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Special Libraries, October 1960

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SPECIAL LIBRARIES

OCTOBER 1960, VOL. 51, NO.

Retrieving Information from Technical Correspondence, Laboratory Notebooks and Engineering Drawings . . . A Library Survey . . . Buyers' Guide Issues of Business Journals . . . Medical Center and Hospital Libraries

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SPECIAL LIBRARIES

Official Journal
Special Libraries Association

Volume 51, No. 8 **CONTENTS** *OCTOBER 1960*

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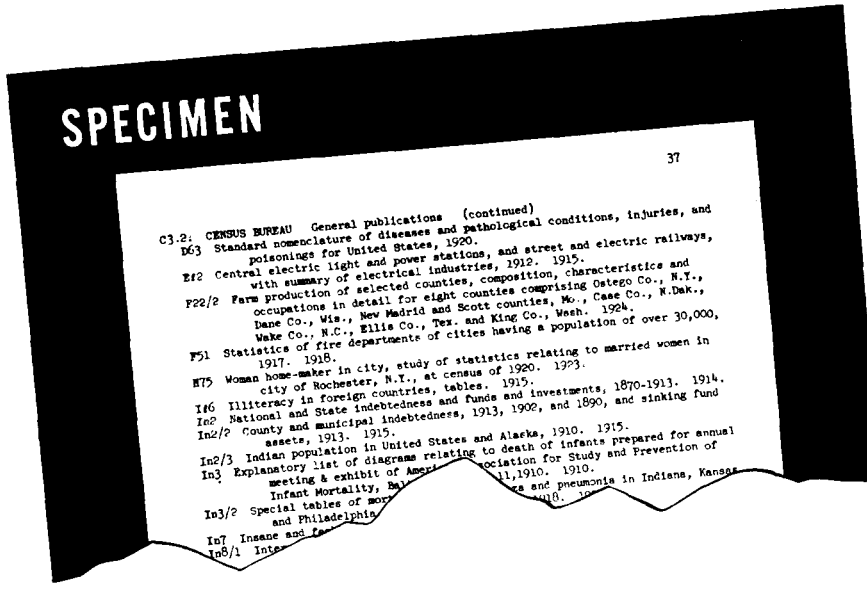
New reference book fills 14 year gap in government documents classification



DOCUMENTS OFFICE CLASSIFICATION NUMBERS FOR CUTTERED DOCUMENTS, 1910-1924

by Mary Elizabeth Poole and Ella Frances Smith

Painstaking accumulation of lists from many sources has resulted in this valuable compilation of numbers for individual documents in Cuttered classes. This work covers the period between the 1909 *Checklist* and the time Documents Office Classification numbers began to be listed in the *Monthly Catalog*. It is in two parts. The first, by Miss Poole, covers A-Y3; the second, by Miss Smith, is from Y4-Y9. Book size is approximately 6½x8¼, bound in cloth, price $25.00 a copy. Order now, during publication, for prompt delivery. Order OP 6268.

Also by Miss Poole:

Documents office classification to 1958. Ann Arbor, Univ. Microfilms, 1958. **OP 16 $58.80**

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Technical Correspondence: Control and Retrieval Through Microfilm and Punch Card Techniques

THOMAS J. DEVLIN and W. T. KING, Office and Plant Division
Esso Research and Engineering Company, Linden, New Jersey

A SURVEY OF FILE activities throughout the Esso Research and Engineering Company was made in 1956 as part of an operations analysis program. As a result of this study, a central technical file was established. It originally included files of four research divisions but now provides service to nine divisions through two branch files. Essentially it is a centralized-decentralized file operation. The file operation is centralized in terms of location, but the material for each division is treated as a separate entity. A uniform file classification system providing a common link between the files is used.

General Considerations

A variety of filing techniques existed among the various units, and several procedural changes were indicated.

The survey of the use of the various file units indicated that specific documents, rather than complete files, satisfied 70 per cent of the requests handled. Subject classification was the basic method used in organizing file material. While this method is ideal for generic searching, it actually was necessary in less than 30 per cent of the requests handled. As a requester could usually supply information on the source and approximate date of a desired document, a method of direct access through these reference points, as well as by subject, was highly desirable. A system was developed that makes use of simple electronic business machines to print various indexes that give access to material by any of the principal points of reference, i.e., source, date or subject.

Presented before the Metals Division, June 6, 1960, at the 51st SLA Convention in Cleveland, Ohio.

The second problem was one that plagues many file operations—the fact that incoming mail is not always returned to the file room when circulation has been completed. Some file units resorted to a controlled circulation system or a log of incoming documents. In these cases the source, title or subject, date and addressee of the material were recorded. This approach would establish the fact that a document had not been returned and show the probable distribution. Essentially it could fix responsibility for a missing document, but it did not necessarily produce the document or the information it contained.

To overcome this problem other units filed duplicate copies of incoming material and discarded them when the original was returned. While this is a positive solution, it can also be an expensive one. It adds a good deal to the file burden, and as duplicates of incoming documents are not always available, it presents a copying problem.

We felt that a copy provided the only positive protection against loss or non-return of a document to files but decided to use microfilming techniques rather than paper-copying processes. This reduces the cost of a copy to a fraction of a cent per page as opposed to five to ten cents per page by other copying methods. The indexes previously mentioned carry a reference to both the original and the microfilm record, thus providing effective access to the microfilm. The use of a 3M reader-printer provides paper copy when required.

Processing of Incoming Mail

Incoming mail for the divisions served by the central technical files is first received by the central mail room where it is sorted by

division. Personal or confidential mail and all second and fourth class matter are removed and sent directly to the addressee. The remainder is sent to the respective division mail clerk in the central files. Here the mail is reviewed; material of temporary value is separated out and sent to the addressee. Mail of technical or administrative importance is processed as follows:

1. A serial number is assigned to each item.
2. The serial number, date, corporate source, author, addressee, title and subject classification number (if desired) are entered on a log sheet.
3. The mail is microfilmed in serial number order.
4. Routing slips are attached, and the mail is forwarded to the addressee.

At the end of each day the log sheets are sent to the file clerks for reference work, and IBM cards are prepared from the Flexowriter tape through the use of a tape-to-card converter. At the end of each week the microfilm is sent out for processing and, upon return, is filed in chronological order in rolls.

Serial Number Assignment

The serial number consists of eight digits that are divided into a three-digit group, indicating the year and division, and a five-digit group, representing the accession number. As both incoming and outgoing mail are assigned serial numbers, a means of distinguishing between these two types of mail is required. This is done by assigning incoming mail accession numbers starting with 40,000; all numbers under 40,000 are immediately recognized as outgoing mail. The components of a typical serial number (912-41000) for incoming mail are:

YEAR	DIVISION	ACCESSION NUMBER
9	12	41,000
1959	Products Research	Incoming Letter #1000

The same pattern applies to serial numbers on outgoing mail, for example (802-1000):

YEAR	DIVISION	ACCESSION NUMBER
8	02	1,000
1958	Tech. Information	Outgoing Letter #1000

Preparation of the Log Sheet

Bibliographic data are recorded on the log sheet with a Flexowriter. As the data will later be transferred mechanically to IBM cards, entries must be in a form that will facilitate the transfer. A program tape on the Flexowriter provides automatic tabulation and also enters machine codes that serve as instructions for the tape-to-card converter.

It should be noted that other means of recording this data are available. Direct keypunching is a possibility; this approach would require the separate preparation of a printed log sheet. The use of an IBM card-producing typewriter would provide both the cards and the typed list from the same operation. The choice of equipment depends entirely upon the characteristics of the application under study.

Microfilm Operation

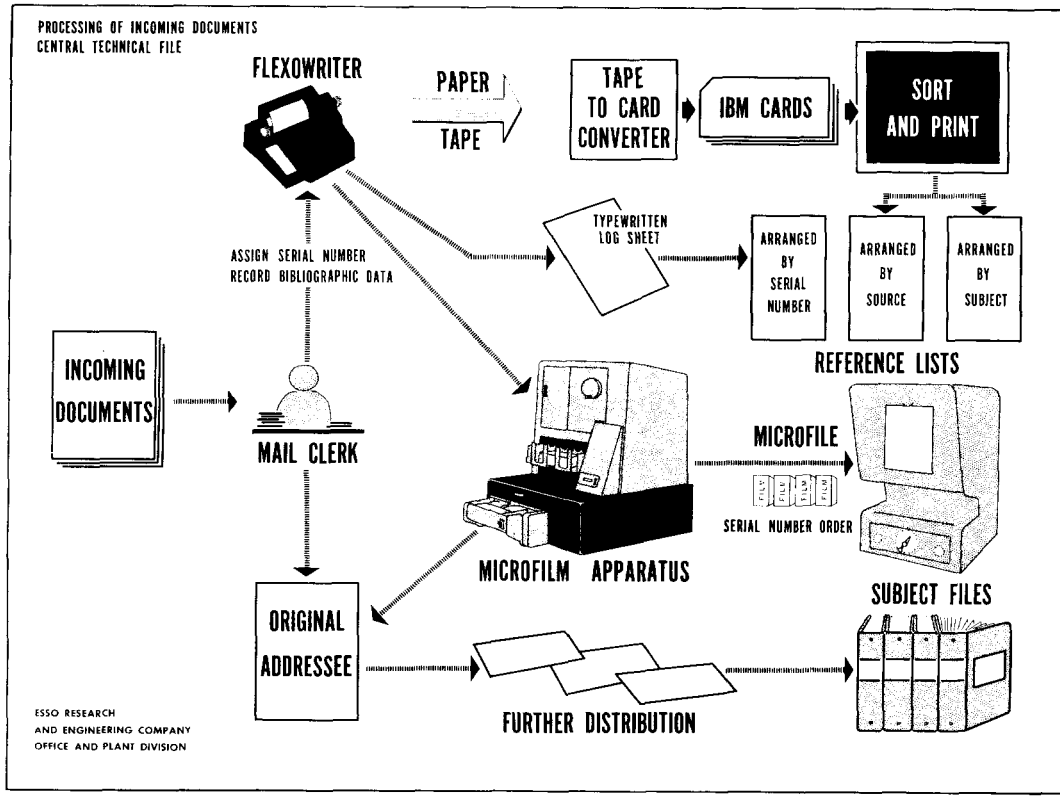
Central Technical Files is presently using a Recordak Reliant Microfilmer. The film size is 16mm, and material is photographed at a 24:1 reduction ratio. The film is sent to the Recordak Corporation for processing and, in our particular case, is returned within two days. Mail is received and filmed several times a day, and as all divisions use the same microfilm camera, a method for segregating material on the roll is required. We are using target sheets ($8\frac{1}{2}$ x 11 paper targets) that contain the serial number of the first and last document in the sequence and the date of filming:

7-12-59
912-41000
912-41025

While we have not consolidated the microfilm of each division's mail into single rolls, this could easily be done by cutting and splicing the film at regular intervals. Access to microfilmed documents is available through the various indices. The 3M reader-printer allows screen viewing of the documents or can prepare paper copies if desired.

Tape-to-Card Conversion

The data contained in the Flexowriter tape is transferred to punched cards through the



Flow Plan of the Processing of Incoming Documents at the Central Technical File.

use of a Systematics, Inc., tape-to-card converter. This machine is attached to an IBM printing keypunch. It consists of a reading head for the tape and associated electronic components that control and operate the keypunch machine. The converter is controlled by a plug board that can be used to vary the conversion program within prescribed limits.

Because of the limited capacity of the card, it is necessary to use more than one card per document entry. The first card contains all the bibliographic data except the titles. Each additional card required contains one line of the title and all bibliographic data except the names of the authors and addressee. A set of cards then consists of the bibliography card plus an additional card for each line of the title.

A listing of documents by source is obtained in the following manner:

1. Sort bibliography cards numerically by source code.
2. Sort title cards numerically by source code.
3. Merge bibliography cards and title cards by using an IBM collator.
4. Feed merged deck into an IBM 407 tabulator to print reference list.

Essentially the same procedure would be followed in preparing a listing in any desired order.

Processing of Outgoing Mail

The bibliographic data recorded for outgoing mail is of the same nature as that recorded for incoming mail. The difference lies in the techniques of handling the information. A stenographer prepares a document description card for each letter typed. The IBM cards are prenumbered, thus the serial number for a letter is automatically assigned by merely taking a card from the supply. The author assigns the file classification number and subject heading or title. Cards can be processed upon receipt, and listings made in any desired order (author, subject, etc.) at regular intervals.

File Procedures

Subject classification is still used for organizing file material. The system employs a number code as a shorthand notation for subject headings, i.e., 2380-jet fuels. The use of numbers improves filing efficiency, but their biggest advantage is that they allow machine sorting by classification number. The classification number is supplied by authors in the case of outgoing mail. It is also available on incoming mail from other divisions that use the file classification system. In cases where a file classification has not been supplied, one is selected by a file clerk.

In addition to assigning classification numbers, a file clerk indexes documents using the principles of coordinate indexing. The indexing data is collected on a coding card. It provides for five indexing terms (limited to 12 characters each) plus the serial number, file classification number and a date and author notation. More than one card can be used per document if required, as long as the document serial number is repeated on each card. The relationship among the terms selected from one document can be maintained by using a common indexing term on all cards. When classification and indexing have been completed, the classification number is entered on the original log sheet, and the material is filed.

The IBM cards resulting from the indexing step are used to form an alphabetic subject index by reproducing the original deck four times. The reproducer board is wired to put the contents of field 2 into field 1, field 3 into field 2, field 4 into field 3, field 5 into field 4 and finally field 1 into field 5. After each reproduction operation, the cards generated become the master deck. As a result, after four passes all the words appear in field 1 at least once. The decks are then combined, sorted alphabetically and tabulated to print the subject listing.

Equipment Used

The equipment used in this operation is listed below. As pointed out earlier, individual situations might cause some variation in the type of equipment chosen. Certain items, however, are essential. These are indicated by an asterisk. We actually have acquired only the first three items specifically for file use. The remainder are available through our computing center.

Flexowriter—Model SPD Programatic
  Friden Corporation ca. $3000[1]
*Keypunch—IBM 026 Printing Keypunch
  Monthly Rental ca. $ 70
Tape-to-Card Converter
  Systematics, Inc. ca. $2800
*IBM Sorter
*IBM 077 Collator
*IBM 514 Reproducer
*IBM 407 Tabulator

Summary

These techniques are not limited to the processing of correspondence. They can also be quite useful in the handling of technical reports, papers and journal articles. For example, by recording the source, author, title and subject classification of any article, a classified list of titles can easily be prepared. IBM cards need only be sorted by subject classification number, and a print-out made from the selected cards. Source lists and author lists can be prepared in the same manner.

This combination of manual and machine techniques gives us the desired flexibility in handling requests. The subject classification system serves the need for generic searching, while the various indexes provide effective access to the most active segment of the files. Simple business machines can handle the present work load effectively. Should the card volume reach a point where manipulation becomes a problem, transfer of the operation to more sophisticated machines is entirely feasible.

1. Price will vary, depending upon additional features that may be desired.

A Microfilming Program for Laboratory Notebooks

MEREDITH S. WRIGHT, Librarian, Parma Research Center
Union Carbide Corporation, Cleveland, Ohio

WHILE THERE ARE numerous special cases, a decision to microfilm records is usually based upon one or more of the following potentialities:

1. To save labor in current office operations, for example, to substitute for listing or filing or to effect some procedural improvement;
2. To provide duplication of records by a low-cost, high-speed technique, which will substitute for the more usual copying methods such as photostat, either in the initial collection of data or in the provision of multiple copies;
3. To save storage space in applications where the cost of microfilming is less than the cost of storing the records themselves in inexpensive record centers or where the need for access to the stored records is both frequent and immediate;
4. To provide security for valuable records which are irreplaceable if lost. Usually the "security" aspect becomes determinative only when records exist in unique copies. Most records do not require security microfilming because they are duplicated in different locations and if lost or destroyed at one location will be preserved in another.

Unique Characteristics of Research Notebooks

The case of the research laboratory notebook is a special one in which the decision to microfilm usually is based almost entirely upon reason four—the need for a "security" copy. The laboratory notebook is truly a unique record, since it exists as the only one of its kind. For this reason most organizations have established policies calling for permanent or very long-term retention of research laboratory notebooks. Such retention policies do raise a storage problem and invite consideration of microfilming to reduce storage space requirements. More important than the solution to a space problem, however, is the need to secure the record against accidental destruction. Notebooks used in a laboratory are especially vulnerable to accidental destruction from the hazards that exist even in the best-kept laboratory—small flash fires, chemical spillage, minor explosions—all serving to underline the importance of a security copy.

The case of the laboratory notebook is a special one not only because the notebook is a unique record but also because the notebook record of experimental work constitutes the major documentary support for patent applications. For this reason any microfilming program designed to provide a security copy of a laboratory notebook must take careful note of the legal status of such copies. Only a lawyer can speak with authority on this problem, and it is essential to secure from the company's legal and patent departments a careful statement as to just what is needed to insure a legally adequate photographic copy of a unique record. Lewis and Offenhauser* have reviewed this problem in some detail. As they point out, in a court of law the original document itself is the best evidence. When these original documents have been lost or destroyed, secondary evidence can often be introduced to prove their contents, provided, of course, that the original documents themselves would have been competent as primary evidence and also that a proper reason be given for introducing the secondary evidence. Before secondary evi-

Presented before the Metals Division, June 6, 1960, at the 51st SLA Convention in Cleveland, Ohio.

* LEWIS, Chester M., and OFFENHAUSER, William H., Jr. *Microrecording*. New York: Interscience, 1956.

dence can be admitted, the cause of or motive for the destruction of the original materials must be shown. Photographic copies are secondary evidence and are admitted as such. Federal law now admits photographic copies of business records on the same level as the originals they replace "if photographed in the regular course of business."

For this reason, most organizations include in their filming procedures a "declaration of intent and purpose," tending to prove that microfilming is a routine operation carried on regularly. The usual form of the declaration of intent and purpose makes this point explicitly and should go on to state that the film is made for the purpose of serving in lieu of the original records in either of two eventualities: first, if the original records should be accidentally lost or damaged, or, second, if the original records should be purposefully destroyed as part of a planned operating procedure expressed in writing as a records retention policy. For any program such a declaration should be carefully checked to insure that it meets the requirements of both the federal government and the various states.

Recognizing the importance of notebooks, both as legal and as scientific records, Union Carbide Corporation has ruled that all corporation laboratory notebooks are to be covered by a records retention policy under which notebooks will be regularly filmed to provide security copies. The manner in which this program will be carried on is left to the discretion of each operating unit.

The Role of the Library

Since 1948 a microfilming program has been in operation for the companies now represented at the Parma Research Center. Under the system established here, the technical group leaders are responsible for the technical content of the laboratory notebooks, the manner in which they are kept and the practices of signing and witnessing. The library is responsible for all other aspects of the notebook program, including the design and supply of the notebooks themselves, distribution to the technical staff, maintenance of all necessary records, the establishment and execution of the microfilming program and the permanent storage of completed notebooks.

The notebooks, supplied to the library's design specifications, are permanently bound books with an over-all size of 11¾ x 9¾ inches, the inside page measuring 11½ x 9 inches. There are 100 data pages in each notebook, plus a title page, tables of contents and index pages. Page stock is white ledger, 25 per cent rag, ruled on a quarter-inch grid with a light-green ink. All notebooks are distributed from the library. Each employee is assigned a permanent reference number, and his notebooks are issued to him serially under that number. Thus if John Jones is assigned the reference number 38, his notebooks are issued to him serially as 38-1, 38-2 and so on, and a record is kept of numbers out, dates of issue and subjects covered. References to notebooks in monthly reports or correspondence are made to the full notebook numbers.

While there are no instructions to that effect, most notebooks are kept one to a project, and the average technical man uses about four notebooks a year. "Suggestions," prepared by the library on the best method of keeping notebook records, are provided in each notebook distributed; they include a note on the microfilming program and also point out that the books remain the property of the corporation and are to be returned to the library for permanent filing when they are no longer in active use.

When the practice of microfilming of laboratory notebooks was begun, completed notebooks were filmed as they were returned to the library for permanent filing. The results of this practice were not entirely satisfactory, primarily because notebooks were held so long by authors that the danger of damage and even loss was unduly large and the opportunity to correct effectively any omissions in proper witnessing was lost. A new schedule was therefore established in which every technical man's notebooks are called in for filming on a six months' schedule. Any notebooks completed during the preceding six months as well as any notebooks in current use are filmed on this six

months' date. While slightly more complicated record-keeping is required by this new schedule, it does provide surer protection against possible loss or damage since the periods between filmings are short; it also encourages more prompt signing and witnessing of important pages. The filming itself is done on Saturday mornings, and the schedule is maintained by filming about 20 notebooks each week, normally a two- to three-hour job.

This kind of a filming schedule is possible primarily because microfilming equipment is available in the library. The initial notebook filming of completed books was done by an outside service on a contract basis. This proved only partly satisfactory. Since the records were of a confidential nature, there was some resistance to having them handled by outsiders. The preparation of books for filming had to be done much more painstakingly, since the filming was to be done by an outsider who could not exercise individual judgments to solve problems as they arose during filming. Finally, the inspection of the completed film presented difficulties. We felt it necessary to conduct a rigorous frame-by-frame inspection of the processed films. Since such frame-by-frame inspection is the most time-consuming and expensive step in the entire microfilming program, there seemed little to be gained in having it carried out by an outside service and repeated by the library staff.

Because of this and because our total microfilming program had developed to a point that justified purchase of our own equipment at the Center, it seemed that a more satisfactory job of laboratory notebook microfilming could be obtained by doing it ourselves.

Present Procedures

Since 1950 we have done all our own microfilming using 16mm film and a flat-bed camera at a reduction ratio of 21:1. The availability of equipment on the premises allows a continuing filming program scheduled to our convenience. Since the filming is done by a member of the library staff, judgment can be exercised by the operator during filming, and this permits intelligent handling of problems as they arise, eliminating extensive advance preparation. Filming is done on Saturdays when notebooks are normally not in use, and the notebooks themselves are never handled by outsiders. Returned rolls of film undergo a frame-by-frame inspection, and since this inspection is carried out by the persons who not only will have to use the record but who also are directly responsible for its creation, the inspectors have a decidedly personal interest in the film and much more rigorous standards are applied.

Under the filming schedule now in use, at the beginning of the week individuals are notified which notebooks are to be filmed on the following Saturday and are requested to bring these notebooks to the library on Friday afternoon. The notebooks are then checked by a member of the library staff, in cooperation with their owners, to make certain that the books are in condition for filming. In particular a check is made to insure that significant pages have been signed and witnessed, that loose sheets containing primary data are properly identified and attached and that no additions or corrections have been made to pages that have been filmed previously. Loose sheets containing secondary data are removed and returned to the owner.

After the notebooks have been checked, the necessary roll records are prepared and assembled in order for filming. The standard procedure requires the following sequence, all targets being prepared with block letters about one inch high so that their microfilm images can be read without magnification:

1. A *roll-number* target. The first roll of film covering laboratory notebooks is designated LN-1, and succeeding rolls are numbered in serial order.
2. A *name* target, showing the company, the location and the name of the record.
3. The *declaration of intent and purpose,* discussed earlier.
4. The *microfilm roll record,* showing the contents of the roll and indicating the index points. Index points are filmed about every 10 feet or, if possible, at the beginning of each new set of notebooks to facilitate finding on the completed roll.

5. *Index point 1,* a large block number target. Index point targets are always preceded and followed by three blank spaces to insure that the index point will stand out in the finished film.
6. The laboratory *notebook cover and title page.*
7. The *notebook* pages.

After filming the notebook pages, the operator spaces three, films index point 2, spaces three and continues from step six above. At the end of the roll, the roll record target is signed by the camera operator and refilmed.

When the film is returned from processing, the operator carries out a frame-by-frame inspection, noting on the appropriate roll record sheet any corrections or retakes necessary. These corrections, retakes and the roll record sheets are then refilmed at intervals as correction reels LN-C-1, 2 and so on.

Negative microfilm rolls are stored at the corporation's records center in Vermont. Here the film is held under optimum conditions at humidities between 40 and 50 per cent and temperatures between 60 and 80°F, in a fireproof, air-conditioned vault. Because the negative film is intended to serve primarily as a security copy to insure availability of the record should the original be lost or damaged, a positive film is regularly prepared from the processed negative. These positive copies are held at the Parma Research Center as reference copies for use at the laboratory. Since the notebooks themselves are still being held in permanent storage and are available for consultation in the original, present use of the positive film is slight. When the original notebooks are destroyed under the records retention policy or should they be removed to a less convenient location so that use of the positive film increases, it is expected that the positive rolls will be cut up and the film strips filed in transparent envelopes by notebook number to increase ease of reference.

The notebook filming program described meets the objective set by management of providing a security copy of a unique and irreplaceable primary record. From the library's point of view, however, it has an important side effect. The laboratory worker tends to keep his notebook record in a personal style. Notebook instructions suggest that the record should yield the complete story of every experiment in such detail that it can be repeated and properly understood without interpretation many years later, but this is an ideal not easily achieved.

Awareness by the laboratory workers that their notebooks are being filmed and forwarded to a corporation center for retention has had a salutary effect on the records themselves. Signing and witnessing is carried out more systematically. Personal data has tended to disappear from the notebooks, making the resulting record more professional. The use of individual green, purple and red inks is declining in favor of the less spectacular but more photogenic blacks. The library's practice of calling in the notebook keeper to check poor results on the film has further encouraged more attention to the condition of the original record, and the cooperation of the bench worker in the filming program is becoming increasingly more active. Such cooperation is, of course, essential to the provision of satisfactory records, and our filming program is contributing effectively in this direction.

AUTHOR'S NOTE: The author gratefully acknowledges the assistance of Wilma Street of the library staff, who has been responsible for most of the microfilming under this program.

ELECTRONIC RETRIEVAL OF LEGAL DATA

An International Business Machine 650 data processing system that locates legal information in record time was previewed at a demonstration conducted by the University of Pittsburgh's Health Law Center and the American Bar Association prior to being presented to members of the Association's convention in August. The electronic "law library" searched for, found and printed out, upon request, the full text of laws from various states on health and hospitals. In another demonstration at IBM headquarters, laws in the patent design field were retrieved with a RAMAC 305.

Engineering Drawing Processing System

F. M. PARKER, Office Systems and Services Section
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THE NAME Westinghouse is undoubtedly familiar to everyone. What may not be so apparent is why anyone from Westinghouse should speak on a program entitled "Information Control and Retrieval Through Microfilm and Punched Card Techniques." It is simply this: at the East Pittsburgh Division requests for prints of engineering drawings are processed from working microfilm. The only function of an engineering tracing is as an intermediate in the preparation of microfilm whenever a tracing is created or changed. But this is not the complete story. Working microfilms are used to considerable advantage in the creation of some new or changed engineering tracings.

The microfilming of engineering drawings might be a relatively simple accomplishment in a small, new operation, but East Pittsburgh is the "parent" division of the corporation, from which most other Westinghouse divisions have sprung. Its products range from giant custom-built generators, motors, circuit breakers and switchgear control apparatus down to small, mass-produced fuses and porcelains. There are approximately 14,000 employees, including almost a thousand engineers and draftsmen organized into seven different product departments. Annually more than 30,000 new tracings are prepared, and twice that number are revised; daily 2,000 requests for more than 10,000 prints are processed. From a librarian's viewpoint, it may be interesting to note that we are able to make a print from microfilm of any engineering tracing in existence when the microfilming program was started in 1941, including all subsequent changes up to the present time.

Presented before the Metals Division, June 6, 1960, at the 51st SLA Convention in Cleveland, Ohio.

Prior to July 1958, a print of an engineering drawing was obtained by pulling the original translucent tracing and placing it on a piece of light-sensitive paper; the combination was run through a machine that projected light through the tracing to the paper and then fixed the image to prevent deterioration from additional exposure to light. Multiple copies were obtained by repeating the machine processing, after which the tracing was refiled. This repetitive handling was hard on tracings and forced us to use expensive cloth. In addition, the tracings were large and awkward and required a great amount of filing and handling effort.

In an industrial activity such as Westinghouse's, the creation or change of an engineering tracing generates not only many requests for prints, not all of which can be anticipated, but also the necessity for further changes in the tracing itself. Because of this, a tracing was frequently not on file when it was most needed and, in order to know whether it was out a short time for prints or an indefinite period for change, a laborious tracing charge-out system was required. This system introduced still another source of clerical error, resulting in a complicated, spasmodic work-flow. An excessive amount of the time of skilled technicians was required merely to pinpoint the most fruitful areas for thorough searching. With several thousand tracings being handled each day, filing errors were inevitable, and locating a misplaced tracing was a major project.

Reasons for Automated System

Westinghouse's decision to automate its engineering drawing processing system at its main plant was based on three fundamental considerations. First came economy—the substitution of tracing paper for tracing cloth, impressive reductions in floor space and personnel, and savings in materials and supplies all made the change attractive.

The second consideration was service. The advantages in ease and speed of handling aperture cards instead of cumbersome tracings are rather obvious. A less apparent but very important advantage is that aperture cards are available for making prints after the tracings have been pulled from the files for changes. Of course, there are safeguards which provide for flagging those aperture cards of tracings where contemplated changes will affect current as well as subsequent production. The aperture card is always available for printmaking unless it is out of file for prints on an earlier request. This leads to a little recognized but important rule in the administration of an automated drawing processing system: the shorter the time cycle between the pulling and refiling of the aperture cards—as long as they are in groups large enough to comprise efficient machine runs—the better the system is going to operate. Thus, efficient operation leads to shorter time cycles and, therefore, better print service.

The third fundamental consideration in choosing to automate the drawing processing system—and this one undoubtedly bears most directly on the librarians' field—is the ability to code, in accessible form, engineering design information. This step has such potential that it may easily dwarf the previous two considerations. The purpose of such coding is to aid the engineer in his design problems by electro-mechanically sorting out, in readily viewable form, all previous solutions to similar problems. Unfortunately we have not developed this potentiality in our system, but we have provided IBM card columns to accomplish this after our classification system is developed.

For anyone who is interested in ideas and details in this area, I would suggest he study the description of the Brish system contained in H. H. Maynard's *Industrial Engineering Handbook* (McGraw-Hill, 1956). This is one of a number of systems that have been devised to categorize engineering drawings so that efforts to locate parts similar to those currently under design consideration are reduced to a minimum. As librarians will be quick to recognize, this is a mammoth project for a large company with active drawings numbering in the hundreds of thousands. It represents a major challenge in the organization and classification of detailed human knowledge; the solution will not be easy, but I feel it will be most worthwhile.

Operation of System

Under our automated drawing processing system, engineering drawings are traced on high-grade paper instead of cloth, at a savings of $50,000 a year. Tracings are photographed under a planetary camera equipped with a back-lighted copyboard. Backlighting is necessary because of the wide range of originals and reproducibles contained in our existing system, some of which actually have the image on the underside of the tracing medium. This was acceptable under the previous system because the light burned through the tracing to the sensitized paper; without backlighting, however, the camera records only what is on the front of the tracing.

Early in the conversion process the practical, though challenging, policy that the new system must do everything the old one did was adopted; our savings would not be dissipated by costly retracing to conform to special requirements attending the new process. The addition of backlighting to solve one problem created another, however, not entirely unlike shooting into the sun with a home camera. We have experimented with several masking devices to prevent backlighting beyond the tracing itself from hitting the camera lens. We appear to have arrived at a satisfactory solution for the present with a sprocket and chain controlled opaque mask. I believe, however, the eventual solution to this problem will be through the application of the principles of polarized lighting.

After a tracing is photographed, one print is made by the old method and the tracing is filed until such time as it is needed for revision. The print is used to initiate shop routing and manufacturing information so that they will be in parallel with the twice-daily film processing, card punching and amalgamation into finished aperture cards. The finished aperture cards are machine-sorted into alpha-numeric order, matched

with corresponding requisitions generated by the previously mentioned conventional print, broken down by size and quantity and fed into a Haloid-Xerox Copyflo® 24 electrostatic printing machine.

Within this machine, light is projected through the negative film image onto a negatively-charged selenium-coated drum. The light dissipates the charge on those areas of the drum which it strikes; a negatively-charged dry ink or "toner" cascaded over the drum adheres only in the discharged areas. As ordinary paper is rolled against the ink-coated drum, a positive charge is applied behind the paper, causing the ink to transfer to the paper. Heat is then applied to the ink and paper, causing the ink to melt and bake into the paper, thus forming a permanent image. The prints emerge from the machine, are automatically cut to the proper size and are stacked in a receiving tray. They are then run through a folding machine and matched with the original requisitions, which become the mailing labels to dispense the prints.

The aperture cards are ejected from the machine, sorted electromechanically into alpha-numeric order and reinserted in the master file to await the arrival of the next requisition. A reduction in the number of requisitions received per day is an interesting by-product of the system. Quite frequently the information needed from a print is most readily available in aperture card form. When the tracing is on the camera copyboard, two exposures are made; the second of these is sent to the engineering section where it is most frequently needed for reference. When information is desired, the card is removed from file, inserted in a viewer and the information read from the projection screen, thus eliminating the necessity for, and the delay of, ordering a print.

The three fundamental considerations are being justified daily at the East Pittsburgh works. Substantial economies are being realized through the substitution of paper for cloth as a tracing medium and the reduction of floor space and personnel; the costs of materials and supplies, particularly those connected with the Copyflo electrostatic printers, are disappointingly high. The ease of handling punched aperture cards instead of tracings and their availability while the tracings are being changed are definite advantages. Some benefits are derived from the punched card coding potential as we punch a four-digit engineering product code, which is used every day to segregate the file copies for the various engineering sections. Much remains to be done, however, to realize the full potential usefulness of coding engineering design information.

This, I hope, gives a fairly complete picture of how our engineering drawings are processed, although I have not mentioned our camera reduction ratios, which are designed to produce a standard-size product regardless of the odd sizes of the originals, or the captive film processing, which minimizes the delay inherent in a precision microfilming program, or our approach to the problem of what drawings to microfilm, which resulted in an uncluttered, though complete, file.

Future Potentials of Microfilm

Based on my experiences I should like to offer the following observations and suggestions regarding microfilm and its use in the library. First, I question the advisability of unitizing library microfilm records, at least on a single card basis. Aperture cards cost approximately fours cents each, and this cost alone would seldom be justified in library circles. Other "cards," some consisting entirely of sensitized film, are available, but these broaden the application only a little. Because of the nature of library materials and demand, it seems to me that the most fruitful field is roll microfilm coupled with adequate reference projection and print-out facilities. In my opinion, the frequent usage that would justify aperture cards would be satisfied more logically by a print-out. The chief problem with roll microfilm is proper indexing; reference materials on microfilm without an accompanying card catalog would, in most instances, add frustration to uselessness. I do not minimize the complexity of this task.

A microfilm program is expensive, and the costs must be spread over many copies and multiple usage for it to be economically justified. Yet the advantages in space con-

servation and the protection of valuable originals while permitting ready reference to their contents preclude brushing it aside. A logical solution among many possibilities would seem to be the use of centralized service organizations to select the suitable subjects for microfilming, perform the necessary technical functions and disseminate the finished product. The easy portion of this task is performing the necessary technical functions. The other components are vastly more complex, and I am aware of no available commercial organization to discharge them.

The basic need is organizational; the techniques are available, the dangers of expensive duplication of effort are appalling, the need is fundamental to the advance of human knowledge and the challenge is real. The result of tremendous expenditures of money and time in misdirected efforts could be chaos; but the successful attainment of well-considered goals should result in another large step forward for librarians everywhere. Economic considerations might favor strategically located master files from which microfilm copies or positive print-outs, made in a matter of minutes, would be dispatched to member libraries. Ultimately of course, this would progress to wired, or even wireless, facsimile transmission.

If the Special Libraries Association were to undertake this project, or even to initiate a joint effort in this field, I am sure the American Library Association and the National Microfilm Association would be active, even anxious, participants. The companies producing equipment would welcome such a coordinated effort and would cooperate fully. Such an effort is not without dangers, however; the microfilm, projection and print-out equipments are in rapid stages of development at the present time. New films, finer viewers, better projectors and improved printers at lower prices are almost monthly developments.

Earlier this year General Electric described a new information-recording system it calls thermoplastic recording or TPR. Though still in development, this system potentially combines the processing speed of magnetic recording and the storage capacity of photography in the form of microscopic wrinkles on plastic tape. In principle, the announcement stated, TPR could record all 24 volumes of the *Encyclopaedia Britannica* on a reel the size of a spool of thread, taking only a minute to record each volume.

This, then, is the enigmatic picture facing us today. We cannot ignore it or wish it away. Fortunately the problem breaks down into segments that can be attacked somewhat independently. If librarians can agree as a coordinated group on satisfactory solutions to their portions of the problem, techniques are available, and are constantly being improved, to satisfy the demand.

CONVENTION PAPERS

In addition to the five Convention papers appearing in this issue, the following Convention items will be published as complete articles, extracts or revisions in future issues of *Special Libraries*. This list may not be complete, since as of September 15 several papers still had not been received for evaluation by the *Special Libraries* Committee.

APPLICATIONS OF MACHINES TO LIBRARY TECHNIQUES, papers by Marjorie Griffin, Anne McCann, William Richardson and Chris Stevenson.

BLAIR, Keith G. Engineering Library Bulletin: Human Factors Considerations.

BURNESS, Jack. Some of the Areas in which Standards Could be Formulated for a Newspaper Library.

GUY, Dr. Albert G. Sources of Metallurgical Literature in the Soviet Union.

HOWE, Robert J. The SLA Personnel Survey: Its Value to Management.

LOWRY, W. Kenneth. Some Functions, Interactions and Problems of Communication.

RAPPAPORT, Philip. Union Lists: A Case Study in Meeting Mutual Local Needs.

RARE BOOKS AND SPECIAL MATERIAL IN MUSEUM LIBRARIES, papers by Mrs. Frances Joan Brewer, Miriam L. Lesley, Ruth A. Sparrow and Mrs. Elizabeth R. Usher.

WARHEIT, Dr. I. A. The Principles of Computer Operation.

Must Library Surveys Be Classics in Statistics?

WALTER A. KEE, Formerly Chief Librarian, Library and Documents Section
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THERE HAVE BEEN many articles written on the necessity for composing all surveys as carefully as though one were preparing a psychological test or a national survey to determine a nation's attitudes towards going to war. Such a concept is, in my opinion, nonsense. It has frightened many librarians from conducting a survey of their clientele to determine users' feelings towards the library's services. A survey prepared with a certain amount of care, imperfect though it may be, is an invaluable tool for every librarian.

I shall describe how we prepared a survey of our library operations and the results received from it. We do not claim that this survey is expert since we are all rank amateurs, but we do know that many benefits accrued to both the library staff and its clientele.

Preparation of the Survey

The staff of the Library and Documents Section decided to conduct a survey because it had been through three years of physical rearrangement, a consolidation of many information units into one unit, many procedural changes and a rapid expansion of its collection. We sincerely wanted to discover our clientele's reactions to these events. As a first step three basic rules were evolved and established as the ground rules.

1. Write each question as clearly as possible.
2. Leave space after each question for comments so that personnel surveyed can amplify their evaluations.
3. Send the survey to a random sample of the actual library users.

We felt the last rule was particularly important. Since the library serves all company personnel, a sampling from all departments and from all levels of employment was most desirable.

We found about 3000 names on our list of users and arbitrarily decided to send the survey to about 15 per cent. Because this list is arranged in alphabetical order, it was easy to pick every seventh name, totaling 430. In checking through a random sample of persons chosen, we decided our aim of contacting all departments and all levels of technical employment had been accomplished. No attempt was made to arrange an exact statistical sample in which each department and level of employment was proportionately represented; this seemed unnecessary.

The next step was to prepare the questions —the most difficult part of the problem. Questions concerning the services currently being performed were listed first, next we added those concerning the proposed physical rearrangements, and finally we included some queries about the additional services we hoped to be able to provide for our clientele. We worked long and hard on the questions, trying to word them so that they said what we meant them to say, while presenting the facts in unbiased language.

The Survey

Here are the questions included in the survey and a summary of the results and comments. Answers were received from 70 per cent of the random sample. This represents ten per cent of the library's users and is

Paper presented before the Science-Technology Division, June 2, 1959, at the 50th SLA Convention in Atlantic City, New Jersey. Since giving this paper, Mr. Kee has joined the Library Branch of the Technical Information Services, U. S. Atomic Energy Commission, Germantown, Maryland.

certainly a large enough sample to indicate that the answers are reliable or at least indicate a trend in users' opinions.

SURVEY OF LIBRARY AND DOCUMENTS SECTION OPERATIONS

Ordering

How do you feel about the services we perform in acquiring the various materials listed below—realizing, of course, that when ordering reports, technical orders and military specifications we have to go through "channels?"

	Good	Fair	Poor
Books	69%	16%	15%
Journals	66%	18%	16%
Reports	61%	20%	19%
Technical orders	61%	22%	17%
Military specifications	64%	21%	15%
Average	64%	19%	17%

Comments: The main complaint concerned the amount of time required to obtain military reports; however, many of the personnel mentioned they realized military channels were the main cause of delay. Two suggestions were made which we are attempting to carry out: *1)* to set up a better follow-up system on reports the library orders; *2)* to have the library staff actively order reports felt to be applicable to the company's program without waiting for a user to place a specific request.

Cataloging

We catalog all material by source, author, title and subject to help you to find any data related to your problem.

1. When I use the catalog, I can: *generally,* 63%; *sometimes,* 31%; *seldom,* 6%; find the data I need.
2. I believe the difficulty lies chiefly with: *inadequacy of the catalog,* 14%; *my unfamilarity with the catalog,* 46%; *both factors,* 40%.

Comments: The main complaints were that the catalog did not have a detailed enough subject breakdown and some type of a handout outlining the organization of the catalog for the users was needed.

Collection

The library has been making a determined effort to improve both the quality and quantity of our collection of books, journals and reports. To conserve space and still have the material available, we have acquired some material on microfilm. Of course, with Xerox Copyflow and our microfilm reader-printer, we can make full size copies of this material available to personnel.

1. I believe the collection is: *good,* 40%; *fair,* 50%; *inadequate,* 10%.
2. Microfilm (which can be reproduced) is: *satisfactory,* 86%; *unsatisfactory,* 14%.
3. I believe more accent should be placed on the following type(s) of data (i.e. reports, books, etc. —list all types).
4. I believe that more emphasis should be placed on the following subject categories (list them).
5. We are working toward consolidating the entire collection of data (technical orders, specifications, manuals, etc.) into the library area. Would such an arrangement be: *helpful,* 82%; *make no difference,* 14%; *work a hardship,* 4%.
6. Reproduction equipment in the library which would enable you to make a fast copy of a few pages from a bound volume would be: *very useful,* 84%; *useful,* 15%; *not helpful,* 1%.

Comments: About 15 per cent of the personnel believed the book collection was the area which needed improving most, while 45 per cent felt we should concentrate on the journal collection. These comments were received in spite of the fact that we have been buying both books and journals rather heavily for three years. Most of the men did admit there had been a big improvement over this span of time but much remained to be done before we would have an adequate collection.

The subject areas, in rank order, which the men felt needed strengthening were electronics, physics, mathematics, mechanical engineering and engineering mechanics and materials.

The personnel also stated that the various sections of our collection, books, journals, reference books, NASA reports, etc., were not identified clearly enough for them to find the material they needed quickly.

Reading Room Facilities

We will shortly go through a physical rearrangement of our facility to provide a better reading room.

1. Would individual study carrels be: *preferable,* 56%; *makes no difference,* 40%; *be less useful,* 4%; than the present tables.
2. Would a partition closing off the reading room-unclassified stack area from the charge desk area, be: *helpful,* 64%; *makes no difference,* 33%; *be disadvantageous,* 3%.
3. Would a classified reading room where you could read classified material without charging it out be: *helpful,* 92%; *not very helpful,* 7%; *not at all helpful,* 1%.

Comments: A large percentage of the men commented on the confusion and noise that now exists in the combined reading room-circulation area. They felt a separate reading room was a must. Also, they were enthusiastic about a classified reading room which would enable them to read classified documents without charging them out. Access to this area would be controlled from behind the circulation desk.

Circulation

1. In general, is the service you receive in ob-

taining classified material (reports): *good,* 75%; *adequate,* 21%; *poor,* 4%.
2. Is the library personnel: *cooperative,* 96%; *fairly cooperative,* 4%; *uncooperative,* 0%.
3. Is the new charge-out system: *better,* 76%; *no change,* 19%; *more inconvenient,* 5%; than our former system.
4. Is our interlibrary loan system: *adequate,* 80%; *fair,* 17%; *inadequate,* 3%.
5. As you know, the 30-day loan system for classified reports has been imposed upon us by military security. The loan period for unclassified data has been set up to keep information readily available to everyone. Do you believe the loan system: *helps,* 72%; *hinders,* 22%; *makes no difference,* 6%; to your work.
Comments: The new charge-out system mentioned is a modified Gaylord book-charging system, which enables us to save ourselves and users a lot of time in charging and uncharging materials. Since we are charging out about 5000 items a month, the time-saving is considerable.

An interesting and rather surprising comment received from many users was to the effect that our 30-day loan system, with indefinite renewals, was not strict enough. They asked that we limit the number of renewals and recall items more promptly.

REFERENCE

1. When you come in with a reference question do you find the library staff: *able to help you,* 63%; *sometimes able to help,* 36%; *seldom helpful,* 1%.
2. Do you find the reference collection (handbooks, reference sets, indexes, etc.): *adequate,* 45%; *fair,* 48%; *inadequate,* 7%.
3. The library is attempting to work out a procedure for providing a cumulative index to all military reports. When the system is devised, we plan to submit a proposal to management. Would such a cumulative index be: *very useful,* 60%; *useful,* 39%; *not very useful,* 1%.
4. The library has obtained permission to hire literature research personnel—these will be technical people who specialize in literature work. Their mission will be to perform extensive literature searches, to prepare bibliographies, to answer involved reference questions and to work closely with personnel to help them keep abreast of the state-of-the-art in their field of interest. Will such a service be: *very useful,* 59%; *useful,* 27%; *not very useful,* 14%.
5. The library has been issuing a monthly additions list giving new books and reports.
1) Do you find this publication: *helpful,* 81%; *fairly helpful,* 14%; *not helpful,* 5%.
2) Is the subject category breakdown: *good,* 46%; *adequate,* 43%; *needs further breakdown,* 11%.
6. Would a monthly publication which lists the contents of all major journals in the field of aeronautical and space engineering and science be: *very helpful,* 47%; *helpful,* 32%; *of little help,* 21%; to you.
Comments: The users stressed their need for an index to ASTIA reports and for literature research personnel to help with technical problems.

DISTRIBUTION

As you know, the Library and Documents Section is charged with the responsibility for distributing all data to the military customers.
1. Do you find our service in distributing reports: *good,* 53%; *adequate,* 41%; *poor,* 6%.
2. We also distribute technical orders, military specifications, Martin specifications and similar publications, both internally and to field personnel. Do you find this service: *good,* 54%; *adequate,* 41%; *poor,* 5%.
3. Revisions to a number of engineering manuals are distributed by our section. Is the present system: *good,* 49%; *adequate,* 45%; *poor,* 6%.
Comments: The library very recently was given the responsibility for the complete handling of technical orders and for transmitting all technical data to our military customers and to our field representatives. Previously these functions were performed in many areas throughout the company. We have had problems of obtaining schedules for the release of data, of a large percentage of data being received at the last minute, of learning all the military's procedures for transmitting data and of training our personnel.

In spite of these facts, most of the personnel felt that we were doing a good or adequate job. Some general comments were made to the effect that the library had improved several 100 per cent in the last few years and that we have done a good job with our limited facilities.

Results

We believe that there were many beneficial results obtained from this survey:
1. We had to sit down and think through our operations. It helped to clarify our thinking.
2. It gave us a better idea of users' feelings towards the library's services and of their needs and desires.
3. It had a good psychological effect on users and the technical personnel in general. They felt they were contributing to our activity, and it made them more aware of our operation.
4. It brought our operation to the attention of management. We were asked to submit an over-all program of physical, organizational and functional plans. The statistics we were able to quote helped to back up our suggested changes. Requests we have made to management over the past few months have been ear-marked as part of our long-range

plan. As a result we have made better progress in having plans accepted.

Here are some of the changes we have instituted:

1. Rearranged the library into a separate reading room, classified reading room, microfilm reading room and obtained shelving with locked doors to replace the file cabinets for storing classified reports.
2. Obtained a 3M microfilm reader-printer and a Thermo-Fax book copier.
3. Consolidated all library-type functions into the library and placed all distribution functions in our technical data center. We have acquired new space to enable us to move all technical data center personnel into one area and to provide a supplementary storage area for bulk quantities of documents.
4. Have acquired study carrels for use in the library.
5. Set up a 30-day loan period on all material with only one 30-day renewal period. Material can be recalled after the first 30-day period if it is needed by another person.
6. Improved internal control on distributing technical data to the customer and having much more complete schedules of data to be transmitted to the military submitted to us.
7. Placed more index cards in catalog to give a more detailed breakdown and provided hanging signs to lead the men to the various parts of the collection.
8. Studying methods of providing our own cumulative index to ASTIA reports.

Although our survey was not a model of questionnaire construction and ignored many of the precepts of statistics, it did perform the function required of it. The library staff obtained a good idea of users' feelings and acquired a good tool to help sell its program to management.

We recommend that other librarians try it. We are convinced that surveys pay dividends.

Selected List of Annual Buyers' Guide Issues of Business Periodicals

RAYMOND E. GNAT, Librarian II
Milwaukee Public Library, Milwaukee, Wisconsin

WHERE IS THE Harwood Plywood Institute located? What is the address of the Largent Electronics Company? Who manufactures Rigid-Tex metal for the building industry?

The search for manufacturers' addresses, locations of institutes and the identification of trade names ranks high in the duties of many industrial and business librarians. The following list of buyers' guides, published as special issues of trade magazines, is offered as an aid in continuing the search after the general and better-known reference tools have been checked to no avail.

This list may well be a companion to the Selected List of Annual "Statistical" or "Review" Issues of Business Periodicals, prepared by Donald T. Clark (*Special Libraries*, vol. 36, no. 9, November 1945, p. 447-50) and later revised and issued as Reference List no. 9, Baker Library (Harvard Graduate School of Business Administration, November 1954).

The time of publication is approximate since dates vary from year to year. The price of the special issue is indicated in case the buyers' guide is desired without subscribing to the entire magazine.

The following sources may be used for ordering special directory issues of magazines. The most familiar sources are *Ulrich's Periodicals Directory* (9th ed., Eileen C. Graves, ed. New York: R. R. Bowker, 1959), a classified guide to a selected list of current periodicals, foreign and domestic, and N. W. Ayer & Son's *Directory of Newspapers and Periodicals, 1960* (Philadelphia: N. W. Ayer & Son, Inc.).

A valuable and up-to-date source of current directories, which features an excellent subject arrangement, is the *Guide to American Directories for Compiling Mailing Lists, 1958* (New York, 27 East 22nd Street: B. Klein & Co., $15). *Distribution Data Guide*, published monthly by the Superintendent of Documents (Washington 25, D. C.: Government Printing Office, $2 a year) is a highly recommended source for new publications, which are listed under the headings *1)* Publishing Companies—Directories and Market Guides and *2)* Publishing Companies—Periodicals: Special Reports. An excellent index, published twice a year, greatly facilitates the use of this publication. *In-*

dustrial Marketing: 39th Annual Market Data & Directory Number, June 25, 1959 (Chicago, 200 South Illinois Street: Advertising Publications Inc., $3) lists in its Business Reference Publications Index the outstanding business reference publications in 72 major industries. Other sources are *Business Publications Rates and Data,* published monthly by Standard Rate and Data Service, Inc., and the Public Affairs Information Service's *Bulletins.*

PERIODICAL	TITLE OF SPECIAL ISSUE	MONTH OF PUBLICATION	APPROX. PRICE
Agent & Representative	Directory of MANA Members	July	$5.00
American Artisan (heating and air conditioning)	Directory and Show Number	January	1.50
American Artist	Directory	January	.60
American Brewer	Register & Brewery Buyers' Guide	December	1.50
American Builder	Buyers' Guide: "What to use, How to use it, Who makes it"	April	2.00
American Business	Directory: Management Consultants and Business Services	February (part 2)	5.00
American Ceramic Society: Bulletin	Membership Roster	October	w/sub
American Exporter	Buyers' Guide to United States Export Products	January	1.00
American Fruitgrower	Buyer's Guide	July	1.00
American Glass Review	Directory	January	2.00
ALA Bulletin	Guide to Library Equipment and Supplies	July/August	.25
American Lumberman and Building Products Merchandiser	Dealer Products File	January	2.00
American Machinist	Buyers' Guide	September	1.50
American Restaurant	Convention	May	3.00
American Soft Drink Journal	Blue Book	April	.50
Art Material Trade News	Directory of Art and Craft Materials	December	.50
Automotive Industries	Products Guide	December	.50
Automotive News	Almanac: Review and Reference	April	2.50
Aviation Week	Buyers' Guide	December	3.00
Baking Industry	Buying Directory	February	1.00
Boot and Shoe Recorder	Brand Names Guide and Trade Mark Directory	December (part 2)	w/sub
Brewers Digest	Buyers' Guide and Directory	January	2.00
Brushware	Brushware Buyers' Guide	June	1.00
Building Specialties and Home Improvement Dealer	Manual and Directory	December	.35
Building Supply News	Dealers' and Jobbers Directory	February	2.00
Business Screen Magazine	Production Review	February	2.00
Camping Magazine	Reference and Buying Guide	March	2.00
Chemical Week	Buyers' Guide	September	w/sub
China, Glass and Tablewares	Redbook Directory	May	1.50
Coal Age	Mining Guidebook and Buying Directory	July	1.00
Computers and Automation	Computer Directory and Buyers' Guide	June	.50
Constructor	American General Contractors Directory	July	2.00
Craft, Model and Hobby Industry	Hobby Directory and Reference Bible	February	w/sub
Crockery and Glass Journal	Directory Number	May	1.00
Distribution Age	Directory (Warehousing)	February	4.00
Electrical West	Manufacturers Directory	April	.50
Electronic Industries	Verified Directory and All-reference	June	5.00
Electronics	Buyers' Guide	June	3.00
Engineering and Mining Journal	Guide Book and Buying Guide	June	1.00
Farm Implement News	Buyers' Guide	April	1.00
Flooring	Directory and Catalog	November	.35
Food Packer	Buyers' Guide and Reference	October	.25
Fueloil and Oil Heat	Buyers' Guide and Industry Directory	May	1.00
Funspot (amusement)	Market Analysis and Directory	February	.50
Furniture and Furnishings	Buyers' Guide and Directory	July	2.00
Furniture Retailer	Annual Directory	March	1.00
Garden Supply Merchandiser	Green Book Buyers' Guide	December	1.00
Gift and Art Buyer	Directory	August	w/sub
Giftwares	Buyers' Guide and Reference	August	1.00
Hardware Age	Who Makes It	July	2.00

Periodical	Title of Special Issue	Month of Publication	Approx. Price
Heating and Air Conditioning Contractor	Annual Buyers' Guide	January	2.00
Heating and Gas Appliance Merchandising	Gas Appliance and Accessories Buyers' Guide	September	1.00
Heating, Piping and Air Conditioning	Directory and Show Number	January	2.00
Hospitals	Hospital Administrators Guide	August	1.50
Housewares Review	Buyers' Guide and Directory	August	1.00
Implement and Tractor	Product File	March	1.00
Industrial Distribution	Marketing and Products	December	1.00
Industrial Marketing	Market Data and Directory	June	1.50
Inland and American Printer and Lithographer	Annual Directory	December	1.00
Instrument and Automation	Handbook and Buyers' Guide	October	1.00
Instruments and Control Systems	Buyers' Guide	October	w/sub
Jobber Topics	Annual Reference and Directory	November	5.00
Juvenile Merchandising	Directory	October	1.00
LP Gas	Buyers' Guide and Directory	February	1.00
Linens and Domestics	Buyers' Guide	December	1.00
Manufacturing Confectioner with International Confectioners	Buyers' Guide	July	.75
Materials in Design Engineering	Materials Selector Reference	October	1.00
Missiles and Rockets	Missile Market and Product Guide	May	4.00
Modern Brewery Age	Blue Book	March	w/sub
Modern Packaging	Encyclopedia	November (part 2)	6.00
Modern Plastics	Encyclopedia	September	3.00
Modern Stationer and Office Equipment Dealer	Greeting Card Directory	August	3.00
Motor Boating	Show Number	January	1.00
National Cleaner and Dyer	Guidebook	March	1.00
Notion and Novelty Review	Directory	May	1.00
Nucleonics	Buyers' Guide	November	2.00
Office Appliances	Buyers' Index	February	2.00
Office Management	Yearbook of Office Management	January	1.00
Official Container	Directory	Semi-annually	9.00
Oil, Paint and Drug Reporter	Buyers' Directory	August	w/sub
Packing and Shipping Directory (Bonnell's)	Directory	January and July	1.00
Pet Shop Management	Directory	June	.35
Photo Dealer	Directory	March	1.50
Pipeline News	Directory of Pipelines	June	5.00
Plastics World	Directory of the Plastic Industry	October	.50
Popular Boating	Boat Show and Directory	February	1.00
Practical Builder	Data and Specifications File	May	2.00
Premium Practice	Blue Book Directory	January	1.00
Printing Magazine	Yearbook	November	w/sub
Printing Production	Where to Buy Printing Equipment and Supplies	December	2.50
Products Finishing	Directory	March	w/sub
Progressive Grocer	Equipment Buyers' Guide	May	w/sub
Pulp and Paper	World Market Pulp Directory	July	w/sub
Sanitary Maintenance	Buyers' Guide	April	1.00
Sports Age	Sports Equipment Guidebook	June	1.00
Super Market Merchandising	Nonfood Buyers Guide	March	.25
Textile Industries	Annual Product Parade and Buyers' Guide	November	1.00
Textile World	Fact File	June	w/sub
Tool Engineer	Suppliers Directory	June	w/sub
Toys and Novelties	Buyers' Guide	June	1.00
Upholstering	Directory of Supply Sources	w/sub	1.00
Vend	Market Data and Directory Almanac	March	w/sub
Welding Engineer	Fact File and Product Reference	June	.50
Western Farm Equipment	Directory	March	w/sub
Wines and Vines	Annual Directory	September	2.00
Yachting	Show Boat	January	1.00
	Boat Owners Buyers' Guide	June and March	.50

The Medical Center Library

WILLIAM K. BEATTY, Medical Librarian
Medical Center Library, University of Missouri, Columbia, Missouri

THE MEDICAL CENTER Library at the University of Missouri serves the faculty and students of the School of Medicine, faculty and students of the School of Nursing, the medical and administrative staff of the University Hospital and a large number of graduate and undergraduate students from other parts of the campus. In cooperation with the public library it will soon provide service to the patients in the hospital.

The first advantage is a saving of money. Duplication of staff and collection can be reduced or eliminated. Since fewer staff members are needed, the positions can be made more attractive. Savings are also possible in the acquisition and processing programs. There is no need for duplicating orders, searching, cataloging, classification or any of the other library routines.

A second great saving is that of space. Better service can be provided in a smaller area. Equipment can be consolidated. One typewriter can do what three typewriters did before in three different locations.

A third advantage is that the combined library is often able to secure a better location than the separate parts could obtain for themselves. Fourth, a combined library usually has stronger support both in tangible features, such as budget and staff, and in intangible elements, such as attitudes of the administration and users toward the library.

A fifth advantage is that in a combined library it is easier for both users and the library staff to locate material, since it is all housed in one place. Also the library can stay open longer.

The final advantage, and possibly a major one, is that the library staff has to look at all the materials coming into the collection on several different levels. This multi-level approach applies to selection, cataloging and classification, reference, arrangement of material physically within the library and the use of that material in circulation.

Disadvantages may be real or apparent, and what begins as the one, may, when the situation is fully and clearly seen, turn out to be the other. Some people may feel that in a combined library it is more difficult for the user to find the material he wants. This is so to the extent that a single piece may be cataloged and classified in one way for a hospital library and in another way for a medical school library. Copious use of cross references obviates this problem in practice.

A combined library seldom builds up a collection so large that size itself becomes a deterrent factor in locating material. Some feel that there will be less support for the smallest member in the combined family. This is not necessarily so. Our School of Nursing now has a larger book budget than it did when it supported a separate library.

The combined library does not give the same service to different groups of readers. The library staff will spend more time gathering references for faculty members than for students. However, more time will be spent showing students how to use the basic tools.

Our major problem is maintaining different circulation regulations for the different groups of users. This is confusing for both the library staff and the readers. Since we are part of the university library system, we must abide by the circulation regulations in effect throughout that system. This means that the students of the School of Nursing are treated differently than the faculty, the students and staff of the School of Medicine and the hospital staff.

Another disadvantage is over-crowding. In a university community, many people wish to use the most comfortable and convenient library on campus, whether or not they are actually using material housed in that library. This has caused considerable trouble for us, and we can find no easy way out under the present conditions.

Presented before the Hospital Division, June 6, 1960, at the 51st SLA Convention in Cleveland, Ohio.

The Integrated Hospital Library

MRS. BARBARA COE JOHNSON, Director of Libraries
Harper Hospital, Detroit, Michigan

BEFORE BECOMING specific about the form of hospital library known as "integrated," I should like to point out two facts: *1)* every hospital library originally was organized to meet a specific demand, and *2)* the means of satisfying the demand fitted into the hospital's over-all administrative pattern at the time the library was organized. The needs remain much the same—the physician must continue his medical education and check current practice; the student nurse must supplement the information given her in textbooks and classes; the patient still needs reading which will transfer his attention from his present illness to the everyday world he must one day re-enter. The social and economic patterns of hospitals, however, have changed both in size and complexity.

The traditional means of satisfying the needs mentioned above—libraries tailor-made for specific reader groups—no longer fit well into practical patterns. Certainly tailor-made libraries that are still satisfactory on all counts, including not only service but also cost, should carry on; but when they become too expensive in terms of duplication, availability of trained library staff or space, another means must be sought, especially when only a few changes in philosophy and policy will usually be sufficient to effect a satisfactory integration of all or any combination of the elements involved. An integrated library, then, differs from separate libraries only insofar as it better reflects today's answer to a hospital's economic and social demands. It is the logical solution to high operating costs, the librarian shortage and increased technical complexity in hospitals themselves, all factors that promise to continue to be problems.

Presented before the Hospital Division, June 6, 1960, at the 51st SLA Convention in Cleveland, Ohio.

Future and Past

I should like to point out that even the integrated library is only an intermediate step in the course of development of hospital libraries. If two or three libraries within a single institution can successfully combine, why not those of two or three institutions in the same community? As far as I know, such an arrangement does not yet exist, but there are arrows pointing in this direction. Two hospitals in small, geographically adjacent Michigan communities share the services of a single librarian; four libraries in Charleston, South Carolina, operate essentially as branches of the county medical society library; Harper Hospital's library collection serves the Rehabilitation Institute of Metropolitan Detroit in all medical subjects except its specialty, while RIMD, in turn, serves Harper in the fields of physical medicine and rehabilitation. A further advancement seems to be brewing in the plans for the Detroit Medical Center, which should be complete about 1965. In this center, which will be the result of five downtown hospitals coming to the conclusion that rising costs can be overcome only by doing away with duplication, a central, clinically oriented, inclusive library collection is planned; each hospital will maintain on its own premises only a minimal working collection. This may represent the next logical step in the development of hospital libraries, but, as it is not yet in existence, judgment must wait.

Accident and necessity both play parts in invention; in medicine especially, an accident may prompt a discovery, but it is usually necessity that forces its use. For instance, penicillin, discovered in 1929, was only a laboratory plaything, full of unrecognized potentialities, until war's necessity demanded its commercial development in the 1940's. And necessity is what forced the development of integrated libraries. I find I cannot

document the date the first one came into existence, but I am of the impression that the Newton-Wellesley Hospital in Newton Lower Falls, Massachusetts, was first in 1944 when it solved a staff shortage, space problems and rising cost of operation in its medical and nursing school libraries with this unique answer. I only *know* what happened at Harper Hospital, however, and shall draw upon my experience to illustrate the points to follow.

Changing Concepts and Needs

During World War II, civilian shortages of all medical personnel had largely obliterated the hard and fast lines of difference between physicians and paramedical personnel, including not only nurses but also pharmacists, dietitians, medical technicians, practical nurses and so forth. Also, military medicine had developed the team concept to the point where such tacit declarations of status difference as separate dining rooms for doctors or separate libraries for doctors and nurses were recognizable as genteel survivals. Such a significant change in attitude, coupled with financial and administrative necessity, made obvious the fact that "something had to give" at Harper. What gave was the concept of three individually operated libraries.

Harper Hospital is a 670 bed general medical and surgical teaching hospital located in metropolitan Detroit. Founded in 1863, it has continually led the development of medicine in Detroit, including on its medical staff members of the clinical faculty of Wayne State University College of Medicine and supporting the Harper Hospital School of Nursing. A nursing school library was founded in 1880, a physicians' library in the 1890's and a patients' library in 1931. The separate nursing and medical libraries have been under the direction of professional librarians almost since their inceptions; the patients' library was a volunteer group's responsibility until 1950 when all libraries were combined.

In 1948-49 the space occupied by the nursing school library was required for offices and classrooms; the medical library area in the pathology department was needed for expansion of laboratories; the small room housing the general collection was located in a patient area. The medical librarian resigned; as no replacement could be found, her duties were added to those of the nursing school librarian. The hospital's power house became available for other uses when the hospital found it could buy power more cheaply than it could manufacture its own. Almost simultaneously this set of circumstances led the administrator, the librarian and the chief of staff to advance the suggestion that the libraries be combined into a single department and that it be located in part of the former power house, on a corridor leading off the main floor.

The administration agreed to support the combined library's cost from the hospital's general funds and to give the librarian the responsibility and authority of a department head. The School of Nursing agreed to transfer its direct control, both financial and administrative, to the new department head but retained an advisory function through the inclusion of the school's chief on the library committee. The medical staff also relinguished its direct control and assigned three of its members to the library advisory committee. The volunteers gave over their sovereignty to the librarian and are represented on the library committee by the same member who represents the administrative functions of the hospital.

The Library Advisory Committee

"This Committee shall have supervision of the library of the hospital and shall act as advisor to the librarian and to the administration on the conduct of the library for the best interests of the medical and nursing professions."* The committee satisfies the requirements for accreditation of the school, of both the Joint Commission on Accreditation of Hospitals and the National Nursing Accrediting Service.

The committee is advisory; there are no rigid requirements regarding its pace or its specific duties. Such built-in flexibility has proved very wise. During the first three years

* Bylaws for the Medical Staff of Harper Hospital, Detroit, Michigan, n.d. (1949), p. 15.

of the newly integrated library, the committee met often and helped the librarian establish the character of the library through advice on policies concerning matters such as loan periods, hours, budgetary requirements and acquisition policies. Even during this very active period, however, the committee met only at the request of the librarian. This procedure effectively assured the librarian of support and forced her to accept the initiative demanded of her as an administrator in the day-to-day operations of the library. During the next three years, the librarian adequately handled her tasks without formal advice from the committee.

In 1956 at the librarian's retirement, the committee again became active, both in determining the appropriate qualifications required of a new librarian and later in orienting her to the needs of the hospital. The new librarian's lack of experience in a library so actively serving nurses could possibly have reflected to nursing's disadvantage (especially since her predecessor had been a nurse), so the committee asked the member who represented both school and service to appoint an ad hoc nursing committee to which the librarian could turn for advice. During its two-year existence, the nursing committee acted as a consultant in discarding out-of-date nursing texts, advised changes in the handling of reserve collections, collaborated in changing the library's program for student-staff orientation and suggested practical ways of bringing the library's resources more forcibly to the attention of the graduate and student nursing staff.

Medical staff members of the committee played active roles too. They suggested policies regarding the scope of the collection and alerted medical department heads to the need for thorough weeding of out-of-date matter and acquisition of current materials; they implemented this policy by assigning residents in specialty subjects to help the librarian weed, by looking over projected discards and by suggesting new titles, both book and journal, to bring the collection up-to-date. The committee has again become relatively inactive since 1958. Except for one formal meeting a year, at which a report is given, the librarian's contacts with her advisors are the informal kind that arise over the purchase of one specific questionable title or the most useful place in which to classify a book.

In describing the functions of the library committee, I hope it is clear that the committee is really active only in times of stress when it serves to preserve continuity and at the same time supports necessary change. The committee establishes the background and then gratefully retires into it. The organizing, planning, delegating of duties, determining of policy, budget and personnel requirements, spending of money, reporting and over-all supervision remain the librarian's responsibility as a department head. The librarian's authority comes directly from the hospital administrator, and it is her duty to be sufficiently aware of the hospital's changing needs to adapt the library's program to fit them. Only when help is needed, either because new circumstances present an unfamiliar problem or complexity demands liaison with many, does the experienced librarian use her stress outlet.

For example, now that Harper is planning to combine its resources with those of four other hospitals to form the Detroit Medical Center, the question arises as to precisely what this should mean in terms of enlarging or decreasing the collection; this matter needs committee consultation. On the other hand, the decision that the library, while staffed only from 9:00 to 5:30, Monday through Friday, be open and allow self-charging from 7:00 to 11:30 p.m. every evening of the week was, and should have been, the librarian's. A committee is not the only answer to every librarian's need for advice, support and liaison, especially in times of change, but it is the answer found useful at Harper.

Practical Considerations

I have purposely avoided discussing the exact problems which arose, and are still arising, because I believe that they will be unique in every hospital and should be settled within that hospital's established pattern. I feel that there are even some cases where an integrated library might not be the

answer. If, for example, a hospital has a closed medical staff, all of whom are on the premises every day, and library personnel is limited, the librarian's time might be so dispersed that the main purpose, in this case ready availability of material to the medical staff, would be lost. In the ordinary case, however, where research personnel and house staff constitute the main class of physician users, I should not think difficulties would arise. The advantages of breaking down the artificial barrier between physician and other medical personnel, together with the financial advantages implicit in not having to duplicate collection, space or staff, would make the integrated library appropriate.

Having the recreational library located in the same general area has a number of advantages. No one can lose sight of the primary reason for the hospital, that of patient care, if patients are plainly visible; further, the recreational collection is open to staff as well as patient. I do not think that fiction and general non-fiction can be physically integrated into the medical collection, partially because patients should not be put into the position of having material available to help them diagnose and treat their own illnesses any more than they should prescribe their own medications, and partially because the casual word, carelessly spoken, can sometimes be terrifying to the patient and embarrassing to the physician or nurse who dropped it. I do believe, however, that if the decision is made to integrate, it should be carried through wholeheartedly. No second-class citizenship should be built in. Let the same borrowing privileges and observance of rules apply to all users. Combine the collections into a single classification system, and respect all users' intelligence by refusing to spoonfeed some few with special services that cannot be given to all.

I am convinced that integrated libraries are the answer to the problem of providing satisfactory service in the majority of hospitals today because they allow for the most efficient use of collection, space and trained library staff, but I do not think they are appropriate for all institutions. A climate of cooperation cannot be established until separated libraries have proven themselves expensive and inadequate. A new hospital, establishing its library for the first time, however, should certainly investigate thoroughly the integrated organization. It should be able to profit from others' experiences to the point that its atmosphere for cooperation is established from the beginning. Without such a climate integration cannot be contemplated because it demands changes that seem to offer no advantages; after all, the best suits are still tailor-made. But when tailor-mades not only do not fit but are expensive as well, the integrated library is the answer.

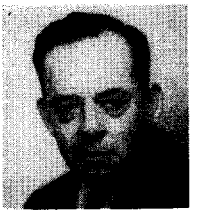
MLA OFFERS WORKSHOPS

The Medical Library Association will offer a new three-year experimental program in learning and relearning before its next convention on May 8, 1961 in Seattle, Washington. A workshop course will deal with practical problems confronting the medical librarian from libraries whose holdings are under 10,000 volumes, but the course will offer a wide base of eligibility and be open to all who think its emphasis is suitable to their particular needs. Specific details of the several subject areas will be available from Pauline M. Vaillancourt, Memorial Hospital, 444 East 68 Street, New York 21. The second course, working from a central syllabus for several small groups, will be an advanced seminar in medical librarianship. Registration will be limited to persons from libraries whose holdings are over 10,000 volumes (and in subsequent years to those who have taken the workshop course previously) and will be required four to six months in advance of the Seattle meeting so that reading lists and problems can be distributed and proper preparation made by the participants. The 1961 advanced seminar will be devoted to "Searching the Literature." Details will be available from Dr. Estelle Brodman, National Library of Medicine, Washington 25, D. C. The new program is an inevitable development of the refresher courses previously sponsored by MLA and will provide medical librarians an annual opportunity to learn at a graduate level what is currently germane in their professional practice.

Planning the New Library:
The AC Spark Plug Library

HAROLD S. SHARP, Technical Librarian

AC Spark Plug Division, General Motors Corporation, Milwaukee, Wisconsin



THE HEAD OFFICE of the AC Spark Plug Division, General Motors Corporation, is located in Flint, Michigan. In 1948 a decision was reached to establish in Milwaukee, Wisconsin, a branch facility to be concerned with research, development and manufacturing in the field of electronics, with particular emphasis on missile guidance systems. Accordingly, a plant was leased in Milwaukee and operations were started.

It was obvious that library services were required by the new branch. A skeleton organization was set up, designed to carry out minimum library requirements in Milwaukee and leaning heavily on the already established library at Flint and the General Motors Research Library at Warren, Michigan. This Milwaukee library was operated by a stenographer under supervision.

The branch gradually expanded from one plant to three, and in August 1957, it became apparent that the comparatively limited library services available to electronics engineers, research men and scientists were not sufficient. For this reason a four-man advisory library committee was appointed by the Supervisor of Engineering, Administrative Services, to consider the company's library requirements and make recommendations to management. The committee's report indicated that while the function and service of the library had attempted to meet needs as they developed in the past, the current space, facilities, personnel and service would not be adequate to meet prospective future needs. The first step to be taken should be the employment of a professional librarian.

Accordingly, a job description was written and a personnel requisition activated. The library was designated as a separate department in charge of a technical librarian, who, as department head, would report directly to the executive engineer.

Late in February 1959, the librarian reported for duty and, after preliminary introductions to the organization, made a detailed study of the existing library situation. The study included reviewing proposed tentative layouts and equipment, making recommendations for expanding library services and reviewing the qualifications of the library staff.

As the contemplated AC Spark Plug Milwaukee library system would include one main and two branch libraries, it was determined that the staff should be increased from six to 11 persons, with one professional librarian and one nonprofessional assistant at each branch, and two professional and five nonprofessionals at the main library. It also was obvious that adequate areas and facilities should be provided at all three libraries. Following the recommendations of the librarian, floor space totaling 3370 square feet was allotted to the library system, distributed as follows: 625 square feet for each of the two branches and 2120 square feet for the main library. In the case of the branch libraries no specific areas had been designated, and consequently the librarian was able to plan floor space in terms of anticipated requirements. This was not so with the main library, as a rectangular room, 34 feet 9 inches by 61 feet, had already been set aside. The difficulties encountered in planning the library were increased as it was necessary to fit the floor plan into the available space rather than adjust the space to library requirements.

As a library's services and collection are determined by the needs of its users, it was necessary to ascertain just what specific fields of interest existed among the AC Spark Plug personnel. A committee of field-of-interest advisers representing all major departments of the company was appointed. Members of this committee inform the librarian of new technical areas in which the company becomes interested so that he may add appropriate books and other materials to the collection. Information obtained from these advisors also assists the librarian in weeding obsolete material. The final approval or disapproval of recommended new acquisitions is made by the librarian.

The book collection consisted of some 300 titles, mostly obsolete, which the librarian weeded thoroughly. Based on the requirements of library users, he selected and ordered approximately $10,000 worth of new books which formed the nucleus of the new collection. The selection ranged from basic reference books to specialized texts in fields such as inertial guidance, servomechanisms, radar, automation, missiles and rockets, mathematics, physics, chemistry and related subjects.

It was determined early that the function of the AC Spark Plug technical library was to serve all company employees and not merely members of the engineering staff. Books on management, plant protection, accounting, building maintenance, industrial relations and similar non-engineering subjects, as well as engineering and scientific books, were ordered.

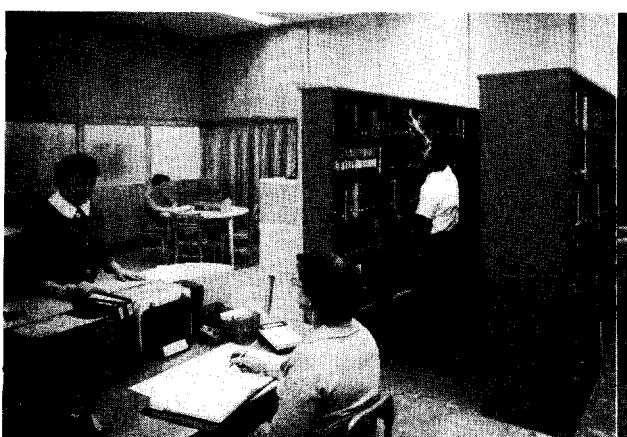
As AC Spark Plug is vitally interested in research and development, not only in electronics but also in other scientific fields, steps were taken to augment the reference collection as much as possible. Technical dictionaries and handbooks were acquired, and subscriptions to many divisions of *Engineering Index* and appropriate periodicals were purchased. Other timely source material was provided, making up-to-date developments in appropriate areas available to all interested.

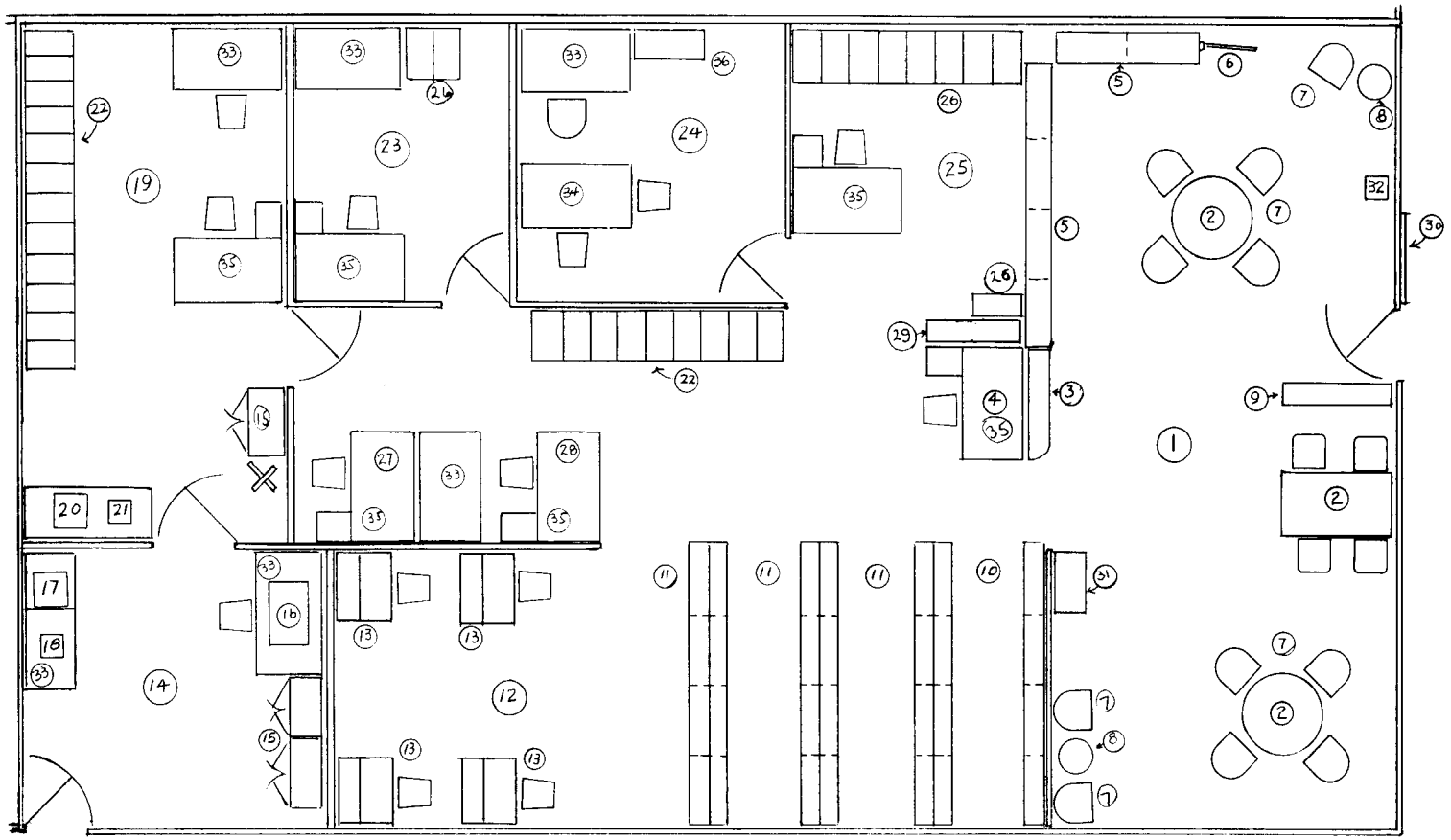
Three professional librarians were added to the staff in July 1959, and, following indoctrination, were assigned to cataloging the book collection. The Dewey decimal system, amended to fit our special requirements, is used, cards being procured from the Library of Congress. One of each card required is ordered, and duplicates are made by using an A. B. Dick spirit duplicator with glossy black "Ditto" carbon. This has proved very satisfactory.

Books were cataloged at the Milwaukee main library, as it was planned to use the two branches primarily as liaison between the main library and the plants in which they are located. In cataloging, shelf lists were set up for each of the three libraries; in the case of each branch the shelf list reflects only the portion of the collection at that particular branch. Symbols on both main and added entry cards show the location of each copy of each book. Card index files, other than shelf lists kept at each branch, are identical with the file at the main library, thereby enabling the card catalog user to become aware of all books in the entire collection. Inter-library loans between main and branch libraries are made when necessary.

It had been the practice of the company to donate back copies of periodicals to the

View (left) of charging counter and work desk facing the reading area located in the front of the library. The reading area (right), with ample tables and chairs and easy chairs, is separated from the staff's work section by periodical display racks.





The AC Spark Plug Main Technical Library

The floor area covers 2,120 square feet

local public library, with the understanding that those normally retained on a non-circulating basis could be borrowed by the company as the need arose. This arrangement proved unsatisfactory, and it was determined that the AC Spark Plug library acquire a collection of back-issue technical periodicals for reference and photoduplication. Reprint requests received in the past were screened, and based on these requests, certain periodicals were selected for binding. As many periodicals as possible were acquired and sent to a commercial bindery. When it was not possible to obtain all copies of a periodical, microfilm was purchased from University Microfilms, Ann Arbor, Michigan. Photostats of articles in bound copies of periodicals are made with an A. B. Dick "Premier" photoduplicator, and a 3M microfilm reader-printer is used to reproduce full-size copies of microfilmed material. Reproductions of material not available in the reference section are obtained from outside sources.

KEY TO FLOOR PLAN

1—Reading area
2—Reading tables
3—Charging counter
4—Charging desk
5—Periodical display racks
6—Newspaper sticks
7—Arm chairs
8—Reading lamp
9—Planter
10—Reference
11—Book stacks
12—Study area
13—Study carrels
14—Work room
15—Storage cabinets
16—A. B. Dick photoduplicator
17—A. B. Dick spirit duplicator
18—Periodical control file
19—Documents area
20—Microcard reader
21—3M microfilm reader-printer
22—Vertical files
23—Assistant librarian's office
24—Librarian's office
25—Secretarial area
26—Correspondence files
27—Government documents control desk
28—Cataloger's desk
29—Book cart
30—Bulletin board
31—Card index file
32—Dictionary stand
33—Table
34—Executive desk
35—Stenographer desk
36—Book case

Study carrel area, isolated from the other areas by a partition, insures quiet reading and study facilities.

Floor plans made by the librarian designated a large reading area, another area for study carrels, book stacks, an 18-foot periodical rack, offices for the librarian and assistant librarian, desk space for the library staff and a work room. The same general plans were used for all three libraries, with provision made for the additional functions to be performed at the main library. The latter is housed in a new building recently constructed by the company.

The walls are of birch paneling and frosted glass. The furniture was selected to harmonize with the birch panels. Two round and one rectangular birch finished tables were placed in the reading area, and three matching easy chairs with ginger-brown washable Naugahyde upholstery were placed in corners. Satin brass finished reading lamps and smoking stands were specially designed. A 24 inch by 36 inch wall map and an attractive planter added to the décor. A charging counter was designed by the librarian and constructed in the company carpenter shop. It is finished in birch and is 39 inches high, permitting the circulation attendant to remain seated while charging books. This arrangement also permits unobtrusive supervision of the reading room.

Through the years many departments within the company had purchased books for their own use; most had been procured through the library, which was actually little more than a book-ordering agency. A drive was made to reclaim as many outstanding books as possible before new books were

ordered, and approximately 500 volumes were returned to the library. These were screened and either discarded or cataloged and placed in the collection.

The reading room furniture was furnished by the Buckstaff Company; the metal bookstacks were made by Borroughs of Kalamazoo. The periodical display racks were purchased from Remington-Rand Library Bureau. All book stacks, study carrels, filing cabinets and office furniture are finished in suntan coral. Dark brown drapes in both the reading and carrel areas harmonize with the birch paneling and suntan coral metal.

In laying out the library, emphasis was placed on separating the reading area, study carrel area and work area. Thus, the reading tables and easy chairs are located in the front of the library, separated from the library staff by panels and the wooden periodical display rack. The study carrel area is isolated from the other areas by the book stacks and a birch partition. This insures quiet reading and study facilities, and many favorable comments have been received.

The work room was designed to house the photo- and spirit duplicators. Facilities for book processing also are located here as is the periodical control file. Storage cabinets in the work room contain office supplies, positive and negative paper for the photoduplicator, duplicator fluid, blank catalog cards and similar items. Overhead shelves were constructed to hold back issues of periodicals accumulated for binding.

Lighting for the entire library is furnished by recessed overhead fluorescent lighting fixtures. These give approximately 75 footcandles of illumination at desk height, which is more than adequate for reading purposes.

The present layout of the AC Spark Plug technical library permits the seating of a maximum of 18 patrons at one time. This has, to date, proved adequate, but expansion may be achieved by converting a conference room adjacent to the reading area into an additional reading room. Seating for an additional eight persons will be possible in this area.

If we had it to do over again, we would certainly include a sink for the work room in the plans. The matter of a sink was considered at the time the layout was submitted and was, unfortunately, decided against.

The AC Spark Plug technical library furnishes a quiet, attractive place for company employees to browse, read or study. Every effort has been made to furnish the necessary tools for reference, information searching and library services generally.

VITAL STATISTICS FOR AC SPARK PLUG LIBRARY

Total square foot area	
Main library	2120
Branches 2 (each)	625
Staff	11
Professional	4
Nonprofessional	7
Employees served at location	2200
Services extended to other areas	300
Average number of users per day	125
Books and bound and unbound periodicals as of April 1, 1960	3000
Current periodical subscriptions	210
Vertical file drawers	32
Date of completion	February 1960
Planned by librarian	

Special facilities or equipment: 3M microfilm reader-printer; A. B. Dick spirit duplicator; A. B. Dick photocopier; Microcard reader.

Report on the IFLA Conference

AT THE END OF the 26th Session of the IFLA Council, held in Lund and Malmö, Sweden, August 8-11, 1960, C. Goicoechea, the Director of Spain's Biblioteca Nacional, recommended that meetings of IFLA should be held in parts of the world outside Europe. The Executive Board agreed to give the matter serious consideration, but a large proportion of IFLA's 86 members (representing 51 different countries) are European, and unless an extra-European meeting were very heavily subsidized, it would be impossible to have a substantial or representative attendance. Though there are hopes for a Canadian meeting within the next few years, probably most SLA members will have to become familiar with IFLA through European trips or reports such as this.

Since I was in Scandinavia at the time of the IFLA meeting this year, I was privileged to be the official delegate of SLA. Having read a paper entitled "IFLA and Its Problems" by L. R. McColvin (*Librarian and Book World,* vol. 48, November 1959, p. 177-80), I did not expect to find too much of value to SLA, but I am pleased to report that, after the conference, I feel generally optimistic.

The International Federation of Library Associations Council consists of an official representative from each of its member agencies, committees and sections, and its activities are supervised by a small executive board. In a pattern similar to SLA's Cleveland Convention, IFLA had three general meetings—one opening session, a program on library architecture and a business meeting. At other times there were concurrent meetings of several committees and sections, and here the similarity with SLA ended. Though some groups had formal papers, the usual pattern of the meetings was having brief reports and much discussion. I had a chance to exercise my French in a lively consideration of various aspects of periodical and serial publications and an informal debate on statistics and heard some interesting papers on hospital libraries (patients') in English and a polyglot discussion of professional training. Other subjects covered by committees and sections included parliamentary and administrative libraries, national and university libraries, rare books, library work with children, cataloging principles, union catalogs and interlibrary loans and exchange of publications.

While some of these subjects have no interest for special librarians, it is to our interest that large research and government libraries have effective exchange arrangements so that obscure publications may be available when needed. Recommendations such as that the principal union catalogs and international centers in countries participating in interlibrary loan be equipped with Telex could be very useful to us.

This year the President, G. Hofmann of Munich, presented a well-organized "draft program." It is actually an outline of areas of library activities set against a tabulation of projects underway, the name of the responsible IFLA Commission, an indication of previous discussions and the names of other organizations interested in or active in the same areas. Certain projects are marked to receive first consideration. In many senses IFLA acts in an advisory capacity for Unesco, and at the same time it receives considerable support from the latter organization. IFLA and FID tend to complement one another, IFLA concentrating on acquisition and organization of books and periodicals and on the broad aspects of library use.

A major current activity is the planning of the IFLA International Cataloging Conference to be held in Paris, with the dates tentatively set as October 9-18, 1961. Regional working sessions will be held in advance. The general plans for the meeting are discussed in *Libri* (vol. 9, no. 3, 1959, p. 254-61). Other committee activities that will come to fruition in the near future are the publication of a guide to union catalogs and national centers for interlibrary loan and a reference book on libraries and museums of theatrical arts all over the world.

Though such organizations as IFLA make progress rather slowly, a further step will be

taken this year, subject to approval of the Unesco General Conference, when IFLA receives additional funds for the operation, in cooperation with Unesco, of a clearinghouse on libraries and the compilation of a *Monthly Bulletin on Bibliography and Documentation,* to replace *Bibliographical Newsletter* and *Monthly Bulletin on Scientific Documentation and Terminology.* It is hoped that eventually IFLA will have a full-time secretariat, probably also at the Unesco headquarters in Paris.

Another activity is the awarding of the Sevensma Prize for an essay on a current library topic. Next year the proposed topics are storage of library materials and reading rooms in university libraries.

I have mentioned the three official sessions of IFLA. There were many other social meetings of the whole organization, a highlight of which was an afternoon excursion to Östarp Inn where we had an old style smorgasbord luncheon and watched folk dancers perform on the lawn in native costumes. It was a beautiful afternoon, and the friendly atmosphere typified the Swedish hospitality and entertainment we received throughout the conference. It was only natural that we should become well acquainted with many colleagues and feel secure in the desire of the whole group to work for better standards and closer coordination in librarianship throughout the world.

WINIFRED SEWELL

A Report on the FID Meeting

THE 26TH GENERAL CONFERENCE of the International Federation for Documentation (FID) was held in Rio de Janeiro July 22-30, 1960, at the Brazilian equivalent of Annapolis—the Escola Naval, situated on a small island reached by bridge from the downtown part of the city, with Guanabara Bay on the one side and on the other the magnificent panorama of the city's peaks and lights, commencing with the famous Sugar Loaf and ending with the Finger of God in the hazy distance. The facilities of the school were available because, this being winter, the midshipmen were absent on the equivalent of Christmas holidays.

The conference was the guest of Brazil, represented by the Brazilian Institute for Bibliography and Documentation, of which Shra. Lydia de Queiroz Sambaquy is director. The hospitality offered to the conference included interesting visits and tours to Brasilia and São Paulo.

Some 23 countries were represented by official delegations, and the total attendance was several hundred, including representatives of a number of international agencies and national libraries. Among the latter were the British Museum, the Bibliothèque Nationale (Paris), the Royal Library of the Netherlands and many of the Latin American national libraries. From the United States, Dr. Burton W. Adkinson (National Science Foundation) attended as a Vice-President of FID; Verner W. Clapp (Council on Library Resources, Inc.) and Karl F. Heumann (National Research Council) were the official representatives of the National Academy of Sciences-National Research Council. In addition to these capacities, Dr. Adkinson represented the Special Libraries Association, and Mr. Clapp represented the American Library Association. Other members of the United States delegation were Marietta Daniels (Pan American Union), C. Dake Gull (General Electric), Allen Kent (Western Reserve University), Helmut Kohnke (Purdue University), W. Kenneth Lowry (Bell Telephone Laboratories), H. P. Luhn (International Business Machines), Calvin N. Moers (Zator Company), Simon M. Newman (U. S. Patent Office), Florence K. Nierman (Pan American Union), J. Roger Porter (State University of Iowa) and Robert Severance (Air University Library).

In addition to meetings of the FID governing board (General Assembly), there were open program meetings of its Consultative Assembly on current bibliography, union catalogs and relations between national information centers, language problems, scientific information, mechanization and classification. A series of roundtables gave particular attention to the problems of documentation and of training for such work in Latin American countries.

The meeting produced a series of recommendations on the subjects of the discussions and adopted a proposal for setting up a Latin American Commission for Documentation as a regional affiliate of FID. The secretariat of the Commission will, for the time being, accompany the vice-presidency of FID for Latin America—occupied at the moment by Senhora Sambaquy.

The principal immediate result of the meeting was in the exchange of views, with potential effect upon developments in Latin America; but the specific recommendations of the meeting and, in particular, the adoption of the proposal for the Latin American Commission hold possible consequences of importance to libraries in that area.

VERNER W. CLAPP

(Reprinted from *LC Information Bulletin,* August 8, 1960, p. 472-3.)

SLA Professional Award and Hall of Fame

EACH YEAR CHAPTERS, Divisions and individual SLA members are asked to send in nominations for the SLA Professional Award and for the Hall of Fame. The requirements for these two awards are very different and should be carefully considered before submitting a nominee.

Purpose

The PROFESSIONAL AWARD recognizes notable professional achievement in, or contribution to, the *field of special librarianship.*

The HALL OF FAME recognizes individuals who have made outstanding contributions to the *growth and development of Special Libraries Association.*

Eligibility

A nominee for the PROFESSIONAL AWARD may be any individual (or group) meeting the foregoing qualification whether or not a member (or members) of Special Libraries Association. This could be an author, a publisher or manufacturer of special library tools or an SLA member who has contributed specifically and outstandingly to special librarianship, to mention only a few possibilities.

A nominee for the HALL OF FAME must be or have been a member of Special Libraries Association.

Recognition

The PROFESSIONAL AWARD is granted for a specific contribution to the field of special librarianship.

The HALL OF FAME is granted for an extended and a sustained period of service to Special Libraries Association or for specific contributions to the development of Special Libraries Association.

Time of Presentation

The PROFESSIONAL AWARD is presented at a time appropriate in relationship to the contribution made.

The HALL OF FAME is presented near the close or following completion of an active professional career.

It is important that the committee selecting the recipients of these awards have detailed and complete information about each nominee. Chapter Presidents and Division Chairmen will receive a guide for submitting information on a nominee. This outline is *just* a guide. Additional and complete information about the contribution the nominee or nominees have made will assist the committee in selecting appropriate recipients. A nominee previously entered may be resubmitted.

Copies of the Guide for Submitting Information on a Nominee may be obtained from SLA Headquarters. Nominations for the awards should be sent to the Chairman of the SLA Professional Awards and Hall of Fame Committee not later than January 31, 1961: Mrs. Margaret H. Fuller, Librarian, American Iron and Steel Institute, 150 East 42 Street, New York 17, New York.

News from SLA Headquarters

Roster Available

The *Official Directory of Personnel,* which lists names and addresses of the Executive Board, Advisory Council, Association Committees, Special Representatives and principal Chapter and Division officers, may now be purchased for $1. Executive Board and Advisory Council members were sent copies.

Visitor from France

Françoise Haeffelin, Administrative Director of the Union Française des Organismes de Documentation (UFOD), 65 Rue de Richelieu, Paris 2, visited Headquarters as part of her tour of documentation centers in the United States. She described the activities of UFOD and in turn learned what SLA is doing. It was agreed to exchange publications and explore other areas of cooperation.

Have You Heard . . .

Documentation Research Proposals Invited

The National Science Foundation will consider proposals during the current fiscal year for additional research projects or studies of a fundamental or general nature that may produce new insights, knowledge or techniques applicable to scientific information systems and services. Although NSF will consider any proposal for a project that may contribute to the general goal of improving the handling of scientific information, the greatest interest will be in the research areas of the information needs of the scientific community, information on storage and retrieval procedures and mechanical translations procedures and related studies of language. Address inquiries and proposals to: Documentation Research Program, Office of Science Information Service, NSF, Washington 25, D. C.

Nine Council Grants Awarded

The Council on Library Resources, Inc., has awarded nine grants and contracts totaling $29,541 for the support of investigations for improving library work.

The largest single grant, $5,525, was to the Library of Congress to finance a pilot study, preparatory to a thorough investigation, of the use of the classified collections in the book stacks by staff members and scholars. Through observation of stack use, the Library hopes to measure the values derivable from a classified collection and whether these values can be secured from other sources, e.g., the catalog. It also hopes to be able to develop a pattern for determining the value of shelf classification in various types of libraries. The study will be conducted by Herner and Company, Washington information consultants, collaborating with Library staff members. It complements investigations of readers' use of books and of book storage problems now being carried on at the Yale and University of Chicago libraries.

A $5000 grant was made to the group known as The Larger Libraries of Maine, with Bowdoin College, Brunswick, acting as fiscal agent, in support of a survey of the possibilities of cooperation among the chief Maine libraries. Keyes D. Metcalf, Harvard University librarian emeritus and a library consultant, will conduct the survey.

The American Association of Law Libraries is the recipient of a $5000 grant to be used for preparation of a checking edition of legal subject headings, making use of photographic listing techniques.

A grant of $4,987 has been made to the American Library Association for an inquiry into the feasibility of developing a numerical code for identifying individual current American publications. Such a code might be used simultaneously by libraries in ordering and by publishers in inventorying and billing. The inquiry, backed by ALA's Acquisitions Section of the Resources and Technical Services Division, will seek to determine such a code's possible and potential use. The principal investigators are Gustave Harrer, Assistant Director, Stanford University Libraries and Alex Ladenson, Assistant Librarian for Acquisition and Preparation, Chicago Public Library.

The Association of Research Libraries will use a $3000 grant for establishing an improved formula for computing costs of library service attributable to research done under government contract. Plans include sponsorship of a meeting at which representative university business officers involved with government contracts and their respective librarians will discuss the charges that should be included in federal research contracts with universities.

A $2000 grant will enable Guy R. Lyle, Director of Libraries, Emory University, Georgia, to prepare a revised edition of his standard book, *The Administration of the College Library*. Dr. Philip M. Hauser, chairman of the Sociology Department, University of Chicago, will prepare an article for *Library Trends* on the 1960 census and its implication for libraries with his $400 grant.

ALA also has received two grants. One of $1,629 will support preliminary inquiries on

planning research for improving library service in metropolitan areas. $2,000 will be spent for a study of the possibility of presenting an exhibit of "The Library of the Future" at the Century 21 World's Fair in Seattle in 1962.

ADI Appoints New Editor

Dr. Luther H. Evans has been appointed editor of *American Documentation* commencing with the January 1961 issue. Dr. Evans, formerly Librarian of Congress and Director General of Unesco, is currently project director of the Survey of Libraries in U. S. Federal Departments and Agencies for the Brookings Institution under a grant from the Council on Library Resources, Inc. He was associated with ADI's founding in 1937 and instrumental, during his presidency in 1952, in changing the Institute into a personal membership society. The retiring editor, Dr. Jesse H. Shera, Dean of the School of Library Science, Western Reserve University, has served the journal since 1953.

Commercial Book Papers May Have 400-Year Life Span

The Virginia State Library has published a report on *The Manufacture and Testing of Durable Book Papers,* which indicates that the life expectancy of commercial book papers may be increased from a present range of approximately 50 years to one of 400 years. The 64-page report, prepared by Randolph W. Church, Virginia State librarian, outlines new specifications for commercially manufactured paper that should come within the medium price range, based on the investigations of W. J. Barrow, document restorer at the Richmond institution. Mr. Barrow's investigations into the durability of paper have been carried on during the past three years with the aid of grants from the Council on Library Resources, Inc.

Candid Library Photo Contest

The *Wilson Library Bulletin* is holding a photographic competition for candid pictures of libraries in action. Prizes will be offered in seven subject categories, and shots portraying the meaning of libraries rather than routines or buildings are sought. Deadline for receipt of entries is January 1, 1961, and awards will be announced in the March issue. Copies of the rules may be obtained from John Wakeman, Editor, 950 University Avenue, New York 52.

U. S. Scandinavian Documentation Center

A joint Scandinavian Documentation Center has been established in Washington, D. C. by Denmark, Finland, Norway and Sweden. It is non-profit and will stimulate the exchange of scientific and technical information between the four countries, the United States and Canada. The Center, sponsored by the Scandinavian Council for Applied Research, a cooperative organization of Scandinavia's national research councils, is located at 2136 P Street, N.W. and headed by Arne Sverdrup, a biochemist who has had extensive research training in Norway, England and the United States. The group will attempt to fill procurement requests not available through regular channels.

Coming Events

The University of Illinois Division of University Extension and the Graduate School of Library Science will hold an INSTITUTE ON COLLECTING SCIENCE LITERATURE FOR GENERAL READING, November 6-9, at Robert Allerton Park, Monticello, Illinois. The fee for the entire Institute is $40, which should be sent with reservations to: Institute Supervisor, 116b Illini Hall, Champaign, Ill.

Thermo-Fax Laminating Process

Minnesota Mining and Manufacturing Co. has announced a new method of laminating papers, charts, photographs, cards and other written or printed documents with plastic film. The process involves no special equip-

SLA Sustaining Member

The following organization is an addition to the lists of Sustaining Members published in previous 1960 issues of *Special Libraries* and represents new applications received through September 23, 1960.

UNIVERSITY BINDERY, St. Louis 3, Missouri

ment nor adjustments to Thermo-Fax copying machines. Average cost of laminating a letter-size document on both sides ranges from nine to 12 cents depending on quantities purchased, and the process takes less than a minute.

Masonite Panelok System

Adjustable metal shelves, supported by concealed metal supports between wood-grained wall panels, have been used in a library application of the Masonite Panelok system. Between two-foot wide, grooved panels are perforated splines into which brackets for supporting the shelves are slipped. The new system is available from lumber dealers throughout the United States. For additional information write Service Bureau, Masonite Corporation, Suite 2037, 111 West Washington Street, Chicago 2.

Letter to the Editor

We are very sorry that Drexel could not be represented in the fine article by Mrs. Elizabeth Owens appearing in the July-August *Special Libraries* summarizing the special librarianship programs of all the accredited library schools except Drexel. The fault is entirely our own, two copies of the questionnaire having been sent but apparently none was received in the library school office.

The special librarianship picture at Drexel is very bright. We have just hired a faculty member to teach specifically in this area and in scientific literature and documentation. He is Richard Davis, and he was formerly chief of the Technology Department of the John Crerar Library in Chicago.

We offer the following three quarter hour courses in special librarianship and related subjects:

Reference Materials in Science and Technology
Advanced Cataloging
Mass Media of Communications
Documentation
Government Publications
Advanced Reference
Special Library Service
Subject Area Specialization

Typically about 40 per cent of each graduating class goes into special librarianship.

In addition, library school students have access to the technical, scientific and business administration courses offered elsewhere in the graduate schools at Drexel.

JOHN F. HARVEY, Dean
Graduate School of Library Science
Drexel Institute of Technology
Philadelphia 4, Pennsylvania

SPOTTED

● The eminent British librarian, D. J. Foskett, commented in Stechert-Hafner *Book News* (October 1958): "When seeking information, it is just as satisfactory to have someone read you a piece of a book as to read it yourself; and any good librarian soon gets to know the realiability of his sources. Scientists are happiest, and most efficiently employed, when working at the bench, and so if they trust their librarian, they will be quite content to delegate this responsibility for their bibliographical preparedness to him. This means that librarians must have or acquire some knowledge of the wide range of subjects usually covered by a research team, but it does not mean, as some enthusiasts have implied, that he must be more expert than the experts, and tell them what they are to read. The librarian is quite able to suggest that a certain article has a *possible* value for a scientist, but the scientist must decide its *actual* value for himself." ● According to a statement from the Lake Placid Club, the Dewey decimal classification system is used in more than 14,000 libraries in the United States as well as throughout Canada and in English and Spanish editions in 65 foreign countries. The English edition is being translated into Bahasa for use in Indonesia, and scholars are completing translations for Thailand and Korea. The Library of Congress sells 26 million catalog cards a year, of which 21 million carry Dewey numbers. ● Speaking of classification, Erasmus Addlepate remarks in *How to Read Two Books* (Stokes, 1940): "One value of classifications is to produce an illusion of clarity on the part of the reader while actually adding to his bewilderment, thus accomplishing two good ends. He continues in this doped condition to buy further books on classification and to be undisturbed by the bright light of simplicity." ● Musing about the world around him, the young hero of Robert Heinlein's *Have Space Suit, Will Travel* (Scribner, 1958) says to himself: "Dad claims that library science is the foundation of all sciences—just as math is the key—and that we will survive or founder depending on how well the librarians do their job. Librarians don't look glamorous to me, but maybe Dad has hit on a not very obvious truth."

Off the Press . . .

Book Reviews

EMERGING SOLUTIONS FOR MECHANIZING THE STORAGE AND RETRIEVAL OF INFORMATION (Studies in Coordinate Indexing, Vol. V). *Mortimer Taube,* compiler. Washington, D. C.: Documentation Incorporated, 1959. 178 p. $5. (L.C. 53-4043)

This volume is a collection of nine papers reprinted either from other publications or from talks presented at meetings. Mortimer Taube is the author or co-author of the first five contributions. These are theoretical discussions of topics related to mechanizing information-handling, such as the evaluation of systems on the basis of cost, the relationship between storage and retrieval, a comparison of collating and linear searching, the impossibility of designing a "universal machine" to fit all applications, the branches of logic applicable to computers and storage and retrieval devices, the size of the questions to be put to a system and the Comac (Continuous Multiple Access Collating) idea for a machine.

The other four chapters describe some specific hardware and system installations: *1)* the IBM 9900 Special Index Analyzer (a mechanized Uniterm Index developed from the Comac idea); *2)* the IBM Universal Card Scanner (an electronic Luhn Scanner) and two projects utilizing it; *3)* DuPont's "concept coordination" system (a very slightly mechanized Uniterm system with fancy accessories like "Word-association Matrix lists," "term categories," "role indicators" and "association links"); and *4)* Magnavox's Magnacards (unit cards made of magnetic tape material). These developments of the last couple of years are worth reading about if one hasn't already encountered them elsewhere.

There is one paper, however, that might do more harm than good in the search for "emerging solutions." In Chapter 4, Taube "attempts an evaluation of the total existing literature of use studies" of scientific information and reports a "generally accepted failure of use studies." This is indeed news to those of us who have found such studies of great assistance in the planning and evaluation of libraries and other information services. The author later concludes that "the organization and dissemination of scientific information is a professional activity, the value of which cannot be measured by consumer responses." This is a classic example of mistaking means for ends. An information system is not a final end in itself but only a means to a further end, the goal of improved communication among its *users.* Disregarding the user's needs, habits and desires usually results in the kind of information system which, though "efficient" and "logical" on paper, is used so infrequently and so resentfully that it becomes practically worthless. Fortunately, there are enough references to users in this very volume, in such terms as "human recognition" characteristics, "particular environments" of systems, "receivers who present questions to the system" and "the size of questions expected," to indicate that the author himself doesn't really believe that anyone, even systems designers, can live in a vacuum.

ROBERT S. MEYER, Head Librarian
University of California
Lawrence Radiation Laboratory
Berkeley, California

CATALOGING AND CLASSIFICATION. *Maurice F. Tauber;* SUBJECT HEADINGS. *Carlyle J. Frarey* (The State of the Library Art, volume 1, parts 1 and 2, edited by Ralph R. Shaw). New Brunswick, N. J.: Graduate School of Library Service, Rutgers—The State University Press, 1960, 271; 92 p. $8. (L.C. 60-7278)

The State of the Library Art, a series of volumes being issued by the Graduate School of Library Service, Rutgers University, with the financial support of the Council on Library Resources, is a significant contribution to the bibliographical control of the literature on librarianship. Professor Maurice F. Tauber, Columbia University School of Library Service, has made a selective, objective survey of the literature on cataloging and classification problems, in volume one, part one; Professor Carlyle J. Frarey, University of North Carolina Library School, has reviewed and evaluated the literature on subject headings and the subject catalog in part two. Their method of presenting information is a distinctive feature of this volume.

The two authors have searched the literature on a particular topic, have synthesized in descriptive style the important published and unpublished writings and summarized the findings. Secondly, they have prepared a critique and evaluation of the writings. Their third approach to the same subject has been to recommend basic research studies. A terminal bibliography to each topic is given.

In reviewing the literature on code revision, alternatives to card catalogs, distinctive features in systems of reproducing catalog cards, collectanea files and numerous administrative problems, Tauber raises pertinent questions that should be answered and further studied. One of the particularly informative topics pertains to the union catalog situation in foreign countries; information was acquired from personal communications or translated from the original accounts. Studies on the cataloging and classification of government

documents and the management of technical reports literature are included, but non-book types of materials, such as music, maps, slides and so on, have been omitted.

Special librarians will find many articles evaluated by Frarey pertain to fields of particular concern to them—medicine, law, pure and applied sciences, social sciences. Studies on specificity in subject headings, the see and see also reference structure and subject heading terminology versus user terminology are a few of the topics he has critically examined.

Librarians writing papers on technical services should take note of the criticisms and limitations of the studies reviewed by Tauber and Frarey, which were based on mere description, rationalization and personal opinion. Research methodology specified in the projects conducted systematically and scientifically should also be noted. The purpose of this series—to indicate lacunae in the literature and to define the needed areas of investigation and research—is fulfilled in this volume, which is an important contribution to a review of the status of the current knowledge of technical services.

It is regrettable that there are numerous misspellings, typographical errors and inconsistencies in bibliographical references. The indexes are inadequate for finding many specific topics and contain alphabetization mistakes. These errors seriously detract from the caliber of the publication.

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New Serials

PROBLEMS OF INFORMATION STORAGE AND RETRIEVAL, an international quarterly being prepared, will cover original works on techniques and theory of information storage and retrieval, emphasizing scientific information and the intellectual problems involved. Yearly subscription rates are $20 a volume to libraries, government, industry, university departments and other multiple-reader organizations and $15 to private individuals certifying that the subscription is for their own use. Orders should be sent to Pergamon Press, Inc., 122 East 55th Street, New York 22.

JOURNAL OF CHEMICAL DODUMENTATION, a semiannual of the American Chemical Society starting in 1961, will be concerned with the process of revealing and using specific chemical knowledge. The annual subscription is $10 for nonmembers and $7 for members. Orders may be sent to the Society at 1155 Sixteenth Street, N.W., Washington 6, D. C.

SPE TRANSACTIONS, a quarterly scientific journal of the Society of Plastics Engineers, Inc., commencing January 1961, will contain articles, complete or abridged, on basic polymer theory, science and engineering as well as translations of articles originally published in foreign languages. The annual subscription rate for members is $10; for nonmembers in the United States $15, and foreign $25. Further information is available from the Society at 65 Prospect Street, Stamford, Conn.

Copyright Law Revision

The third Senate committee print on *Copyright Law Revision;* Studies Prepared for the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, now is available from the Government Printing Office in Washington, D. C. The studies include: Notice of Copyright, Commercial Use of the Copyright Notice, Use of the Copyright Notice by Libraries and False Use of Copyright Notice.

Alabama Health Union List

The SLA Alabama Chapter has prepared the *Union List of Health Science Periodicals Available in Selected Libraries in the State of Alabama,* covering the holdings of 25 libraries. It is priced at $2, and orders may be addressed to the Secretary-Treasurer, Alabama Chapter SLA, Air University Library (3D), Maxwell Air Force Base, Alabama.

Classification Research Reading List

Dr. Phyllis A. Richmond of the University of Rochester Library has compiled a reading list designed to serve as an introduction to the recent literature of classification research and several related areas. The bibliography is arranged in the following sections: Definition: What is Classification, Kinds of Bibliographic Classification, Recent Views on Classification, Subjects Related to Classification and Auxiliary Background Material. Most of the references are in the University of Rochester Library, Rochester, New York.

Physics Journal Increases Publication

The Physics of Fluids, journal of the American Institute of Physics, will be published monthly instead of bimonthly effective with the 1961 volume. Research in the areas of plasma physics, fluid dynamics and statistical mechanics has made doubling the number of issues desirable.

Technical Literature Surveys

As Number 58 of its *Occasional Papers,* the University of Illinois Library School in Urbana published this spring a 48-page survey of publications in the fields of interest of its Resources and Technical Services Division: The Literature of Technical Services by Helen Welch; The Literature of Acquisitions by David Kaser; The Literature of Cataloging and Classification by Kenneth W. Soderland; The Literature of Serials by Robert R. Holmes; The Literature of Document Reproduction by Allen B. Veaner; The Literature of Interlibrary Cooperation in Technical Services by Margaret D. Uridge; and The Literature of Library Resources by William Vernon Jackson.

Single copies of this, as well as previous *Occasional Papers,* are available gratis upon request to the editor.

Biological Materials Translated

The American Institute of Biological Sciences, with support from the National Science Foundation, is currently translating and publishing seven Russian research journals in biology: *Doklady: Biological Sciences Section; Doklady: Botanical Sciences Section; Doklady: Biochemistry Section; Plant Physiology; Microbiology; Soviet Soil Science;* and *Entomological Review.* AIBS can offer these translations at a fraction of their publication cost because of NSF's support, and further price reductions are given to AIBS members and academic and non-profit libraries. In addition AIBS has translated and published six Russian monographs on biological subjects. For more information write: American Institute of Biological Sciences, 200 P Street, N.W., Washington 6, D. C.

Military Union List

Air University Library has just published the *Union List of Military Periodicals,* a result of the combined efforts of military libraries in the United States and Canada. The list is primarily the product of a Military Librarians Workshop project begun in March 1957. Single copies may be obtained from Air University Library, Technical Assistant to the Director, Maxwell Air Force Base, Alabama.

Preliminary Census Publications

As soon as the results are tabulated, preliminary counts and advance statistics of the April 1960 census will be published as several series of multilithed reports, beginning in July. These series will be superseded in 1961 and 1962 by final volumes. The reports will cover housing and population information by census tracts, state and local groupings, metropolitan statistical area analytical characteristics, city block characteristics, components of change, residential financing and rural housing analytical characteristics.

SLA Authors

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DAVID, CHARLES W. The National Union Catalog —1952-1955 Imprints. *Library Journal,* vol. 85, no. 13, July 1960, p. 2544-5. (See also *College and Research Libraries,* July 1960, p. 275-6.)

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MAYNARD, GLENN R. *A Tour of Russian Libraries.* Livermore, California: University of California, Lawrence Radiation Laboratory, 1960. 22p.

MEYER, EVA J. Library. *In* Psychoanalytic Education in the United States by Bertram D. Lewin and Helen Ross. New York: W. W. Norton & Co., 1960.

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———. The Tape Typewriter Plan: a method for co-operation in documentation. *Aslib Proceedings,* vol. 12, no. 8, August 1960, p. 277-291.

MORAN, MARGUERITE K. Indexing of Metal and Thermit Corporation Research Records on Keysort Cards. *American Documentation,* vol. XI, no. 3, July 1960, p. 222-8.

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———. Getting Your Share from Technical Literature? *Product Engineering,* July 4, 1960, p. 40-1.

———. How to Uncover Hidden Hazards in Your "Safe" Plant. *Management Methods,* February 1960, p. 97-101.

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———. A Little Personal Job. *Trained Men,* vol. 40, no. 2, p. 16-8.

———. 10 Ways to Kill Progress. *Trained Men,* vol. 39, no. 4, p. 16-9.

———. We Offer You a Professional Challenge. *Trained Men,* vol. 40, no. 1, p. 12-3.

SHOEMAKER, RICHARD H. Some American Twentieth Century Book Catalogs: Their Purposes, Format, and Production Techniques. *Library Resources and Technical Services,* vol. 4, no. 3, Summer 1960, p. 195-207.

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ZAFREN, HERBERT C. *Jewish Newspapers and Periodicals on Microfilm Available at the American Jewish Periodical Center.* Cincinnati: American Jewish Periodical Center, 1960.

RECENT REFERENCES

Library Literature

COMMUNICATION, 2nd ed. *Elmer D. Johnson.* New York: Scarecrow Press, 1960. 256 p. $5. (L.C. 60-7263)

History of the development of the alphabet, writing, printing, books and libraries.

LIBRARIES AND BIBLIOGRAPHIC CENTERS IN THE SOVIET UNION (Slavic and East European Series, no. 16) *Paul L. Horecky.* Bloomington, Indiana University Publication, 1959. 288 p. pap. Apply. (Available from Indiana University Research Center in Anthropology, Folklore and Linguistics) (L.C. 59-63389)

Description of the day-to-day functioning of Soviet libraries and bibliographic centers, their place in the Soviet cultural system and distinctive features resulting from the impact of the Communist political philosophy. The study was supported by the Council on Library Resources, Inc.

LIBRARY EVALUATION (Frontiers of Librarianship, no. 2) *Wayne S. Yenawine,* ed. Syracuse: Syracuse University Press, 1959. 48 p. pap. $1.50 (L.C. 59-14068)

Three papers presented at the Symposium on Library Evaluation, Syracuse University School of Library Science, July 17, 1958, on book collections, the techniques of personnel rating and the function and procedures of program evaluation, with particular reference to adult education activities.

PUBLICITY PRIMER, 4th ed. *Marie D. Loizeaux.* New York: H. W. Wilson Company, 1959. 128 p. pap. $1.50 (L.C. 59-6608)

Includes new chapter on the use of TV and radio, an expanded publicity calendar and a new bibliography. Primarily for public libraries.

RISE OF CURRENT COMPLETE NATIONAL BIBLIOGRAPHY. *LeRoy Harold Linder.* New York: Scarecrow Press, 1959. 292 p. $6.50. (L.C. 59-6546)

A study of the contents, arrangements and development of the current complete national bibliographies of England, France, Germany and the United States with a view toward determining the characteristics of success, patterns of development, physical structure and financial support necessary for such bibliographies.

STUDIES IN BIBLIOGRAPHY, vol. 13. *Fredson Bowers,* ed. Charlottesville, Virginia: Bibliographical Society of the University of Virginia, 1960. 292 p. $6. (L.C. 49-3353 Rev.)

Twenty-one literary papers presented by members of the Society. Also selected checklist of 1958 bibliographical scholarship.

Bibliographic Tools

ART IN LIFE. *Jane Clapp.* New York: Scarecrow Press, 1959. 504 p. $12.50. (L.C. 59-6544)

Index to the pictorial art reproductions, photographs of architecture, sculpture and the decorative arts, and portraits of artists and historical and literary personages which appeared in *Life* from 1936 through 1956.

BIBLIOGRAPHICAL GUIDE TO THE STUDY OF THE LITERATURE OF THE U.S.A. *Clarence Gohdes.* Durham: Duke University Press, 1959. 120 p. pap. $2.50. (L.C. 59-15074)

Lists the chief tools necessary for the study of United States literature, classified under 35 headings; a selected group of books on the methods and techniques of research in the fields of history and literature; and the chief books or bibliographies in American history, biography, art, religion and other Americana.

LITERATURE OF LIBERAL ADULT EDUCATION 1945-1957. *J. D. Mezirow* and *Dorothea Berry,* comps. New York: Scarecrow Press, 1960. 308 p. $6.50. (L.C. 60-7264)

Annotated guide to journal articles, government publications, pamphlets and books published since World War II in the United States, Great Britain and Canada which deal with liberal adult education.

MASTER'S THESES AND DOCTORAL DISSERTATIONS IN THE PURE AND APPLIED SCIENCES, 1958. *Beth M. Schick,* ed. Lafayette, Indiana: Purdue University, School of Mechanical Engineering, 1959. 500 p. pap. $6.

Represents 164 schools with 6607 titles covering 64 fields. Includes table of contents with subject classifications, a subject index and an index to schools with page references.

SPACE TRAVEL; PROBLEMS AND PROSPECTS. Wright-Patterson Technical Library, Wright-Patterson Air Force Base, Ohio, 1958. 55 p. pap.

Bibliography of books, American Rocket Society, Institute of the Aeronautical Sciences and Society of Automotive Engineers preprints and periodical references.

STATE GOVERNMENT: AN ANNOTATED BIBLIOGRAPHY (RM-329) Chicago: Council of State Governments, 1313 East 60th Street, 1959. 56 p. pap. $2.

Part One lists citations according to the form of the work; Part Two lists citations according to broad subject headings.

A UNION LIST OF PUBLICATIONS IN OPAQUE MICROFORMS. *Eva Maude Tilton,* comp. New York: Scarecrow Press, 1959. 356 p. $7.50. (L.C. 59-6549)

Compilation in dictionary order of American publishers' bibliographic listings of opaque microprint reproductions through December 1958.

Miscellaneous

AGREEMENT ON THE IMPORTATION OF EDUCATIONAL, SCIENTIFIC AND CULTURAL MATERIALS, 2nd ed. Paris, France: Unesco, 1958. 32 p. pap. 50¢.

Description of the operation and application of this Unesco agreement. Appendix gives the full text of the agreement.

DIRECTORY OF INSTITUTIONAL PHOTODUPLICATION SERVICES IN THE UNITED STATES. *Cosby Brinkley,* comp. Chicago: University of Chicago Library Photoduplication Service, 1959. 24 p. pap. $1.

Section one gives a tabular listing and schedule of rates for institutional libraries offering significant services; section two gives the addresses of institutions in the tabular listing; section three gives mailing addresses of institutions not in tabular listing which offer limited photoduplication services, largely Thermofax and transfer process photocopies.

DOCUMENTS OF INTERNATIONAL MEETINGS 1953. *Robert W. Schaaf,* comp. Washington, D. C.: Library of Congress, 1959. 210 p. pap. $1.50. (Available from Card Division, Library of Congress.)

Bibliography of the official records of 250 international non-governmental meetings held in 1953. For most entries a note is given describing the sponsoring organization and relating the meeting to earlier and later conferences. Following the note the documents in the Library of Congress are described and their locations given by a call number or symbol. An appendix lists 399 intergovernmental meetings held in 1953 and the non-governmental meetings for which LC has no documents.

EUROPA YEAR BOOK 1960, vol. 1: Europe, 1208 p.; vol. 2: Africa, Americas, Asia, Australasia, 1200 p. London: Europa Publications Limited. ea. $25; set $44.

EMPLOYEE PUBLICATIONS. *William C. Halley.* Philadelphia: Chilton Company, 1959. 152 p. $5. (L.C. 59-9467)

The principles and problems involved in employee publications and a step-by-step pattern for producing an effective publication, including a picture portfolio reproducing actual features of such publications.

SCIENTIFIC RUSSIAN. *George E. Condoyannis.* New York: John Wiley, 1959. 240 p. pap. $3.50. (L.C. 59-9340)

WHO'S WHO IN AMERICAN ART. *Dorothy B. Gilbert,* ed. New York: R. R. Bowker Company, 1959. 736 p. $22.50. (L.C. 36-27014)

Lists for the first time museum directors, associate and assistant directors, heads of college and university art departments and Alaskan artists. Also includes American and Canadian biographies, a geographical index, 1956-1959 obituaries and a list of open exhibitions.

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PROFESSIONAL ASSISTANT with knowledge of architecture and art history for School of Fine Arts Library. Reference, processing accessions, assisting with book selection and supervision of rare book collection, revision of subject headings, part-time cataloging of city planning pamphlets. M.L.S. degree and romance language required. Salary $4800-$5000. Contact Personnel Department, University of Pennsylvania, 3025 Walnut St., Philadelphia 4, Pennsylvania.

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