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ABSTRACT

A microform program is proposed based on the availability of the microforms and the literature requirements of a growing health science community. The program concentrates on miniaturized serials, government-sponsored research reports, and micrographic catalogues. It considers their acquisitions, format, and organization; itemizes the hardware necessary for their viewing; and makes recommendations for their storage. Effective utilization of microforms is emphasized by illustrating reading environments to take place in a new medical library facility. Important sources of information on acquisitions and equipment evaluation are included, as well as a list of references. (Author/LS)

MICROFORMS IN A MEDICAL LIBRARY ENVIRONMENT*

by

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A microform program is proposed based on the availability of the microforms and the literature requirements of a growing health science community. The program concentrates on miniaturized serials, government-sponsored research reports and micrographic catalogues. It considers their acquisitions, format, and organization; itemizes the hardware necessary for their viewing, and makes recommendations for their storage. Effective utilization of microforms is emphasized by illustrating reading environments to take place in a new medical library facility.

*Presented May, 1973 at the Seventy-second Annual Meeting of the Medical Library Association, Kansas City, Missouri.

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Microforms promised a boom for libraries in the 60's, but delivered a bust. Why? because in the 60's the industry was evangelical, and more concerned in selling gear to libraries, rather than solving their problems. In spite of the potential value of microforms for libraries, user reaction is at best apathetic. Perhaps this reluctance is caused mostly by inconvenience for reading photoreduced materials. The benefits of microforms for libraries have long been realized -- such as, savings in space, acquisitions, binding costs, inter-library loan services, and rapid retrieval of cataloging copy. Efforts have failed partly because the microform user has not been given sufficient consideration. However, for the nineteen seventies, the industry is focusing on this individual -- the customer.

The advantages and disadvantages, notwithstanding, medical libraries are or will be expected to acquire and provide a variety of microforms. Based on their availability, a program is proposed for a growing health science community. This paper does not attempt to review microreproduction coupled with computer technology; this combination has greatly increased the capabilities of offering better library systems at a savings. However, the program concentrates on miniaturized serials, government-sponsored research reports and catalogues in a medical library environment. It considers their acquisitions, format, and organization, itemizes the hardware necessary for their viewing, makes recommendations for their storage, and illustrates reading environments necessary for their effective utilization.

ACQUISITIONS

Before embarking on an acquisition program for serials, a preliminary inventory should be made to analyze gaps in the periodical collection. When filling gaps, microfilm should be considered because it is one eighth the cost of reprints or hard-to-find originals. Such an analysis can then be followed-up with a rated priority list of those titles indexed in Index Medicus. In addition, some evaluative data should be collected to determine seldomly-used titles. Records of CODEN titles, volume, and year can be kept of photocopy and inter-library loan requests for a year. This data should provide valuable input and could be used as selection criteria for a serials microfilm collection.

Acquisition aids for research reports are Research in Education (RIE) and Government Reports Announcements (GRA). The former periodical makes possible the early identification and acquisition of reports of interest to educators. Approximately 5.5% of the ERIC output (20,000 documents/year) are health related. In some states these reports are available at no cost to educators. The GRA includes scientific and technical report literature as well as business and economic data. Microfiche copies of health science reports on a demand basis are $1.45/report. Documents available on a standing order basis through the National Technical Information Service (NTIS) Selective Dissemination of Microfiche (SDM) service are priced at $.45/document. Profiles, formulated from the NTIS questionnaire, produce reports on a periodic basis in the biological and medical sciences, biotechnology and medical engineering. The NTIS collection now exceeds 730,000 titles, to which some 60,000 new reports are added annually. Approximately 6% of this annual output is related to the biological and medical sciences (3,600 reports).

Definite acquisition aids for an effective microform program are Guide to Microforms in Print and the Subject Guide to Microforms in Print. Copies

of catalogs from the 100 or more micropublishers listed in the Guide should be requested and will serve as a good starting collection for locating microform material.(1) These catalogs can be stored alphabetically in pamphlet boxes along with the additional loose sheet information which supplements the micropublishers' major catalog.

The National Register of Microform Masters is another excellent tool for acquisitions; unfortunately, its cooperative effort is neglected and thereby receives little use in most libraries. The Register contains about 60,000 serial and monograph entries in one alphabetical arrangement with some 10,000 cross-references. It consists of two files, master negatives and master preservation negatives. Master negatives do not circulate, being used only to produce copies. Master preservation negatives are not for copying but for archival retention. This Register, probably needs more publicity, simplification and clarity in its reporting forms, considerable improvement in internal organization, and enhancement of microforms as a mechanism of communication.(2) The 1972 edition is free to National Union Catalog subscribers and costs non-subscribers $25.00.

In libraries, microforms are not only being utilized as micro periodicals, reports and similar communication materials, but also as miniaturized catalogues of books and serials. Micrographic catalogue retrieval systems are becoming more and more commonplace. This medium demonstrates savings in storage, verification, and location.(3) The microform format is easier to use than the cumbersome, bulky publications which are in the bibliographic areas of our libraries today. Several commercial services now produce on microfiche the catalog card output of the Library of Congress.(4) Such micrographic systems diminish the work

in processing inter-library loan requests, and produce rapid retrieval of cataloging copy.

The Medical Library Center of New York now issues its publication, Union Catalog of Medical Periodicals (UCMP) in a microfiche format. The benefits of the system are that the micropublication includes 50% more listings and offers quarterly up-dating at $70.00/yr. as compared to a bi-annual hard-copy catalogue with annual supplements at $75.00.

Another miniaturized catalog series which is becoming popular in medical libraries is the INFACT medical school information system. The microfiche file is a listing of current U.S. and Canadian medical school catalogs produced by Dataflow Systems Inc., Bethesda, Md The printed Index/Guide coordinates the searching of information about entrance requirements, tuition and fees, courses, clinical facilities, residency requirements, research activities, etc. Students, faculty, and administrators are finding this tool more useful than the out-of-date, incomplete, misfiled medical school catalogs found in most reference areas. A one year subscription costs $139.50 and includes a quarterly up-date of microfiche and an annual printed Index/Guide.

FORMATS

The formats which will be encountered during this proposed microform development program are 16mm and 35mm microfilm and the 4 x 6 in. microfiche. Guide to Microforms in Print indicates the availability of several formats — reels, fiche, jackets, aperature cards, micro-opaques etc. However, studies show that serials in 16mm microfilm, coupled with development of the convenient cartridge loading reader-printers, provide substantial advantages for the user. Look-up is faster and more convenient, and it is easier to take information away from the library.(5)

Microfiche unitizes information, therefore it has become the favored medium for reproducing scientific report literature. In the 1960's the government became

convinced that microfiche was far superior to micro-opaques as an information carrier.(6) In light of the foregoing studies, developments, and advancements, serial publications in the 16mm microfilm cartridge and scientific reports in the 4 x 6 in. microfiche are recommended.

ORGANIZATION

The technical processing priorities assigned to microforms — checking-in, inspecting, cataloging, classifying, etc. — can either establish a new research tool or can bury the information beyond the ability of the user. In order to accomplish the former objective, serial holdings on microfilm should be integrated into present record-keeping, indicating that particular volumes are held in the micro format. Micrographic catalogues should be given full descriptive cataloging, subject analysis, and incorporated into the present card catalog. ERIC and NTIS reports should receive less elaborate technical processing. Upon receipt, they should be inspected, recorded, and filed in fiche cabinets by report number. Retrieval can be achieved via the sophisticated name and subject indexes produced by the sponsoring agencies or through on-line data bases available in most medical school libraries. A flow chart (Figure I) illustrates the procedures that might be followed in organizing a microform collection.

HARDWARE & STORAGE

A survey of the 1972-73 literature disclosed a number of readers and reader-printers. The Buyers' Guide published by the National Microfilm Association is a service to present and potential users of microfilm equipment, products, and service.(7) The Guide lists sustaining members of NMA by product and service. It is designed to be a concise introduction as well as a continuing reference to many valuable sources of currently available products and services. The booklet is divided by an alphabetical heading list which can also serve as a verticle file organizer for loose-sheets, pamphlets, and advertisements received from

manufacturers on their product.

Leading evaluative bodies for new technology and advancements are the ALA Library Technology Program, and the National Reprographic Center for Documentation (Hatfield, England). The latter's evaluative report series is especially informative to the potential buyer of foreign products and contains technical evaluation and detailed illustrations of the machines.

The concerned consumer is also referred to the "Checklist for Selecting Microfilm Readers" developed and approved by the American Standards Institute (AMSI) PHS Ad Hoc Committee on Consumer Standards. Some 22 decision-making factors are listed here when selecting microfilm readers such as, are lenses interchangeable? -- are bulbs accessible? -- is light evenly diffuse? -- can film be easily inserted?(8) Additional questions to be considered when selecting Reader-Printers are:

1. Dry or wet copy?
2. Speed?
3. Maintenance ease?
4. Cost/copy?
5. Is copy trimmed off or must it be pulled off?

Depending on the volume of the collection, studies indicate that for an active collection 10,000 in size, a semi-automatic system should be used. However, for active collections up to 30,000 in size, a fully automatic one should be emphasized.(9) Table I itemizes the equipment necessary to institute a microform program in a new library facility at the College of Medicine and Dentistry of New Jersey (CMDNJ-N); occupancy is scheduled for March, 1975.

For the effective utilization of microforms a library environment should be designed for the protection of the media as well as the comfort of the user. On behalf of the Association of Research Libraries, Donald C. Holmes made an

exploratory study designed to identify the needs of microform users.(10) His report recommends the following:

1. Lighting, that should be of low intensity (15-21 ft. candles)
2. Reading areas, which are air-conditioned and accoustically treated
3. Temperature, not to exceed 70° F
4. Humidity, not higher than 60%
5. Reading Areas, which are a minimum of 40 sq. ft.

In view of the foregoing study, microform reading areas at CMDNJ-N are being designed with optimum physical environment, yet conveniently located to microform storage. Reading Area 1 (Figure II) meets all the requirements set forth in the Holmes study. In addition, it offers an adjacent work area where staff can inspect, clean, repair, and duplicate microforms. Overflow viewing will be accommodated by using portable readers in the A-V User Area.

Reading Area 2 (Figure III) is designed for less intense study. It is conveniently located to the microforms stored in the "Princeton Micro-Shelf".* In addition to viewing, hard copy duplication and staff assistance can be received at both locations. All reading areas will be equipped with carrels which are large enough to accommodate a viewing machine and a working surface for the viewer (Figure IV). Carrels are 60 in. high, 60 in. wide and 54 in. deep. A turntable allows the reader-printer to be moved 30" in each direction and to be tilted backward and forward for added convenience. This carrel was designed for CMDNJ-N by Mitchell Associates, Wilmington, Del.

Security measures for microfiche need not be so strict as other microforms since only 'use copies' will be duplicated and circulated. Storage will be in specially constructed slide drawer metal cabinets with removable trays. Their use minimizes misfiling and loss of fiche, protects them from dust, and utilizes floor space effectively. Serials and reference works in the 16mm microfilm

*Available from Princeton Microfilm Corporation, Princeton, N.J.

cartridge will be stored in the "Princeton Micro-Shelf". These are ideally designed to store bound volumes and film collections together on the shelves. In addition, the "Micro-Shelf" may be used for carrying the microfilm to reading stations.

In spite of the fact that more and more research oriented material is being provided in the microform format, medical librarians and their patrons have a negative attitude towards their use. Acceptance of microforms by library users is dependent to a large degree on the attitude of the library staff to the medium. For this reason, it is essential that the staff get to know microform thoroughly, be given in-depth instruction in their use, and become acquainted with the operation of the related equipment. Another aspect of training is encouraging staff to take pride in understanding and using equipment properly. It is important that the staff be knowledgeable, helpful, courteous, and if possible enthusiastic. Holmes states that a staff member embarassed by his own ineptness often develops in the user a dislike for the medium. Consequently, the user tries to avoid contact with the forms.

To help bridge the gap between user and microforms, a motivated librarian should be appointed microform coordinator. This individual should be assisted by a thoroughly trained and interested technician who will be mainly responsible for hardware and software maintenance. Various staff members can be assigned the task of assisting clientele in the use of micro-serials, bibliographic tools, and reports; however, the technician should be available for consultation and to report hardware malfunction by telephone.

In order to insure that good general guidelines be established for administering an effective program, a microform committee should be set-up chaired by the coordinator. Members of the committee should be those individuals whose operations involve microforms. At CMDNJ, the serials librarian, the A/V librarian,

the acquisitions librarian, and the hospital librarian make-up this committee. This body concerns itself with such specific matters, such as acquisitions, formats, organization, reading room arrangement, and selection of new hardware. Any recommendations which are reached by this committee are then transmitted to the Director's office for implementation.

PUBLICITY

Judy Fair suggests a number of ways to publicize the resources of the microform collection.(11) "Regularly scheduled tours, complete with 'hands-on' experience for as many participants as possible, may be instituted. During this tour, all types of equipment should be demonstrated and staff who can be of assistance during future visits should be identified." Additional means of publicity are displays, bibliographies, exhibits, announcements, and lectures. Even simple signs can be helpful in educating the user about microform resources. She concludes by mentioning that a useful aid to patrons is to label each piece of hardware as to the type of microform or microforms that can be read at that machine

CONCLUSION

Microforms' future? It cannot miss.

"They offer potential economies in space, in acquisition, and binding costs, costs in distribution of copies of materials, and library circulation costs. There are benefits, both realized and potential, in the extension of interlibrary loan services, in opportunities for individuals to obtain personal libraries of their own at little expense, and in more effective teletransmission of photo-facsimiles."(12)

This article attempts to highlight how one growing medical library is experimenting with microforms to meet today's needs with tomorrow's technology. The increasingly high cost of publications and operations which all medical libraries are experiencing has led to the re-examination of traditional ideas of what constitutes good systems for disseminating information. For this reason, it is important that medical libraries begin meeting today's needs by considering microform resources, their effective use and management.

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MICROFORM EQUIPMENT

Equipment	Unit Price	QTY	Total Price
1. Reader/Printer, 16mm cartridge	$3,000.	2	$6,000.00
2. Reader/Printer, Fiche	1,900.	1	1,900.00
3. Portable Fiche Readers	150.	3	450.00
4. Portable Film Readers	150.	2	300.00
5. Fiche Duplicators	650.	1	650.00
6. Storage Cabinet for Microfiche with Removable Trays	400.	1	400.00
7. Princeton Micro-Shelf	6.25	100	62.50
		TOTAL	$9,762.50

TABLE I

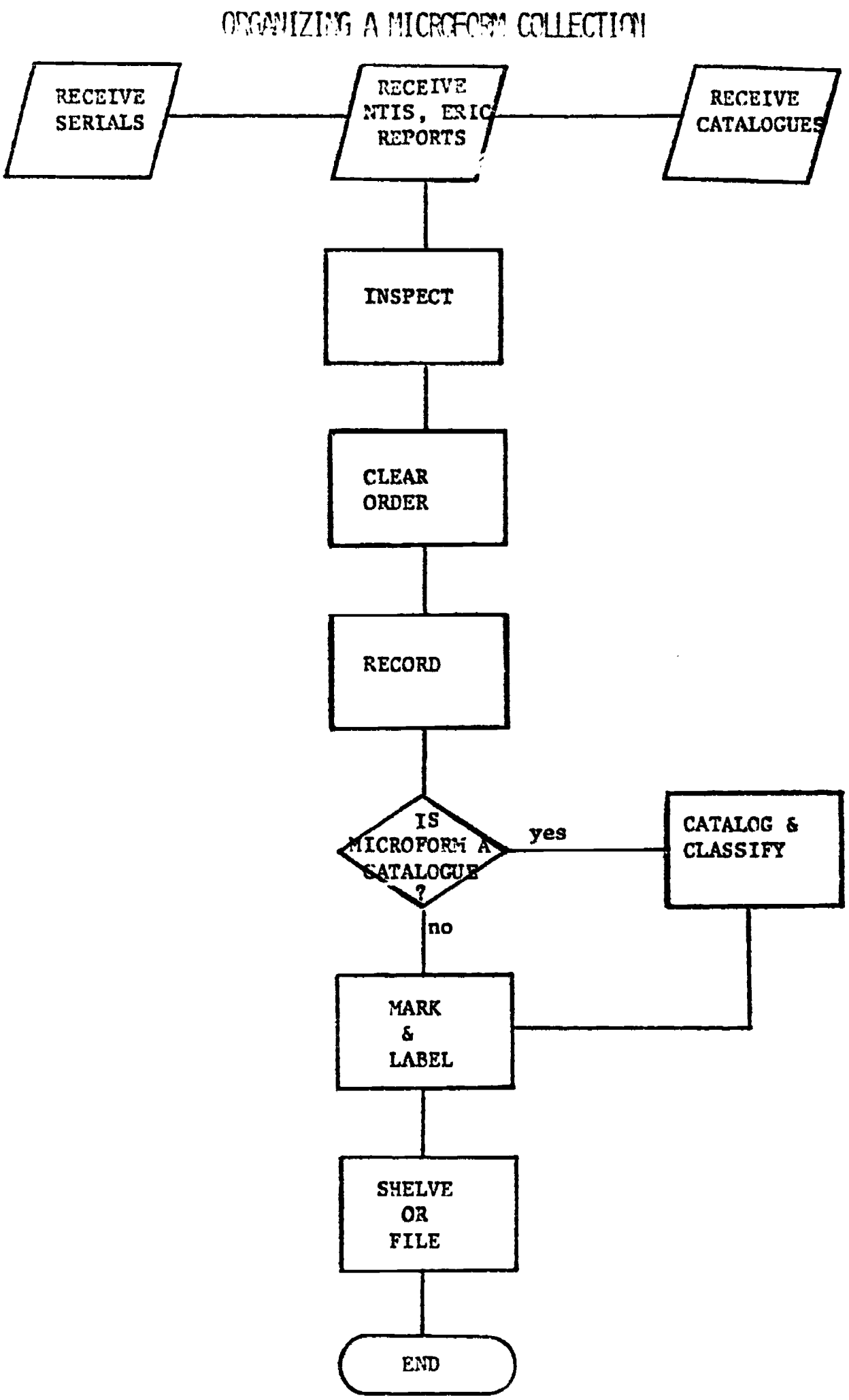


FIGURE I

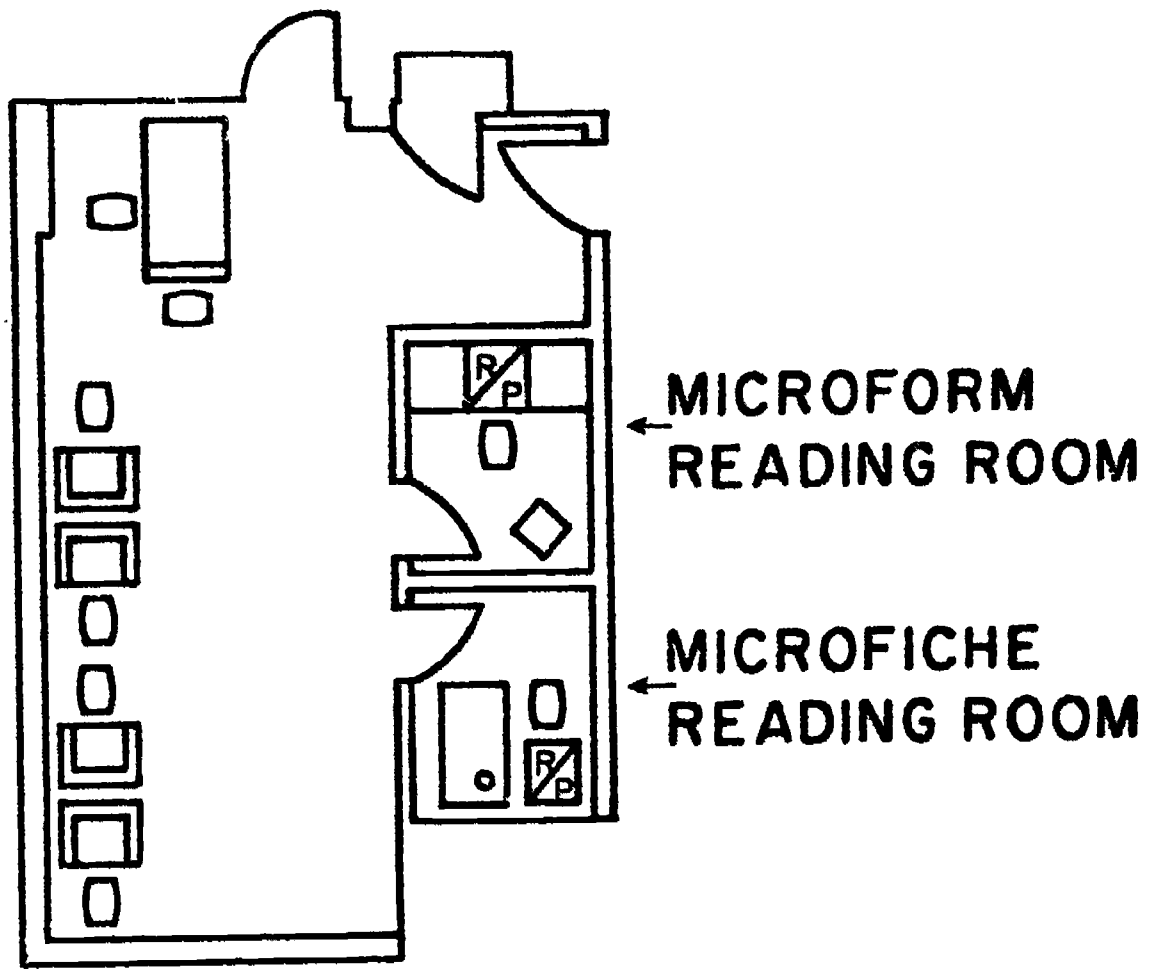


FIGURE II

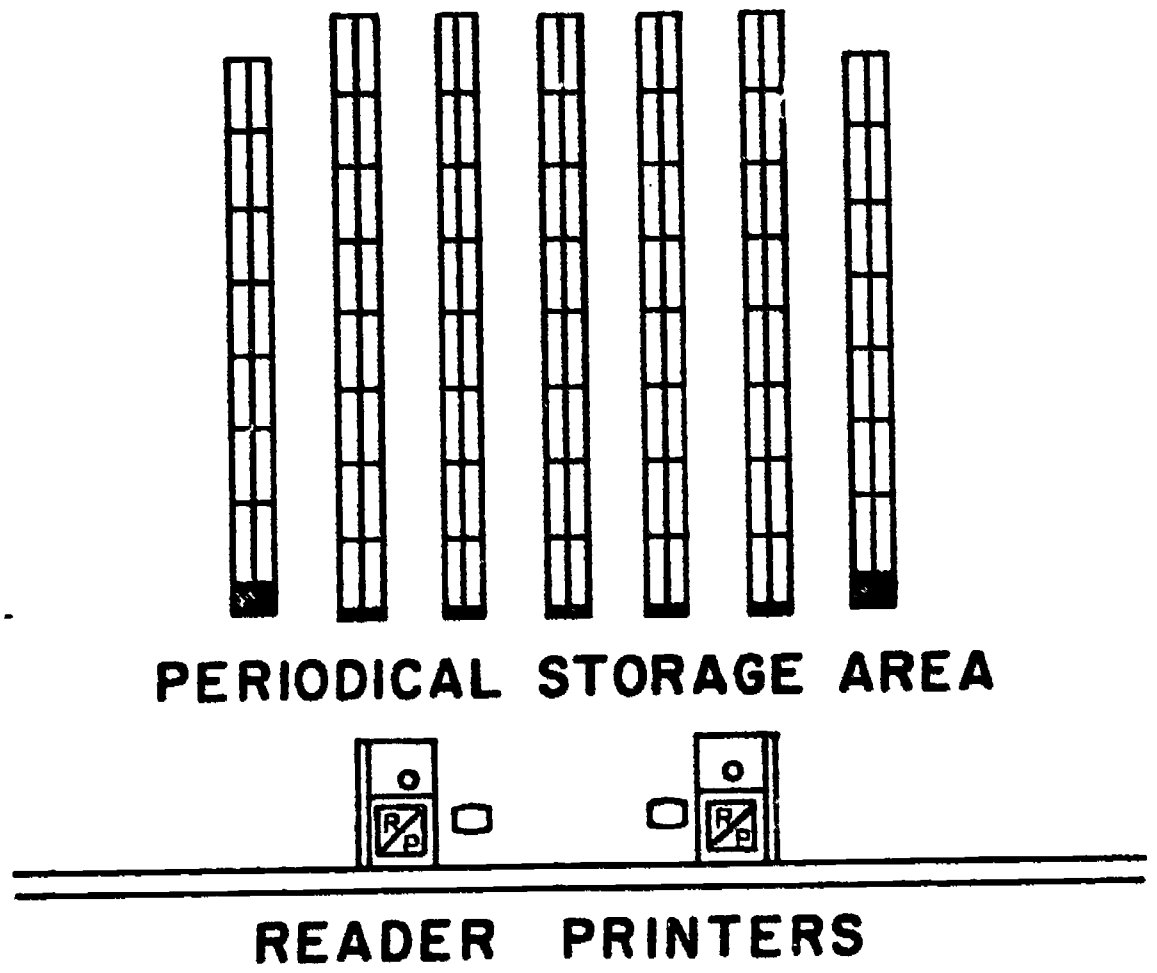
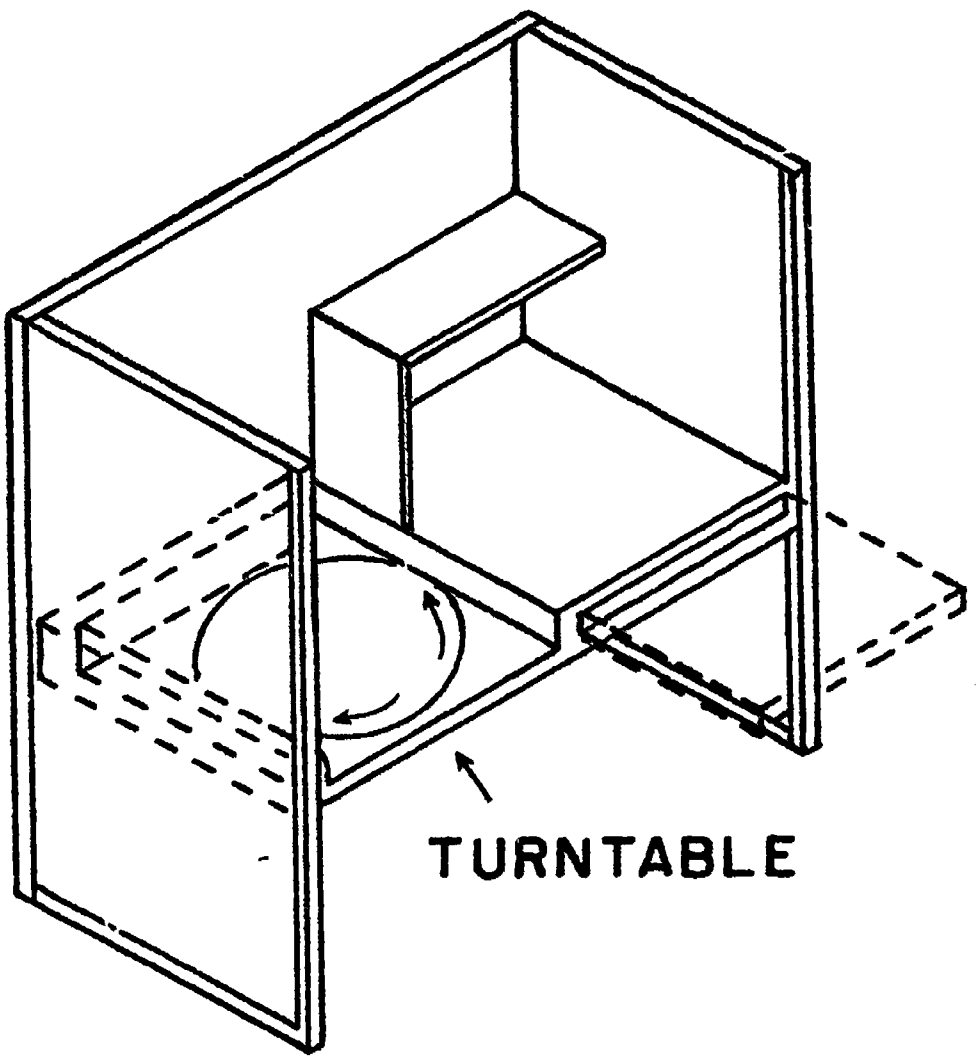


FIGURE III



MICROFORM CARREL

FIGURE IV