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SPECIAL LIBRARIES

OCTOBER 1959, VOL. 50, No. 8

Measuring Performance In Special Libraries

The Need For Work Measures

Standards For Special Libraries

Data Processing Systems

Russian Scientific Abstracting Journals

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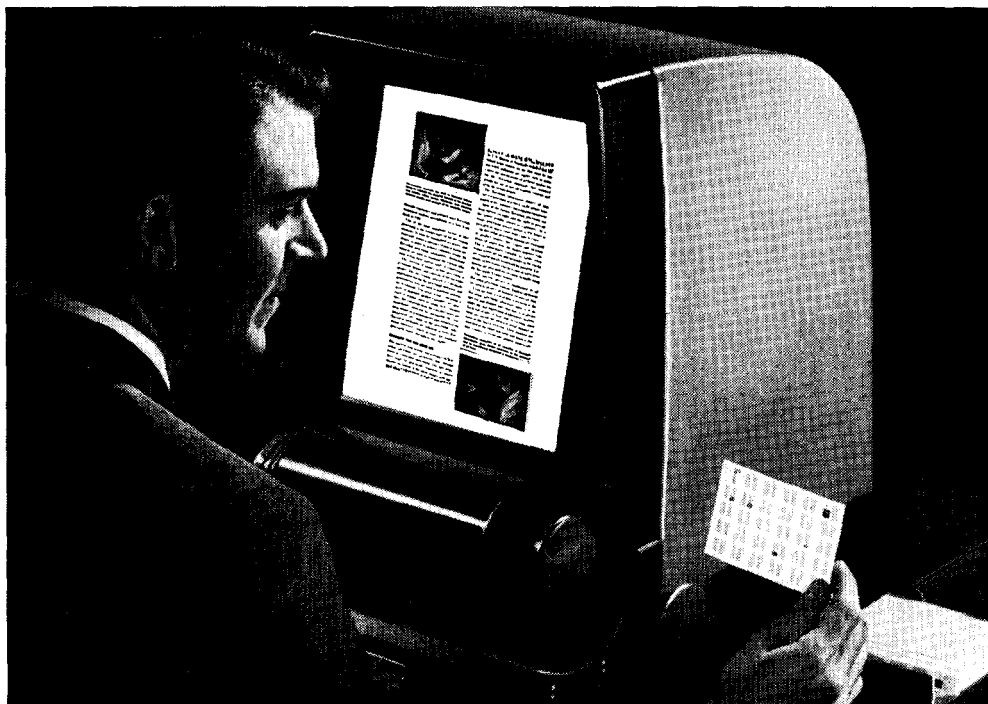
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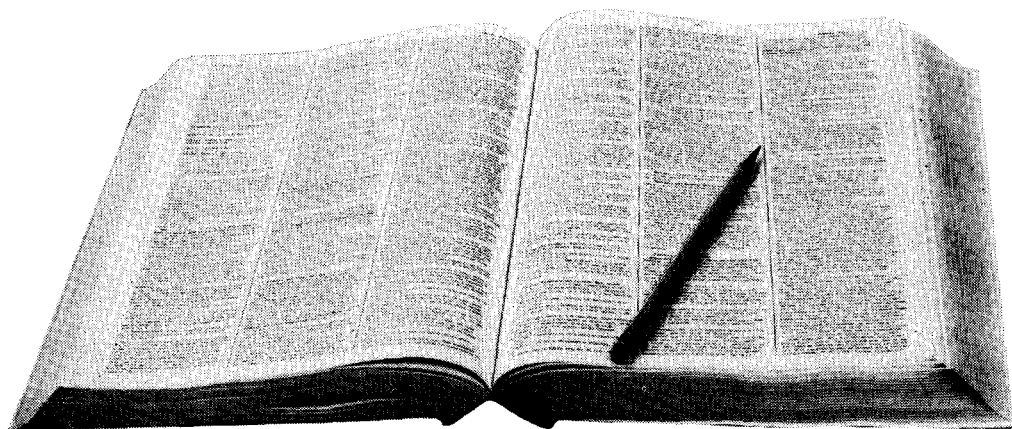
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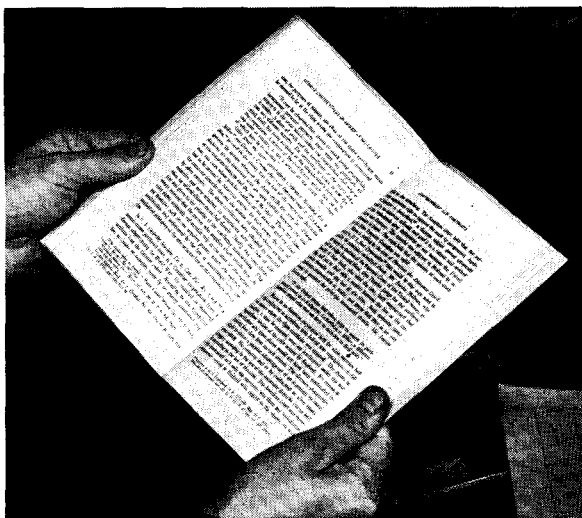
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Official Journal
Special Libraries Association

Volume 50, No. 8

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The Measurement of Performance and Its Relation to Special Library Service

ALBERTA L. BROWN, Head Librarian

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"TO PRACTICE a profession one must have acquired mastery of an academic discipline as well as a technique for applying this special knowledge to the problems of everyday life. A

profession is therefore intellectual in content, practical in application."¹ It is this practical application of our profession with which we are concerned here.

Scientific management in the special library is not new. The study of methods, work flow, simplification of service as a result of the application of statistics and scientific management have been common topics for discussion at annual conventions for many years. The literature is rich in material which, if analyzed and coded, would form an excellent introduction or base for the achievement of greater efficiency in library performance.

Work standards have been defined as the complete analysis of a man's time; from an engineering standpoint this is an adequate definition, but work standards in a library imply much more than the measurement of a librarian's time in order to determine his efficiency. They involve a fine relationship between professional personnel and the service they render to their clientele. Between these two groups of human beings stands the library collection, which exists as a workshop to be used by both groups in the attainment of their goals. Consequently the above definition needs to be modified to include the many intangibles involved in creating as well as maintaining a service department.

Paper presented at a General Session, June 2, 1959, at the SLA Convention in Atlantic City, N. J.

We do have production lines in the library, and some of our routines lend themselves to those techniques that can be measured mathematically; others are a compound of professional training and experience plus a knowledge of the tools to be used and the application of all of these to the immediate problem. This application does not lend itself easily to measurement, though we are all cognizant of the fact that the librarian who is able to locate an obscure piece of information in a single motion is more competent than one who must search through many sources, though the end result—service to the clientele—is the same. Since quantitative achievement in any library must include qualitative capacity, a definition of library standards might read as follows: *The measurement of achievement based on the relationship between work performed and personnel needed for that performance and both equated to the particular need and facilities of the special library involved.*

We are not attempting to set up actual standards in this discussion but rather to explore the problems involved in laying the groundwork for such future action. The definition above indicates that our problem has two distinct facets: 1) the quality of the library collection itself, including physical facilities, and 2) the measurement of achievement based on the relationship between work performed and personnel needed for that performance. Since these are entirely different areas of operation, they will be considered separately.

Size, Type and Location of Library

When setting up any kind of standards in a special library, the first problem with which we are confronted is the matter of size. The one-man library certainly has a

different set of problems to cope with than one with a sizable staff. The librarian who must index company reports and catalog books between telephone calls and reference service cannot possibly plan such activity on a work flow basis since the interruptions for service to the clientele of necessity take precedence over such behind the scenes operations as indexing and cataloging.

Forty-five years ago Andrew Linn Bostwick pinpointed this problem when he was the Municipal Reference Librarian at the St. Louis Public Library. He said: "It is an accepted fact . . . that there are fundamental differences between the general and the special library. We know that the special library, with its restricted scope and limited patronage, is called upon to work in a special way and with tools which as far as the general library is concerned, may be of little value. It naturally follows that in the actual administration of such a library certain special problems are likely to confront us—problems which are peculiar to our particular class of institution, and which may not appear at all in general library administration. . . .

"One situation . . . is brought about by the fact that we are obliged to perform a great deal of the purely routine work from which the general librarian is relieved. In a special library there is no well-defined line of demarcation between administrative and routine duties. An underlying cause of this is the relatively small size and small corps of assistants, in the case of the special library. . . . The head of a special library may have only two or three persons to help him; (parenthetically he may not have any help) the result is that he must at all times be ready to do a little of everything, from outlining policies and schemes of work down to stamping envelopes."²

The library with a larger staff has an entirely different problem. Here it is possible to allocate work so that improved methods of performance can be put into effect by the use of time and motion study procedures. One of the major defects in present library administration is the lack of organization at the supervisory level. As the work increases, professional or clerical personnel may be

added to help with the backlog, and an emergency situation where the whole staff dabbles in every routine becomes the status quo. When the staff grows from one to two the problem of the division of labor should receive serious consideration in the interests of better efficiency.

The *type* of library involved will make considerable difference in the kind of measurement to be used and the results expected. A business library dealing entirely in current financial affairs and composed largely of material housed in information files and containing relatively few books would have entirely different operational problems than a science-technology library, which is dependent not only on books but the vast field of periodical literature. The technical problems of buying and processing, which lend themselves to measurement, are more obvious in this latter situation.

Location of the library, both geographically and within the company, is a factor in efficiency studies. Easy accessibility means that one's clientele will need and demand less personal service, particularly in the "fetch and carry" category. The geographical location of the company itself is important and creates problems of its own. A library located in or near a metropolitan center with easy access to materials in other libraries has an entirely different acquisitions problem, with the resulting technical processing, than the library isolated in a small town.

Therefore in setting up standards for special libraries such variables as *size*, *type* and *location* are important factors and should be given consideration.

Job Analysis and Job Description

One of the most important single items to be considered when setting up standards is the qualifications of the library staff. In order to measure performance it is necessary first to set up standards of employment, and this leads logically to job analysis and job description. Robinson has defined this step-by-step description of the work done by an individual as follows: "Job analysis finds out what is to be done and determines the best methods of doing it . . . and the qualifications required of a worker to be able to

do the job satisfactorily."³ Kathleen Stebins comments further: "By analyzing the work load involved and the qualities necessary to carry on such activities, suitable job descriptions can be prepared. Job descriptions provide the requirements of the various operations and duties, equipment, methods, working conditions, responsibilities, and other essential factors concerned in the jobs."⁴

The job description, which is usually brief, is apt to cover the job in outline only. For purposes of measurement, a useful tool to implement the job description is the library procedure manual, which is a form of work analysis. Such a handbook is prepared by library personnel and revised whenever a procedure is materially changed. This manual not only outlines the procedure but describes in detail the methods used to perform the task and indicates the work flow. If prepared by the persons who actually perform the job, it serves a number of useful purposes:

1. Gives the employee an over-all picture of the end result desired.
2. A step-by-step outline tends to show up wasted motions.
3. Serves as a basis for the rearrangement of work flow.
4. It is a great time-saver when a substitute must do the work.

Job analysis used in this sense, in connection with expanded job descriptions in the form of a procedure manual, is more than a device for either hiring or evaluating personnel; it becomes a tool for measurement as well.

Equally as important as the analysis and description of the various job requirements in the library is the management problem of the profitable use of manpower. We often hear the complaint that persons without adequate training are performing tasks calling for special training, and we are criticized because professionally trained staff members are regularly performing non-professional tasks. It is extremely difficult to draw a fine line between professional and clerical operations because it is sometimes easier and cheaper to finish a process in one operation. Interrupting the flow of work to separate

clerical and professional operations can be both time-consuming and wasteful of effort and therefore costly.

The Joint Committee on Library Education recently presented a report to the Council of National Library Associations for action entitled "Proposal for an Inquiry into the Utilization of Manpower in Libraries." Some of the basic questions considered in this report are:

1. Are the kinds of positions now provided in libraries actually those needed to meet the demands for services?
2. What really is the nature of professional staff service in libraries? In all types of libraries?
3. What auxiliary and technical personnel can be used in association with professionals to perform the services needed?
4. To what extent is professional education needed? What is the specific nature of this education? What is the place of the education of librarians in the whole academic structure?

The proposal sets forth a plan for a basic study that would clarify immediate problems of the library occupation and would penetrate into the fundamental development of library service.⁵

The American Library Association published in 1953 a bibliographic essay entitled *Personnel Administration in Libraries*, which covers such fundamental problems as position classification and salary administration, selection and development of employees, conditions of employment and human relations. The foreword states: "There has been a growing realization during the last thirty years that successful management of any enterprise, public or private, depends on getting effective results from people. This emphasis on the human aspects of management—selection and development of personnel—has resulted in a growing body of doctrine and techniques. Libraries, in common with other enterprises, are concerned with personnel administration. The extent of this concern will vary from the one-man library to the large public or university library with hundreds of employees, many of whom are highly trained specialists. The fact that well over half of the budget of most

libraries is spent on salaries is, in itself, evidence of the need for the library administrator to be acquainted with personnel administration."⁶ Though this study has been geared to the public and university library, there is much valuable information contained in it that is applicable to the special library.

Therefore, our second step in setting up standards involves an analysis of the job requirements based on work analysis and accompanied by an understanding of the profitable use of manpower grounded on a thorough comprehension of good personnel administration policies.

Physical Facilities

The definition of standards formulated earlier in this paper indicated that the measurement of work performance must be equated both to personnel and to library facilities. This latter includes not only physical facilities and equipment but also the collection of material, whether it be books or files, or both, which are the basic working tools of our profession.

Physical facilities embrace many areas, such as adequate space to house the collection plus allowance for convenient use by both the librarians and the clientele. We are particularly in need of standards for those items that are unique to our profession, such as catalog cards, book cards and pockets, binding equipment, library shelving and catalog card cases, to name a few.

The need for such specifications is common to all libraries, whether general or special. To meet this need, The Council on Library Resources, Inc. made a proposal in 1957 for a research-testing-standardizing project in the field of library materials, supplies, equipment and systems. This proposal has resulted in a national service sponsored by the American Library Association, the purpose of which is to provide libraries with accurate information on the quality of library equipment and supplies. The project, entitled "Library Technology: A Standards Program on Equipment and Supplies," will be operative under a grant for two years. The chief emphasis will be on the systematic accumulation and publication of existing standards information.

Since library supplies and equipment are common denominators in any library, the results of this study should be given serious consideration in the development of standards in this area for the special library.

The Book Collection

The book and periodical collection is infinitely more difficult to assess. The large research organization where the literature search is fundamental is faced with an entirely different problem than the library that is purely an information center. Probably no two libraries have exactly the same basic needs or objectives; therefore the amount budgeted for books will vary with each situation. There are two approaches to this problem, and both must be taken into consideration in building library standards.

1. The working collection, whether books, periodicals or other materials, must be adequate to meet the demands of the particular library situation. Any formulation of standards will need to take this variable into consideration.

2. The annual budget should be planned so that the collection, whatever its content, will be kept up to date.

It was mentioned earlier that more than half of the library budget is allotted to salaries. It is essential that our available revenue be budgeted carefully so that our resources will not become outmoded. Budgeting has been defined as the setting of attainable goals and then controlling and limiting variations from the original plans so that the goals are attained. One of the most important factors in this area will be to determine the percentages of the total budget to be spent for salaries, for building and maintaining the book collection, for maintenance and other essentials.

Library standards, therefore, should include the means for measuring facilities that comprise both equipment and supplies as well as the book collection while providing for sound budgeting procedures.

Quantitative and Qualitative Measurement

There are library procedures that lend themselves to measurement in the engineering sense; on the other hand there are many

activities for which it would be extremely difficult to develop quantitative standards. Helen Loftus has said in "Why Work Standards?": "Essentially there are two types of work standards; quantitative standards and qualitative standards. Each has a place in evaluating library operations. In quantitative standards, the principal consideration is the number of units produced in a given period of time. . . . With qualitative standards, the principal consideration is the level of efficient performance and service a well organized and efficiently managed library should provide under a given set of circumstances."⁷

All kinds of record keeping in the library could well be included in the quantitative analysis. These would comprise such routines as checking in and routing of periodicals, circulation routines, flow of work from cataloging through typing of cards, marking and pasting to the final shelving of new books, filing, interlibrary loan and binding procedures. Many cataloging records could easily be shortened without loss of efficiency, since complete bibliographic information is often not necessary in the special library. In anything but the very large library, cataloging and classification are carried on as a single operation. However, the former lends itself to streamlining while the latter does not. The transfer of the bibliographic information from the title page of a book to a catalog card is a process that can be taught to an untrained person. Classification, however, falls into another category requiring not only technical library training but judgment and experience as well. Therefore, though cataloging routines might lend themselves to quantitative measurement, its sister operation, classification, would defy anything but a more subjective measurement.

The other side of the coin is qualitative measurement. Service to the clientele in the form of reference service, preparation of abstract bulletins, literature searches, building the book collection and classification mentioned above do not lend themselves to easy measurement. To quote again from Loftus: "Standards for these activ-

ities on the whole must be derived from value judgments based upon the experiences of many special librarians in many special libraries over a long period of time. Before standards can be developed for these activities, much data must be gathered, analyzed and evaluated. It will require sharing results of studies already completed as well as active participation in surveys to be undertaken. The success of a formal standards program would require the cooperation and coordination of the efforts of the entire membership over a long period."⁸

The place and importance of administrative planning to attain better over-all operation should be emphasized. Efficient work methods are the continuing business of the administrator. Librarians need to acquaint themselves with business machines and forms that can be adapted to library use and become time-savers. Library procedures are apt to become fixed, inflexible and often unnecessarily time-consuming. Administrators have the responsibility for keeping abreast of new developments in the library field as well as in related areas where adaptation is practical. Mechanization systems are a case in point. We must be able and willing to assess the value of machine techniques by moving out of the realm of the imagination and wishful thinking into the area of cold facts and exact cost figures. Any standards of value to our profession must take these new devices into consideration.

Conclusion

We have defined our problem as the measurement of achievement based on the relationship between work performed and personnel needed for that performance and both equated to the particular need and facilities of the special library involved. The areas covered in this discussion are not necessarily definitive but are rather suggestive of the extent and range of the field to be surveyed and the scope of the undertaking.

During the past year we have advanced professionally by the adoption of stand-

ards for membership based on academic training plus experience; our next move forward is to implement these with standards of performance. To quote from a well known television personality, "Progress is our most important product."

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We Need Work Measures

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IF SOME fellow set up a stand on the Atlantic City Boardwalk offering to sell \$2 bills for \$1 each, most people would pass him by. They'd say, "There's some trick somewhere."

Yet, in essence, that is what I'm about to do. The facts are that work measurement can be used to give you two for one.

Some of you are aware of such facts because you are close to industrial operations. You know that good work measurement has greatly increased output per man hour. That is reason enough for finding out how long it should take to do work. But there are four by-products I want to point out. These are: 1) work measures act as a sorting device to separate management errors; 2) work measures bring out better ways to do what is decided is necessary work; 3) work measures determine what is a fair day's work; and 4) work measures give a reliable base for determining costs.

To avoid confusion by my use of the term "by-product," let me explain. I consider work measurement a means toward

achieving better management. It is not, in my opinion, a substitute.

Management Errors

You will see more clearly why I think as I do when I discuss my first by-product, management errors. This is the term I use to describe the large amounts of time lost and work wasted I see in plants I visit. I call these time-cost leaks management errors for the simple reason that the employees themselves cannot do very much about them. Only management can reduce their causes.

I divide these management errors into three groups. I call them: 1) Failure to Plan; 2) Failure to Specify; and 3) Failure to Follow-up. Each of these will be described briefly as it comes into focus later on.

Here, I want to stress the fact that we do not know these cost leaks exist unless we have work measures. The key is found in the statement made by the pioneer Henry L. Gantt. He said: "In connection with the man's record, it is the most complete analysis we can make of the workings of a plant, and the one that will help us most quickly to bring into their proper channels things that have gone haphazard. Such an analysis is far more important

Paper presented at a General Session, June 2, 1959, at the SLA Convention in Atlantic City, N. J.

than an improved tool steel or a new set of piece rates, for it enables those in authority to see each day how their orders are being carried out.”*

The “complete analysis” of time spent is the sorting device. It separates the wasted work and lost time from that called productive. Primarily work measures are needed as a “tool” to help manage better the operations one is responsible for.

The time leak sorted out by work measures that most managers work on first is waiting time. This is the evidence of failure to plan. It occurs because people run out of work. Let me explain why.

Managers try to avoid criticisms for failing to render prompt service. As a result, they retain enough people to meet the demands. They have some leeway in the use of overtime, but they are always confronted with peak and valley work loads.

When the peaks come on, people who do not have work measures usually will turn out more production. But when the work load slacks off, they take more time to do their work rather than appear idle. Thus, the waiting time may not be apparent.

The waiting time in industry that shows up runs about 10 per cent. My few experiences with office operations indicate the percentage to be greater. One reason is that, in the usual office, there are more definite peak loads.

To know how much and where wait time occurs will enable you to reduce costs or to improve services. It will also point the way to better scheduling.

Unless you do plan work, the peaks and valleys will be relatively the same with work standards as they are now. And to the extent that part of the wait time is saved, there will be less flexibility to handle the peak loads.

So to really improve operations, you are forced to do more and better work scheduling. This requires at least three steps. The first is to find out about what

the total work load is per week. The second is to plot the load by days to determine the peaks and valleys. If these do not occur weekly, then you need to plan for a longer cycle. The third is to classify the work to be done into several degrees of urgency. Then you can move chores away from the peaks to reduce their heights and fill in the valleys to utilize the wait time that exists in those periods.

Job Specifications

The second by-product obtained from work measurement is the sorting out of wasted work. I classify all indirect work in three types. I call them necessary, optional and luxury. These groupings suggest why you see comments in business literature about “trimming the fat” from costs.

But a critical study of even that work called necessary will show some of it to be carried on from habit. Also, some work may be duplicated in whole or in part at a different time or place in your operations. These kinds of wasted work are reduced by management decisions.

Then there is the more obvious kind of wasted work. That is the kind done the “hard way.” Ingenuity and applied common sense will help to find better ways to do the necessary work. Attentive listening at technical sessions such as those at professional conventions will help you to discover the better methods others are using.

It is in this field of what work is to be done that the failure to specify shows up. By and large, overhead costs are gauged only by budgets. Budgets are dollar allotments. They are based on past experiences—past errors if you like. Budgets do not specify either what work is to be done for the dollars allowed or how often.

Very few indirect operations have specifications such as there must be to turn out products in our shops. The result is we have much more wasted work in our overhead departments than in our so-called direct labor operations. I commonly find 20 per cent in the shop, so you can guess what may exist in office operations.

* GANTT, HENRY L. *Work, Wages, and Profits*. McGraw-Hill, 1913, p. 288.

When starting to set work measures, the first thing you have to specify is, "What shall be done?" The second step is to decide, "By what method?" The third phase is to determine, "How often?"

You managers have to make all three decisions before you can logically tell your staff what they are supposed to do. Here again, the sorting device comes in. When you specify what work is to be done, you leave out the work you want eliminated. You set measures!

Fair Day's Work

This brings us to the third by-product of work measurement. This has to do with answering the question, "What is a fair day's work?" That question is at the bottom of many of today's human relations problems. You may recall that one of the reasons given for the growth of unions was that they gave protection against the favoritism of the bosses.

One of the protective clauses is designed to guard against "hardship" imposed by managers who want to increase work loads. I have never seen this type of clause in contracts dealing with work standards. My guess is that it is not necessary when the fair day's work is established by work measurement.

It appears, then, that you have three choices. One is to set work standards. A second is to negotiate. The third is to default and let people set their own measures of a fair day's work.

This latter is the usual case. Here is some evidence. The nation-wide survey of wage incentive and work measurement coverage reported in the April 1959 issue of *Factory* indicates only four per cent of the responding companies have measured office work.

We may conclude, therefore, that special librarians' interest in this subject means they are way ahead of the average. You may solve some of your problems before they become more troublesome.

Keep in mind that managers set work standards of output or else the people who do the work will set their own. Their standards are based on past practices—

what is acceptable. In some cases it may be said it's the least amount people can get by with. Probably this latter degree would not apply in libraries because of the more professional attitudes of librarians. Even so, you still have the question, "What is a fair day's work?"

The best answer I know to that question is work measurement. By setting work standards, you gain the several advantages I have already cited and, in addition, you are in a position to manage better. Recall, if you will, the latter part of Gantt's statement about complete analysis of a man's time. He said in part, "Such an analysis . . . enables those in authority to see each day how their orders are being carried out."

In my language he is saying that work measures help managers to overcome the third type of failure I suggested—the failure to follow-up. I can make this clearer by example. If your employees were making candy bars, you could tell each day, even each hour, how their output compared with some standard you had in mind. Your measure of output would be the number of candy bars finished.

But librarians do not have any such simple measure. Library operations are diverse and complex. What can you use as a measure of output? How do you know whether or not people do what they should? How can you tell who are doing the best jobs?

You know that most people seek recognition. They want to get ahead. To many, I realize, getting ahead means more money.

More basic is the competitive race we are in against those we work with and toward our own goals. "How am I doing?" is the everyday question. Can you answer it satisfactorily without having work measures? If you have no figures to use as a yardstick, you may express an opinion and bring on some reactions called favoritism.

Actually, people prefer impartial work measures to gauge their progress. Most people want to do a fair day's work. They are more satisfied when they know they are doing what is expected of them. Con-

sequently, morale is higher when people know that you know how they are working, assuming all other conditions to be equal.

Now take a look at the problems of new employees. How soon should they learn their jobs? Can they learn the work you assign them to do?

One of the biggest advantages of work measures is in this process of training new employees. First, the specifications establishing the measures of work to be done make it easier and less costly to train new and promoted people. Second, their progress can be followed more constructively when there are work measures and learning curves. Third, and I think this is very important, the process is more humane. You may find early in the training that the new employee won't ever make the grade.

Aid to Determining Costs

Finally, we come to the fourth by-product. This may be the one of primary interest to you. Librarians who manage service functions must have a devilish job trying to secure increases in their budgets. The reason is that many managers think the world will come to an end if their overhead ratios go up.

Overhead ratio thinking is worse than silly. It is dangerous. It contradicts progress. Take a simple case. How can managers buy new machines to reduce shop costs without raising their overhead expenses? If they buy the machines, they do so to lower the so-called direct labor cost. Thus they cause a double change in their overhead ratios.

You can't change that process by applying work measures in libraries, but here's what you can do. You can put price tags on the services rendered. You can say, "This search will cost you \$100," or "That report will cost you \$50." Thus, you utilize what I call the forced-choice method of persuading. In simple words, "Does the boss want the report more than he wants the \$50?" If he does, the library receives its budget increase.

The boss should want that or some other report—and many more of them, with in-

creasing frequency. His problems are growing rapidly. They are becoming more complex. So he and others who must make decisions need more and better information.

Information, however, costs money, and so it is up to you librarians who operate information departments to furnish what you have at lower costs. I put it this way because you don't want to do what so many have done—you don't want to price yourselves out of business.

Work measures can help you to avoid curtailing your much-needed services. Work measures will enable you to render better service at lower cost. Work measures will permit you to supply more information with your present payrolls. Work measures will assist you to run your departments with fewer headaches. Finally, work measures will give you the cost facts about the work done in your departments so that you can become better managers.

NEW INDEXES FOR MEDICAL LITERATURE

Beginning January 1, 1960, the American Medical Association and the National Library of Medicine will institute a new cooperative program for the indexing of medical literature. The new system will mechanize the composition of the index, using a new type of camera capable of photographing text material at the rate of 230 cards per minute. This technique will not only speed up production and reference service but also reduce printing costs. Under the new program, the AMA will discontinue publication of its *Quarterly Cumulative Index Medicus*. The *Current List of Medical Literature*, published by the National Library of Medicine, will be expanded and, beginning with the January 1960 issue, will appear in a revised format and be renamed *Index Medicus*. It will be published monthly thereafter and will be available on a subscription basis from the Superintendent of Documents. Starting with the volume for the calendar year of 1960, the AMA will publish, *Cumulated Index Medicus*, annual cumulated volumes of the new Index.

Standards for Special Libraries— The Need and the Opportunity

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General Electric
Photography Operation

IT MAY BE desirable, as a beginning, to clarify in our own minds what the Convention discussions on work standards are and are not intended to accomplish. *It is not* the purpose of the discussions to establish standards. This will obviously require a great deal more study than we will have time for. *It is* the purpose of the discussions to explore in detail the whole problem of devising standards for the Special Libraries Association—the advantages, the disadvantages and the difficulties. Those of us who have worked on this program are hopeful that the discussions will create in the Association a climate favoring positive action on the matter of standards.

I think the discussions will be most fruitful if we keep clearly in mind the distinction between a statement of standards and the measurement of work performance. While these two ideas are somewhat related, they are not by any means the same. As we all know, there are many different kinds of standards. As far as special libraries are concerned, one can think of standards of service, standards of reference resources, standards of facilities and equipment, standards of financial support, standards of personnel selection and so forth. Among the many kinds of standards are work standards—standards of accomplishment and efficiency. In determining work standards, established techniques for the measurement of work performance will undoubtedly be very helpful. In developing other kinds of standards—standards of service for example—these techniques will be of little or no value.

May I say, as an aside, that the development of work standards is a reasonably sophisticated task. My own feeling is that there are many elementary standards—standards of space or reference resources, for example—that will need to be agreed upon before we tackle the difficult problem of work standards.

I think this distinction between standards and work measurement is highly important. First, one of the reasons why the development of standards for special libraries may be resisted is fear that the work performance of one library may be compared unfavorably with the work of another. This fear is completely unfounded. Standards describe, if you will, the ideal library—what it is in terms of equipment, resources, services and staff. A standard is like par on a golf course—it gives one something to shoot for. Second, we may get sidetracked from our primary objective—standards—if we become too involved in the measurement of work performance. I don't think the measurement of work performance in a library is greatly different from the measurement of work performance in an insurance office or a purchasing department. Librarians should not think that the activities in a library are so unique and different that they are not amenable to standard work measurement techniques. The wise course is to be aware of developments in this field and to apply these where we can. But let's remember that techniques for the measurement of work performance will primarily be useful in the establishment of work standards, which are only one of a number of different kinds of standards that are needed.

Need for Standards

It should not be necessary to labor the need for standards with special librarians,

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most of whom are well acquainted with the standards promulgated by other professional organizations. The plain truth is that standards have been found to be important and useful in almost every phase of our daily lives. For example, the home I live in is built to standards set forth by the American Institute of Architects; the bus I ride to work on has its horsepower rated by the American Society of Automotive Engineers; the roadbed over which the bus travels meets the standards of the American Concrete Institute; the hospital the bus passes is operated in accordance with standards set by the American Medical Association; the safety performance recorded on the bulletin board at the entrance to the plant is measured by standards set by the National Safety Council. And so it goes.

It is a fact too that most standards in daily use today were established by professional organizations such as SLA. Without standards we are in a completely untenable position. This is our present position where, if we are asked to define good special library service, we can only reply, "We don't know. We've never really defined it."

Well-developed standards will, I am certain, serve the Association in many important ways. First, they are a tool for educating management. Further, they are a particularly efficient tool because management understands standards and uses them continually. At Hanford for example, we maintain a very complete standards file that is in constant use. If usable standards are not available, management frequently undertakes surveys and studies aimed at developing them. The usefulness of standards to business management is a fact that can be verified in the experience of all of us.

As a member of the Washington State Library Commission I have had an excellent opportunity to observe in action the standards developed by our colleagues in the public library field. I have seen local library budgets defended before boards of county commissioners on the basis of per capita support recommended by the American Library Association. I have seen library buildings designed and sold to the public on the basis of space standards developed by the Ameri-

can Library Association. These standards are doubly effective because they are professional standards developed without specific reference to the local situation.

Aid to Management

What will standards do to educate management? I think there are a number of straightforward answers to this basic question. With standards we can tell management what a special library really is. We can describe this library in terms of its facilities, its resources, its staff, its services and its place in the organization. This description will be an eye-opener to many industrial managers.

Let me again hark back to my public library experience. Many a library board in a small community has only the foggiest notion of what a public library is and does. The board simply does not realize that the institution it is administering for the community is not in fact a library at all. The standards of the American Library Association, preached continually by public and state librarians, have done much to bring to these library boards a concept and a vision of what good public library service is. I have a feeling that large segments of business management are in the same position as a small town library board when they think about their company library. Management still has much to learn about what a special library is, what resources and facilities it requires and what services it is capable of performing. One of the principal uses of SLA standards will be to help management obtain this picture.

Another important job standards can do is to educate management to the scale of expenditures necessary to adequately staff and run a special library. The number of shoe-string library operations in industry is astonishing. Information is a valuable resource and it cannot be purchased cheaply. Management appears quite able to accept the fact that it costs money to keep a steam plant on a standby basis for the day when the electric power fails. They seem quite able to accept the fact that it costs money to maintain a fire department for the occasional fire alarm. They must also be taught to accept the fact

that it costs money to have an organized reference collection on hand and ready for use. The customer expects to walk into the library, ask for a paper published in 1921 in the *Comptes Rendus* and have the librarian walk to the shelves and get it. This kind of miracle does not just happen. It requires time, money, space, people and planning. Management needs to realize this, and standards will help.

Standards will also form a useful and important tool to aid those of us responsible for the management of special libraries. In fact, this may well turn out to be their most important function. They will compel us to think through and to clarify the function of the library. They will give us goals and objectives towards which to work. They will give direction to our planning and a measure of our progress. They will provide helpful guidance in many day-to-day decisions the administrator of the library is called upon to make, decisions like these, for example: Is this task a clerical or a professional one? What is the appropriate ratio of professional librarians to the number of people served? What is a reasonable travel budget? Is the spacing of these shelves and reading tables according to standards? Are the space standards for offices applicable to libraries or does library work require more space per employee? What's an appropriate library budget for a company of this size?

Standards will serve, then, as a useful tool for those of us charged with administering a special library.

Promotion of Status

Standards will also, I believe, help to improve the status and stature of our profession. They will do this both directly and indirectly. They will have a direct effect because standards are a hallmark of a professional group and the very word itself implies excellence and quality. Gaining general acceptance of our standards will in itself raise the status of the profession. Indirectly, we will all benefit through the improvements standards will bring to special libraries.

I don't need to stress the importance of that little word "status." It sets limits to what you can do, it affects your salary, it

fixes your place in the organization. It is important that we do everything we can to improve the status of our profession. More than any other profession that I know of, we are handicapped by a stereotype—that of the elderly lady charging out books to children in the town library back home. The difference between that little library and a modern information center is that between a model T Ford and jet airplane. That stereotype must be replaced—and is being replaced. But progress is dishearteningly slow.

Almost all of you, I am certain, have had this experience. The company personnel man comes to see you about Mr. X. Mr. X is a great lover of literature. In fact, he reads a lot. But the company hasn't been able to find quite the right niche for Mr. X. He seems to lack drive, aggressiveness and a sense of direction. He's been appraised as a dud in a couple of earlier assignments. But he does love books and surely he would work out very well in the library. After all, is there very much to it? Sound familiar? The personnel man would think you demented if you suggested that Mr. X might make a good professional engineer. The difference is primarily "status." Standards will help us achieve this, I believe.

Looking into the Future

I would like to conclude by discussing two other important points. First, the timing of this enterprise. For a number of reasons, I believe the time is short. The information business—and special libraries are an integral part of this business—is today in a state of crisis. This crisis results from a very simple fact—the volume of information being generated today far exceeds the capacity of our present techniques to handle it. In the field of technical information, this crisis is receiving national attention and national action. Information about this crisis is appearing in periodicals written for management and in the mass media. Knowledge of this crisis is certain to penetrate to management levels soon, if it has not done so already. When it does, librarians will be asked a very pointed question, "What steps must be taken to provide an adequate information service for this company?" When that day

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comes, and it cannot be far off, we will have to be ready with such a program. An important part of being ready will be an adequate set of standards.

Finally, one would hope that in working out our standards we would be able to visualize a little more clearly the information center of the future and that the standards should incorporate some of this vision. For it is certain that the information needs of the future are not going to be met by special libraries in their present form. In fact, one of the frightening things to me about our profession is our apparent inability to grasp the important role that the information agency must play in the future and to gear our thinking to a greatly enlarged concept of our work. We are not going to have forever to raise our sights. Already the question is being raised (see J. Farradane's letter in the February 1959 *Aslib Proceedings*) as to whether a single profession can encompass all the skills that are going to be required of this information specialist of the future. Personally, I think our profession can. I firmly believe that an opportunity exists—as it never has before—to broaden the scope of our profession beyond our wildest dreams. I hope we accept this opportunity, together with the changes in library education, library operation and library responsibility that it entails. One would hope that our standards would incorporate such a high vision of our future.

Our plan of attack should include an order of priority and a goal to be accomplished before this Association convenes again. The important thing is to make a beginning—and to make it now!

EXAMPLES OF LIBRARY MATERIALS

What kind of an impression is your library making? Are your stationery and/or library forms outmoded? Do they need modernization or rejuvenation?

The Advertising Division has assembled a fine collection of samples from various libraries, which will be of great value in re-assessing your materials. These exhibits are in four volumes, as follows:

BOOK I—Acquisitions, processing rubber stamps, reference sheets, stationery and miscellaneous forms.

BOOK II—Periodicals slips, overdue notices and similar material.

BOOK III—New acquisitions lists and bibliographies.

BOOK IV—Departmental reports, library publicity brochures and manuals and policy memoranda.

An examination of these books will enable you to see what other libraries have done and are doing; and you may get some new and worthwhile ideas for your library.

The charge for a loan of these books is \$2 a month per book for members of the Advertising Division, and \$3 a month per book for nonmembers; with an additional charge of \$1 per week per book kept thereafter. The borrower must also agree to pay all shipping charges, at an insured value of \$50.

Arrangements for securing one or all of these exhibit books may be made by contacting Mrs. Elizabeth M. Hutchins, Young & Rubicam, Inc., 285 Madison Avenue, New York 17, New York.

REPORTS OF LIBRARY RESEARCH PROJECTS

The Library Services Branch of the Department of Health, Education and Welfare has begun issuing on an irregular basis *Library Research In Progress*, an information bulletin, classified by subject, listing individual and collective research projects in progress in all fields of library science, statistics and services. Only projects already started or fully planned will be listed. An author-title-subject index will be issued periodically. In order to make the bulletin an effective clearinghouse of information and to avoid unnecessary duplication of research efforts, individuals and associations are urged to submit their projects for listing as soon as they are initiated. Copies of the necessary form, LSB-5 "Notice of Library Research Project," and of *Library Research In Progress* itself are available without charge from the Library Services Branch, Office of Education, Department of Health, Education and Welfare, Washington 25, D. C.

Information Retrieval: General Purpose Data Processing Systems

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ONE OF THE MOST interesting recent developments in the field of information retrieval is the use of medium and large scale general purpose electronic data processing systems for information retrieval applications.

General Characteristics

These systems come in a wide variety of shapes, sizes and costs. The unifying idea behind these systems is the concept of the stored program and the high speed memory. A system has an internal electronic memory capable of storing information—several hundred characters or digits on up to many thousands of characters or digits, depending on the size of the system. For purposes of reading information into or out of desired portions of the memory, the memory is organized into locations commonly called "words." As an example, the basic IBM 650 has 2,000 words of memory, each word being ten decimal digits and a plus or minus algebraic sign.

The designation of an individual operation a machine is to perform is called an "instruction." The sequence of operations the machine is to perform is called a "program." In these stored-program systems, any portion of the memory may be used to store data or to store program instructions. Systems differ considerably in the details of the operations they will perform but all have the basic arithmetic operations and some repertory of transfer and test and branch operations, by which they can examine the results they have calculated and, on the basis of this examination, decide which of sets of alternate instructions they will follow in a particular case.

A system has input and output facilities, such as punched cards, punched paper tape and/or magnetic tape. Some systems have provision for direct printed output; others

require a separate operation on a separate machine to convert the results to printed form. A small system will often have only one type of input-output, such as a card reader and card punch or a paper tape reader and punch. Larger systems may have several types of input-output units and may have multiple units of a given type. For instance, a system may have several tape drives, so that data may be taken from, and results written onto, a choice of several different reels of tape.

Finally, a system will have an operator's panel or console, from which the operator can start and stop the machine, switch the machine from one program to another and exercise supervision and control.

Programming

Perhaps the best way to illustrate information retrieval application of stored program machines is by means of an example. In order not to become bogged down in the details of particular machines, I will discuss a program for a hypothetical machine. Adopting this program to a particular machine would be a matter of detail work only; the basic principles are common to all machines.

The hypothetical machine will have a punched card input and printed output. It will take instructions from memory locations consecutively, unless a special transfer command intervenes. It will have the following instructions included in its vocabulary:

Read a card location x . The contents of the card are read into a block of locations beginning with location x . The details of which columns of the card go into which locations are determined by a format control mechanism, such as a plug-wired control panel.

Compare x and y . Compare the contents of location x with the contents of location y , and record internally whether they are equal or unequal.

Equal-unequal branch a and b. If the result of the last compare instruction was an equal indication, take next instruction from location a. If the result was an unequal condition, take next instruction from b.

Control transfer location x. Take next instruction from location x.

Storage transfer x to y. Place the contents of location x in location y. (The information being transferred into y also remains in location x.)

Print location x. Print out the contents of a block of locations beginning with location x. The details of what positions of memory print in which columns of the paper and the spacing are controlled by a format mechanism, such as a plug-wired control panel.

Since the purpose here is only to illustrate the principles of programming, let the following drastically over-simplified case serve as an example.

We are to program a direct scan-type of search. The records to be searched are document records, on cards. Each card contains a document identification number and exactly seven numerically-coded descriptors. The search request is to consist of exactly three descriptors, and we wish to print out the identification of all documents containing these three descriptors.

The input reader is set up to read the seven descriptors and the identification number respectively into locations 1 through 8. The search request descriptors are to be located in locations 9 through 11. We will here suppose that the operator manually keys in the three request descriptors. In practice the request would be read in off a card that the machine would be programmed to recognize as a request card, but here we wish to avoid describing the details of how to program a machine to recognize different types of cards and to select, accordingly, where information is to be stored.

The program is placed in locations beginning with location 12. Here again we will, for simplicity, suppose that the operator enters these instructions by manual keying, rather than taking the space to describe how to load a program from cards.

Simple Program

We will first show a very straightforward program, which does not make full use of the flexibility of the machine. This Version I of the program is shown in Figures 1 and 2.

Scanning Program, Version I

LOCATION	INSTRUCTION
12	read a card
13	compare 9 and 1
14	if equal go to 27
	if unequal go to 15
15	compare 9 and 2
16	if equal go to 27
	if unequal go to 17
17	compare 9 and 3
18	if equal go to 27
	if unequal go to 19
19	compare 9 and 4
20	if equal go to 27
	if unequal go to 21
21	compare 9 and 5
22	if equal go to 27
	if unequal go to 23
23	compare 9 and 6
24	if equal go to 27
	if unequal go to 25
25	compare 9 and 7
26	if equal go to 27
	if unequal go to 12
27	compare 10 and 1
28	if equal go to 41
	if unequal go to 29
29	compare 10 and 2
30	if equal go to 41
	if unequal go to 31
31	compare 10 and 3
32	if equal go to 41
	if unequal go to 33
33	compare 10 and 4
34	if equal go to 41
	if unequal go to 35
35	compare 10 and 5
36	if equal go to 41
	if unequal go to 37
37	compare 10 and 6
38	if equal go to 41
	if unequal go to 39
39	compare 10 and 7
40	if equal go to 41
	if unequal go to 12
41	compare 11 and 1
42	if equal go to 55
	if unequal go to 43
43	compare 11 and 2
44	if equal go to 55
	if unequal go to 45

Scanning Program, Version I

Flow Chart

Note: At the left of each box are shown the locations of the block of instructions performing the indicated operation.

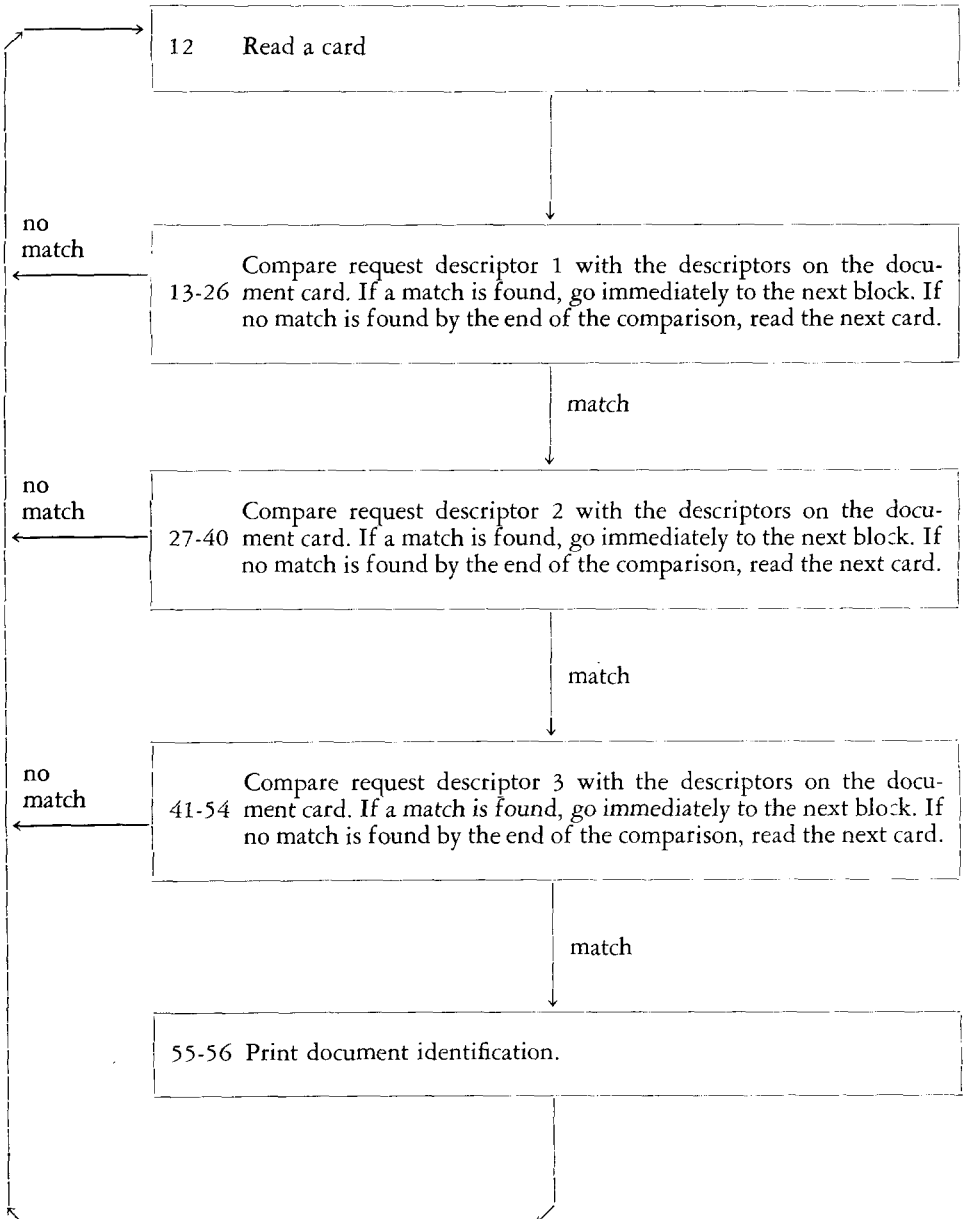


Figure 2

LOCATION	INSTRUCTION
45	compare 11 and 3
46	if equal go to 55
	if unequal go to 47
47	compare 11 and 4
48	if equal go to 55
	if unequal go to 49
49	compare 11 and 5
50	if equal go to 55
	if unequal go to 51
51	compare 11 and 6
52	if equal go to 55
	if unequal go to 53
53	compare 11 and 7
54	if equal go to 55
	if unequal go to 12
55	print location 8
56	control transfer
	location 12

Figure 1

If the reader does not permit himself to be frightened by the proliferation of detail and will patiently go through the program line by line, the essential simplicity, straightforwardness and naturalness of the program should become apparent. As the flow chart shows, the main (comparison) part of the program may be divided into three sections for the comparison, respectively, of request descriptors one, two and three. The comparison of descriptor one is located in the block of locations 13-26. The block for comparison of descriptor two, which is entered only if comparison block one yields a match indication, occupies locations 27-40. The block for comparison of descriptor three, which is entered only if comparison block two gives a matching indication, occupies locations 41-54. If this third block yields a matching indication, the program goes to its print-out block. If any of the comparison blocks fails to yield a match, the program goes back to its read instruction and reads the next card.

Compact Program

The foregoing program, while being simple and straightforward, is bulky—it occupies more locations than are needed to solve the problem. In Version II of the program,

Figures 3 and 4, we see how the same result may be accomplished in a program in which there are fewer written instructions and which requires fewer locations. This program is a little more difficult to understand and more interesting.

Scanning Program, Version II

LOCATION	INSTRUCTION
12	read a card
13	storage transfer 9 to 38
14	storage transfer 10 to 39
15	storage transfer 11 to 40
16	storage transfer 38 to 37
17	storage transfer 39 to 38
18	storage transfer 40 to 39
19	compare 37 and 1
20	if equal go to 33
	if unequal go to 21
21	compare 37 and 2
22	if equal go to 33
	if unequal go to 23
23	compare 37 and 3
24	if equal go to 33
	if unequal go to 25
25	compare 37 and 4
26	if equal go to 33
	if unequal go to 27
27	compare 37 and 5
28	if equal go to 33
	if unequal go to 29
29	compare 37 and 6
30	if equal go to 33
	if unequal go to 31
31	compare 37 and 7
32	if equal go to 33
	if unequal go to 12
33	compare 40 to 37
34	if equal go to 35
	if unequal go to 16
35	print location 8
36	control transfer location 12
37	{ these locations are reserved for working storage
38	
39	
40	

Figure 3

In this program, there are not three separate blocks for the comparison of the three request descriptors. There is one comparison block, location 19-32, which compares the

Scanning Program, Version II

Flow Chart

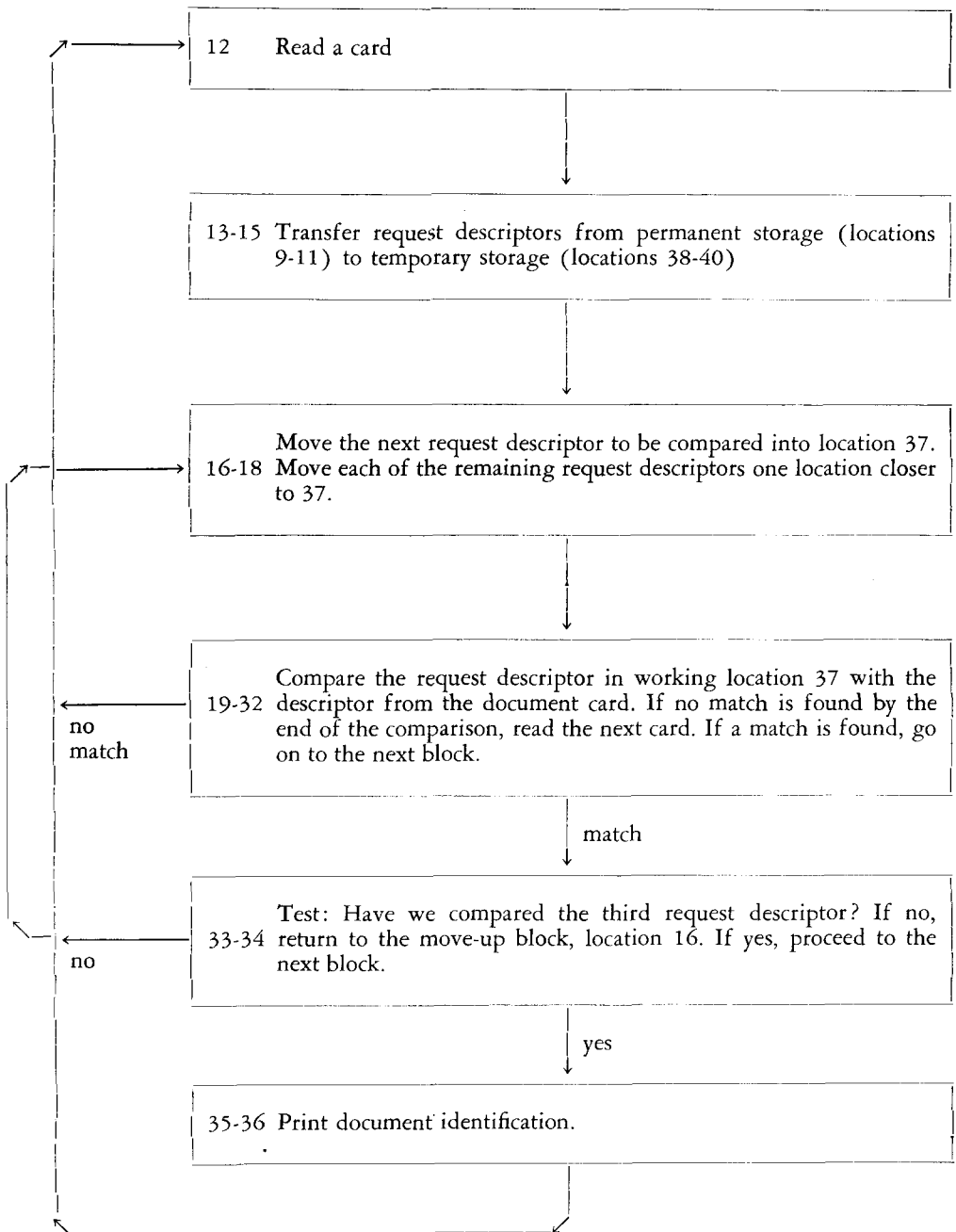


Figure 4

descriptor in a "slot," location 37, with the descriptors from the card.

The three request descriptors are successively entered into the working slot by the "move-up" block, locations 16-18. As before, if the program fails to find a match on any run-through of the comparison block, it goes directly to the read instruction and reads the next card. If the program does find a match during a run-through of the comparison block, it then tests to see if this comparison was with the third descriptor, that is, whether the descriptor in the working slot is the third descriptor. If so, a print-out is made. If not, the program returns to the move-up block to enter the next descriptor into the working slot.

It is seen that, by this device of having one block of instructions and moving various data to where they can be operated on by this block, a substantial number of locations are saved. No time is saved, since it will take the same amount of time to go through one block three times as to go through three blocks, but space is saved. The saving shown in the present example is perhaps only moderately impressive, 40 locations as against 56, but the example does illustrate the principle. It will be understood that in a problem of more realistic dimensions, where we might be comparing eight request descriptors against 18 document descriptors, the saving of writing one block for 18 comparisons, as against eight such blocks, would be very considerable.

Address Modification

There is an even more powerful technique for saving space, known as address modification. (The designation of a location is called an "address." In the instruction: "Compare 9 and 1," "9" and "1" are addresses.) If the program were written in this style, there would be a basic instruction, such as: "compare 9 and 1." After this instruction was executed, the program would add a one to the second address of the instruction, thereby creating the instruction: "compare 9 and 2." This instruction would then be executed. Again a one would be added, creating the instruction: "compare 9 and 3," and so on. If a match is found, the program would restore the instruction: "compare 9 and 1."

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Then it would add a one to the *first* address, creating the instruction: "compare 10 and 1." Then it would again go through the loop, increasing the second address by one. Appropriate tests would be included, so that if no match is found by the time the second address reaches seven, the program returns to the read instruction; and so that if a match is found after the first address reaches 11, the program goes to the print-out instruction.

In this version, as in Version II, the saving would be greatest in a problem of larger dimensions.

It will be appreciated that data processing machines can be programmed for search procedures of considerable complexity. For example, the program could be written to recognize special codes, which arrange the descriptors into groups or phrases, or to recognize special codes, which assign roles to the descriptors, such as starting point, raw material, end point, purpose, process, etc.

For our example we have taken a direct scan-type of search. But data processing machines are equally applicable to the look-up and compare type of searching. For a discussion of a very successful application of this type, the reader is referred to the article "Information Searching with the 701 Calculator," by R. H. Bracken and H. E. Tillitt, in the *Journal of the Association for Computing Machinery*, vol. 4, no. 2, April 1957.

It is hoped that the above examples have shown how efficiently the stored program type of machine can be used in information retrieval problems—that most of the memory can be made available to store data, since the instructions necessary to handle a large volume of operations on a large volume of data can be compressed into relatively few locations by programming technique.

It is also hoped the reader acquired some feeling for what programming is. It is particularly to be noted that programming does not require a background in mathematics or in formal logic, beyond what is necessary to solve the problem by manual means. The foresight, attention to and regard for detail, and imagination necessary for any good systems and procedure design work are all necessary for data processing programming.

NOTE: This is the last in a series of four articles.

Soviet Scientific Abstracting Journals

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WE LIVE IN AN AGE that has seen the race between nations for new scientific discoveries reach a furious and unflagging tempo. The concomitant of this race has been the production of a great flood of scientific literature so vast that no individual scientist could be expected to cope with all of it. At the same time, it has become necessary for the scientist to follow carefully not only the developments in his own specialized field but the progress in related sciences; and this has entailed a familiarity with the scientific literature published not only in his native tongue but in other languages as well.

The solution to this dilemma has been one of the most useful of bibliographical tools—the abstracting journal.

The purpose of the scientific abstracting journal has been, generally, to list systematically the most important literature in particular fields of science and to elucidate their contents in an abstract. In many cases the abstract alone is sufficient for a scientist's purposes, and he is therefore saved the time of hunting down and reading the actual publication. In this way abstracting journals enable the scientist to acquaint himself, in a comparatively short time, with a broad range of scientific literature and to employ this information in his work for better results.

There are, at the present time, a few hundred scientific abstracting and similarly informative journals in existence throughout the world. It is the purpose of this article to examine the Soviet abstracting journals—journals which today are proving of great value to the foreign as well as the Soviet scientist. The main emphasis is on current publications of this type, with only a brief outline given of their predecessors.

Early Abstracting Journals

In Russia the first publications having the character of abstracting journals began to appear at the end of the first quarter of the

nineteenth century. Of these pre-Soviet journals, the best known and most successful are: *Ukazatel' otkrytii po fizike, khemii, estestvennoi istorii i tekhnologii* (Index of discoveries in physics, chemistry, natural history and technology—1824-1831); *Ukazatel' russkoi literatury po matematike, chistym i prikladnym estestvennym naukam, medetsine i veterinarii* (Index of Russian literature on mathematics, pure and applied natural sciences, medicine and veterinary science—1872-1891, 1899-1916); *Meditsinskoe obozrenie* (The Medical review—1874-1918); *Bibliograficheskii ukazatel' statei zhelezno-dorozhnoi periodicheskoi literatury* (Bibliographical index of railway periodical articles—1883-1916).

The abstracting journal proper, of the kind familiar to us today, began in Russia in 1928, with the publication of *Indeks nauchnoi literatury* (Register of scientific literature). This journal was intended to cover all scientific literature but it was discontinued the same year, after the publication of a few issues, to be replaced by a series of individual abstracting journals. Each of these was devoted to a scientific specialty, and some were devoted strictly to the abstracting of foreign scientific literature. These journals were: *Tsentral'nyi referativnyi meditsinskii zhurnal* (The Central medical abstracting journal—1928-1941); *Khimicheskii referativnyi zhurnal* (The Chemical abstracting journal—1938-1941); *Za ovladenie tekhnikoi* (For mastering of technology—1931-1933); *Referativnyi biologicheskii zhurnal* (The Biological abstracting journal—1933-1937); *Mirovaia tekhnika* (World technology—1933-1938); *Novosti inostrannoi metallurgii* (News in foreign metallurgy—1935-1938); *Fiziko-matematicheskii referativnyi zhurnal* (Physico-mathematical abstracting journal—1939-1941).

The most important journal of all, however, was *Novosti tekhnicheskoi literatury*

(News in technical literature), which was published monthly from 1936 to 1953, in the following six series: 1) Mining industry, 2) Machine construction, 3) Metallurgy and the technology of metals, 4) Building industry, 5) Chemistry and chemical engineering and 6) Energetics and power industry. These individual sections were further subdivided into detailed thematical groupings. Both Russian and foreign literature was abstracted. Foreign material was listed first in its original language, then in Russian translation. *Novosti tekhnicheskoi literatury* was published by the Gosudarstvennaia Nauchnaia Biblioteka (State Scientific Library) of the Ministry of Higher Education, located in Moscow.

In 1953, after 18 years of existence, *Novosti tekhnicheskoi literatury* was discontinued. Its work has been carried on by a series of abstracting journals published by the Institute of Scientific Information of the Academy of Sciences (Institut Nauchnoi Informatsii, Akademiia Nauk SSSR), which was established especially for this purpose. These journals, under the collective title *Referativnyi zhurnal* (Abstracting journal), were first published in October 1953, in eight series. Today the series has grown to 13, covering all the sciences and the most important technical disciplines.

Referativnyi Zhurnal

The journal covers approximately 1,000 scientific publications of the Soviet Union and approximately 13,000 foreign scientific periodical and non-periodical publications from 88 countries. In addition it also prints data on new books, theses and patents. Each entry is numbered consecutively within its series, and this number is used to identify it in the indexes included in each issue. These indexes include 1) a Russian index, 2) an index in Latin script covering material in the West European languages and 3) individual indexes of material in Chinese, Arabic, etc. (Since these indexes appear, as a rule, in each issue of every series, they will not be mentioned again in the annotated part of this article.)

These indexes are supposed to cumulate, on different bases, in all the series—but this

cumulation has hitherto been highly erratic and delayed, sometimes as much as three years. The publishers are, however, "catching up." Whenever such an index is already available, the fact is noted.

Within each of the series, material is arranged in categories by subject. A contents table of these categories, in Russian, is included in each issue. Some of the series also have contents tables in English on the last page, and some have a loose English contents table inserted, unbound. Whenever this is the case, it is indicated in the annotations.

The individual entries, which are listed on a double-column page, are, as a rule, entered in alphabetical order by title under each subject heading. In the case of foreign material with the title translated into Russian, the original title, in the original alphabet, follows in parentheses.

The title is followed by the author's name, which, in the case of foreign works, is transliterated into Cyrillic characters and followed by the name in its original alphabet.

Each entry includes detailed bibliographical information and abstracts of 50-300 words, often accompanied by drawings. A small percentage of the material, largely books, includes short annotations or bibliographical information instead of abstracts, but in these cases reference is usually made to a more detailed review of the publication.

The abstracts appear with varying delays after the appearance in print of the material. The Soviet material is generally abstracted within six months after its first publication; the abstracting of foreign material takes much longer.

Each of the 13 series has a specific subtitle, which follows the collective *Referativnyi zhurnal*. The full title of the chemistry section, for example, is *Referativnyi zhurnal. Khimiia*; of the biological section *Referativnyi zhurnal. Biologiia* and so forth. In the remaining portion of this article, I will refer to the sections by their subtitles alone.

In 1958 Mezhdunarodnaia Kniga (the Soviet book exporting agency) announced that as of 1959 separate reprint booklets would be issued for some of these journals, covering the more important subjects in the regular issues. Two such booklets would be

issued, for example, for *Metallurgia*, one covering "The Production of Steel and Cast Iron" and one on "Welding Production." These reprints would appear monthly or semimonthly and would be subscribed to separately from the journals themselves.

The author has not, at this writing, been able to locate any of these booklets. It may be assumed, however, that they are being published, since they are advertised in the subscription catalog of *Mezhdunarodnaia Kniga, Newspapers and Magazines of the U.S.S.R. for 1959*.

ASTRONOMIIA I GEODEZIJA (Astronomy and Geodesy)

Published monthly since October 1953, this publication is, I believe, the only one of its kind in the world—the only one, that is, which enables the reader to follow the international literature on astronomy and geodesy. During its first year it was called *Astronomiia*, but the gradual enlargement of the geodesic section brought about a change of title in 1954.

Today this journal includes in each issue approximately 800 abstracts, notes and bibliographical listings, covering all branches of astronomy and astrophysics, radio astronomy, cosmogony and cosmology, geodesy and topography, aerial photography and photogrammetry, higher geodesy, the theory of the earth's shape and gravimetry, theoretical astronomy and the mechanics of the heavens, problems of interplanetary communication, etc. It records achievements in instrument-making and apparatus construction and the activities of astronomical and geodetic institutions and organizations.

A cumulative subject index has been published, covering the period 1953-55.

BIOLOGIJA (Biology)

A semimonthly publication, *Biologiia* first appeared in October 1954. Each issue includes between 4,000-5,000 entries.

This journal covers all branches of the biological sciences: biology, paleontology, anthropology, cytology, histology, individual development, genetics, virology, microbiology, general and systematic botany, plant psychology, soil science, plant growing, plant diseases, paleobotany, general and systematic zoology, morphology, paleozoology, farm animals, animal diseases, pathology, physiology of mammals and man, pharmacology, pharmacotherapeutics, toxicology and all branches of parasitology.

Each issue includes, on the last page, an English index.

ELEKTROTEKHNIKA (Electrical Engineering)

A monthly, published since November 1955. Its original title was *Elektrotekhnika. Telemekhanika. Radiotekhnika. Elektronika*. Each issue includes abstracts of 2,000-3,000 items.

Elektrotekhnika covers the following subjects: theoretical electrical engineering, electrical materials, thermoenergetics, hydro- and wind-power, power systems, electrical machines and transformers, electrical apparatus, electrification of industry, transport and agriculture, measuring techniques, automation and telemechanics, electronics, radio engineering, electrical communications, light techniques and chemical power sources.

FIZIKA (Physics)

A monthly, this journal has been published since January 1954. From the time of its inception until 1957, it covered all the physical sciences of interest to technical and scientific personnel. In 1957 a separate organ was founded for the section on geophysics, which has since that time appeared under the title *Geofizika*.

At the present time each issue of this journal includes approximately 2,500 numbered entries, covering the following branches of physics: theoretical and nuclear physics, atomic and molecular physics, solid-state physics, magnetism, electricity, electronics, acoustics and optics. The journal also takes up questions of nuclear engineering and energetics.

A cumulative subject index has been published for 1953-55.

GEOFIZIKA (Geophysics)

Originally a part of the publication *Fizika*, this journal has been published as a separate monthly organ since 1957.

Each issue includes approximately 850 entries on all branches of geophysics: physics of the atmosphere, hydrosphere and the earth. It includes material on the various programs for the International Geophysical Year and on matters of interest to scientists in hydrological and meteorological services. The section entitled "Earth Physics" also reviews current literature on geophysical surveying methods and logging geophysics.

The last page of each issue carries an English table of contents.

GEOGRAFIJA (Geography)

A monthly, published since January 1956. From July 1954 until 1956, it was published as part of a series covering both geological and geographical material and was entitled *Geologiia i geografiia* (this series presently includes between 2,500 and 3,000 abstracts, bibliographies and other publications).

Geografiia covers all branches of physical geography: paleogeography, geomorphology, climatology, inland water hydrology, oceanography, glaciers, geography of soils, biogeography and nature protection. In addition, it covers cartography, regional and economic geography, medical geography and historical geography. It also takes up the general problems of the science, the activities of different institutions in the field, the history of geography and the methods and organization of teaching it.

Each issue includes an index by author, a brief subject index, an index to the maps included in the various articles and a loose (unbound) index in English. A cumulative author index for 1954-55 was published in 1957.

GEOLOGIIA (Geology)

Originally published as part of the series *Geologii i Geografia*, this journal has appeared as a separate monthly publication since January 1956.

Each issue includes approximately 2,000 items, and it can safely be said that it is the only such journal in existence today covering all the branches of geological science. It includes material on the theory of mineral deposits, exploration and prospecting of solid minerals, surveying and logging geophysics, hydrogeology, engineering geology, frost action, mining problems, the problems of economy and organization in the mining and fuel industries, drilling and the working of mineral deposits.

Each issue generally includes an English table of contents.

A cumulative author index for 1954-55 was published in 1957.

KHIMIJA (Chemistry)

A semimonthly published since October 1953, this journal covered all chemical subjects until 1955. In January 1955, because of the enormous amount of current material on all aspects of the science, a separate series on biological chemistry was initiated under the title *Khimiia. Biologicheskaiia Khimiia*. In January 1956, the metallurgical section became a separate series entitled *Metal-lurgiiia*.

Today a typical issue of *Khimiia* includes approximately 3,500 entries on such branches of chemistry as geochemistry, hydrochemistry, organic chemistry, high polymer chemistry, analytical chemistry, chemical technology, laboratory equipment, corrosion, chemical plant processes and equipment and safety and sanitation in the chemical industry.

Annual indexes of authors and patents have been published for the period 1953-55.

KHIMIJA. BIOLOGICHESKAIA KHIMIJA (Chemistry. Biological Chemistry)

Originally a part of the journal *Khimiia*, this journal has been published as a separate semimonthly organ since January 1955.

Each issue includes approximately 1,300 items, covering the following: general problems of biochemistry, methods of biochemical analysis, biochemistry of proteins and amino acids, enzymes, vitamins, hormones and other bioactive substances, biochemistry of microorganisms, viruses, bacteriophages, antibiotics, immunochemistry, biochemistry of plants and animals, biochemistry in medicine and nutrition, technical biochemistry and the biochemical aspects of pharmacology and toxicology.

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MATEMATIKA (Mathematics)

A monthly, published since October 1953. Each issue includes 800 to 900 abstracts.

Matematika covers all the branches of theoretical mathematics and such branches of applied mathematics as the theory of the construction and operation of computers and other mathematical instruments, graphical methods used in mathematics and so on.

Beginning with 1958, an annual author index should appear in the last yearly issue. A subject and formula index has been published for 1953-54.

MASHINOSTROENIE (Mechanical Engineering)

A monthly, this journal has been published since 1956. Each issue includes approximately 3,500 to 4,000 items on the following subjects: the general problems of mechanical engineering and machine design, mechanical engineering technology, metrology, foundry technology and equipment, transportation, traction and hoisting equipment and engines, special mechanical engineering (agricultural, food, chemical, printing, construction, road-building, mining, household).

MEKHANIKA (Mechanics)

A monthly published since October 1953, this journal includes approximately 1,200 to 1,400 entries in each issue. It covers all branches of general mechanics, including the stability of movements and the theory of mechanisms and machines. Special sections are devoted to the problems of gas and aerodynamics, hydrodynamics, the theory of waves, turbulence, the theory of ships, elasticity and plasticity.

Thus far, annual subject indexes have been published for 1953-56.

METALLURGIJA (Metallurgy)

A monthly published since 1956, this journal was previously a part of the publication *Khimiia*.

Each issue includes approximately 2,000 items, covering the following subjects: the general problems of metallurgy, ore treatment, properties of refractory materials and fuels and their applications at metallurgical plants, plant control, the use of measuring apparatus, metallurgy of pig iron, steel, non-ferrous and rare metals, powder metallurgy, metallurgy of semi-conductors, metal-working by pressure, welding and heat treatment, corrosion and protection, metal physics, physical metallurgy (theoretical questions, the structure, properties and applications of pig iron, steel and non-ferrous metals and alloys), quality control, industrial analysis and safety practices and the technical and economic analysis of metallurgical plants.

A cumulative subject index has been published for 1956.

Subscriptions

Subscriptions to these journals may be placed through the following firms in the United States:

Four Continent Book Corp.
822 Broadway
New York 3, New York

Imported Publications & Products
4 West 16th Street
New York 11, New York

Victor Kamkin, Inc.
2906 14th Street N.W.
Washington 9, D. C.

Moore-Cottrell Subscription Agencies Inc.
North Cohocton, New York

Stechert-Hafner, Inc.
31 East 10th Street
New York 3, New York

Universal Distributors Co.
52-54 West 13th Street
New York 11, New York

(Listed in the subscription catalog of Mezhdunarodnaia Kniga).

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Honorary Library Societies Merge

Pi Lambda Sigma Fraternity, Inc., the oldest library honor society in the United States, has merged with and become a Chapter of Beta Phi Mu, an international library honorary fraternity. The Chapter installation and initiation of members took place at Syracuse University, where the fraternity was founded in 1903.

Special Libraries Fifty Years Ago

A plan for co-operation between the Library of Congress and the state libraries and legislative reference departments in the preparation of reference lists is outlined in an article by H. H. B. Meyer in this issue. We invite careful attention to this plan on the part of all persons interested in bibliographies on public affairs. The great waste of time and energy which goes to the duplicating of lists already prepared will be minimized by co-operation and attention can be directed toward those subjects on which no bibliographic work has been done.

There is a vast amount of work which needs to be done in special bibliographies. Attention should be directed toward the greater specialization of lists. General bibliographies should be broken up into detailed classified lists. Thus the Library of Congress list on government regulation of insurance should be classified to cover the newer phases of regulation, such as state control of fire rates, etc.

The first essential in co-operation is that each library should determine what already exists before attempting any bibliography, and having prepared any list covering a new subject, whether complete or incomplete, they should let that fact be known.

The attention of special libraries or of any library, for that matter, should not be given largely to the preparing of lists of material. They have a more useful function in interpreting material. Effective co-operation in preparation of lists will leave them freer to perform their more useful functions.

The Library of Congress already has a large number of typewritten supplemental bibliographies to its printed editions and typewritten lists on other subjects. Many of these lists are available for permanent deposit in state libraries or may be loaned for short periods. . . .

The Library of Congress will prepare a preliminary list and run off copies on a duplicating machine so as to be able to send one to each state library for addition and suggestion. The lists are then to be returned to the Library of Congress for editing and printing. This presents a practical plan of co-operation, of which the Library of Congress is willing to make a trial.

SPECIAL LIBRARIES, October 1910, p. 58, 62.

Developments in Photoreproduction

LORETTA J. KIERSKY, Librarian

Air Reduction Company, Inc., Murray Hill, New Jersey

Chairman, SLA Committee on Photographic Reproduction

THIS YEAR MARKS the 100th anniversary of the granting of the first commercial microfilm patent. It was granted to Rene Dagron by the French Patent Office on June 21, 1859. A visible record of progress during this century was apparent in the exhibits shown at the Eighth Annual Meeting of the National Microfilm Association, held April 2-4, 1959, in Washington, D. C. Increased demands from industry, particularly during the post-war years, have resulted in the development of new systems, processes and equipment with wide latitude for application.

Among these developments is the Kalfax process developed by Kalvar Corporation, New Orleans. This is a dry process for making 16mm or 35mm duplicates from either negative or positive originals. An emulsion sensitive to ultraviolet light is coated on a Mylar base and then processed by heat. The final image is plastic rather than a dye image. The image is shown as an opaque white on a yellow background. It appears black when projected onto a screen.

The film is waterproof, tear and crack-resistant and also resistant to nuclear radiation. It has an indefinite shelf-life and requires no special storage environment. Format may be sheet, roll or unitized film. At present the cost of unexposed Kalfax film is about two cents more than silver print film. However, processing costs will vary depending upon volume and equipment in use. Because of its capability for duplication, the film offers a high potential for application to information systems.

Recently two new hand microfilm readers made their appearance. Opta-View model "F" is a small hand reader designed by Optics Manufacturing Corp., Philadelphia. It is used for viewing micro-images on cards or jacketed film strips of 16, 35 and 70mm width. It features an adjustable lock-ring for focusing, a triplet lens optical system and a

pressure plate that grips without scratching. Price of the 8X lens covering a one inch field is \$29.50; price of the 12X lens covering a five-eighths inch field is \$33.75.

Inspector "25" is an economy pocket-sized hand viewer for on-the-spot reading of microfilm. Weight is about three ounces. Any available light source permits viewing unitized cards with a Mil. "D" aperture. It has a magnification of 3X. Manufacturer is Filmsort Division, Miehle-Goss-Dexter, Inc., Pearl River, New York. Price is \$5.50.

Minor refinements have been made in photocopiers, and a few new models are available. Copy ready for use in 12 seconds can be obtained from the latest high-speed copying machine manufactured by Copycat Corporation, New York City. It may be attached to a wall to save space or used as a desk portable. The new spray process developing agent can be used for a month or approximately 400 copies. The machine is available in two models—F10, priced at \$395, copies originals up to 10 inches, and F14, \$495, copies originals up to 14 inches.

"Satellite," a single unit copying machine, has recently been added to the line manufactured by Photorapid of America, New York City. It will copy single sheets or pages of a bound volume up to 9 x 14 inches. Weight is 20 pounds. Metal masters can be made on the machine for about 39 cents per plate. Cost of the machine is \$169.

A new 13 pound portable Verifax Book Copying Unit is available from dealers handling the Eastman Kodak line. It is designed for copying pages in bound volumes or other originals up to 8½ x 11 inches. A special thin platen permits copying tightly bound pages. Support of the book during exposure prevents damage to the binding. Exposures can be processed in any Verifax Copier. This can be done immediately or days later if the exposure has been made at a field location. Approximate cost is \$185.

One of the lowest priced portable photocopyers is the Genco Challenger, available from General Photo Products Co., Inc., Chatham, New Jersey. The curved surface printer permits copying from single sheets or bound volumes. It will copy all colors and is operated under normal lighting conditions. Copying surface is $9\frac{1}{2}$ x 15 inches. Weight is 14 pounds. Price is \$85, or \$105 if electrically driven.

New developments in paper manufacture for use in photocopiers permit greater speed in obtaining copies. A new negative paper called Bright-Light No. 1 has been developed by Peerless Photo Products, Inc., Shore-

ham, Long Island, New York. The manufacturer claims it has increased resistance to fogging under high-intensity fluorescent lights or sunlight. It has an extra shield containing a yellow pigment that acts as a filter to screen out ultra-violet rays. No change in exposure time is required for making a DRI-STAT copy.

Copycat Corporation has a specially coated Multi-Positive paper which, when used with their spray process developer, permits 10 to 15 copies to be made at an initial cost of $3\frac{3}{4}$ cents per copy. The paper may be used with some other copying machines depending upon the developing agent and the degree of exposure to light.

Standards For a Common Language Conference

First steps have been taken to find a way to develop a "common language" which would make it possible to code and index the world's growing store of scientific knowledge. The purpose is to make it possible to use machines to retrieve indexed material quickly and easily and to translate the literature, available in many languages. The problem was discussed by some of the world's leading figures in the educational, library and documentation fields and by representatives of the machine manufacturers at the International Conference for Standards on a Common Language for Machine Searching and Translation held at Cleveland, Ohio, September 6-12. The conference was sponsored by Western Reserve University and the Rand Development Corporation.

Representatives from 10 countries participated in the conference. Optimism that a solution can be found characterized their discussions.

Five study committees, which were set up to coordinate the ideas presented and to codify the recommendations, reported to an ad hoc committee composed of members from each of the nations represented at the conference and several members-at-large. The ad hoc committee will report the results of the conference and set the stage for future work. It was the intent of the meeting that this committee should continue in existence and issue regular

progress reports. Its recommendations are to be presented at another international conference to be held no sooner than one year from now nor later than two years. The hope was expressed that in the meantime certain of the resolutions could be transmitted officially to the International Organization for Standardization for its suggestions and possible submittal to an ISO committee for study.

William H. Offenhauser, Jr., a member of the American Standards Association's Committee Z-57 on Standardization in Sound Recording, urged the use of existing procedural machinery for development of the standards that will be needed. The International Organization for Standardization and the American Standards Association offer the integrity and impartiality that is needed for successful realization of the goals of the conference, he said.

Vice-Admiral G. F. Hussey, Jr., managing director of the American Standards Association and vice-president of the International Organization for Standardization, spoke at the dinner meeting of the conference. Admiral Hussey attended the conference as an observer on behalf of the ISO. "Without standards, a tremendous amount of energy could be dissipated without fruitful results," Admiral Hussey said. "But with standards, a key can be provided which will unlock the archives for all the world."

Have You Heard . . .

International Association Of Law Libraries Formed

At the organizational meeting of the International Association of Law Libraries in New York City in June, Professor William R. Roalfe, Northwestern University Law School, was elected President of the new Association and Mr. K. Howard Drake of the Institute of Advanced Legal Studies, University of London, Vice-President. A nominating committee was appointed to select candidates from various parts of the world for the offices of secretary, treasurer and members of the board of directors. The new Association will have as its objective the promotion of the work of individuals, libraries and other institutions concerned with the acquisition and bibliographic processing of legal materials collected on a multi-national basis and will strive to facilitate the research and other uses of such materials on a world-wide basis. There will be two classes of membership: regular members, persons or institutions interested in the acquisition and servicing of legal and related materials; and sustaining members, publishers, book dealers or other institutions desiring to support the Association's program. Dues for regular members will be \$5; for sustaining members \$15.

Microfilm Indexing Booklet

Recordak Corporation, a subsidiary of Eastman Kodak Company, has published a new booklet entitled "How to Index Your Microfilm Records." Using simplified charts and illustrations, the book explains in detail the best methods for indexing microfilm, including the Kodamatic and target systems. Copies are available without charge from the Recordak Advertising Department, Wanamaker Place, New York 3, New York.

Service Furnishes Undocumented Information

World Wide Information Services, Inc., located at 660 First Avenue, New York 16, is an independent research organization specializing in obtaining undocumented information, conducting market, product, industrial

and opinion surveys and supplying promotion and public relations services. The firm started over a year ago when the Special Services Department of International News Service ceased operations, and many former INS reporters and bureau chiefs are now among the more than 5,000 correspondents representing the company in 96 countries and territories. Richard Hubbell, Director of the service, believes that its growth and success can be attributed to the fact that its operations are organized for speed and flexibility and that men trained in advertising and research supervise reporters and photographers who have in turn been trained to secure facts quickly and accurately. Thomas Battle, a serials publisher representative, has recently joined World Wide Information Services, Inc. in an executive capacity to organize and extend its services to business and technical librarians. The service is available on an individual assignment or continuing contract basis.

H. W. Wilson Company Appoints Library Relations Chief

The H. W. Wilson Company has announced the appointment of Jack Ramsey, formerly chief librarian of the Glendale, California, Public Library, to the newly-created post of Chief of the Library Relations Department. Mr. Ramsey, who will begin his duties on or before November 1, will have administrative supervision over such phases of the company's relations with its library customers as correspondence, advertising, promotion, mailing, exhibits and related activities.

Coming Events

AN INSTITUTE ON THE ROLE OF CLASSIFICATION IN THE MODERN AMERICAN LIBRARY, sponsored by the University of Illinois Division of University Extension and the Graduate School of Library Science, will be held November 1-4, 1959, at Robert Allerton Park, Monticello, Illinois. The fee for the entire Institute, including registration, nine meals and dormitory lodging for three days, is \$40. For further information write: In-

stitute Supervisor, Division of University Extension, 116b Illini Hall, Champaign, Illinois.

SLA Member in the News

JOHN L. GARDNER, formerly engineering librarian in the Research and Development Division of Allen B. Du Mont Laboratories, Inc., in Clifton, New Jersey, has been selected to organize and supervise a new library for *Sports Illustrated* in the new Time, Inc. building in New York City.

In Memoriam

MRS. RUTH PARKS, librarian at the National Safety Council in Chicago, died after a long illness. A member of SLA since 1930, Mrs. Parks was particularly active in the Illinois Chapter, which she served as Secretary-Treasurer, President and Director.

Letters To The Editors

The Decimal Classification Office, Library of Congress, seeks advice from educational film librarians on the use made of the DC numbers printed on Library of Congress cards for films.

For many years the ALA Audio-Visual Committee has taken the position that the application of DC numbers to film cards is not only useless, because most well-managed film collections are not arranged in this way, but also undesirable, in that the numbers may encourage inexperienced or untrained librarians to use them when other systems of arrangement for films are preferable.

However, the International Film Cataloging Conference held at Rochester, New York, in 1952 recommended that DC numbers be placed on LC film catalog cards.

The Library has followed this international recommendation, though with misgivings. It is the experience of the Decimal Classification Office that it is often difficult and sometimes impossible to assign a correct DC number to a film. Many assignments are guesses; undoubtedly a fair number are wrong.

We now find that there is only one non-U.S. subscriber to these cards (although many libraries world-wide receive the printed catalog of film entries as part of the *National Union Catalog*), and we feel that we should, therefore, discontinue the assignment of DC numbers to films *unless American libraries require them*.

May we invite answers to the following questions:

1. Do you make any use of the DC numbers on LC catalog cards for films?
2. If you do, what is the use?
3. Would you object if the numbers were discontinued?
4. If you wish the numbers continued, would you

approve of the use of shorter numbers assigned from the Abridged Decimal Classification, or perhaps limited to the three figures preceding the decimal point?

Replies sent to the undersigned at the Library of Congress before January 1, 1960, would enable the Decimal Classification Office to plan its work so as to provide the most service to the greatest number of libraries.

BENJAMIN A. CUSTER
Editor, Dewey Decimal Classification

June 20, 1959

I have just returned from our 50th Anniversary Conference. My greatest joy was to see so many of the early workers in the vineyard still alert, enthusiastic and interested in knowing how the Association to which they had contributed so much was functioning. There were those honored by election to the Hall of Fame and those not so honored but well-remembered by some of us for their many contributions to our struggling Association when we were financially poor but very rich in members' interest and voluntary work.

On Wednesday night after the Banquet, a dozen or more of us from all over the country and from Canada, some young and some not so young, were sitting in a group discussing the events of the past few days. It gradually became evident that there was a unanimous feeling of sadness, uneasiness and frustration. The Conference that should have served as a clarion call to the next 50 years of achievement had passed into history but we were going home empty-handed and uninspired. Why?

While we were all aware of the penalties of the mushroom growth of membership, we were struck by the lack of recognition accorded our present hard-working members. For instance, in honor of our 50th Anniversary, it would have been fitting to have invited *all* members to the Sunday tea to meet the Hall of Fame electees, present officers and Past-Presidents. Instead, only the new conventioners were included while those who had "borne the heat of the day" were ignored.

Much more important, however, is the fact that no longer is time provided at the Annual Business Meeting for Chapter Presidents, Division and Committee Chairmen or Special Representatives to report *personally* on their activities, to ask advice on their problems or to give due recognition to those who have worked with them as officers or committee members. Thus the membership, as a whole, is not fully informed on work in progress or completed nor does it have the opportunity to express an opinion on recommendations made in such reports. To hear that six Chapters did so and so or that all Committees worked hard means little, but many would have been interested in the details of the recruitment campaigns of the two Chapters that divided the H. W. Wilson Company Award, to cite only one instance.

If it is imperative that all these reports be rather summarily dismissed by inclusion in either the

President's report or the reports of the Chapter and Division Liaison Officers, then it would seem a simple matter to allot time during the Annual Business Meeting to present each President and each Chairman to the members and allow them to present—or at least name—their co-workers. This would serve as slight recognition of their efforts and thanks for work well-done.

Such recognition would also serve a more important purpose. It is from these people that we should draw our candidates for our officers and for the Executive Board. This little ceremony would help to make these active, working members better known to the membership as a whole and to the Nominating Committee which should be on the alert for promising people. If and when such people were nominated, they would be personalities instead of merely names on the ballot as they usually are now. In the past, potential leaders were noticed because of the way they spoke to a question or because of the presentation of an excellent report.

Unfortunately, I was ill and could not attend the Annual Business Meeting. Later, I was surprised to hear that the Agenda had no place for "New Business" as the Executive Board apparently felt that there were no policy matters which were "subject to authorization of the Association" as provided in Bylaw II, Section I. As a matter of fact, I had intended to present two questions I feel are of vital interest to all the membership and which involve Association policy.

The first concerned our nominating and election procedures. As a result of the recent election, 11 of the 12 members of the Executive Board are associated with some type of technical library. This came about because only two non-technical librarians were nominated and each of them was paired against a technical librarian. True, every Division can not be represented on every Executive Board but if, in pairing candidates, choices were made from groupings such as the following there would be a chance for fair representation:

- a. Biological Sciences, Hospital, Metals, Science-Technology, and Transportation
- b. Documentation, Geography & Map, Military Librarians, and Social Sciences
- c. Advertising, Business & Finance, Insurance, Newspaper, and Publishing
- d. Museum and Picture

I wonder if the membership is aware of the monumental task required of our Nominating Committees in finding *two* candidates of equal caliber for each office giving due consideration to choosing representatives of the varied interests of the Association. And, is the membership aware of the waste of our resources when an outstanding candidate is defeated twice? We are bound to lose his services as a future officer—not because of his hurt or embarrassment but because he will never again approach his executives with a request that they allow him to accept nomination. We must

never lose sight of the fact that candidates' acceptances depend entirely on the good-will of their executives. A single slate would automatically ease the work of the Nominating Committee, assure that the final slate represented high caliber leaders from different Chapters and Divisions, and would save a great deal of money now spent on mail ballots of which a bare 50 percent are returned.

My second question concerned the Executive Board's decision to revert again next year to a three-day convention. When we had less than 1,000 members, we needed three days to conduct a year's business. Today, with 16 Divisions plus 6 Science-Technology Sections and 2 Social Science Sections, it is patently impossible to provide in three days sufficient time for Association business and time for Division and Section meetings without so much overlapping that the whole convention becomes an endurance test and everyone goes home dissatisfied.

Our Divisions have a most important place in making the Association a valuable asset to members in their daily work. Their only opportunity to meet and discuss common problems is during the convention, and many members feel that these meetings are their whole justification for attending the convention. This year, the Divisions cooperated nobly in the 50th Anniversary plans by scheduling only Division business meetings but this pattern will not be acceptable in the future. More and more Divisions will resort to post-convention meetings, and the tendency will be to attend these only rather than the convention as a whole. This is a definite policy decision on which the membership should be polled.

To revert to the failure to provide a place for discussion of new business. Another member wished to suggest consideration of some adjustment to allow Sustaining Members to choose publications issued by Chapters or Divisions especially in cases where the Sustaining Member's subject interest is outside the field of the majority of Association publications. Discussion of this member's proposal for a solution of this problem might well have helped to bring in many more Sustaining Members.

Another member wished to discuss the Executive Board's decision not to publish separate convention proceedings. Members should have had an opportunity to express their wishes pro and con and the Board could have been guided accordingly.

These examples are sufficient to indicate a disturbing trend which is weakening what has always been our greatest asset—the volunteer efforts of an interested membership.

The Executive Board is elected "to manage and conduct the business of the Association, subject to authorization of the Association." The Executive Secretary and the Headquarters' staff is charged with carrying out Board decisions. Many of these decisions—as they should be—are based on recommendations of Divisions, Chapters or

Committees but *no* decisions should be made without consulting the membership *unless* they fall within established policy which has been discussed and authorized by the membership. Moreover, all policies need periodic review and revision. Admitting the danger that members' decisions may not always be right, the value of an active, participating membership, which knows that it will be consulted on changes in policy and which is given public recognition of work well-done, will more than counteract an occasional mistake.

We are 50 years old and have a proud heritage. We have set up membership standards and are about to embark on an attempt to set up service standards. We can do it if we live up to our heritage of active participation of every member but we can't do it if the membership is dissatisfied with Association policies. Let's have an opinion from you—and you—and you.

Write the editor or the President on any or all of these questions:

1. Pairing of candidates by related subject interests to assure better representation—or a single slate
2. Three-day, four-day, or even one-week conventions
3. More leeway for Sustaining Members in the selection of publications
4. Publication of separate convention proceedings
5. Assurance of membership participation in policy decisions

Write the editor or the President on any or all of the points raised here. Or, maybe your dissatisfaction stems from other causes. Write about that. It certainly won't do any good just to go on grumbling in your beard!

RUTH SAVORD, Librarian
Council on Foreign Relations, New York

To my great regret I learn that some of my library colleagues in Israel have taken offense at what I had to say in my article on the planning of the Wix Library of the Weizmann Institute of Science, on page 124, column 2, paragraph 2, of the March issue of *SPECIAL LIBRARIES*.

The erroneous impression created is, I believe, due to two factors in that one paragraph. On the one hand, I made too hasty a transition from general remarks to my own specific task in organizing the Weizmann Institute libraries. The other factor was recourse to language purely in the American idiom. Nevertheless, I should like to state clearly for the record that there was no intention on my part to indicate that use of the Dewey Decimal classification, ALA rules and other practices well known to American librarians are not in common use in Israel. As a matter of fact, were I writing an article about librarianship in Israel as a whole, I should go to some pains to point out that the ALA rules and the Dewey Decimal classification have long been in use in Israeli libraries (in addition to the Hebrew translation, for the benefit of librarians whose collections are primarily in Hebrew).

Dr. Leon Carnovsky has already written a definitive report on libraries in Israel. Since that report was written, a Graduate Library School has been established at the Hebrew University in Jerusalem. The third class will be graduated this summer. Intensive courses in library techniques are given periodically in the principal cities of Israel, and amazingly large numbers of people avail themselves of the opportunities to become familiar with formal library practices.

Another development which has been helpful is the fact that a sizeable number of Israeli librarians have had the benefit of training in American libraries and library schools, by virtue of various grants and fellowships which have been made available.

DAVID R. WAHL, Chief Librarian
Wix Library
Weizmann Institute of Science
Rehoboth, Israel

For a biographical study of Dr. Albert E. Foote (1846-1895), American scientist and mineralogist, I would like to hear from anyone possessing or knowing of letters, photographs, articles or other pertinent material.

NORMAN P. GENTIEU
30 West Tulpehocken St.
Philadelphia 44, Pa.

Many librarians of special libraries or those with special collections all over the country have expressed their enthusiasm for our publication of important card catalogs in book form. The market for these highly specialized publications is extremely limited, but by the application of novel printing techniques we have been able to produce unusually small editions at very reasonable prices.

We have just announced our intention of publishing 16 more hitherto unpublished special catalogs covering a wide variety of subjects. These are listed in our ad appearing in this issue. We will be glad to hear from readers who are interested in receiving more complete details or from those who would care to suggest other catalogs for publication.

HUBERT W. DEAN
G. K. Hall & Co., Boston

EDITOR'S NOTE: Since this issue carries a variety of "Letters to the Editor," this seems an appropriate time to remind readers that contributions to this column are always welcome. Letters commenting on articles, opinions on professional and Association activities and policies, bibliographic questions, requests for information or assistance and constructive criticism will be published as space permits and at the discretion of the editor. All letters must be signed and should be as brief as possible. As has been the policy in the past, letters concerning specific Association or Committee actions will be referred to the Executive Board or to the Committee Chairman involved.

Off the Press . . .

Book Reviews

REPORTS FOR SCIENCE AND INDUSTRY.

Margaret D. Blicke and Kenneth W. Houp. New York: Henry Holt, 1958. X + 319p. \$6.50.

This book is divided into 11 chapters. After two introductory chapters, the authors consider, in turn, Prose Parts of Reports, Mechanical Problems in Report Preparation, Letters, The Proposal, Progress Reports, Memorandum Reports, Final Reports, The Informative Article and Language, Composition and Writing Mechanics.

Although the preface states that the book has been written "for those who have had experience in compiling reports and for those who are dipping into the subject for the first time," this reviewer doubts that it will be of much value to practising report writers. Instead of backing up the instructive material with specimens of well-written reports and report components, the authors have relied heavily on "sample material drawn from student and commercial writing" (over 130 pages in 310 pages of text). Most of these samples, many running to five or more pages, are reproduced without comment or criticism and are therefore of doubtful instructional value. Their subject matter is generally too specialized to be meaningful to many readers, and the arrangement and style are often quite undistinguished. Some samples: "The same paper by Taylor intimates that when heated statically all the water is gone at about 450C." (p. 188); "After being heated for four days at 150C and cooled in a desiccator, the loss or gain in sample weight was determined." (p. 190); "There are some basic principles which must be observed in obtaining slot-wedge data which will help us avoid these difficulties which we wish to bring to your attention." (p. 201); "The variation in the number of larvae found in a given section at a certain time never varied by more than one until in the section 7-9 inches from the initial barrier." (p. 211).

Many of the statements in the text are debatable or out of place. Not all scientists will agree that it is unfortunate that "... the methods of scientific investigation do not always produce results that can be read off with the accuracy of a laboratory thermometer." (p. 49) or that "Without the line graph the engineer and the research man would feel that they had been deprived of one of their most useful tools, on a par with the slide rule, the voltmeter, and the test tube." (p. 78). Is it necessary to remind readers that "... Mr. and Mrs. are abbreviations and require a period in American usage. Miss needs no period." (p. 93)?

Although the authors warn that "One obscure or noticeably awkward sentence per page can be quite damaging in its over-all effect upon the reader." (p. 288), their own writing is by no

means free from such faults: on technical articles (p. 255) "Written objectively these articles use no personal pronoun."; on editing (p. 15) "... editing time very frequently progresses at the rate of a half-dozen pages per day." Occasionally platitudes are combined with slang: "Nothing makes a person feel more confused and ineffectual than to plug away at materials without having a clear sense of direction."; "It is a rare occasion, indeed, that a first-rate report can be banged out in a single five-hour session." (both on p. 15).

Incorrect references are found not only in the samples (p. 187, 213, 235) but also in the text. For example the "United States Library of Congress volume on *Science Division-Science and Technical Serial Publications*" (p. 253) is actually a series of volumes entitled *Scientific and Technical Serial Publications*, prepared by the Science Division of the Library of Congress. The list of periodicals (p. 254) cites the following incorrectly: *Chemical and Engineering News*, *Journal of American Concrete Institute* and *National Geographic Magazine*. *Scientific Monthly* suspended publication at the end of 1957.

There are numerous factual errors: "Light-years" is a measure of distance, not speed (p. 80). There is no such noun as "inhibitives" (p. 21), nor an acid called "soda acid" (p. 195). "Beta propiolactone, a veracide" (p. 256) is a particularly bad example of the many typographical errors. Presumably, "beta-propiolactone, a virucide" was intended.

On the positive side, the chapter on "Letters," though perhaps out of place in the present book, contains much useful material. The concluding chapter offers helpful advice on sentence construction, punctuation and various grammatical difficulties. It also contains many samples of bad writing and the authors' suggested revisions.

However, the book does not contain enough worthwhile material to recommend its purchase to those with some experience in technical writing. It might be somewhat more suitable for college students, though in this field it will face stiff competition from many other texts already on the market.

KURT GINGOLD
Research Service Department
American Cyanamid Company
Stamford, Conn.

TECHNICAL EDITING, B. H. Weil, Editor.
New York: Reinhold, 1958. 278 p. \$5.75.

This work proves the author's contention that there is a difference between technical writing and editing. Dr. Weil's earlier efforts, particularly his standard work, *The Technical Report* (Reinhold, 1954), are of uniform excellence. The collected papers making up this work differ vastly

as to value and importance. They range from thoroughgoing discussions having immediate practical value (of which there are many) to such bantam weight, surface-scratching contributions as the one on editing translations.

The book, which is intended to be used by technical editors (experienced or fledgling), by management and by students, is divided into five parts entitled: I Editing Internal Documents, II Editing Journals, III Editing Books and Manuals, IV Editing Graphic Aids and Other Exhibits, V General. As may be seen from these titles, a comprehensive coverage of the subject is provided. The work's main idea—as pithily expressed by William F. Bland in his "Editing the Technical Business Magazine"—is that technical editing "is a job of communication, of getting ideas not only onto the printed page but also off the printed page and into the reader's mind." There is no doubt that the book as a whole is successful in putting this idea across painlessly and with a minimum of verbiage. Of course, some repetitiousness and similarity can hardly be avoided in a publication containing 19 papers giving how-to-do-it advice based on the same fundamental principles.

If I now proceed to stress valuable distinctive features of some of the papers it should be clearly understood that I do so without any prejudice to the articles that space prohibits me from quoting. There is first the well appointed legal back drop of "Editing from the Patent Standpoint." The fine exemplification presented in Bixler's "Editing Technical News Releases" deserves praise. Cortelyou and Jones's "Editing Illustrations for Technical Reports and Papers" excels in the same respect. Last but not least, Jenks and Huntsman's stimulating bibliography of tools available to the technical editor in their "Editing Know-How—Techniques and Tools" should be helpful to every technical editor.

The book deserves recommendation for purchase wherever technical editing is a problem. The price appears to be high.

KARL A. BAER, Chief Librarian
National Housing Center Library
Washington, D. C.

New Serials

DIGEST OF SOVIET TECHNOLOGY, a monthly express digest of recent technological developments in the U.S.S.R. and East European countries, has recently been published by English Information Services, Kirkham, Preston, Lancashire, England. The new publication is divided into four sections: Design and Production; Metallurgy, Welding and Foundry Production; Instruments and Automation; and General, which includes inventions, industrial and economic news and book reviews. The information, of an original nature with a view to practical application, is obtained from over 50 periodicals and a variety of non-periodical literature. All material is provided with source refer-

ences. Full translations of any article assessed in the *Digest* will be prepared on request at a maximum charge of \$5 per page, including figures and equations plus air mail delivery. Depending on demand, the charge will be reduced. The annual subscription rate for the *Digest* is \$18 surface mail, \$22 air mail.

SOVIET PHYSICS—SOLID STATE, a cover-to-cover monthly translation of a new USSR Academy of Sciences journal, *Fizika Tverdogo Tela*, has been added to the list of Russian physics periodicals available from the American Institute of Physics, 335 East 45th St., New York 17. Offering results of theoretical and experimental investigations in the physics of semi-conductors, dielectrics and applied physics associated with these problems, it will publish papers on electronic processes taking place in the interior and on the surface of solids. The regular annual subscription rate is \$55 in the United States and Canada, \$59 elsewhere; for libraries of non-profit, degree-granting institutions, \$25 in the United States and Canada, \$29 elsewhere.

The Advertising Division of SLA has announced the availability of its new, revised publication, *WHAT'S NEW IN ADVERTISING AND MARKETING*, edited by Pauline E. Lybeck of the Television Bureau of Advertising. This publication will feature a listing of advertising, media and marketing publications, consumer surveys and bibliographies; announcements of material before it is released; and analyses of important books, services and periodicals. To introduce subscribers to this professional publication, a special introductory rate is being offered. SLA members may receive the next four issues for \$1.25; nonmembers for \$1.75. Subscriptions are available from Mrs. Elizabeth M. Hutchins, Young & Rubicam, 285 Madison Avenue, New York 17, New York.

New Documentation Newsletter

The American Institute of Physics has just begun the publication of a *Documentation Newsletter*, to be issued irregularly whenever there is sufficient news worthy material. The *Newsletter* will report on the results obtained in the AIP's current studies of physics publishing and documentation problems and will also assist in coordinating other documentation studies having particular applications to the field of physics. For further information write: Dr. R. E. Maizell, Director, AIP Documentation Research Project, 335 East 45th Street, New York 17, New York.

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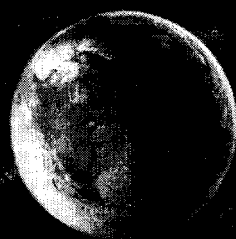
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