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ABSTRACT

Designed to serve as a blueprint for other libraries developing plans for microcomputer facilities, this report describes the planning and implementation of a microcomputer laboratory at South Dakota State University's Hilton M. Briggs Library. The university's plan for installing microcomputer labs on campus and the initial planning process undertaken by the library upon learning that it had been chosen as a microcomputer lab site are summarized; and the activities of the library's Site Selection Committee are described, including its consideration of the lab's impact on traffic patterns, noise, structural remodeling, staffing, proximity to other service areas, and security. In addition, the design of the lab is discussed; and policies and procedures for use of the lab, software, and administration of the lab are summarized. Finally, the process of opening the lab is described, including the posting of signs, maintenance, and publicity. The text is supplemented with three figures, including two floor plans; and the Library Microcomputer Lab Policy and Procedural Statements, a Microcomputer Lab Information sheet, and a 17-item bibliography are appended. (KM)

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**INSTALLING A MICROCOMPUTER LAB
IN A MEDIUM-SIZED ACADEMIC LIBRARY**

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Abstract

In January 1986 a Microcomputer Lab was installed in the Hilton M. Briggs Library at South Dakota State University. The installation went relatively smoothly and the facility has proven to be a valuable addition to the library. However, this installation did not just happen by itself; it culminated a long planning and implementation process, begun in March 1986, by several committees. This planning process is illuminated by discussion of the work of these committees, including the Site Selection Committee, the Microcomputer Lab Policy Development Committee, and the Software Review Committee. Information is presented which deals with: choosing a location for a microcomputer lab within an existing library building; designing the facility and furnishings; developing policies and procedures for use of the lab; developing policies and procedures for selection, acquisition, and use of software; supervising and staffing the lab; publicizing the facility; and other topics. Included are the policy and procedural document that was developed at SDSU, a floor plan for the lab, and a brief selected bibliography. The authors emphasize the importance of planning procedures and writing policies before a microcomputer facility opens.

INSTALLING A MICROCOMPUTER LAB IN A MEDIUM-SIZED ACADEMIC LIBRARY

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INSTALLING A MICROCOMPUTER LAB IN A MEDIUM-SIZED ACADEMIC LIBRARY

INTRODUCTION

H.M. Briggs Library at South Dakota State University in 1986 found itself in the enviable position of receiving a microcomputer lab by mandate of the university administration. Not having faced such a project before, the committees charged with accomplishing various tasks began reading about how other libraries handled such an undertaking. What they hoped to find was a document that described the process from start to finish, with tips for avoiding specific problems. What they found were many excellent articles describing parts of the process and many sample microcomputer lab policies, but no single article which put the entire procedure into a logical sequence. Since the literature does not contain such an article, the Microcomputer Lab Policy Development Committee at SDSU decided to create such a document. Believing that their experiences will assist other librarians who must develop plans for such facilities, this document is designed to serve as a blueprint for implementation. It contains discussion of the development process, copies of the policies and procedures documents, and a selected bibliography.

UNIVERSITY PLAN

In March 1986 the university administration at South Dakota State University initiated a plan to install several microcomputer labs on the campus. Although two such microcomputer facilities had developed independently, one in the Computing Center and another in the education building, there was no overall plan for installation of such labs in a organized way until that time. The plan was part of a larger scenario to increase computer literacy among faculty, staff, and students; and as such it included an ongoing training program in the use of microcomputers and appropriate software for these groups. The microcomputer lab installation portion of the plan included the installation of one microcomputer lab per year. Specifically a new microcomputer lab was to be opened each January for the next several years.

These labs are intended to provide access to microcomputers for all SDSU faculty, students, and staff. Because there was a shortage of facilities where group instruction using microcomputers could be accomplished, the size, layout, and location of the first few labs had to allow for such instruction. However, needs of individuals were not to be ignored so it was important that the hours of operation be extensive, that a selection of software packages be available, and that staffing be provided for assistance. For both class instruction and for individual use it was believed that a location in a high traffic area of campus was desirable. Security and staffing logistics,

including cost and management of day-to-day operations, for the facility were another crucial factor affecting the location of the lab.

LIBRARY PLAN

The Hilton M. Briggs Library was chosen as the most desirable location for the installation of the first planned microcomputer facility. Its long hours each day make it an ideal location for students needing access to microcomputers for word processing or to complete programming assignments. The library's security system and staffing patterns make it a relatively secure area for the equipment. The location of the library and its high traffic make it a convenient location for using microcomputers. The proximity of microcomputers to the reference sources and manuals held by the library was also seen as an advantage for the library location.

The library also benefits from the microcomputer facility that it houses. The installation of the microcomputers enhances the library's progressive image by association with new technology. The microcomputers are presented as another access/manipulation source for information, and the library continues to be thought of as the information hub regardless of the medium. Also, because the campus Computing Center has been involved in the installation, operation, maintenance, and training for the Microcomputer Lab, the cooperative exchange between the library and the computing center has improved.

The progressive image and improved relationship with the Computing Center are not the only benefits derived by the library. The microcomputers provide new resources which are useful to both library users and library staff. Valuable training and staff development opportunities are realized by library staff. The microcomputer facility can be used to train groups of staff on the basics of microcomputers and on various software packages. Therefore computer literacy increases in the library. The software collection which accumulates for the microcomputer lab can be used by library staff members to test/evaluate specific programs to determine whether they are useful for library applications.

When the university administration announced its microcomputer plan and the desire for the library to be the first location the library faculty greeted the plan with mixed emotions. Most library faculty saw the overall benefits that the library would receive from such a facility. However, they also realized that there were many questions to be answered and many potential

problems which must be addressed. Where would the lab be installed in the library? How much prime library space would the library lose? Who would be responsible for staffing the facility, the library or the Computing Center? If the library is responsible for the staffing, which department? Will additional money be forthcoming from the university administration? Does the library staff have the expertise to manage the facility and to answer the questions of the users of the facility?

The first step was to determine the most desirable location for the lab within the library. In late March, 1986, a Site Selection Committee composed of three librarians was appointed to examine this question. The committee visited the two existing microcomputer facilities on campus and solicited information and suggestions from staff at those facilities as well as the recommendations of Computing Center personnel. They then examined the library building and identified several acceptable locations which were submitted for discussion at a library faculty meeting. The specific considerations of this committee will be discussed below.

Next, another committee of three librarians was appointed in June 1986, to draft a set of guidelines or policy statements concerning the use of the microcomputer facility and the acquisition and use of software. This Policy Development Committee was also charged with incorporating procedural statements into this set of guidelines. The committee was to submit a draft of these policy/procedural statements to the library faculty by October 1986. It was considered important that such a policy and procedural document be developed before the Microcomputer Lab opened. The resulting document, after several revisions, is included in this report along with elaboration of the committee's planning process.

In the meantime the Dean of Libraries discussed administrative and financial issues with the university administration and with Computing Center officials. Members of the two library committees were brought into these discussions at various times during the process. The administrative/financial structure for the Microcomputer Lab developed as follows. The library would choose the location of the facility, and be involved in design of building modifications and furnishings for the lab. Money for these building modifications and for furnishings and equipment would not come from the library's funds. The library would be responsible for staffing and maintaining security for the lab. However additional money was given to the library for student assistants. A pool of money would be made available for the purchase of an initial software collection, but the library would

be responsible for funding the purchase of software in the future. The Computing Center would be responsible for repair of any equipment, but the library would handle daily maintenance.

SITE SELECTION

The Site Selection Committee visited the existing microcomputer lab in the education building to collect information concerning size and type of space required. The committee learned that approximately twenty-five square feet is recommended for each computer work station. Since the library site was to comfortably house twenty-five micros, the space selected would need to be approximately 625 square feet.

Through a literature review and discussions with those operating the Education Department's lab, the committee knew that having enough square footage was only the beginning of site selection. At this time, they compiled a list of thirteen locations within the building that could possibly be converted to a microcomputer lab. In drawing up this initial list, the committee considered only whether there was enough space available at each site and whether the library could logically "give up" that particular space, without losing a major service or causing future overcrowding.

The next step was to consider the impact the lab would have on existing library design and services. The Site Selection Committee considered the following:

Traffic Patterns

Experience indicates many people who come into a library to use a microcomputer have only that goal in mind. It is a one-purpose trip. Therefore, the lab needs to be located convenient to the main entrance; either, on the main floor or near stairwells on other floors.

Noise

Using micros tends to be a relatively noisy process. Keyboards make clicking noises, conversation may be necessary and printers often are loud enough to disturb those in nearby rooms. The lab should be located in an area where this noise will not disturb other library users.

Structural Remodeling

Even though construction costs were not going to be paid with library funds, the committee wanted to select a site that would need very little remodeling. The following questions were asked of each site: Do walls need to be removed or added? Is door access adequate? If windows are present, can they be shaded to minimize glare on the video screens? Can additional electrical wiring be added to the space? Is there adequate ventilation for the microcomputers?

Staffing

Supervisory responsibility and staffing needs of the Microcomputer Lab had not been determined when the committee began site selection. Indications were that a public service department would supervise the lab and student assistants would be hired as monitors. Software and manuals would be checked out from the Reserve Desk. Because there would not always be a staff person in the lab, the committee wanted to ensure that the location was convenient for spot supervision.

Proximity To Other Service Areas

In addition to locating the lab near a public service department, there was a conscious decision made to ensure that lab patrons would have convenient access to public restrooms and telephones, as well as be directed to the lab very easily from the main entrance.

Security

With a substantial monetary commitment tied up in lab equipment, security of that facility becomes a very important consideration. To prevent video monitors, disc drives, keyboards and printers from disappearing, the committee wanted the exit path to be visible from one of the public service departments. They also determined the lab should be a self-contained room, with its own locking door, instead of an alcove within a larger area of the library. They considered the possibility of thefts occurring by way of fire exit doors, but because H.M. Briggs Library has a system in which these doors only open when an actual fire occurs, locating the lab near fire exits was not a problem. If a building has the more common crash doors, then it is best not to locate the lab where a would-be thief can exit very quickly through one of the fire escapes. Finally, the committee considered placing anti-theft devices on each piece of equipment, but decided later to bypass this route. Instead, 3-M detection

strips were hidden in the keyboards of each computer.

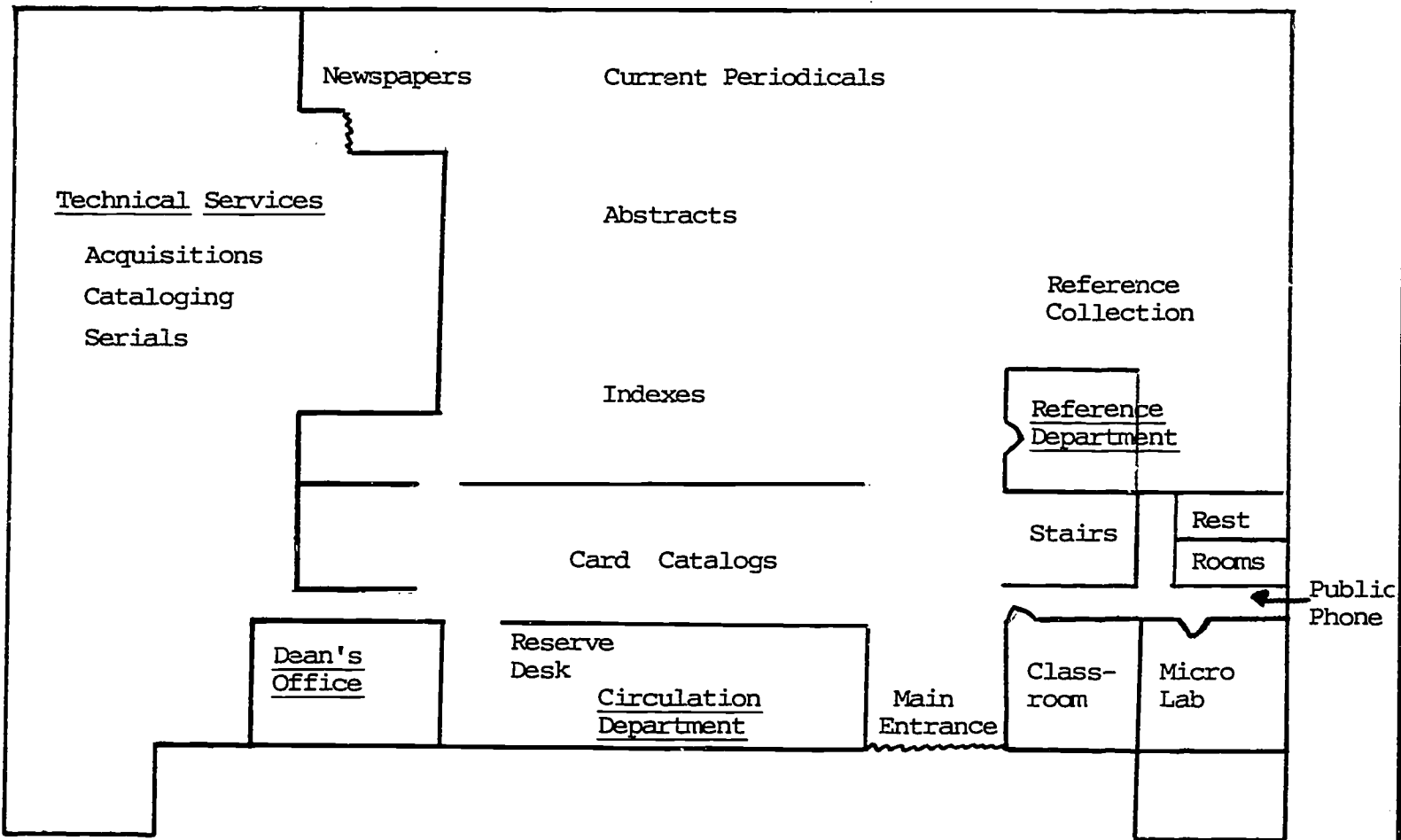
Using the above criteria, the Site Selection Committee was able to eliminate eight of the thirteen possible sites almost immediately. These sites were excluded because excessive remodeling was needed, they were not convenient to the main library entrance, or they were secluded and would cause security problems. The five remaining sites all offered: convenient locations, minimal construction, good ventilation, and minimal loss of prime space. The committee discussed the sites, listing advantages and disadvantages of each. In the end, they recommended three of the five, but not in any preferential order. The other two sites, it was agreed, were workable alternatives, but they were not favored locations.

The committee's recommendations were considered by the entire professional staff, which then decided upon the final site. The site chosen was a smoking lounge on the main floor, just down a short hall from the main entrance. (SEE FIGURE 1 FOR LIBRARY MAIN FLOOR PLAN) It offered a central, convenient location, close to phones and restrooms. The traffic patterns would not disturb study areas and those coming to and leaving the lab would be visible to staff at the Circulation Desk. Minor construction, which amounted to the removal of an interior wall and the laying of carpet, would be necessary. The room's only apparent disadvantages were its smaller size - it was only 608 square feet - and loss of a smoking room on the main level.

DESIGN OF THE LAB

The plan called for twenty five microcomputers, i.e., twenty IBM compatible and five Apple computers, and twelve printers to be placed in the microcomputer area. However in January 1987 only the twenty IBM compatible computers and eleven printers were deployed. These twenty consist of five AT&T computers with color monitors and fifteen Kaypro computers with monochrome monitors. The five Apple computers arrived in mid-May, 1987. All the printers are Epson LX-80 models.

The furnishings and design of the library microcomputer area was somewhat problematic. Although there are many types of microcomputer tables or workstations available, none were completely satisfactory. They were either too large or the wrong shape to fit twenty five computers into the room, or they did not aesthetically match the existing library furnishings. Finally it was decided to let the campus physical plant, carpentry staff build the furniture. The library staff explained specifically



BRIGGS LIBRARY MAIN FLOOR PLAN

FIGURE 1

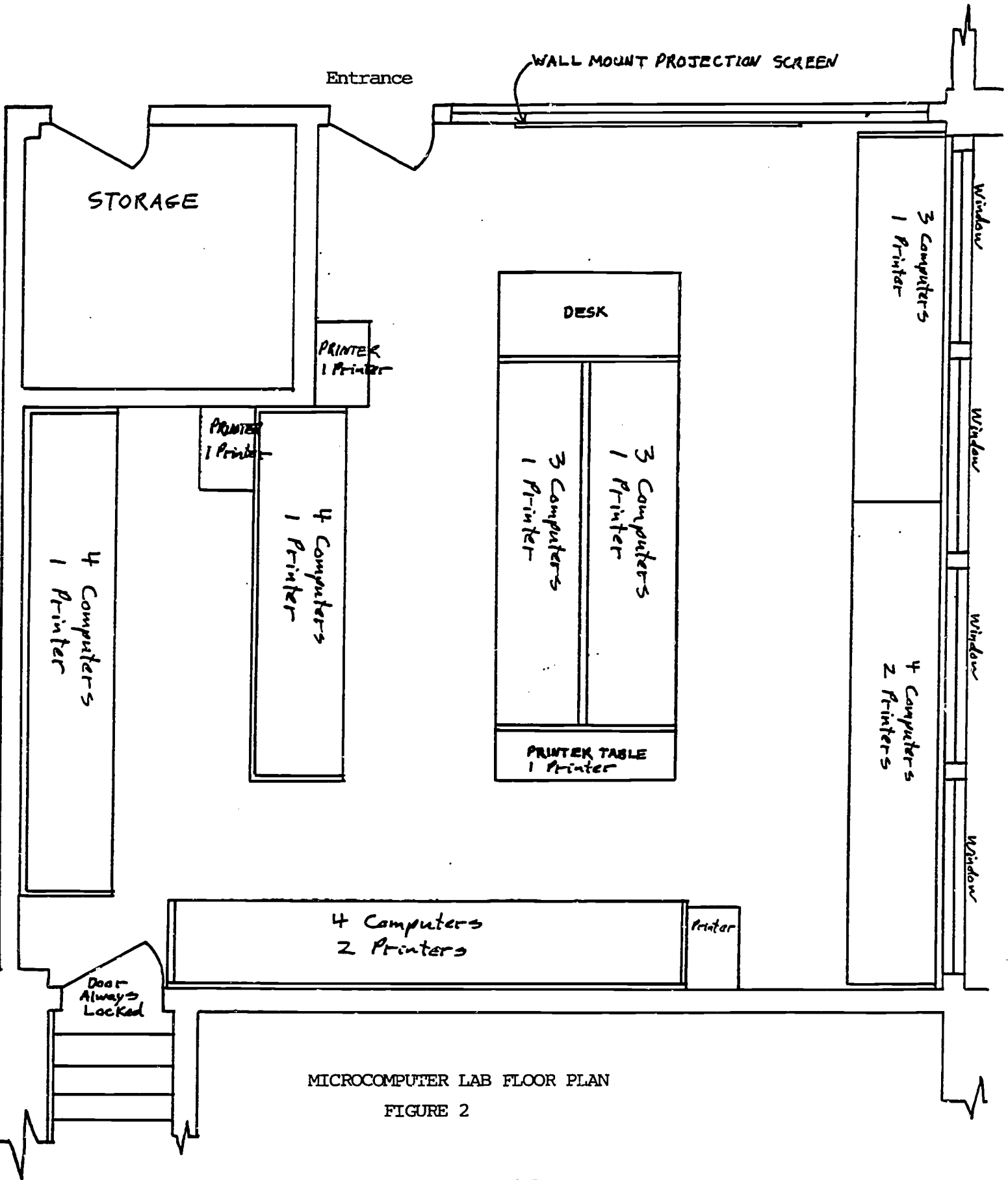
what was desired; long flat tables with no dividing partitions between computers, although low end walls and back walls on the tables were desired. No partitions between computers was desirable to provide as much work space as possible for users and because it was assumed that the microcomputers would be used in a classroom situation. Preliminary furniture designs were completed and submitted to the library committee that worked on selection of the microcomputer location. The committee examined these preliminary designs, carefully checking the specified height (floor to surface) and depth (front to back) of the tables. This was important because, on the preliminary designs, the tables were too high for comfortable typing and too deep for a comfortable fit into the room.

The shape and size of the room did not permit deployment of the computers all facing in the same direction which would have been desirable for classroom instruction. Nevertheless, the library staff believed that this limitation might actually be an advantage as it would discourage classroom use and result in increased access for individuals. It was hoped that the library's Microcomputer Lab could be available for individual use as much as possible. Although it was expected that the facility would be heavily used for classroom instruction during the first year, it was also expected that this classroom use would decrease as more microcomputer facilities became available. (SEE FIGURE 2 FOR A FLOOR PLAN OF THE LAB)

In addition to the computers and printers, it became apparent that other equipment was desirable. If classes are to be taught in the facility an erasable marker board (not a chalk board due to dust problems) is necessary. Also a projection screen for using overhead projectors and projection video monitors is a good idea. Projection video monitors are rather expensive but a good investment for classroom computer instruction. At this time the SDSU library does not own a projection video monitor, however there are several available through both the Audiovisual Center and the Computing Center on campus.

Other equipment that must be considered for a microcomputer lab includes a desk for a lab monitor or teacher (preferably one with locking drawers) and shelving for software/hardware manuals and other reference material. Modems may be considered to link the microcomputers to the campus computing network which would allow many advantages such as making software available from a centralized storage device, e.g., a hard disk, etc.

Storage space in the microcomputer facility is definitely desirable. Such storage is useful for supplies such as paper and



MICROCOMPUTER LAB FLOOR PLAN

FIGURE 2

ribbons for the printers as well as other supplies necessary for maintenance of the computers and printers, e.g., cleaning supplies, etc. In addition, if the storage area is large enough it could be used for equipment needing repairs and for overhead projectors and projection monitors. Such a storage area should be lockable. At SDSU the Microcomputer Lab is not large enough to include storage of supplies, e.g., printer paper and ribbons, are stored in the Circulation Department; not a serious problem but somewhat inconvenient.

The problem of glare on the video monitors should also be addressed when designing a microcomputer lab. The orientation of the microcomputer screens in relation to windows can create problems for users. At SDSU one entire wall of the lab is windows, and the size and shape of the room does not permit positioning of microcomputers to minimize glare. However, windows can easily be dealt with by using blinds or some other kind of covering. Also it is possible to tint the windows to help cut down on the glare problem. At SDSU ordinary Venetian blinds proved sufficient for the windows.

Glare problems may also arise due to the lighting fixtures that are in place in the room. It may be necessary to change the fixtures completely or to install glare reducing covers. This has not been a problem at SDSU.

POLICIES AND PROCEDURES

The time required for remodelling gave the library staff an opportunity to plan for the changes. It was believed that determining policies and procedures early on would reduce uncertainty for the library staff when answering questions once the lab had opened, and help prevent problems from developing. The Policy Development Committee was appointed to draft a microcomputer lab policies and procedures document. In developing this document three areas were considered: use of the lab, software acquisition and use, and administrative and staffing needs.

The committee presented the draft policies and procedures document at a staff meeting for suggestions and comments. After staff members were given a chance to react to the document the committee met to discuss necessary changes. The revised document was then presented to the Dean of Libraries for approval. The committee realized that the document might need to be revised once the lab was open and a trial period had passed. Since it is a working document, subject to periodic review, changes are made when necessary. (SEE APPENDIX A FOR THE LIBRARY MICROCOMPUTER

LAB POLICY & PROCEDURAL STATEMENTS)

Use of the Lab

When developing policies and procedures for the Microcomputer Lab, the committee considered persons permitted to use the lab, hours the lab would be available for classroom use, and the need for scheduling microcomputers.

The committee determined that the primary users of the library, the faculty and students, should also be the primary users of the lab. Residents of the community not associated with the university may apply for a special borrowers card to check out library materials. These special borrowers also will be able to use the Microcomputer Lab but such use should not be encouraged. Persons under 18 cannot apply for special borrowers cards so will not be allowed access to the lab. The committee discussed the possibility of adding a statement prohibiting use of the lab by children but decided to phrase the statement in a positive way indicating the persons permitted access rather than those excluded.

When considering the hours the lab would be open the committee sought to set hours as liberally as possible. The Microcomputer Lab opens when the library opens and closes one-half hour before the library closes. The earlier closing time for the lab enables circulation personnel to lock the lab before beginning regular procedures for closing the library.

The procedures for scheduling of microcomputers were considered for possible inclusion in the policy and procedures document. Other libraries' policies for their microcomputer labs have included provision for scheduling of computers both for class and individual use. The committee discussed the possibility of scheduling only for classroom use or for both class and individual use. The committee decided scheduling class use was necessary because of the limited facilities available on campus at the time. Eventually the use of the lab for classes should be reduced as other more suitable classroom facilities become available resulting from the implementation of the university plan for microcomputers.

Locating the microcomputer lab in the library maximized the hours it would be available for student use. The library staff agreed to make space available for the lab because student access to microcomputer facilities was recognized as an important service. While individual use should have priority, the committee formulated guidelines for classroom use since instructors'

requests to schedule the lab will occur until alternate quality facilities become available. Limiting scheduling of classes to weekdays from 8:00 a.m. to 5:00 p.m. leaves the evenings and weekends completely free for individuals. Individual use is also permitted during weekdays when the lab is not scheduled for classes.

The scheduling for individual use would be very complex with twenty-five computers and the number of hours the lab is open. Staff time needed to answer calls and maintain sign-up sheets would have a significant impact on the department given responsibility for the lab. Only heavy use of the lab would justify individual scheduling of computers. Initially, no statements were included in the policies and procedures document related to individual scheduling. Such a statement could be added at a later date if the number of users increases to a point where a demonstrated need existed. Use statistics will help the library staff monitor the need for individual scheduling.

Software

The development of a software collection for use in the microcomputer lab is very important. Although many users will bring their own diskettes containing the software that they wish to use, the Microcomputer Lab should provide access to microcomputers not only to experienced computer users but also to those who are interested in learning to use them. These inexperienced users will usually not have the software that they need. Even experienced users may not always own software, especially expensive packages. Therefore it is important that the library develop a software collection to make the facility as useful as possible to as many users as possible.

Because it is impossible to predict the needs of all potential users of the microcomputer lab it is necessary to develop a software collection which includes a wide variety of software packages. Software selection policies or guidelines should be prepared as soon as possible, preferably before any software is ordered. This software selection policy should state what types of software will be purchased (and housed) by the library, it should state the criteria which will be used to evaluate software for the library. In addition it is important that procedural statements also be included which specify things like: How will software purchases be funded?; How are software order requests submitted and who will process them?; Who will evaluate the software requests?; Who will check and setup the software once it is received?

A library software collection should address both academic and personal needs of potential users. However at SDSU it was decided that educational and utility programs which complement the curriculum and/or research needs of the university's students, faculty, and staff should be emphasized. Although this criteria can be interpreted very loosely to include a wide variety of software, it does give the library some justification for refusing to purchase (or house) certain software packages. The SDSU policy specifically states that purely recreational software, i.e., games, will not be purchased or maintained in the library's software collection. This is important because an educational atmosphere should be maintained in an academic library's microcomputer lab. Some purely recreational game software is not conducive to a study environment due to the sounds it makes and the potential noise from its users.

Other criteria should also be stated in the software policy. The software should be compatible with the microcomputers and data storage equipment in the facility. The software should be of high quality, and review or evaluation sources should be consulted during the selection process.

The software policy and procedural statements should specify what funds will be used for purchase of software. At SDSU it was decided to establish a separate fund for purchase of software. It is possible that existing book (monographic) funds could be used when purchasing software. However, due to the high cost of some software packages, the SDSU library staff believed that book funds could be depleted very quickly with the purchase of only one or two very expensive programs. Therefore a separate fund was established for software.

The university administration had allocated a sum of money for software purchase for an "Opening Day Collection." The Policy Development Committee, in consultation with one of the university's computer research specialists, selected a core collection of software. The collection consisted of several software packages for each of the three types of micros. Software selected includes a variety of word processing, database management, spread sheet, and graphics programs. It was ordered so that it would be present when the lab opened.

Procedures for software order requests should be stated in the policy and procedural document. At SDSU all software order requests, for faculty, staff, students, or others, are submitted to the library's Acquisitions Department. However, the acquisitions staff cannot be expected to have the time, or the expertise, to evaluate each software request to determine whether

it meets the library's selection criteria. Therefore a Software Review Committee was appointed to evaluate each software request. This committee evaluates each software package before it is ordered to determine whether it meets the selection criteria. It also makes sure that adequate ordering information is available for the acquisitions staff to place the order. If additional information is necessary to evaluate or order the software the committee contacts the requesting individual to request more information. The committee also informs the requesting individual if it decides a particular software package is not appropriate for the library's collection.

Software costing over \$250 must also be approved by a university committee responsible for coordinating software purchasing throughout the institution. If such a committee did not exist the policy and procedures document would have needed some mechanism to prevent costly duplication in purchasing expensive software packages by different departments or administrative units.

When software arrives it is received by the library's Acquisitions Department and is inspected for obvious physical damage and to make sure specified manuals and the correct number of diskettes have been received. The software is then sent to the library's Reserve Department for further processing. Responsibility for determining whether the software operates properly is passed on to the individual who requested the purchase of the software. The requesting individual is notified that the software has arrived and encouraged to come to the library to check the software within ten days. If the person has not checked the software within ten days, the reserve staff will process the software for use, including any setup or configuration that is necessary. The library's software review committee helps with this setup and configuration process when necessary.

The most desirable location for the storage of the software diskettes and the accompanying manuals is in the microcomputer facility itself. However, this requires that storage space and cabinets be available in the facility (a problem at SDSU due to the size of the room) along with some mechanism for tracking the use of the diskettes. It obviously requires that the facility be staffed at all times. At SDSU the decision was made early on that it would not be possible to staff the facility during all open hours. Currently staffing is provided during evening and weekend hours. Therefore the software is held at the Reserve Desk which is not too far from the Microcomputer Lab. Users must check out the appropriate operating system along with any

software and supporting manuals in the same manner that other reserve materials are checked out. Software circulates for two hours and cannot be taken from the building.

Whenever possible working copies of the software diskettes are made and used for circulation. The original diskettes are stored in a safe location. Therefore if the working copies are damaged the original can be used to make another working copy. Unfortunately producers do not always permit the copying of the diskettes to make working copies, and it is necessary to circulate the original diskettes for some packages. It may be possible to obtain another copy from the producer by explaining the situation to them, but this does not always work. Especially if original diskettes are circulated, it is a good idea to specify in the written policy who is responsible for replacement costs if the diskettes are damaged or lost.

Diskettes which are circulated must be clearly identified as library property. Because it is impossible for a reserve staff member to read what is on a particular diskette it may be possible for someone to return a substitute diskette. At SDSU each diskette contains a label that is not easily removed and an unobtrusive mark on the back of the diskette case itself to help staff identify library diskettes.

The nature of microcomputers and the software storage formats that are used with them make it difficult to prevent copyright violations. Most users will quickly learn how to copy files, and it is impossible and not desirable to guard them closely enough to prevent illegal copying. Some software is copy-protected, i.e., the software cannot be copied using routine procedures, and it is possible for the library to install copy-protecting logic on all other appropriate diskettes if staff members have the expertise to do so. However these copy-protection procedures can be circumvented by sophisticated users. At SDSU each diskette contains a label informing whether it is illegal to copy files from it. Also, as part of the normal software checkout procedure, each user must sign a form advising that they understand that copyrighted software may not be duplicated. (SEE FIGURE 3 FOR THE LAB RESERVE MATERIALS CALL SLIP) In addition numerous signs are posted in the microcomputer lab stating that it is illegal to duplicate copyrighted software.

Title _____	
Manual _____	Software _____ Album# _____
I have read and agree to abide by the Microcomputer Lab policies and procedures. I understand that copyrighted software and manuals may <u>not</u> be duplicated.	
Signature _____	
Name _____	ID Number _____
Address _____	
SDSU Library Microcomputer Lab Reserve Materials Call Slip	

FIGURE 3

Administration of the Lab

The committee identified the Circulation/Reserve Department as the logical administrative department for supervising the operation of the Microcomputer Lab, including its student monitors and software checkout (through the reserve system). The Circulation Department Head would also act as a liaison with the Computing Center. This recommendation was made to the Dean of Libraries who agreed, but library department heads were consulted before the plan was accepted.

The Circulation Department Head hires the student monitors, attempting to hire students with previous experience using microcomputers to reduce the necessary training. Monitors are trained to change printer ribbons, add paper, clear paper jams, and handle other simple equipment problems and questions. Also they should have a clear understanding of the software check out procedures and be able to answer basic operating system questions. Monitors are not expected to answer questions about all types of software, instead students with specific questions about programs are referred to the appropriate printed manual. The monitors are not meant to be tutors. Their function is to answer simple questions, conduct routine maintenance, and identify equipment problems for referral to the computing center. Since monitors can not be scheduled during all the hours the lab

is open, selected circulation personnel are also trained; and a general microcomputer orientation session was presented by a university computer research specialist for all librarians and selected support staff from other library departments. During periods of high use the monitors answer users questions in the lab, and statistics regarding inquiries are collected to help ensure effective student monitor scheduling in the future.

The chair of the Software Review Committee reviews license agreement forms for purchased software. The chair of the committee describes the restrictions to the department head of circulation who then determines the labelling procedures necessary to convey this information to the Microcomputer Lab users.

OPENING THE LAB

The ideal situation is for the remodeling to be complete one day, the equipment and furniture to arrive the next, the final preparations such as equipment hook-up, to be accomplished the third day and then the lab to open for business on day four. In the real world it does not happen quite that way.

In the case of SDSU's lab, the remodeling was completed but the equipment and furniture did not arrive on schedule. The 15 Kaypro and five A.T. & T. micros arrived on time, but the arrival of the five Apple computers was delayed. In addition, the chairs for the lab arrived a few weeks late.

Microcomputers are marketed as ready-to-use once they are plugged in. There are, however, printers to hook up and machine configuration to be done. On a single machine this does not take long, but multiply this by twenty-five micros and there is a not-too-small investment of time involved. The Computing Center at SDSU provided the initial installation of each computer, so library staff did not have to take time to do this.

Preparing the software for computer use is another time-consuming process. Each micro needs its own copy of DOS, so the Microcomputer Software Review Committee was kept busy formatting diskettes and then preparing twenty working copies of DOS.

Once the computers were operational and the copies of DOS had been made, the Software Review Committee began the process of making working copies and back-up copies of each software package. They made as many copies of each piece of software as were permitted by agreement or copyright. The original copy was then stored in a place separate from the working copies.

All software manuals were placed on reserve at the circulation desk. A simple 3 by 5 inch form was devised for check-out. This form includes space for software title; a place for indicating whether the software, manual or both are checked out; and a space to indicate which software/manual copy number was borrowed. A simple statement of agreement to abide by copyright restrictions is also included on the form. (SEE FIGURE 3)

Those using the lab are also given a one-page sheet entitled, "Microcomputer Lab Information." This document (SEE APPENDIX B) outlines the lab's hours of operation, the procedure for checking out software and manuals, the fine schedule for overdue materials and basic lab policies, such as who may use the lab, how to report equipment problems and what type of software may be used in the lab.

Access to the software collection is provided by a simple listing, not through the traditional card catalog. Kept at the Reserve Desk, this list is arranged according to type of software, e.g., word-processing. Within each type, the software is arranged alphabetically. The list also indicates what manuals are available for each software title. Since the software collection is relatively small, this simple list seems to work well. When the collection expands, it may be necessary to catalog the software.

Signs

A number of signs were designed and posted in order to make the lab easy to use and in the hopes that they would cut down on confusion and questions. A large sign was posted both outside and inside the lab outlining the hours of operation. Other signs posted in the lab include:

Ten red signs, approximately 8 1/2 by 11 inches stating, "FEDERAL LAW PROHIBITS DUPLICATING OF COPYRIGHTED SOFTWARE." These were spaced between every second or third micro.

One large sign, approximately 14 by 22 inches near the door states, "REMOVAL OF ANY LAB EQUIPMENT WILL TRIGGER THE THEFT DETECTION SYSTEM," a reference to the 3-M Tattle tapes in the equipment.

On a bulletin board toward the front of the lab there are three signs, plus a listing of software available and a copy of the one-page lab information sheet. The signs posted are:

- REPORT ANY EQUIPMENT PROBLEMS TO THE MONITOR OR TO THE CIRCULATION DEPARTMENT, approximately 14 by 22 inches.
- SOFTWARE IS AVAILABLE AT THE RESERVE DESK, approximately 8 1/2 by 11 inches.
- NO FOOD, NO DRINK, NO BUGS, approximately 16 by 20 inches. This sign is one of the Library's warnings about having food or beverages in the building.

Finally, there is a schedule on the lab door indicating what times the lab will be used that day for classes. This is changed each morning by a member of the circulation staff. There is also a sign that may be posted when a class is meeting in the lab which reads, "CLASS IN SESSION." Other useful signs would include basic operating instructions, such as HOW TO FORMAT A DISKETTE. Also, handouts could be developed giving basic instructions for use of each software package in the collection.

Lab Maintenance

When a monitor is on duty, he or she resupplies the printer, but during other hours it is the circulation staff which is responsible for this aspect of maintenance. After the lab was in operation for only a short time, it became obvious that the printers needed stands in order for the paper to feed more easily and to eliminate paper clutter on the tables. The Software Review Committee then ordered eleven inexpensive enamel coated wire printer stands from a computer products supply company.

Publicity

Publicizing the new microcomputer lab proved to be the one aspect of offering this new service that was least necessary. Weeks before the lab opened, scores of students began asking about it at the Information and Circulation Desks. Before it was ready for general use, while the Software Review Committee was configuring software, many students wandered by to take a look. It was necessary to keep the door locked at all times, even when staff was working on lab preparations because students would enter the lab and begin using the micros. Almost every student on campus seemed to know about the lab well in advance of its opening.

To officially announce that the lab was ready for use, a brief article was placed in the faculty/staff weekly newsletter, Update. In addition, the student weekly, Collegian, published an interview with the Dean of Libraries. The library faculty

sponsored an all-day openhouse for faculty, staff and students to visit the lab. From nine a.m. until three p.m. that day, librarians were available to answer questions about lab use, procedures and policies. The library newsletter, Conspectus, also carried an article about this newest library service.

SDSU's experience seems to indicate that when a new service, such as a microcomputer lab for which there is great demand, is provided, little publicity seems to be necessary. Word of mouth is fine for creating interest in the lab, but the library needs to provide the campus community with accurate information about this new service. This is a prime time to sell the library as innovative and forward-looking. It is also important to sponsor an event like an openhouse or grand opening so that the campus community has a chance to see the library at its best and to feel they have a part in promoting and using this new service.

CONCLUSION

Providing public access to microcomputers is a service that is being offered with increasing frequency in libraries. The experience of this library may assist other library decision makers when developing plans for microcomputer facilities. Library staff involvement early in the planning process ensured site selection best serving the needs of the lab users without negatively influencing other library services. A key to the successful implementation of the plan for the Microcomputer Lab was the cooperation of the Computing Center personnel and the library staff. Design of the lab, selection of initial software and training of staff and monitors were areas affected by this cooperation. Developing policies and procedures prior to the opening of the lab prevents problems from developing. The policy and procedures document developed by the library staff for this library can be used for ideas when preparing such documents for similar facilities.

LIBRARY MICROCOMPUTER LAB POLICY & PROCEDURAL STATEMENTS

Introduction

Microcomputer software which is housed in the Hilton M. Briggs Library, whether purchased with library funds or other funds, must comply with the following criteria. Use of the microcomputer software and the equipment in the library microcomputer lab should also be guided by the following policy statements.

What Software Will Be Purchased and Housed in the Library

1. Microcomputer software should be of an educational or utility nature which complements the curriculum and/or research needs of the university's students, faculty, and staff.
2. Software should be of high quality and, when possible, review or evaluation sources should be consulted when making purchase and placement decisions.
3. Purely recreational, i.e., game, software will not be purchased or maintained in the library's software collection.
4. Audible software will only be purchased or maintained in the Library if it fits the recommendations stated in this document and if the computers are equipped with headphones so others will not be disturbed.
5. Only software which has programming and a storage format that is compatible with the computers in the Library will be purchased and/or maintained in the library collection.
6. Printed documentation that accompanies, supplements, or supports the use of the software should be purchased whenever possible.

Funding For Software

1. Microcomputer software may be purchased directly by the department desiring the package if their own funds are used. Software which costs over \$250 must be approved by the appropriate university committees. This software can then be submitted to the library's Reserve Department for temporary or permanent placement in the library's software collection. (See Software Ordering and Placement Procedures and Decisions.)

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2. The Library will maintain a general fund for the purchase of appropriate microcomputer software and supporting documentation. Departmental library book funds may not be used for the purchase of software packages.
3. Requests for microcomputer software to be purchased with library funds should be directed to the library's Acquisitions Department. (See Software Ordering and Placement Procedures and Decisions.)
4. Monies for very expensive software packages, i.e., over \$250, may be shared by both library funds and the nonlibrary funds of the department that is requesting the software. These decisions must be agreeable to the appropriate librarians and/or the Dean of Libraries. This shared funding does not necessarily have to be equally shared and usually the requesting department should bare a larger portion.
5. Software purchases to support internal library operations should be funded from library funds at the descretion of the appropriate librarians and/or the Dean of Libraries.
6. Registration fees are often required for the support of software. Such registration fees will be taken from the same fund(s) which were used to purchase the items.

Software Ordering and Placement Procedures and Decisions

1. Software to be ordered from nonlibrary monies may be ordered directly by the department requesting the item. Software which costs over \$250, or which is not instructional in nature, must be approved by the appropriate university committees. This software may then be submitted to the library Reserve Department for addition to the library's software collection. This software will be evaluated by the library's Software Review Committee (see appendix A for a list of current members) to determine whether it meets the requirements of this document for temporary or permanent placement in the library's software collection. Any written information, especially published reviews and/or evaluations, should also be provided for the committee's use.
2. Software to be ordered from library monies should be requested through the Acquisitions Department. Order requests, along with any written information about the software package being requested, including published reviews

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and/or evaluations, should be submitted through the normal channels. Special funding requests must be discussed with the acquisitions librarian.

3. All software order requests will be reviewed by the library's Software Review Committee (see appendix A for a list of current members) to evaluate whether the material is compatible with the recommendations of this document.
4. Software costing over \$250 requires the approval of the appropriate university committee. A request for such approval should be completed (in pencil) by the individual requesting the software. The form and the information about the software should be given to the Acquisitions Librarian who will submit it to the library's Software Review Committee (see appendix A for a list of current members). If the Committee approves the purchase of the software they will complete the form and submit it for approval to the university committees before the software is ordered.
5. If adequate information is not available to evaluate the package and the library's Software Review committee is unsure of the appropriateness of the software for the library's collection it may request additional information from the individual who submitted the item or request.
6. Disputes between the review committee and others will be referred to the Dean of Libraries.
7. The Library will not attempt to obtain software for preview purposes. If necessary this should be done by the initiating department or individual.
8. Software will not be borrowed via interlibrary loan.
9. Free software (no cost for purchase) may be ordered through the library's Acquisitions Department to ensure appropriate processing. This free software must meet the same requirements which are used when evaluating other software packages.

Software Receiving and Quality Control

1. Microcomputer software ordered by the Library will be received in the Acquisitions Department. Shipments will be inspected for obvious physical damage upon receipt and to

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ensure that the correct number of disks, documentation, etc. has been received.

2. Responsibility for determining whether the software is free of defects and errors (it operates properly) cannot be assumed by the Library or its staff. Therefore it is recommended that the requesting individual be notified and encouraged to load and check the software as soon as possible after the software is received in the Reserve Department but before it is made available for use by our patrons. The material will be held for ten days to allow for this check. If the material is not checked within the ten days it will be made available to users without being checked.
3. As is the practice with other library materials, generally there will be no attempt to return software unless it is damaged or defective. Acquisitions will not attempt to return materials that are deemed "inadequate" or which turn out to be less than the expected.
4. License agreement forms are often received with software. When possible these license agreements should be a criterion in the selection process. All license agreement forms should be reviewed by the Chair of the library's Microform Review Committee (see appendix A for a list of current members).

Use of Microcomputer Software

1. Any person holding a valid SDSU identification card or a special borrower's card may check out microcomputer software for use in the microcomputer lab ONLY. Software will not be circulated outside the building and will not be lent through interlibrary loan.
2. Microcomputer software, its supporting documentation, and hardware documentation will be maintained at the Reserve Desk and will be circulated according to normal reserve procedures. Fines for software held longer than permitted will be assessed at the same rate as other reserve materials. Software diskettes should not be returned in the bookdrops, they must be given directly to a library staff member.
3. Microcomputer software owned by the Library or placed on reserve in the Library will be listed in the same way as other reserve materials. Access will not be available through the card catalog. A separate list of the software

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owned by the Library will be available at the Reserve Desk. Software placed on reserve, but not owned by the Library, will be listed in the regular reserve lists under the person's name and the title, etc.

4. Library patrons damaging or losing software will pay full replacement costs plus a service charge.
5. Patrons may bring their own software to use in the lab, but only programs of an instructional or utility nature may be used.
6. Audible software will only be used in the lab if the microcomputers are equipped with headphones.
7. Users of the lab must supply their own blank diskettes.
8. Software must not be placed in bookdrops or run through the electronic detection system. All software borrowed must be returned to a staff member at the Reserve Desk.
9. Copying of software is prohibited by law, except in cases where the licensing agreement allows for such copying or where the software is not protected by copyright (public domain software). The Library will comply with all known federal and state laws regarding copyright, licensing, etc. A warning that it is illegal to duplicate copyrighted software will appear on each diskette when it is appropriate. Users will sign a standard form when they check out software at the Reserve Desk which warns them about legal responsibilities. And warning signs will be posted in the microcomputer lab about copying restrictions.
10. The Library will maintain an archival copy of each piece of software, where permitted by law or licensing agreement. This copy will be stored separately from the circulating reserve copy and will only be used to make a new reserve copy. The archival copy will never be circulated to a patron. The Circulation/Reserve Department will be responsible for making the archival copy of software purchased with library funds. Faculty/departments placing personal copies of software on reserve will provide the Library with at least 2 copies of each software program, one of which will be stored as the archival copy.

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Access to Microcomputer Lab

1. SDSU ID or special borrowers card is required to check out the operating system diskettes necessary to use the microcomputers in the lab.
2. Users should have some familiarity with microcomputers since the library staff will provide only limited assistance.

Microcomputer Lab Scheduling

1. The library's microcomputer lab opens when the Library opens and closes one-half hour before the Library closes. The microcomputer lab may be scheduled for classroom use during weekdays from 8:00 am to 5:00 pm. Faculty members may call the Circulation Department in advance to schedule the lab for classroom use. A class-use schedule will be posted daily on the door to the lab to inform potential users.
2. Walk-in use on a first-come first-served basis is available for those with appropriate ID during times when the lab is not scheduled for classroom use. Time limits on the use of software or equipment may be imposed if necessary during certain times. Note that the software available at the Reserve Desk circulates for two hours.

Instructional Assistance

1. Library staff will provide only basic level instruction.
2. Student employees will be hired and trained by the Circulation/ Reserve Department to provide limited assistance in the microcomputer lab during certain time periods.
3. A hotline number to call for assistance from the Computing Center may be available.

Maintenance

1. When a user finishes a session the diskettes should be removed from the drives, the terminal should be turned off, and the software must be returned to the reserve desk (given directly to a Reserve staff member, not put in the book drop or left on the desk).
2. Users causing damage or loss of equipment or software will

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pay full replacement costs plus a service charge.

3. Microcomputer or printer malfunctions should be reported immediately to the Circulation/Reserve Department or to the lab monitor.
4. If printers run out of paper or ribbons need changing, etc. report problem and printer number to the Circulation/Reserve Department. Printing supplies will be provided by the Library and will be installed by a library staff member from the Circulation/Reserve Department or by the lab monitor.
5. The Circulation/Reserve Department will initiate replacement (through the Acquisitions Department) of damaged software when a new working copy cannot be made from the archival copy, i.e., when no archival copy is permitted.

HALLMAN/CASPERS/RICHARDS 10/7/86 Revised HALLMAN 1/19/87

Appendix A

Software Review Committee

Current Members

Clark Hallman, Chair

Mary Caspers

Susan Richards

1/19/87

MICROCOMPUTER LAB INFORMATION

The Briggs Library Microcomputer Lab may be used by SDSU students, faculty and staff, and others holding current library borrowers cards.

HOURS	
Monday-Thursday	5pm - 11pm
Friday	5pm - 8:30pm
Saturday	1pm - 8:30pm
Sunday	1pm - 11pm

Also available 8am - 5pm, Monday - Friday
when classes are not scheduled

Software and Documentation

Microcomputer software, its supporting documentation, and hardware documentation are available at the Reserve Desk, and are for library use only. Materials circulate for 2 hours. Software and documentation are protected by copyright. Borrowers must show a valid ID, and sign a statement that they will not copy, attempt to copy, or lend software restricted by copyright. Software must be returned directly to a member of the circulation staff. Improperly returned software will be subject to a fine.

How To Check Out Materials

1. A list of available software and manuals is located at the Reserve Desk.
2. Complete a call slip for the title you wish to check out. Only one software package may be checked out at a time.
3. Present current ID and call slip to a circulation staff member.
4. Return software directly to a circulation staff member.

Fines

- *A fine of 50 cents for the first hour and 25 cents for each additional hour is charged for each overdue item.
- *Borrowers who damage or lose diskettes or manuals will be charged full replacement cost plus a \$5.00/item processing fee. Improperly returned software will result in a \$2.00 fine; and if damage results, replacement costs will be assessed.

Lab Policies

- *Persons using the lab should have some familiarity with microcomputers since the staff will provide only limited assistance. Monitors will be available at posted times.
- *Library diskettes may be used for data storage. Users must provide their own blank diskettes.
- *Instructors can reserve the lab by calling the Library Circulation Dept., 688-5106. The lab is available for class use 8am-5pm, Monday - Friday.
- *Report any equipment problems to the monitor or the Circulation Desk.
- *Users may bring their own software to use in the lab, but only non-audible programs of an instructional or utility nature may be used.

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