATIONS

The United Nations in its Publishing Programme makes available a great deal of indispensable material on such major subjects as Economics, both global and regional, International Statistics, Energy, Human Rights, Social Questions, Transnational Corporations, International Law and Demography.

A full listing of our titles is yours for the asking. Send for our catalogues, available free of charge.

- Publications in Print 1978
- Standing Order Service Brochure
- Microfiche Price List
- United Nations Official Records Supplement

UNITED NATIONS PUBLICATIONS
Room A-3315
New York, N.Y. 10017

UNITED NATIONS PUBLICATIONS
Palais des Nations
1211 Geneva 10, Switzerland

TELL A FRIEND ABOUT REFERENCE SOURCES . . .



the most comprehensive and current information about reference materials ever published. No one else can make such a claim about an annual publication that serves as a selection and acquisition guide and a bibliographical record of reference book production. It includes:

- verified main entry
- full bibliographic information and price
- LC headings and Dewey numbers
- reviews from more than 100 publications

. . . tell a friend about Reference Sources.

Pierian Press
P.O. Box 1808, Ann Arbor,
MI 48106

PLACEMENT

"Positions Open" and "Positions Wanted" ads are \$2.00 per line; \$6.00 minimum. Current members of SLA may place a "Positions Wanted" ad at a special rate of \$1.50 per line; \$4.50 minimum.

In each membership year, each unemployed member will be allowed a maximum of two free "Positions Wanted" ads, each ad to be limited to 5 lines including mailing address (no blind box addresses), on a space available basis.

There is a minimum charge of \$11.00 for a "Market Place" ad of three lines or less; each additional line is \$4.00. There are approximately 45 characters and spaces to a line.

Copy for display ads must be received by the first of the month two months preceding the month of publication; copy for line ads must be received by the tenth.

Classified ads will not be accepted on a "run until cancelled" basis; twelve months is the maximum, unless renewed.

Special Libraries Association reserves the right to reject any advertisements which in any way refer to race, creed, color, age, or sex as conditions for employment.



POSITIONS WANTED

BS, natural resources Cornell University '77 MLS '78—Ref., gov. docs., or computerized lit. search position in acad./special library. Brenda Graff, 3942 Lockport Rd., Sanborn, N.Y. 14132.

MLS, BA (health ed)—Licensed practical nurse seeks work in medical, pharmaceutical, or industrial library. Experience in med. school library. Will relocate. Valerie Schmeer, 240 Rosedale Rd., Yonkers, N.Y. 10710 (914) 337-3107.

MLS 5/78—BA Anthro. Focus in Ref. in Soc Sci and Humanities; On-Line Services and gov. docs. 4 yrs. exp. in Ref., Acq., and Cat. Knowledge of Spn. Résumé and refs from: R. Erickson, 1701-A Nueces, Austin, Tex. 78701. (512) 477-9308; (915) 598-7197.

State certified school and public librarian—MLS, twenty years experience seeks part time position (T-W-Th) Sept. Phoebe L. Golman, 415 W. 23 St., N.Y.C. 10011 (243-0778).

Cataloging/media/one-man-show—I. U. MLS ('78) seeks position esp. in corporation. Have Radio-TV and 3 yrs. social work experience; also on-line searching, orig. cataloging, tech. svcs. Electronics hobbyist. Ted Morris, c/o Grad. Lib. Sch., Bloomington, Ind. 47401.

POSITIONS OPEN

Head Librarian—Montana Historical Society Library. Duties include administration of programs and activities of a small, historical library; supervision of personnel; acquisition and maintenance of special and rare book collection; reference and other public services. An ALA accredited masters' degree in library science, with undergraduate degree in American history, with an emphasis on the American West preferred, and three years supervisory and administrative library experience required. Salary is \$16,138, 3 weeks annual leave, and additional benefits. Submit letter of application, résumé and references to Ken Korte, Director, Montana Historical Society, 225 North Roberts, Helena, Montana 59601.

Librarian, Special Collections—Will develop and maintain various special collections and assist with supervision of public service operations. The collections will include microforms, A-V materials, documents, manuscripts, maps, rare books, and the history of technology. Applicants with a background or demonstrated interest in technical materials and their history, one or more years of appropriate experience and an accredited MLS degree will be given preference. Salary from \$10,500 depending upon qualifications. A 12-month appointment with 24 days vacation a year and faculty fringe benefit programs starts summer 1978. Send resumé with references and transcript to James C. Andrews, Director of Libraries, Rensselaer Polytechnic Institute, Troy, N.Y. 12181. An Affirmative Action Equal Opportunity Employer.

Business Magazine Librarians—German weekly business magazine seeks bi-lingual (German-English) librarians/researchers for minimum two-year commitment in Dusseldorf, Germany. Requirements: MLS and three years business library experience, preferably with a profit oriented company. Competence with Lockheed, N.Y. Times, and SDC computerized data bases. Excellent salary and benefits. A uniquely challenging and rewarding opportunity for service and information oriented librarians/researchers. Submit a résumé and names of three references to: Box S-245.

* *

Please mention *Special Libraries* when dealing with our advertisers.

JULY 1978

POSITIONS OPEN

Director, Medical Library—A Director of the Louis Calder Memorial Library of the University of Miami School of Medicine is being sought to administer the health sciences library serving the Schools of Medicine, Nursing, and Graduate Studies, as well as one of the largest hospital complexes in the South. The librarian reports directly to the Vice President for Medical Affairs and should be qualified not only with a graduate degree in librarianship but also with special training in medical librarianship as well as administrative experience in medical school and health sciences libraries. It is desirable for the applicant to have familiarity with and interest in computer-based systems, information services, and cooperative networking. The position will be available June 1, 1978, and the salary is open. The University of Miami is an AA/EO Employer. Interested applicants should write to Harvey Blank, M.D., Chairman, Search Committee for Library Director, University of Miami, P.O. Box 520875, Miami, Florida 33152; include a curriculum vitae as well as suggested references.

ONE
IN
SIX
CAN'T
KEEP UP

In America today, many normally healthy children can't do twenty situps or even one pullup. Lacking strength, they're left out of sports and games. Don't let this happen. Many schools have special programs to improve strength and endurance. If your child needs help, see that he gets it. Write for a free booklet: Fitness Washington, D.C. 20201

The President's Council on Physical Fitness and Sports



19A

**Library Photocopying
and the
U.S. Copyright Law of 1976
An Overview
for
Librarians and Their Counsel**

1978 / paper / 92 pages / 8½ × 11 /
\$3.50 / ISBN 0-87111-253-1

Prepared under the Auspices of the
Special Committee on Copyright Law
Practice and Implementation,
Special Libraries Association

This important document was distributed free to all SLA members early this year. Because of continued demand, *Library Photocopying* has been reprinted and is available in limited quantities.

To order, write:

**Special Libraries Association
Order Department
235 Park Avenue South
New York, N.Y. 10003**

**An Evaluation with
Recommendations for Actions of
The Government Printing Offices
Services from the
User's Point of View**

SLA Government Information
Services Committee
And the Committee on
Information Hang-ups

1978 / paper / 80 pages and
supplement / 5½ × 8½ / \$7.50 /
ISBN 0-87111-254-X

This report was compiled from questionnaires sent to 725 public, academic, and special libraries in the United States and Canada. An attempt was made to cover a variety of subject specializations and types of libraries. The report contains general recommendations on how the U.S. Government Printing Office can improve service to its users, as well as recommendations for specific areas such as congressional materials, serials and subscriptions, customer services, bibliographic information, *GPO Monthly Catalog*, and pricing.

A limited quantity of the report is available from:

**Special Libraries Association
Order Department
235 Park Avenue South
New York, N.Y. 10003**

THE MARKET PLACE

Your Link with the UN—For all printed and microfiche editions—complete series to single titles. We are specialists in the field and provide documentation services tailored to libraries' specific needs. Let us help you. UNIFO Publishers Ltd., P.O. Box 89, White Plains, N.Y. 10602 (914) 592-8710.

Specialized Subscriptions—Libraries having a heavy population of scientific and technical journals in their subscription program are invited to contact Maxwell International Service for Science and Technology (MISST) which has resumed its activity for the domestic market. Special advantages offered by this service can not be matched in the industry. Please call or write to Maxwell International Service for Science and Technology, a division of Pergamon Press, Inc., Fairview Park, Elmsford, N.Y. 10523, (914) 592-9141.

Back Issue Periodicals—Scientific, Technical, Medical and Liberal Arts. Please submit want lists and lists of materials for sale or exchange. Prompt replies assured. G. H. Arrow Co., 4th & Brown Sts., Philadelphia, Pa. 19123.

U.S. Government Publications—Out-of-print. We buy, sell, and exchange. S. Ward, La Plata, Md. 20646. Wanted: *Monthly Catalog* before 1967.

THE MARKET PLACE

Foreign Books and Periodicals—Specialty: Irregular Serials. Albert J. Phiebig Inc., Box 352, White Plains, N.Y. 10602.

INDEX TO ADVERTISERS

BIOSIS	15A
Data Courier, Inc.	8A
Ebsco Subscription Services	Cover IV
Elsevier North-Holland	Cover III
Engineering Index, Inc.	7A, 16A
F. W. Faxon Company, Inc.	15A
Halsted Press	5A
Information Handling Services	14A
Institute for Scientific Information....	Cover II
Lockheed Missiles & Space Company	12A-13A
The Magazine Index	10A-11A
Marquis Who's Who, Inc.	6A
McGregor Magazine Agency	4A
Noyes Data Corporation	2A
Pergamon Press	9A
Pierian Press	18A
Predicasts, Inc.	17A
Special Libraries Association	1A, 20A
Swets North America, Inc.	17A
United Nations Publications	18A

MEET SOME OF THE PEOPLE FROM ELSEVIER'S SCIENCE DIVISION

As one of the largest scientific journal publishing groups in the world, we know the importance of giving you accurate, up-to-date information about our publications.

The people in the Journal Information Center in New York can provide you — our North American customers — with price, volume, sample copies, back volume information and other data on the more than 300 journals published by Elsevier's Science Division.

Journal Information Center

Elsevier North-Holland, Inc.
52 Vanderbilt Avenue
New York, New York 10017
Telephone (212) 867-9040



Tom Reich



Judy Miller



Michael Torzewski



Caryn Sweig
2195 17th Bannington
Los Angeles, California 90049
(212) 472-2709



Tess Carey
2000 Wilshire Blvd
Atlanta, Georgia 30307
(212) 867-9040



Christine Ellicott
1121 West Wellington
Chicago, Illinois 60667
(312) 871-5337



John Tagler
52 Vanderbilt Avenue
New York, N.Y. 10017
(212) 867-9040

Elsevier's Science Division representatives

are now located in major geographic centers to provide you with complete information to meet your professional and scholarly needs.

We have the experience, diversity and quality that you need. For complete information about all of our publications, contact the representatives in your area or our New York office. At Elsevier North-Holland, we're here to serve you!

ELSEVIER SCIENTIFIC PUBLISHING COMPANY
Amsterdam

NORTH-HOLLAND PUBLISHING COMPANY
Amsterdam

ELSEVIER NORTH-HOLLAND BIOMEDICAL PRESS
Amsterdam

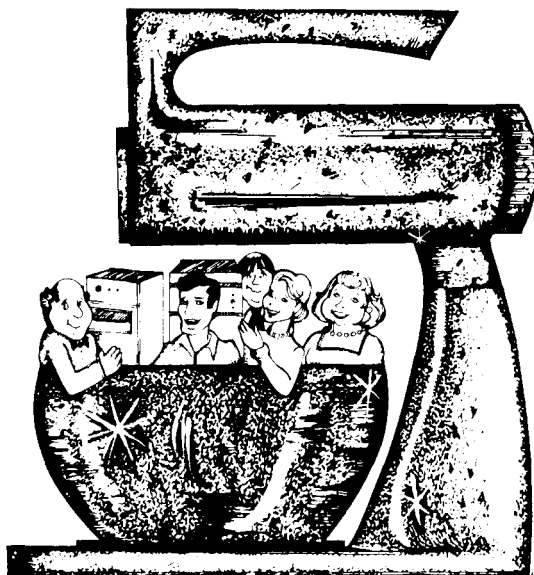
ELSEVIER NORTH-HOLLAND, LTD.
Limerick

ELSEVIER NORTH-HOLLAND, INC.
New York

ELSEVIER SEQUOIA
Lausanne

APPLIED SCIENCE PUBLISHERS
Barking

THE SECRET'S IN THE MIX



The secret to our high quality serials subscription service is our unique mix of sophisticated computer technology and personal customer service. Because of this mix, our serial subscription service covering over 120,000 foreign and domestic titles is capable of providing libraries with the highest quality of trouble-free subscription service available. EBSCO is one source for any title published on a continuing basis including periodicals, yearbooks, annuals, newspapers, journals, book/monograph series, continuations, etc.

As an EBSCO customer, all your order processing, invoicing, payments and records are stored in our computer. The flexibility programmed into our computer routines enables us to provide time-saving reports which are customized to meet your particular needs.

For personal service, one of our 14 regional offices will assign a customer service representative to your library. This representative will work with you personally, answering questions, and acting in your behalf with publishers when problems occur. No library is too large or too small for our services, and your order for one or more titles is always welcome. Join the thousands of libraries world-wide who take advantage of our unique mix. For catalogs and additional information, call or write today.

EBSCO SUBSCRIPTION SERVICES



11 U.S.A. Offices / Toronto / Rio de Janeiro / Amsterdam
P. O. Box 2543, Birmingham, Alabama 35201 (205) 252-9010 Telex 5-9717