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ABSTRACT

This issue of "Illinois Libraries" contains the papers delivered at a 1974 workshop on government publications in microform. Twelve articles focus on such issues as: 1) reasons to collect microforms; 2) criteria for selecting microform documents; 3) microform hardware and software; 4) procurement procedures; 5) bibliographic control; and 6) specific information regarding microforms published by the Congressional Information Service, the Government Printing Office, the Bureau of the Census, the United Nations, and other state and federal agencies. A bibliography listing reviews of documents in microform and the results of a survey of microform collections of government documents in Illinois also are included. (EMH)

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DOCUMENTS IN MICROFORM



**Illinois
libraries**

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special guest editor, Janet Lyons

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*Representing the interests and concerns of urban people who are culturally and economically disadvantaged

preface

This issue contains the papers presented at the sixth annual documents workshop sponsored by the Illinois State Library and the Illinois Library Association on November 21, 1974 in Chicago. The planning committee for the Documents in Microform Workshop consisted of Marian Carroll, Illinois State University; Joyce Johnson, Peoria Public Library; Anthony W. Miele, Alabama Public Library Service; Lois Mills, Western Illinois University; Patricia B. Ourth, Illinois State Library; William J. Powers, Jr., Cook County Law Library; and Janet Lyons, Illinois State Library.

The goal of this series of workshops is to provide an opportunity for continuing education for documents librarians. The objectives for this workshop were to give a general introduction to microforms through examining the purposes for including in library collections, the policies needed, and the problems involved; to inform librarians about types and formats of microforms available; to establish communication between librarians and producers concerning hardware and software; and to identify problems that need to be researched.

To determine which libraries do collect documents in microform and what their holdings are, a two part questionnaire was prepared and sent out. The results of that questionnaire appear in this issue.

The program participants were welcomed by Kathryn Gesterfield. Morning speakers were William J. Powers, Jr., Wallace McConaghey, John Beil, and Herb Cohen. Jim Livsey was the luncheon speaker. Paul Zeissat, Grey Coie, and Candy Morgan were the afternoon speakers. All speakers then formed a panel, moderated by Anthony W. Miele, to answer questions from participants. A summary of the question and answer period is included in this issue. On display during the workshop were a number of hardware products for participants to examine.

Janet Lyons
Chairperson
Documents in Microform
Workshop Planning Committee

purposes, policies, problems in microform usage

william j. powers, jr.
executive librarian
cook county law library

One of the problems of being a commuter in Chicago, and especially of being a suburbanite is that at the very last minute, when you least expect it, you get tied up in traffic jams that are almost unbelievable. If you will excuse me for ten seconds, I want to plug the microphone into my cassette recorder so that tomorrow I may reprimand myself for the brilliant things I forgot to say today.

I am reminded of the story that Everett Dirksen used to tell about cold, wet mornings like this and about the farmer in Southern Illinois who had to go out and milk his cows on a snowy morning. He was out in the yard for a while and his hands got very cold. After he looked at the first cow and figured that he didn't want to get kicked he walked over to the washstand and soaked his hand in warm water for a while before he started milking. The cow mooed in gentle contentment and turned around to him and said, "Thanks, boss, for the warm hands."

The reason that I mentioned this story is because my function this morning is primarily to plow the ground for the speakers who will follow me. I have been admonished by most of them that if I stole their thunder various dire things would happen to me later in the day or later in the week. So I want to sketch the outline for the day without treading on their particular areas that they wish to discuss. It is rather difficult for me because I love to discuss some of the more technical problems but I am not permitted to do so today.

Let me suggest perhaps that as librarians you really don't want microforms, computers, or any other mechanical gadgets. What you really want is reader services. I will say that mechanical gadgets only have a value when they help the production of reader services. I would like to further suggest that the kind of microforms and the kind of readers and reader/printers that you may finally decide to obtain, in order to obtain services, are perhaps the last things you should think about. The first thing you should think about is what kind of a library you are in and what that library should become.

It is fairly common knowledge that most libraries do not have a written policy statement for collection development but I believe one is quite necessary, at least for the larger libraries, because the policy statement is a vital part of the whole budget process. Another reason, of course, that a policy determination is necessary, is that the library policy provides the framework to guide collec-

tion building.

In other words, your collection building should not be a random helter-skelter acquisition of publications, just because they are published, but the selection process should be aimed at building the kind of collection which fulfills the library policy.

In order for a library policy to be realistic, the policy should be decided in terms of what is possible for your budget to accomplish. I have been in many sessions where people talked about all of the things that would be wonderful to have for their library but in the cold light of morning, they finally came to a realization they would never have those publications because they did not have a budget to support them.

There is no use in deciding a policy that requires expenditures that you do not have or will not have at any time in your library. I might add in passing that the smaller the budget the library has the better the selection process has to be in order to get the best collection that the library budget will permit.

Now what does all of this have to do with microforms? Well, we should decide first, before we decide to buy a microform publication, whether that publication, in any form, fits in the policy guidelines for the library. The *Rosetta Stone* is a publication, for example, but it is not really practical to have in the average library. There are many things which just do not fit into the policy determinations for a particular library.

I am reminded here of the story about a small boy who wandered into a library for the first time and while he was wandering around in a bemused state a charming reader services librarian, who was full of energy, came up to him and asked if she could be of help. He finally decided he would take a book but he did not know what book he wanted because he was not the reading type so she gave him a large, lavishly illustrated book on penguins.

When he returned the following day she saw him and asked him how he liked the book. He said, "Oh, it is a very good book." She said, "Don't you have anything further to say?" And he said, "Yes, there is a great deal of information about penguins in that book that I do not care to know about."

I think his remarks apply generally to the policy for collection building. The collection must be responsive to

the needs of the users of the library.

There is another value to a collection building plan that is often overlooked — it is the help it can give in dealing with your library trustees when you are either trying to keep the budget that you have, or to expand it to larger dimensions. Basically what you need is a plan that you can sell to them which they can understand, accept, and be willing to support.

I think now we should consider some of the reasons why you should consider buying microform publications. The first reason you may consider is that the original publication is out-of-print and that, I think, is one of the truly valid reasons for the use of microforms. You can always argue that there is a necessary publication that is out-of-print.

This reasoning applies especially to older government documents. For example, if you want House or Senate Hearings that are more than ten years old, the only way you can get them is on microfilm or microfiche.

You just can't walk into the Government Printing Office or Bernan's or even some of the other libraries and get complete runs of House and Senate Hearings. There is just no other way to get them. For example, in our own library which was started in 1966 we now have almost complete runs of the House and Senate Hearings from 1839 up until the 80th Congress. There is no way that we could have afforded to spend the time to go scouring through every library listing of excess publications of every dealer in the book trade to find those publications. They are out-of-print and there is no way to get them except on film or fiche.

The second reason that you may want microforms for publications is as a substitute for binding. It is now costing \$4 to \$6 in the Chicago area to bind a book. If you consider that you can buy microfilm editions of many of the same publications in that same price range I think you have a very good trade off. And so, you are also beginning to solve another problem, which is the space problem.

A third reason for buying publications in microform is that you have run out of space in your library or you can easily see that in a few years you will run out of space. There are only three things you can do when you run out of space. The first one to do is stop buying everything — but that is not a very intelligent decision for a librarian to make. The second thing you can do is to go through your library and throw away everything you should have thrown away ten years ago. Most librarians, you know, have a certain affinity with pack rats. Most of us have a tendency to keep things we don't really need until we are absolutely forced by the pressure of lack of space or some other outside force to get rid of things. But there comes a time when we have to start weeding and getting

rid of unnecessary duplicates and other publications, ones that haven't been used for some time, and the ones we are finally convinced are not necessary for the historical integrity of our collections.

But there is a point somewhere along the line where we cannot throw things away anymore if we are going to preserve the historical integrity of our collections.

For example, one of the big problems in a law library is legal precedent and we frequently find lawyers who are looking back for a hundred years, two hundred years, or even further for a case in point which has not been decided in recent times.

One of my very good friends was Urban Lavery, an appellate lawyer and writer, who spent much of his time studying the English court decisions before 1789 because they are still part of the law of Illinois. And there are still cases which do come up where there is no recent case in the Illinois decisions. This man was a lawyer's lawyer and he was the one who taught me how to do legal research in the English common law reports. One of his delights was finding cases which other lawyers couldn't find but which were needed to reverse a trial court decision in the appellate court.

A long-range purchasing plan for microforms will help you avoid the dilemma of arriving at a point some time in the future when you have run out of shelf space and you have received a shipment of new materials with no place to put them.

I recall that in the heydays of Title II some libraries would order books, from page after page of the publisher's catalogues, and put the books into storage until they could be assimilated into the book collections. I am aware that there are a couple of libraries which still have a few boxes of books from those days that have not yet been integrated into their book collections. But those days are gone now and in many libraries the space for new publications is almost gone.

A good example of what can be saved in shelf space is the *Official Gazette of the United States Patent Office*. There are 938 volumes of the gazette, and the thinnest is more than 4 inches thick, and they occupy shelf after shelf in the library. But you can take all of them off of the shelf and replace them with microfilm which will fit into one filing cabinet.

The fourth reason for having publications on film is that you may have a rare publication which you may want to make available to your library patrons but do not want to run the risk of having the publication mutilated or stolen. There a microfilm copy may be the best answer you can get because there may not be any other effective way to reproduce the publication.

If you take an old publication, where the pages are brittle, and if you try to copy them on a photocopy

machine, you may find that you are breaking the binding or tearing the pages.

The fifth reason that I would suggest is that the publication is a new, original publication obtainable only on film or one that is perhaps a combination of existing materials that are in effect new publications. A publication that comes to mind is the proposed publication of the Code of Federal Regulations where the publisher is going back and taking all editions of each title and arranging them in order by title but chronologically by date so that you can take Title One, for example, and have each subsequent edition in order within that title. It is in effect a new publication because there is no other practical way of collating that tremendous volume of material and making it immediately available.

I think now that if you have made some policy making decisions, and have decided to buy publications on film or fiche, that you should be aware also that you have made a decision to buy one or more microfilm systems — because when a page is reduced to the small image on film it is not available to your library users until the page is restored to the original or larger size.

If you buy a publication on 35mm film then you have in effect bought a 35mm system where you will need a 35mm reader and perhaps a reader/printer. And it may not occur to a person buying it for the first time that perhaps you will have 24x microfiche in about two years in the library — but you may not be able to use it on that reader or reader/printer because of the lack of an adapter or the adapter may not be very convenient — so you have to buy a second system. Or you might find out you have bought one publication on 35mm roll film at one reduction ratio and the acquisition librarian doesn't pay attention to the fact that the reduction ratio is 12x and he or she buys another publication at 18x — when you look at the publication on the screen you have two different size images but there is nothing you can do without interchangeable lenses.

There is another little problem that comes up and that is the problem of polarity. If you have negative film you should always buy negative film because the problem of printing-out gets complicated.

One thing you have to decide is how many points of access do you need to the filmed publications. If you have a set of printed books, consisting of one hundred volumes, then theoretically 100 persons can each have one volume — but not if they are on a roll or rolls of film because then you have to have a reader for each person, or they have to stand in line waiting their turn to use a reader.

I do hope that you have not reached the point where you have spent a great amount of money, without having a microform buying policy. I strongly urge that if you do get to the point where you are going to spend money for

microfilm and related equipment that you establish a microform buying policy before you buy anything. If you do that you can anticipate or solve most of the problems that may occur.

There is absolutely no way that I can discuss all of the elements that should be covered in establishing a microform buying policy, but I would like to recommend two publications that should give you valuable insight into what you should think about, and some of the things you should cover.

One is Allen Veaner's work entitled "The Evaluation of Microforms" published by the American Library Association and the other is published by the California State University and College Systems entitled "Criteria for the Procurement and Use of Microforms and Related Equipment for the Libraries of the California State Universities and Colleges" published August 9, 1974.

I am not saying that I agree with everything in the criteria but I do think it is an excellent example of the things that you should think about if you do intend to go into the acquisitions of publications in microform, and the development of a written policy for your library.

There are several other things I would like to add and one of them is the fact that, just as we are each born with our own characteristics, a microform publisher, for the most part, is limited by the quality of the publication which that publisher intends to reproduce and offer for sale. The contrast ratio of the paper and print may not be very good to start with so you cannot always blame the publisher if it is impossible to reproduce it at the highest graphic art level.

Another problem that microform publishers have to contend with is that there seems to be as many different type fonts as there were printers. Some of these type fonts reproduce beautifully and some are horrible — so don't blame the microfilm if some obscure printer in the seventeenth century decided to produce an obscure typeface with all kinds of little curlicues and curls and it is not very legible now even on the printed page.

I think an ethical publisher will tell you that is the best he can do and I think a librarian should take a good look at the original before complaining about the film quality and legibility. It may be that the original was not good either.

The last suggestion is not to get hung up on the equipment problem. Your budget may or may not support the very sophisticated equipment and if that is the case, why worry about it.

If you make a policy decision that you buy only 16mm film publications then you have decided not to be bothered with the problems that go with other equipment. There is a great variety of equipment on the market and some of it you will see here today. Before you start to write a diatribe about the evils of the commercial system of producing readers and printers you should first sit down

and evaluate what you really need. You may find that you do not have any of the problems that you were going to write a diatribe about. Someone else may have them but you don't.

It may have never occurred to you that manufacturers are afraid to sit down with each other and discuss competitive equipment for fear that they will become involved with the antitrust laws.

The last thing that I want to say is that the use of microforms is the only economically feasible answer to the space problem today.

I was one of the persons who thought computer

technology would solve that problem. It may solve the indexing problem, but unless someone develops a new method of inputting one hundred thousand pages, or one million pages, or five million pages at a figure that is within the economic capabilities of libraries, mass computer storage is not the answer for most libraries today.

When is the last time someone offered you enough money to build a new building?

Microfilm technology does offer an alternative answer to the space problem that is economically within our limits and I will leave you with that thought.

basic microfilm for the librarian

w. c. mccoanaghey
president
wallace industries
chicago, illinois

We hope to cover in this article the three areas of prime importance to the library community: *Formats*, the *Benefits* to be derived from various microforms, and lastly the methods for the *Implementation* of a microfilm program.

We choose to be deliberately simple, perhaps to a fault, in order to avoid the many highly technical terms, such as Ross-Crabtree tests, A.N.S.I. specifications, resolution tests, and the like so that we may "de-technicalize" the area of microfilm, thus making it more understandable. We will also ignore those microforms that are not often seen in the library, such as aperture-cards, with the same purpose of simplification in mind.

I. Formats

A. Roll

The oldest, and most common format is the roll since this is what the filming-camera produces. Rolls are typically seen in 16mm. and 35mm sizes, and while being economical, are difficult to handle. The use of microfilm rolls may be likened to the use of a reel-to-reel tape recorder in that threading is required, and is therefore more complicated than the small cassette recorders. Microfilm cartridges, like cassettes, simplify the loading

procedure. In our judgment, if one is starting a microfilm program, they would be well advised to select a more modern Microformat — one that would be in style and popular five, or ten years from now. Since little research and development work is being carried out in the roll-retrieval area, it would be our suggestion that considerable attention to be given to those areas of industry concentration, such as the cartridge, and particularly the proposed Universal Cartridge.

B. Cartridges

Containing the roll in the cartridge enables the end-user to eliminate film-handling, and enjoy the benefits of self-threading along with the benefits of more sophisticated indexing systems. Given records are accessible within 15 to 30 seconds using a properly indexed cartridge system, with little or no possibility of film wear. Cartridges are primarily available in the 16mm format, though some 35mm cartridges are on the market. Currently 3M, Kodak, and Bell & Howell market cartridges which are not compatible one with the other requiring the end-user to purchase retrieval equipment that has been manufactured by the cartridge manufacturer. This leads to both benefits, and liabilities: on the benefit-side, readers and reader-printers that have been manufactured by

the cartridge-maker operate automatically by self-threading devices, and they are generally the easiest on the microfilm, producing little or no scratching while operating at high speed. Usually these devices also offer a number of good indexing systems ranging from simple film-inch counters to image counters, and even more sophisticated methods of reading a binary-code on the film beside the image. The obvious disadvantages of such readers and reader-printers is that they accept only those cartridges made by one manufacturer, and they tend to be high in price.

Various independent manufacturers have entered the market with readers and reader-printers that are relatively low in cost, and will accept roll-film on spools, and either the 3M, or Kodak type cartridges. These machines are deficient in the area of indexing, offering only simple film-inch counters. In our judgment, an even worse disadvantage is the inability of these devices to self-thread. One of the prices of their "universality" is that each roll, or cartridge must be hand-threaded into the reader or reader-printer, which results in operator inconvenience that is considerable. In the last analysis, the library must choose which of the various advantages and disadvantages of these systems they are able to tolerate, since the perfect system does not really exist.

C. Microfiche

Microfiche is a single sheet of film 4 x 6 inches in size, and more recently, as a result of metrification, 105mm x 148.75mm. Microfiche are available in many reduction-ratios, containing as few as 60 images at a reduction of 20x, to 2,000 images at a reduction of 75x. Within the library environment, the most common reduction ratio to be encountered should be 24x, which produces 98 images per fiche. This 98-image format is the standard adopted by the National Microfilm Association for Micropublishing source-documents on microfiche. Two other fiche-formats, not nearly as common, are computer-output-microfilm at 42x or 48x, and, for tax-libraries, ultrafiche, with reductions of 75x or more. Microfiche seem to be an almost perfect tool for the micropublisher, being inexpensive to produce, and particularly easy to distribute. The increased use of microfiche for publishing along with the tremendous growth in the use of fiche for computer print-out has resulted in a great deal of industry attention to the development low cost fiche-readers and reader-printers. The greater availability of sensibly-priced retrieval devices has added even more impetus to the use of microfiche.

II. Benefits

When examining the benefits of microfilm, it be-

comes apparent that some of the traditional benefits are not as valuable to libraries as to business, and that also the opposite is true. As we discuss the benefits, we will concentrate on those of particular value to the librarian.

A. Space

Space is an important consideration to everyone, and especially to the library. When a 98 percent reduction can be contemplated, space savings can perhaps be the single most important benefit to the library. On microfiche, around 350 volumes, averaging 400 pages in length, could be stored in the space of a typical shoe-box. It is possible to imagine a room 10' x 10' that could contain, on microfilm, the entire contents of a medium-sized library. These sorts of realistic space savings mean that the library is now able to support many more titles that even before considered, to the benefit of its users.

B. Security

Security, in our opinion, becomes less important to the library than to certain portions of industry. It is probably not practical to duplicate the microfilms in the library because it would be too expensive, and unnecessary as they would ordinarily be reproductions of a master held by a micropublisher. Security can be important to the library when microfilm is considered solely for that purpose. An example of such an application would be the filming, on premises, of the card-file for protection. In security-microfilming for the library, either the library would have to own, or lease its own camera equipment, or have the work performed by a service bureau.

C. Uniformity

The interfiling of information of various sizes has always been troublesome. By reducing various original documents to one film size, they therefore become one size, and capable of interfiling. For example, the *Wall Street Journal*, and *Time Magazine* both can become 35mm wide, when reduced to microfilm. Both periodicals may therefore be handled in the same manner, without respect to the manner in which the original was bound, or its size. The benefits of microfilm uniformity are also evident in microfiche. Here all original sizes become the uniform 4 x 6, even though reductions may vary greatly.

D. Retrieval

The ease of retrieval from microfilmed images is well known. Properly indexed images should be recalled in a

time period of under thirty seconds. At worst, microfilm should be no more difficult than the original paper would have been under the same circumstances. More and more industry attention is being devoted to speeding the recall of micro-images. The greatest areas of concentration appear to be in the areas microfiche, and cartridges. Reproduction is also a part of the general area of retrieval. Much development has taken place in recent years, not only in the area of better and less expensive readers, but also in the production of good, and inexpensive reader-printers. Microfilm is a good reproducible, and is capable of making a quite good hard copy. Copying processes that have either been developed especially for microfilm, or successfully adapted from copy-machine technology are now on the market, and enable the microfilm user to find, and copy quickly, and with good quality

E. Availability

Certain kinds of information are available only on microfilm. Certain kinds of foreign technical information, records from the Vatican Archives, or records of great historical value, along with many others are simply not available to the librarian in any other manner. Other material, while available in paper, would not be considered because the size of the particular collection would represent too great an investment, either in dollars, or in library space, or both.

There are many other benefits of microfilm, such as its capacity to facilitate the distribution of information, its convenience, its cost-saving abilities, and its ability to preserve file-integrity. We feel that these benefits are not particularly of note to most libraries, and are, therefore, mentioned only in passing.

III. Implementation

In our opinion, the most important fact that the librarian can realize is that there is no universal microfilm system. The library is going to be confronted with around six different formats, and is, therefore, going to be involved with six different microfilm systems. The tremendous temptation to seek out one universal system, or one universal reader is quite understandable, but since these do not exist, the search will be futile.

Another important consideration, mentioned earlier, is the direction that the microfilm industry is taking with regard to the development of new products. There is an enormous interest in the further development of microfiche readers, and reader-printers, and a continuing

development is the area of cartridges. This is not to say that there is no interest in the library market, or that there will be no further development in the library area. It simply says that to take advantage of the best technology, at the best prices, and with the greatest number of manufacturers from which to select, it is necessary to structure the library microform to correspond to those areas of greatest industry concentration.

We are currently unable to avail ourselves of the newest products of the microfilm industry because some of the older library formats are not within the areas of greatest technological concentration. An example of this would be one of the oldest microforms; 35mm roll-film. Readers, and reader-printers sold to this market constitute a minority of the market, and while not ignored, they do not benefit as they could. An important consideration in any contemplated system would be the simple consideration of whether or not the considered format was currently research-intense, and would be contemporary system even five, or ten years from now.

Since much development is directed toward 16mm cartridge systems, and little toward 35mm cartridge systems, the librarian should, whenever possible, avoid the 35mm system. We recognize that often this is easier said than done, but offer it as a guideline for future formats. Open-spool-roll-film is generally in the same category, being an older format, and one wherein the selection of more modern retrieval devices is severely limited, when compared to the industry as a whole. We don't condemn the microfilm industry, or compliment it for these directions, rather simply state the facts as we see them and as we feel the librarian should see them.

Any search for a microfilm system should take into consideration how many of the six systems, mentioned before, already exist in the library. A typical example of six microforms in a library would be (1) a 16mm roll-film format, (2) a 35mm roll-film format (3) a cartridge system from manufacturer "A," (4) a cartridge system from manufacturer "B," (5) a 98-image microfiche system, and (6) and ultrafiche system.

Should your library have these six separate systems, they should be handled in six separate ways, each planned to maximize the benefit of that format. Generally separate readers, or reader-printers should be used for each format, although in some cases a degree of combining is possible. Some microfiche readers will, through a system of interchangeable lenses, enable the user to read all reductions from 18x through 150 reductions. Some roll-film readers will, through lens interchangeability, enable you to read both 16mm and 35mm roll-film. However, 3M readers will not accept Kodak cartridges, and vice versa: roll readers will not generally accept cartridges: cartridge readers will not accept roll-film:

35mm roll-film readers will not accept microfiche; and the so-called universal readers only accept 16mm roll-film, 3M cartridges, and Kodak cartridges, and then at the penalty of the elimination of self-threading.

The cost problem of multiple microfilm formats has been reduced in recent years with the advent of equipment that is produced for a broader market, and therefore less in overall purchase price. Microfiche readers are now available in price ranges from \$150 to \$250, the latter price being for the most advanced models. Roll-film readers for 16mm roll-film are from \$200, for a manual model, to \$900, for a motorized unit. Portable readers for microfiche, and roll-film are on the market, and provide the film user with a light weight, often battery-operated unit that can be taken from place-to-place.

Reader-printers, for both roll and microfiche have also seen price reductions. Microfiche reader-printers are now available for under \$1,000 from several manufacturers, and roll-film reader-printers are priced under \$1,500 by several manufacturers. Microfilm camera equipment for the production of 16mm roll-film in the library had also seen considerable development. Currently many different models are available for under \$3,500.

Many much more sophisticated devices are, and will continue to be available for those applications that war-

rant the investment of thousands of dollars. In our opinion, the typical library is not a prospect for these units.

Whether the library enters microfilm through acquisition of micropublished information, purchasing various titles, or through purchasing their own microfilm camera for in-house microfilming, or through the use of a Microfilm Service Bureau, the benefits will be extremely worthwhile. The space considerations of modern information are ever pressing, and we are fast approaching the point where we will have no alternative to microimages, whether in business, or the library.

A carefully thought-out microfilm system, implemented today, and comprised of formats that allow for future growth, will permit the library to take advantage of the ever-increasing number of titles that are available. In the selection of the formats, the librarian must become more knowledgeable about microfilm in general, and understand more than ever before about equipment types, format applications, and industry trends. The librarian must also become aware of the alternatives to existing formats, and understand the various film formats, and polarities that are offered by the micropublisher. Through this sort of involvement, the library will grow correctly in the use of microfilm, and the use of microfilm will grow in the library.

"cis"

John Beil
congressional information service
Washington, D.C.

You may remember about six years ago the Counterintelligence Analysis Division of the Army was ordered to destroy all of its records on civilians, as a result of great controversy over whether or not the Army had any right to investigate the political activities of civilians at all. The difficulty was that these records were maintained on reel microfilm, and the records on civilians were randomly intermixed with the records on military personnel which the Counterintelligence Analysis Division had every intention of keeping.

Now how, under such a circumstance, do you destroy these records? Well, the answer was that they did not destroy the records. They destroyed the index. The Army's General Counsel ruled that that was an adequate action, and to all intents and purposes those records were legally destroyed.

My point obviously is that information without indexing is hardly information at all.

I think this fact, and it is certainly a fact, may explain the chronic underutilization of Congressional documents. The size and the scope and the importance of the Congressional information-producing activities is hard to overstate.

All of you know where the major legislative activity takes place on Capitol Hill. It does not take place on the floor of Congress. It takes place in the offices and hearing rooms of some 250 to 300 committees and subcommittees.

These committees and subcommittees issue at the present time approximately 600,000 printed pages of information every year. In terms of hearings alone, they heard last year in excess of 15,000 witnesses. Any of you

who have ever participated in helping to prepare the testimony of one of those witnesses, knows how much effort goes into the preparation of one of those 15,000 pieces of testimony.

In addition to these 600,000 pages of hearings, committee reports, House and Senate Documents, Executive Reports, Executive Documents, committee prints and special miscellaneous publications of both Houses, Congress also, of course, produces some 45,000 printed versions of some 35,000 bills and resolutions every two years, and about 30,000 to 35,000 pages of the *Congressional Record* every year. There is an enormous output of information. The subject matter, of course, is virtually limitless. There is no public issue that some group on Capitol Hill does not take a professional and usually a continuing interest in.

I want to give you just a few examples of the kinds of questions that the Congressional publications, just the hearings, the committee reports and so forth will answer:

Sample Questions

- A. What is the cost effectiveness of periodic auto safety inspections? Who are the nations leading authorities?
- B. How safe is artificial turf? Have there been more accidents among pros, since installation?
- C. What is SBA's position on preferential loans to minority groups?
- D. What are issues of privacy raised by government expansion into E. D. P.? Where is William Rehnquist's testimony?
- E. What are some of the problems some states have had in compensating victims of violent crimes?
- F. Etc.

The question is: How do you identify the particular documents that have these answers? Indeed, if necessary, and it often is necessary, how do you get to the pages in those voluminous documents that contain the answers to questions like these? And how do you acquire those documents?

There are a number of sources that have been traditionally used to find information in Congressional publications. I think, however, that I can fairly state that until the CIS/Index began publication in 1970, none of them were designed specifically with this purpose in mind. Nonetheless, they do have their uses.

CIS did not enter an absolute vacuum, although I do think we did enter a situation in which none of the other tools were designed specifically to meet the problems that we attempt to meet.

CIS performs six major functions with regard to

Congressional documents. *First, we collect* them, and amazing as it may seem, we maintain in our office the most complete collection of current Congressional documents that exists anywhere in the world. It is more complete than that maintained by the Library of Congress. It is more complete than that maintained in the Public Documents Office. The reason is simple. We are the only organization in the country that is at those Congressional offices day after day, day in and day out, collecting document systematically and persistently. The Congressional committees know that if they fail to give us a document to index, it means that a year from now when they themselves want to know what was in that document, they are going to find it a little harder to work.

Secondly, we classify these documents. The CIS numbering system is a relatively simple one to use. It is fundamentally based on the fact that most libraries, whether or not they use SuDocs as a classification system, tend to house their hearings committee-by-committee. Consequently, the CIS classification system classifies documents first by committee and then by document type.

Thirdly, we catalog. We give basic bibliographic information; availability; price, SuDocs number when it becomes available, LC card number, monthly catalog entry number, collation, presence of index, the standard materials that one needs if one is attempting to order a publication or to shelve it, or to catalog it in one's own library.

Fourthly, we analyze and abstract the documents. We have a staff of professionals. We go through these documents, often page-by-page, and we create, in the case of hearings, one or two paragraph abstracts for each appearance of each witness before each committee.

In the case of an appropriations hearing, we may have dozens or scores of even hundreds of these analytics for a single volume.

We also pull out and make mention of and index insertions, such as statistics, articles taken from other publications, and other kinds of insertions that are put into the public record and which seem to us to have permanent research value.

Fifthly, we index this material by the name of the witness, the name of the author of the paper, the name of the organization that witness or author represents, the popular name of the legislation under consideration, the number of the bill or the law or the report or the document, the subject under discussion in the hearing as a whole, the subject under discussion in a particular statement. We try to do a thorough job of indexing and, indeed, our index is almost as voluminous as the abstract section in our publication.

We do these five jobs, and we feed all of our information into a computerized data base. Once a month, out of that data base we draw a monthly publication that looks like this.

Every third month we cumulate the indexes and put out a quarterly index. Every year, we cumulate all the abstracts in one volume, and all the indexes — there are a number of them — in another volume and put out a 1,500 page two volume annual. In addition, this year we will accumulate the indexes for the last five years permitting the patron or staff member access to two and one-half Congresses in one search.

CIS Microfiche

After having done that, we do the sixth job: we also micropublish. We take each and every document that we abstract and index, and we publish it in microfiche form. The fiche are sent to subscribers the same month as the index, numbered in the same manner that the index itself is numbered and put out in the same order in which the abstracts are arranged; so that at the end of the year you have all twelve months of Congressional output of about 600,000 pages in a file cabinet approximately the size of a bread box, along with a catalog and index to those documents.

We use standard format, silver halide fiche with eye legible headers. Each committee and subcommittee has a set of tabs to it breaking the documents down as to document type. These tabs, combined with a comprehensive index, means *direct*, not at random, access to over 2.5 million pages of valuable data covering Congress over the last five years. The price of this service is roughly one dollar per document. Costs of maintaining this data base is virtually nil because there is little or no cataloging time, only about one hour of filing time per month. There is little reshelving time because the work can be done without the clerk moving from one location to another. What there *is* is a 100 percent complete collection of hearings, prints, reports, and documents, never out of print, with unlimited circulation capabilities and little staff time requirements. I find it hard to visualize a library acquiring, cataloging, and shelving hard copy documents for one dollar each.

For these libraries with defined needs, we are able to provide special collections. Indeed, many libraries find, as we have found, that acquiring committee prints is a thankless task. We have a special "Limited Edition" collection that provides *all* prints but also includes senate executive reports and documents as well as special and miscellaneous publications. If all you need is the Serial Set, perhaps only hearings or maybe just the Post Office

and Civil Service Committee, we are ready to respond to your requirements.

Legislative Histories

CIS does something in its annual volume which may save some people, in law libraries in particular, from doing things the hard way. At least, we are trying to accomplish something in this area. I am referring to our legislative histories. I want to refer you to Public Law 92-203, the Alaska Native Claim Settlement Act, 85 Stat. 688, product of the 92nd Congress.

In less than a half hour by traditional methods, a number of traditional methods, you or I or I guess any law student could learn the (clean) bill number was HR10356, could get citations to the Senate, House, and conference committee reports, could also get the appropriate citations to the *Congressional Record* and the Weekly Compilation of Presidential Papers.

However, to get beyond that using traditional methods becomes a very difficult job. If you use the CIS Index, however, we have attempted to make it easy for you to get citations to the four volumes of hearings that emerged from the 92nd Congress on this piece of legislation. Also, you would get a citation to a volume of hearings held by the House Committee on similar legislation during the 91st Congress. Also, you would get a citation to a Senate Report issued in the 91st Congress that contains an unusually long and detailed analysis of the issues, including a legislative history through June of 1970 of Alaska Native Claims legislation.

Furthermore, in addition to the citations, you also can find the numbers of the many bills under consideration in both the 91st and 92nd Congress from which the (clean) bill emerged, as well as detailed descriptions of the hearings themselves, telling you the pages on which particular issues were discussed by particular witnesses.

Now, I think that we have a long way to go before we have perfected the legislative history section of the CIS/Index. The more you dig in, the more you discover you have to dig further. But I think we have made an important step forward for those of you who are required to produce legislative histories in a hurry.

The nature of our data bank is such that it has not been a difficult job for us to put these legislative histories together, and it may save you a decent amount of work.

If you are working out of a depository or running one, and if the collection is both complete and accessible, and if the legislative history contains no nondepository items like committee prints, then I imagine you can put together a legislative history without too much trouble. Otherwise, I would suggest that you consider the possibility of using



the CIS Microfiche Library. Here we have all 500,000 pages already keyed, tabbed, and filed. It is available as a complete collection. For those of you who wish only to use the nondepository part of the collection, the 25 percent of the documents that Congress issues that are nondepository are available separately.

Bills & Resolutions

Furthermore, we are able to offer you in addition, in microfiche form, all versions of all bills and resolutions introduced in Congress. A complete collection accessible by bill number as found in publications housed in most libraries. Our bills may be accessed by bill number as identified in Commerce Clearinghouse, Digest of Public General Bills, House Calendar and History of Bills and Resolutions introduced in the Senate.

No library receives 100 percent of the versions of all bills in hard copy form. In fact, they may only receive as little as 80 percent.

As a result they are generally binding an incomplete set. Valuable space is reclaimed by going to film on lesser used retrospective materials. The less a collection is used, the better the reason for storing in microform and the poorer the reason to invest in binding.

To researchers, it is often very important to know how any why wording has been changed. This is very important at the state level where such changes can effect the writing and introduction of state legislation. In fact, some federal bills may fail because Congress feels they may be more suited for state legislation.

This provides a library with all the material necessary to compile a legislative history except the general debate as appears in the record. As we know, the record is available from several sources.

Serial Set

Over the last few years, we have had several requests from libraries across the country to help fill an often times significant gap in a complete documents collection. We are proud to announce a new addition to an already established product line.

CIS is micropublishing the entire Serial Set for the period preceding the first publication of the CIS/Index (1970).

Defined as every document to which Congress has assigned a serial number, the microfiche collection will include:

1. All depository publications that appeared in distinctive serial bindings.

2. Publications that were sent to depository and international exchange libraries, but not in Serial Set form.
3. Publications that were never sent to these libraries under the depository laws even though serial numbers had been assigned to them.
4. Publications within the *American State Papers* that cover the period preceding the introduction of the serial numbering system.

Exercising rigid bibliographic control — and filming from a variety of sources as needed — CIS will micropublish a complete serial set collection . . . more inclusive than any single depository collection in existence.

In addition, CIS is publishing, in ten volumes, an index to the entire Serial Set of 1789-1969, which is a companion finding aid to both hard copy collections and the *CIS US Serial Set on Microfiche*. Each index covers the same portion of the Serial Set collection as a group of CIS microfiche.

For each of these portions of the Serial Set, the index is a cumulative, single alphabetical list of subjects and names, with a separate list of individuals or organizations cited in reports on private bills. Each index also contains a detailed shelflist in serial number order, giving the exact location of all reports and documents.

All previous indexes to the Serial Set are now obsolete. The various finding aids currently in use are, as a whole, inconsistent, cumbersome, and often inadequate. However, the *CIS US Serial Set Index* offers many modern, necessary features. Access to documents is . . .

- **Comprehensive**
A detailed, multiple-access indexing system accommodates all basic research.
- **Consistent**
A sophisticated computer program has been designed to assist CIS editors in the creation of the index. The same types of bibliographic information are provided in each index through a uniform set of indexing rules which will apply throughout the project.
- **Convenient**
For convenient and efficient research, each index is cumulated, so that only a "single look-up" is required to cover a period of ten years or more. (Individual indexes cover a minimum of 10 years to a maximum of 73 years. The average period covered is a span of 18.5 years.)
The *CIS US Serial Set Index* provides unparalleled access to a huge collection of basic research materials for —
 - *CIS US Serial Set on Microfiche* customers.
 - Federal depository libraries with complete or par-

tial hard copy collections.

- Any library or institution with a requirement for detailed indexing of the serial set . . . a reference resource of major historical significance.

ASI

Since the first census (1 volume) was produced nearly 200 years ago, the statistical output of the federal government has grown substantially. In fact, the government is the largest producer of statistics the world has ever seen. And those publications containing statistics are of universal value.

The government itself depends upon them in every aspect. Businessmen use them for corporate development, determining inventory levels and planning investments. Writers for the news media use government statistics for news shows and newsprint. Scholars use them for their tremendous research value.

Imagine the sources within the government. Hundreds of agencies and their subgroups, Congressional committees and subcommittees and various statistics-producing programs. And no central catalog! How does one begin to identify let alone retrieve valuable statistical publications?

Here are some typical questions that ASI can answer:

1. How many women are enrolled in four-year colleges and universities? For how many is it their first enrollment? Has there been a steady increase? What are the projections for future enrollments? What types of degrees are they receiving and how many of each?
2. How are we currently financing mental health care? How do we determine need? What is the average daily maintenance expenditure per patient? What is the total enrollment in medicare, military and veteran programs, state and private institutions?
3. What are the various causes of boating accidents? How many people were killed versus number injuries? Are there more accidents on fresh water or on salt water?
4. What are the most common types of wiretaps used? Who is ordering the wiretaps and how often are they used? When an arrest occurs how often is there a conviction?
5. How many children of unemployed parents are on welfare in California?

The President's Commission on Federal Statistics determined the need for a central catalog and approached CIS. At first we refused, due to the enormous

size of the project. We did agree, however, to look further into the problem.

Recent developments in computer software had allowed us to create the CIS/Index and abstract, and we discovered these newly developed techniques could be adapted towards the creation of a new statistically oriented index. Indeed, we already had created the basic thesaurus. We produced a survey to the library community and waited. By response, it soon became obvious that there indeed was a dire need for this type of index in the library community.

Having decided to publish, we had to confront several major problems. Given the mass of data available, what do you include? We quickly decided to include all statistical publications from depository materials down to and including interoffice memorandums not furnished through the GPO. Also, we discovered that 35 percent of the material we wished to include was either nondepository or non-GPO in nature. (Later discovering that as high as 70 percent of the publications from DID and HUD, 50 percent of Transportation, and 35 percent of agriculture fits into this group.)

Another question to be answered was the one of scope. If we do all series publications, periodicals, and annuals, for what period do we extend coverage? We decided to cover at least a decade. The coverage is: all periodicals for 1973 on; all series as far back as identifiable or as deemed relevant; and all annuals, biannuals, etc., back to 1962.

Acquisitions is a major problem because we discovered many uncataloged publications not issued from the GPO. In addition, few major agencies centrally control their statistical publications. We had to develop contacts down at the statistics producing level. If we were to order every statistical document from every agency catalog, we would only get half of what is available.

There was a greater need for expanded bibliographical control because of the nature of statistical publications. The searcher had to be told specifically from which subgroup a publication comes from, as well as where and how to order from any available source.

We had to be careful in the creation of our abstracts. If they were too brief, they would be insufficient. If they were too detailed, they would defy quick reference. The complete data abstract gives source (primary or secondary), time period, technical notes, and a description of the publication on a table-by-table basis; thus enabling the researcher to determine if it contains the needed information.

Due to the nature of statistical questions and the need for specific answers, we found the need to provide the American Statistics Index with multiple indexes. Not only a standard subject-author index, but an index by category. This will allow the patron to quickly scan a

single list of all publications with tables broken down by age. For example, the breakdowns are by demographics (age, race, sex, etc.) geographic (SMSA, city, state, etc.) and economic (income, industry).

Another index of titles and report numbers enables the researcher to access when only report number and title is known.

Having solved these problems, we again performed six major functions with regard to the statistical publications.

First, we collect them. The most complete collection of statistical publications anywhere. It is more complete than that maintained by the Library of Congress. It is more complete than that maintained in the Public Documents Office. The reason is simple. We are the only organization in the country that is at those agency offices day after day, day in and day out, collecting documents systematically and persistently.

Secondly, we classify these documents. The ASI numbering system is a relatively simple one to use. It is fundamentally based on the fact that most libraries, whether or not they use SuDocs as a classification system, tend to house their publications agency by agency. Consequently, the CIS classification system classified documents first by agency and then by document type.

Thirdly, we catalog. We give basic bibliographic information, availability, price, SuDocs number when it becomes available, LC card number, monthly catalog entry number, collation, presence of index, the standard materials that one needs if one is attempting to order a publication or to shelve it, or to catalog it in one's own library.

Fourthly, we analyze and abstract the documents. We have a staff of professionals. We go through these documents, page by page. And we create abstracts that explain the document, series, annual, or periodical. In the case of series and periodicals we also briefly abstract individual publications within individual issues paying

special attention to tables and graphs.

Fifthly, we index this material, as previously described by subject/author and by category. We try to do a thorough job of indexing and, indeed, our index is almost as voluminous as the abstract section in our publication.

We do these five jobs, and we feed all of our information into a computerized data base. Once a month, out of that data base we draw a monthly publication.

Every third month we cumulate the indexes and put out a quarterly index. Every year, we cumulate all the abstracts in one volume, and all the indexes — there are a number of them — in another volume.

ASI Microfiche

The last function we perform provides the solution to the second problem — once identified, how do we retrieve valuable documents. CIS films and makes available on 4 x 6 microfiche all of those publications identified in the ASI Index. The ASI-74 annual plus retrospective alone includes over 10,000 titles. Nearly two million pages of valuable information.

These microfiche are sent to our subscribers at about the same time they receive the index. They are numbered the same way the abstracts are numbered and put in the same order that the abstracts are arranged.

Once the researcher identifies the publication he needs, he can immediately retrieve it. The document may only be a non-GPO publication available in limited quantity only from the Cabinet Committee on Price Stability but he has it. And he has the most recent document because our microfiche arrive approximately the same time that the monthly index does.

Microfiche packages range from the complete set to subagency groupings designed to meet the needs of modern libraries. Also a special group of nondepository, non-GPO materials are available.



an immodest proposal — state publications when and where you want them (almost)

herbert c. cohen
editorial director
library and education division
information handling services
englewood, colorado

The Library and Education Division of Information Handling Services has been developing an extensive and ambitious micropublication program involving official state publications. The project consists of two basic components: a comprehensive and thoroughly indexed *checklist* — possibly leading very quickly to the creation of a proper bibliography — of state publications, and a separate but related program of microfiche reproduction of *selected* state documents. Each component, in turn, includes two chronological elements: a *current* and continuation segment, and a *retrospective* segment.

Considering the volume and scope of material officially published by the states of the United States, it is clear that any republication program must be *selective*. We expect that for some time, *retrospective* publication will include *only* the regular (serial) reports of major state administrative agencies and their chief subdivisions. The *current* program, on the other hand, will focus on non-serial, more particularized and less readily available state publications, though a precise content definition of the current segment of the program depends on still unresolved problems of availability and acquisition.

A. Checklists — The Current Segment

The major purpose of the checklist is to enhance bibliographic control of state publications by virtue of completeness, standardization, and good indexing. Its effects will be to facilitate research and to improve the accessibility of information by providing, in one place, available quarterly and in annual cumulations, what is now not available except through laborious and expensive searching of a number of disparate sources.

Our work with presently available checklists issued by the Library of Congress, by state documents clearinghouses, state libraries and historical societies and by various state agencies, will be supplemented with library searches, and then compiled and indexed with a view toward creating an efficient and substantial tool for information access and retrieval.

As with any similar data bank, the checklist will be most useful if it can provide complete accessibility through author, title, and subject. It is possible, however, that a proper *bibliography* of state publications — in addition to and supplementing the checklist — will be developed for at least a portion of the program.

Accessibility through *subject* presents at once great promise and equally great difficulty. We see a possible solution: the checklist, traditionally organized by simple hierarchy, would be accompanied by a thorough *subject index* utilizing a moderate number of fixed and generally acceptable *subject categories*.

Thus, the current checklist's overall format would involve a single alphabetical listing of *agencies* (corporate authors) under each state, with subsidiary authors and title data arrayed in normal fashion. The agencies of each state would be indexed separately, according to appropriate and applicable subject headings.

In any checklist dealing with state publications, the accessibility of information through author and title presents some peculiar difficulties. Authors are predominantly corporate, and an arrangement similar to that of the LC *Monthly Checklist* is in essence an indexing by corporate author.

It seems likely, however, that we will choose a scheme that follows the practice established by the Center for Research Libraries, namely, entering by state and by *key word*, with sufficient cross-referencing and a moderate (but adequate) number of subdivisions. Naturally, this pattern will apply to the checklist, not to any bibliography we may create.

Classification by title is of lesser importance with respect to state publications, where documents are often untitled or possessed of such nondistinctive titles as *Report of . . . or Publications of . . .* In most instances, title and corporate author, title and subject, become virtually indistinguishable. It seems to use, therefore, that some selectivity must be exercised if we are to avoid needless duplication in the preparation of a title index.

There are at least two prominent *exceptions* to the rules of anonymous personal author and indistinct title:

first, the various papers, essays and other publications of state universities, and *second*, the specialized research bulletins of agricultural experiment stations. There are in addition instances both of distinctively titled publications without a personal author (especially periodicals), and of publications with a personal author but without a distinctive title.

For these and similar exceptions, it appears that an index of personal authors could be of some value in the checklist. An index of titles limited in scope to the appearance of distinctive titles (such as in periodicals) is also conceivably useful.

As presently envisioned, then, the checklist would have multiple pathways to information retrieval. These access paths would be: (1) a separate *subject index*; (2) a *corporate author or agency-name index*; (3) a *personal author index*; and possibly (4) an *index of distinctive titles*.

The individual checklist entry would contain the following information: checklist number; primary (and possibly secondary and even tertiary) agency name; subject category; bulletin or publication series number; title or description; author; city and year of publication; pagination; illustrations; frequency of publication; Library of Congress catalog card number; hierarchy of source data price; fiche number where applicable; and fiche availability data. Documents available in fiche in the program may form the basis for developing a *bibliography* distinct from and supplementing the checklist, which would be devoted solely to those documents *not* available in fiche.

The checklist *number* would be preceded by a two-letter *state code*, and entries for each state would be separately numbered.

Since we will not adopt the Library of Congress principle of choosing for the primary agency name the lowest independently intelligible element in the state bureaucratic hierarchy, the frequency of secondary and tertiary agency names may be higher than convenient, but some modification of this will be possible in the checklist.

Entries that, at the time of issuance of the checklist, either are *available* on microfiche or are definitely planned for micropublication, will be identified, possibly by an asterisk. Under each of these entries we will specify either an *expected date* of micropublication, or a *fiche number*, depending upon whether the fiche has been produced prior to the availability of the checklist.

In general we expect that the checklist will *precede* fiche production for the current program, whereas the opposite will certainly be true of the retrospective segments, where document acquisition and filming will easily outpace checklist compilation.

A word of explanation is necessary in the use of the

word 'current' when referring to the 'current micropublishing' segment of our state publications program. In order to insure maximum bibliographic control of state publications, we deem it of paramount importance, *first*, that individual entries be compiled annually according to the dates or period of coverage and NOT the date of *issuance* or date of publication of the documents.

In this important respect our checklist will differ from that of the Library of Congress and those most states, which are generally lists of documents published or documents received, and make little or no attempt to distinguish according to the time period covered.

Second, proper bibliographic control will mean that considerable emphasis must be placed on *completeness*.

In order to satisfy the twin demands of completeness and date of coverage, it will be necessary to sacrifice, to some extent, the 'currentness' of the checklist. The reason is obvious: delays in the publication or distribution of documents by the states themselves quickly would destroy completeness on the part of any truly current listing that sought to classify documents by year of coverage.

One alternative that offers a possible compromise between the demands of currentness and the requirements of completeness would be the preparation, annually, of a *separate* annual checklist for each of the three or more *most current* years, each separate checklist containing *only* those items published in the preceding year that pertained to the specific year covered by that checklist. Assembled by a library over the years, the resulting compilation would be a three- or four-part checklist for any given year. After a sufficient time lag had assured relative completeness, we would then issue a single-volume complete cumulation of the distinct yearly lists.

For example, in 1976, a 1975 checklist might be issued containing those items *published* in 1975 and *pertaining* to 1975. In 1977, a 1976 checklist would be published, as *before*, *together* with a *second* 1975 checklist containing only those items pertaining to 1975 but published or issued in 1976.

The pattern would continue until completeness for 1975 had been assured, perhaps in 1978, at which time a cumulative volume of all four previous 1975 checklists would be compiled and published.

Even though the goal of the checklist is completeness, the transitory and ephemeral character of certain classes of state publications probably warrant their exclusion. For instance, the Library of Congress *Monthly Checklist* omits mention of publications in several categories, including: (1) college and university catalogs, (2) state university press publications of a nonofficial or private character, (3) loose-leaf additions, (4) slip laws,

and (5) ephemeral material such as blank forms and publisher's announcements.

We find little reason to quarrel with these omissions, and the Library of Congress practice will probably be followed in our checklist.

Two other peculiarities of the LC *Checklist* are worthy of note. *First*, a listing of publications of interstate and regional agencies and associations of state officials, and another listing of library surveys, studies, manuals, and statistical reports, are appended to the end of each *Monthly Checklist*. A similar appendix for the former (i.e., interstate organizations) would be included in our checklist, and abbreviated cross-referencing entries may also be provided under the individual states, wherever these are reasonably few in number. Cooperative publications (federal and state, and state-to-state) would be listed under the state(s).

So far as library surveys are concerned, it seems to us that they are best incorporated into the body of the checklist.

The *second* peculiarity of the LC *Monthly Checklist* involves its semiannual and annual cumulations of periodicals, where "periodical" seems to be defined as any publication issued more frequently than annually. We are not convinced of the usefulness of such a segregation, and we will incorporate periodicals into the checklist itself, where they will be accessible via the indexes.

B. Checklists: The Retrospective Program

The preparation of *retrospective* checklists is a massive undertaking, whose difficulty increases greatly as one proceeds further back in time toward the mid-nineteenth century, and receives diminishing assistance from LC and from individual state lists and other bibliographic sources. Accordingly, we are hesitant to undertake the preparation of the *retrospective* checklist before we gain some experience in the preparation of *current* checklists.

Generally, formats for citations, for individual entries, and for indexes should remain essentially the same in the retrospective as in the current checklists, though questions of overall format will arise largely because of the greater number of years covered by each retrospective checklist.

We conceive of retrospective checklists prepared in *decadal* segments, with a separate and truly cumulative index volume covering each ten-year period. Classification by year, which is the primary *additional* consideration in the retrospective checklist, may then be introduced into the checklist if it seems desirable to do so.

C. Micropublication: The Retrospective Program

Micropublication of all past state documents is an

impossibly immense task; obviously some set of criteria or principles of selection must be employed in order to reduce the job to a rational and manageable size. To this end, we have selected the regular (mostly annual) official serial reports of the major state administrative agencies and their chief subdivisions as the basic *content* of the retrospective program.

We will *not* ordinarily be concerned with monographs, single commission or committee reports, legislative or judicial publications, the regular reports of highly specialized (mainly small) subdivisions of major departments, or fugitive and ephemeral material, as valuable as some of this is to researchers. Access and acquisitions problems will prove too troublesome for much of this material.

The retrospective micropublication program will be limited, though perhaps not indefinitely, to the comprehensive serial reports of major state departments and their chief subdivisions, as, for instance, the departments of agriculture, natural resources, public works and utilities, transportation, banking, health, taxation, and so on. State hierarchical idiosyncracies will largely be ignored, and publications will be included purely on the basis of the importance and breadth of their content or subject matter.

Admittedly, some "editorial" judgments will be introduced in the selection of publications of secondary importance, especially those within the sphere of influence of a larger departmental report (e.g., the Commission on Higher Education within the Department of Education). Nevertheless, major agency reports remain, for the most part, a clear means of restricting the scope of the retrospective segment to a manageable level, while at the same time providing for the republication of a significant portion of state documents of permanent research value.

Our size estimate for the single year 1972 gives an estimated total page count for these major annual reports of about 500,000 pages, or some 5,600 standard 98-page microfiche masters. Thus, a *decade* cumulation might comprise as many as 50,000 fiche, decreasing retrospectively. Obviously, financial considerations — for us as well as for the library customers — will compel us to move very cautiously in this area.

The retrospective program itself will be produced in time periods judged to be the most feasible and valuable on the basis of careful analysis of library and user needs. Tentatively, we envision decade segments, beginning with the 1960s and proceeding retrospectively; as the volume of published original material *decreases*, time periods larger than ten-year segments may be employed.

The microfiche format of choice — for retrospective and current micropublishing — will be "standard" ANSI Type 1A silver-gelatin microfiche, filmed at a reduction ratio not exceeding 24:1. Some consideration will be

given to using non-silver fiche (e.g., diazo) for certain aspects of the *Current* segment.

Bibliographic information would appear on *headers* as well as on eye-visual information *targets*. The data will follow the pattern and hierarchy established for the checklists, even though document checklists for retrospective time periods may *not* be available, if at all, until well after the fiche are produced.

Eye-legible information on the microfiche will include the segment and project descriptions, years covered, state, subject category, agency name, publication title, and pagination. Prior to the publication of a checklist, external bibliographic tools will be limited to Library of Congress-format catalog cards.

Finally, so far as retrospective document acquisition is concerned, we are not anticipating overly serious difficulties, at least not for the major state agency reports of the most recent decades. Naturally, problems will multiply for earlier years, and they will vary from state to state and from agency to agency.

D. Micropublication: The Current Program

Preliminary information from librarians and document specialists indicates a distinct lack of enthusiasm for republication, on a current basis, of serial reports of major state agencies. There is considerably more interest in the micropublication of smaller, singular, and less readily available material.

We are presently attempting to formulate a coherent micropublication package to accompany production of the current state publications checklists — one whose scope will extend to less comprehensive, non-serial (irregular) reports in areas of significant current interest.

The following subject areas seem to us the most promising in terms of a current micropublication program:

1. *Environment* — including pollution control and conservation of natural resources.
2. *Law Enforcement* — including analyses of police and prison systems, juvenile delinquency, etc.
3. *Health Care* — including community prenatal, mental health, and other health service programs.
4. *Social Reform* — including consumerism, human rights, minority rights, etc.
5. *State and Community Development* — including housing and urban development as well as pertinent studies in transportation and industrial development.
6. *Welfare and Poverty* — including long-term unemployment and generational poverty.
7. *Finance, Budget, and Taxation*

Republication of the documents would be on standard-format microfiche, and would be *concurrent* with the issuance of the checklist or, possibly, a proper bibliography, which, together with Library of Congress format catalog cards, would serve as external bibliographic aids. Bibliographic information on the fiche themselves would correspond to the checklist hierarchy (as in the retrospective program), but concurrent publication would allow the checklist or bibliography entry number to be added to the microfiche header.

The overall intent here is to make available in microfiche truly current official state publications in those areas of greatest research interest, and in a thorough and well-controlled fashion. Some general coherency would be attempted, and certain subject areas will be excluded altogether. A real effort will be made to include, in fiche, such categories as the publications of agricultural and engineering experiment stations, cooperative extension services, legislative committees and commissions, and of legislative councils.

Again, we must emphasize that this aspect of the overall program remains somewhat tentative, and its implementation will depend on the advice and cooperation we continue to seek from document specialists and researchers. Further, the current program will become entirely viable once we have concluded an appropriate working relationship with certain key collecting and cataloging sources. We are now moving toward this crucial objective, and we have good reason to believe that our efforts will succeed.

Clearly, IHS' *State Publications Program* can not and will not be all things to all people. We are convinced, however, that our own serious and long-range commitment to the program — and some good fortune — combined with the help and support of a wide range of specialists and professionals will enable IHS to carry off this singularly important micropublishing program. Immodest? Perhaps. But modesty for its own sake has little relevancy here; care, caution, strong interest, professionalism and dedication to the highest attainable publishing standards — these are the characteristics and criteria that will bring the *State Publications Program* to you and to those you serve.

SOME REFERENCE SOURCES FOR THE STATE PUBLICATIONS PROGRAM (A SELECT LIST)

- Bibliography of Classification Schemes Used for State Document Collections*. Ruth Hartman, Compiler. *Documents to the People* 3:4 (1975).
- Bowker, R. R. *State Publications: a Provisional List*. (1969).
- Childs, James. *Government Document Bibliography in the United States and Elsewhere*. (1942).
- "Current Checklists of State Publications." Barbara Nelson, Compiler. Updated in *Government Publications Review*.

- Current Checklists of State Publications.* New York State Library. Legislative Reference Library (1962).
- "Current Checklists of State Publications, as of May 1, 1962." *Library Resources and Technical Services* 6. (1962).
- Fry, B. M. "National and State-wide Planning for Bibliographic Control of State Government Documents." Prepared for ALA/GODORT (1974).
- Hardin, Ruth. "United States State Publications." *College and Research Libraries* 12:161 (1951).
- Hasse, A. R. *Index of Economic Material in Documents of the States of the United States.* (1907-22).
- Holbrook, F. K. "Checklist of Current State, Federal and Canadian Publications. Revised to June 1, 1965." *Law Library Journal* 58. (1965).
- Jenkins, W. S. *Collected Public Documents of the States* (1947).
- Love, Margaret. "State Documents Checklists." *Library Trends* (1966).
- Lloyd, Gwendolyn. "State Document Bibliography." *Library Quarterly* (1948).
- Monthly Checklist of State Publications.* Exchange and Gift Division, Library of Congress (1910).
- The National Directory of State Agencies.* M. Vellni, et al., Compiler. (1974).
- Weech, T. L. *State Governments as Publishers — An Analytic Study of State Government Publications.* Unpublished dissertation, University of Illinois (1972).
- Wilcox, Jerome. (ed.) *Manual on the Use of State Publications.* (1940).
- Wilcox, Jerome. *Bibliography of New Guides and Aides to Public Documents Use (1953-1956)* Continues the series in *Special Libraries* (Nov. 1949, Dec. 1949, Jan. 1954).

gpo's micropublishing program

jim livsey

director

library and statutory distribution services

government printing office

washington, d.c.

First off, I'd like to give you some background on the Government Printing Office.

Printing in the United States Government is a unique support service — unique, because the printing itself, and the equipment used are controlled by a special public law.

Since 1777, when the second continental congress was evacuated from Philadelphia, there has been the need for laws and regulations to bring order to the many things printed by and for the government.

In 1861, Congress established a Government Printing Office, and then in the Act of January 12, 1895, Congress consolidated the laws relating public printing into Title 44, United States Code entitled "Public Printing and Documents."

This act established a permanent Congressional Joint Committee on Printing and created the position of Public Printer of the United States as head of the GPO.

The Joint Committee on Printing, in effect, is the Board of Directors for the Government Printing Office.

Our primary printing responsibility remains as it has always been — to provide service for the Congress. Also, we are responsible for printing services for the federal departments and agencies.

One of our most important tasks is the printing of the proceedings and debates of the United States Congress, better known as the *Congressional Record*. Fifty thousand copies of this publication are produced each day that the Senate and the House of Representatives

are in session. The average record is about the size of a 38-page daily newspaper.

Regardless of whether the record is 16 or 300 pages, it is delivered to the Congressional Post Office at the Capitol — before 6:30 a.m. the next morning. And, I might add that unlike the average newspaper, it contains neither advertising nor illustrations. Each page is solidly filled with text.

To do these things, the GPO has 8,000 employees. Most are in the main complex, but we are also located all around the country in field printing plants, printing procurement offices, bookstores, and in our two documents distribution centers.

In the main plant, which is one of the largest printing plants in the world, we have 141 presses and 379 typesetting machines spread over 32 acres of floor space.

We do more than 350 million dollars in business each year — approximately 60 percent of this is procured from commercial firms.

We have 32 million dollars worth of equipment and our land and buildings could not be replaced for less than 75 million dollars.

We receive over 1,100 orders for printing each day, use 8 carloads of paper in-house each day and, our contractors use 14 carloads of paper daily. We print well over one million publications a year.

GPO procurement of almost every type of printing imaginable is based on the competitive bid system, and

follows closely the Federal Procurement Regulations under which all government agencies operate.

As you all know — paper is in short supply, and is becoming more expensive. In fact, our paper costs have risen 98 percent in recent years. Add to this a postage increase of over 400 percent, since the Postal Reorganization Act of 1971, when the Postal Service became a business and began charging all federal agencies full postage, and a labor increase of 64 percent, and I believe you will understand why increases are necessary.

Our pricing policy does not reflect an attempt to make a profit on the sale of publications.

We are establishing prices at a standard that will allow us to recover costs, and no higher. We are, in other words, only trying to break even. After substantial losses for the past two years, largely due to postage increases, we are working to put the program back on a self-sustaining basis.

However, often times you have to spend money — to save in the long run. To do this — GPO decided to take a giant step and enter the field of micropublishing. The Public Printer requested approval for GPO to enter the field of micropublishing and to offer filmed documents to customers either in addition to or in lieu of printing. The Joint Committee on Printing approved the request and the Public Printer established a GPO Micropublishing Advisory Committee.

A questionnaire was developed and forwarded to 1,138 Federal Depository Libraries. Eighty-seven percent of the libraries responded in favor of receiving 29 percent of their documents in a microfiche format. It was also determined the *Code of Federal Regulations* would be an ideal test vehicle. The *Code of Federal Regulations* consists of 132 volumes, contains 68,000 pages, weighs 144 pounds and is more than 8½ feet long. Twenty-five percent of the file is updated and reprinted on a quarterly basis — resulting in a complete new issue each year. We felt that most librarians would appreciate converting 8½ feet of shelf space into approximately 4 inches of microfiche.

The film format used for the pilot project will be the Standard 98 Frame 24:1 nominal reduction Ratio Microfiche Format. A specification was prepared requesting:

A first generation negative camera master that would be forwarded to National Archives.

A second generation direct duplicate negative inter-

mediate that would be retained by GPO.

A third generation direct duplicate negative that would be forwarded to the libraries that they would maintain in archival storage and—

A fourth generation non-silver negative for library use — containing a color stripe in the header area.

The title would be in OCRB, which is available on an IBM Golf Ball. The title would contain four lines of manuscript in characters not less than 1.8mm high.

The Government Printing Office does not intend to establish in-house microform production capabilities, all such activities shall be directed toward experienced commercial sources.

Development of the procurement specification was undertaken by members of the Public Printer's Micropublishing Advisory Council with full review before publication by those individuals and organizations competent to judge the content of such commercial procurement specifications for a microform product.

Such specifications included existing industry, military and national standards with respect to filming, processing, packaging, and shipment of the film product.

The IFM was advertised, submitted bids evaluated, a pre-award survey completed — and a contract awarded in September 1975. At present, all systems are go and if things continue as planned, the entire CFR should be completed by late November or early December.

We anticipate savings in reduced production costs and mailing costs and a decrease in total storage area required to house distribution stocks.

As an example of the production cost reductions expected from the proposed pilot program, it is estimated that if 1/6 of the total distribution list of the entire CFR would accept the microfiche product, more than \$300,000 would be saved the first year.

Of all the systems benefits expected in the program, the two most important are — response to the desires of the Depository Library System and the expected increase in availability of government documentation to the general public.

At the conclusion of the pilot program, a full economic analysis will be developed and forwarded to the Joint Committee on Printing.

This is GPO's giant step into micropublishing and only the first of many that may follow.

micropublishing at the bureau of the census

paul t. zeisset

chief, data access and use laboratory
bureau of the census
washington, d.c.

The Bureau of the Census has been in the microform business for a long time. And while other agencies or companies might have more microform frames to their credit, few have probably outshone the Census Bureau in variety of major applications of this medium. So before I settle down to tell you the basic facts of what is now available from the Census Bureau and how to get it, let me give you some background.

The Census Bureau was one of the first government agencies to use microfilm for a large-scale operation.¹ The earliest use was for preservation of records, not for the miniaturization of publications.

When we take a census of the population and housing every ten years, we generate a lot of paper — all of the forms used by enumerators or filled out by citizens — which we then use in compiling the statistics used to apportion seats in Congress and to meet other statistical needs in the nation. But ever since Civil War veterans and their dependents were granted pensions, the census schedules have had a major secondary use. They have been used to provide proof of age when a birth certificate is not available. Thus it has been necessary to preserve these records for continuing access as well as archival purposes.

Preserving these records was no small task. The quantity of documents was ever increasing. Records were subject to getting out of order and to damage by repeated searches through them. Fire destroyed most of the records for the 1890 census. Preservation of the schedules was a major concern in the early twentieth century. Binding and photocopying were tried. Finally in the late 1930s the Census Bureau found that microphotography was the answer. In the next few years all of the census schedules from 1790 to 1930 were microfilmed, and beginning with the 1940 census the schedules have been microfilmed in timely fashion. The microform makes the retention of voluminous paper no longer necessary. In the last couple of years all of the forms collected in the 1970 census have been shredded and turned into just so much recycled paper. Meanwhile, the historical records on microfilm are continually being

accessed by a special staff to meet the requirements of age verification for individuals applying for Social Security benefits, passports, or other benefits. The searches are performed, of course, only by sworn census employees, since personal records from all modern censuses are completely confidential.

The next major step in microform use at the Bureau of the Census resulted from our own invention, computer input via microfilm. In the first full-scale non-experimental use of a computer, the bureau used Univac I to process its 1950 census. Data input was via punched cards, later converted to tape, but the process proved to be rather slow and subject to too much chance of error in data input. Alternate types of input were studied but rejected until a microfilm-based system was developed in conjunction with the National Bureau of Standards. The acronym FOSDIC, contrived from the name *Film Optical Sensing Device for Input to Computers*, was applied to this new system used first in the 1960 census.

FOSDIC is based on the use of a questionnaire or other input document in which the respondent fills in certain dots to represent answers to each question. Optical scanning equipment can interpret the position of dots on a page, and translate them into signals the computer can understand. The use of microfilm in lieu of the original document allows for greater control at various stages in the process. It also, however, requires a precision and speed in the microfilming operation not approached by then existing equipment. The Census Bureau's own engineers developed sophisticated hardware to feed documents, turn pages, and take the pictures, to produce FOSDIC-readable census records on microfilm. This microfilming and optical scanning equipment combined to produce the ability to process the mindboggling quantity of records produced in taking a census in a relatively cost-effective manner. This system has been refined since 1960, but the basic principal remains the same.

These background uses for microfilm may be interesting to you, but you're liable to be more concerned with the availability of census resources via microform. The third microform use I'll describe is in the reproduction of publications. About twenty years ago, the Census Bureau undertook the filming of the volumes from the

¹Dorothy W. Kaufman, "Impact of Technology on Reference and Loan Services" in *Federal Interagency's Field Librarians' Workshop Proceedings*, September 24-26, 1972, Washington, 1973, pp. 265-269. Copy available on request from the Census Bureau.

1790 to 1890 censuses for archival purposes. Later these reels were transferred to the custody of the National Archives. A few years later, major 1960 census publications were microfilmed with the primary purpose of efficiently providing single copies of reports which had gone out-of-print.

It was finally in 1968 that the Census Bureau planted both feet in the micropublishing business and made arrangements for all of its publications (excepting only issues of a preliminary or advance nature) to be regularly put on microfiche. This was the first time for microforming any of the major statistical reports other than the decennial census of population and housing: items like the Statistical Abstract, the censuses of manufacturing and business, Current Population Reports, guides, indexes, methodological reports, and so forth. Originally this was a joint venture with the National Technical Information Services (NTIS) of the Department of Commerce, but more recently the Census Bureau's Library has assumed the creation and dissemination function. Now you can generally count on microfiche of just about any census publication to be available within a couple of months of the time the first copy comes off the presses.

As a sideline I might mention that certain maps are also available in microform. Five thousand map sheets showing street networks and statistical area boundaries in 250 urbanized areas and a smattering of smaller places were put onto 1250 special format microfiche as part of a microforming the 1970 Census *Block Statistics* reports. The Census Bureau also created for internal purposes 35mm microfilm of all of its unpublished maps covering all areas down to the smallest villages and census enumeration districts. These microfilms can also be reproduced for libraries or other users.

In the last few years private firms have also joined into the business of microforming Census Bureau publications, especially those dating back to earlier periods. One company has microformed all decennial census publications, which date back to 1790, and another company tackled all of the other publications, which date back to 1820. Still other companies have microformed reports from a more limited range of years or subject matter. The various companies used different microformat, so where coverage overlaps you may have your choice among negative or positive fiche, 35 millimeter film or even microprints.²

For those of you interested in how to obtain microforms of census publications I'll return to that topic a little later.

First let's talk about why we go to the trouble of microforming all of these publications. From the prospective user's point of view it offers a chance to save a lot of

space, or conversely to acquire more data given fixed space or monetary resources. However, since not all library patrons have yet proclaimed their full acceptance of microforms, perhaps it is more realistic, for this group, to (1) stress the utility of maintaining microfiche as a backup to conventional publications on the shelf which might become lost or damaged or may be needed simultaneously by more than one patron; or (2) to suggest that you may want to maintain the most commonly used publications on the shelf, while having a more extensive collection on microfiche available for the more sophisticated researcher.

But is it really worth the bureau's trouble to market and disseminate this microfiche, which has been created basically for archival purposes? Certainly it is nice to make a few users happy. But the more salient factors in mind these days are the high cost of printing and warehousing. If we could manage to publish just the right number of copies of a publication so that we never were left with too many in the warehouse, but still always had one to sell when another purchaser came along, this would not be a major concern. But with the drastically escalating cost of paper, the incentives are high to avoid overprinting — and that easily leads to not printing enough. Many census users have been frustrated with the number of important 1970 census publications already out-of-print. Microfiche allows us to reproduce out-of-print publications in hard copy for the user at a cost to him of about 6 cents a page, less than we would charge for photocopying a book, albeit more than one would pay if the original publications were still available. But this does provide a realistic way of assuring that no out-of-print publication becomes completely unavailable.

The bureau has in one instance also used microfiche as a way of avoiding conventional publication altogether and the costs associated with it. By a strange set of economics any federal agency issuing a publication must pay the Government Printing Office (GPO) the startup costs for its printing, yet the proceeds from any sale go entirely to GPO. This amounts to a considerable financial disincentive against publishing any major document. The 1972 Census of Retail Trade recently was caught in the squeeze of rising publication costs from which it escaped only by determining that most of one publication series, *Merchandise Line Sales*, would be microfiched but not printed. The United States Summary is now in print but, for the remaining reports giving state and SMSA data, hard copy will be provided via the standard mechanism for microfiche print-outs through the Census Library, and will not be available from GPO. I am not trying to represent this as a particularly clever solution — after all, every user will be stuck with a higher cost per hard copy than for corresponding publications through GPO, and there may

²These commercial sources of microform of census publications are included in the listing in Appendix A.

be some confusion for users in knowing where to get what. In this case, however, it represented the only way out. But this may prove, if our marketing is successful and users accept this mode of dissemination, to be a viable precedent for other items which might otherwise go unpublished for lack of funds or lack of demand in the hundreds or thousands of copies.

Timing may be one other factor which encourages the Census Bureau to pursue data dissemination via microfiche. Printing a document through GPO or its contractors can take anywhere from 2 weeks to 3 months, occasionally more. Dissemination through the Superintendent of Documents can double or triple that time lag. If we could just develop a way of microforming publications before they go to print rather than after they came back, users could obtain urgently needed data in eye readable form with the same timing advantages now possible for the data we disseminate on computer summary tapes. This is not possible given our present microforming equipment, but it does represent a challenge for future work.

While I am emphasizing the future let me indicate some of the major challenges we at the Census Bureau face. The appetite of American government, business, and the public at large for statistical information has been increasing at an enormous rate. In an attempt to be responsive to these demands the Bureau of the Census published twice as many pages in reports from the 1970 census as from the 1960 census, and in addition made somewhere around 10 times as much data available on 1970 census computer summary tapes as was available in the expanded 1970 census published reports. Most of these increases were in the availability of data for relatively small areas: county subdivisions, census tracts, enumeration districts, even city blocks.

We are already aware that there is demand for still further increases for the 1980 census. And from that part of the user community that hasn't yet been able to afford the computer revolution, there is the demand for access to summary tape data in eye readable form. All of these demands come in the context of drastically increasing publication costs which may well force a retrenchment rather than an expansion of publication plans. That applies to both the 1980 Census of Population and Housing and the 1977 Economic Censuses.

Into this context of high demand for more eye readable data comes the fourth major type of use for microforms at the Bureau of the Census. So far, I've mentioned the preservation of records, input to computers, and reproduction and publications. The fourth use is output from computers.

For the last several years programmers at the bureau have used computer output microfilm (COM) in

lieu of paper on many large scale computer print-out jobs, using some COM hardware of our own and a COM unit owned by another nearby federal agency. The cost per page is less and storage or reproduction is so much easier. It was a logical next step to create certain data products for public use also on a medium which can easily and cheaply be reproduced on demand, and we have now produced several major unpublished tabulations of 1970 census data on 16mm microfilm (see appendix B). This certainly opens up the possibility that computer output microforms may indeed be the media on which we can afford to make available the additional data in so much demand.

I have one more use of microforms touching one of the newest areas of microform technology, and one in which I have personally been involved. A few years ago I created a computerized indexing system for the data contents of 1970 census summary tapes and publications. We hoped to publish a generally useful index using computer print-outs generated by the system. Unfortunately, high speed printer copy didn't offer the readability required, and GPO's LINOTRON negative etching by computer was too cumbersome and expensive for this application. Fortunately, we discovered that a sophisticated computer output microfilm device available to us could offer the resolution required for blowing up to page size negatives for printing. The *Index to 1970 Census Summary Tapes* and *Index to Selected 1970 Census Reports* were the first Census Bureau publications largely generated via computer output microfilm.

We didn't stop there. Not only could computer output microfilm produce publishable text, it could also produce publishable graphics, given sufficiently sophisticated computer software. The Census Bureau is in the process of publishing Urban Atlases for the 65 largest metropolitan areas in the country, consisting of a series of maps in which data values for various small geographic areas are represented by their color shading, all produced via computer output microfilm. These high quality maps should not be confused with computer-generated maps produced on standard line printers; maps which are not especially easy to read. The Urban Atlases are printed in color and look like the product of a professional cartographer who labored months over negatives and screens, but have been produced at a fraction of the cost.

The Census Bureau has made its commitment to computer output microforms and is in the process of acquiring precision COM equipment. The new COM unit will be able to produce 16mm, 35mm, or 105mm film and will directly create microfiche with indexing and titling. With support software it will offer full graphics capability. With it we will be able to support a wide range of applications while saving ourselves a lot of money.

I promised to return to the subject of how you can obtain census publications on microforms. Any final publication issued since January 1968 can be ordered on microfiche through the Bureau of the Census Library, Washington, D.C. 20233. A complete list of these publications for each year is contained in the Bureau of the Census catalog for that year. Payment for microfiche is required in advance, and since pricing is currently on a per-fiche basis you should first write or call for a price quotation. We are soon to reexamine our pricing schedule and we may switch to one standard price for any title regardless of the number of fiche, so as to simplify ordering procedures.

As I mentioned earlier hard copy print-outs from microfiche may also be ordered from our library, especially useful for out-of-print publications. In either case, you should be able to expect your order to be on its way to you a week to 10 days from receipt of your payment. For those of you interested in microforms of publications before 1968, a list of the various federal and commercial suppliers and what they offer is appended to this article.

So far, I would have difficulty describing the demand for Census Bureau microfiche as impressive. From 1968 to early 1975 the National Technical Information Service sold well over 50,000 census microfiche, but it turns out the great majority of those fiche were generated for only 28 orders: 17 ordered the full set of reports comprising 2,637 fiche, and 11 ordered a smaller set of 582 fiche. Orders received by the census library have been running only a few a month.

Actually the library experienced a dramatic upsurge in inquiries just last month. That might be associated with two events. In October we held our second workshop for librarians and these have been the first groups we have told about our microfiche services. Then the October issue of *Data User News*, our monthly newsletter, told a larger audience about this service. To say the least, our microfiche marketing program prior to a couple of months ago was far from aggressive, nor was it effective.

We hope this will change. We did make up a lot of order forms for 1970 census microfiche, but it is entirely possible that we didn't send those order forms to the right people. Future Census Bureau Catalogs will give more prominent treatment to microfiche. A simplified pricing policy may assist our marketing effort. We expect to promote more aggressively in the near future the role of microfiche and hard copy from microfiche for use in lieu of the increasing number of out-of-print publications.

Two practices certainly reduce demand for microforms. Government Depository Libraries receive free copies of government publications they want, but current arrangements do not allow them to elect to receive microfiche instead. Expensively printed books are free

but inexpensive fiche will cost them money, albeit not much, so you know what most librarians are choosing. Another practice which we may have more control over is that we do not currently offer a subscription service for microfiche of all census publications in particular series.

We expect the demand for microform products to increase. We recently completed a prototype survey of business users of statistical information. Due to the pilot nature of this survey, which was essentially a feasibility study for a larger scale survey, the results are based on a small sample and are limited in their generality. Preliminary results do, however, tend to confirm the intuitive notion that larger firms are more likely to use microforms and to have microform reading equipment than smaller firms. And, among the respondents who indicated they were using microforms, most indicated they expected their use of microfilm and microfiche to increase, and hence, presumably their receptiveness of future statistical publications on microform.

Our marketing practices on microfiche will improve to meet your needs if you, especially you in the library community, will let us know what you perceive your needs to be. I currently head a task group on publication policy for the 1977 Economic Censuses and we will be making decisions on the priority of microform output from that data base. Not everyone in that task group is yet convinced that there is really demand for microforms. We would do well to hear from serious prospective users. Subscription systems or depository library privileges are not likely to come about unless microform users communicate their needs. There should be ways of cutting down the two-month lag time between publication and availability of microfiche, given sufficient demand. We could also benefit to hear from users who advocate a particular kind of internal indexing on the fiche themselves.

We can help you if you let us know. Let us hear from you.

Appendix A

United States Census Publications In Microform

A list of agencies and publishers known to the Bureau of the Census Library Staff as of October 1975, to have microform copies available for sale to the public.

Decennial Censuses

1790-1890

Publications Sales Branch (NEPS)
National Archives (GSA)
Washington, D.C. 20408

Publications of the Bureau of the Census, 1793-1917. This set includes the publications from the first eleven censuses, 1790-1890, and a publications list issued in 1917.

The *Catalog of National Archives Microfilm Publications*, published in 1974, identifies the 42 rolls of this set as T825 of Record Group (RG) 29.

Format: Positive microfilm — 35mm.

1790-1970

Research Publications, Inc.
12 Lunar Drive
New Haven, Connecticut 06525

United States Decennial Census Publications, 1790 to 1970. Includes population and non-population reports issued as a part of each of the decennial censuses.

A Guide to the Microfilm Edition of United States Census Publications serves as a bibliography and reel index.

Format: Positive microfilm — 35mm.

1960

Population Division
Bureau of the Census
Washington, D.C. 20233

1960 Censuses of Population and Housing. Includes PHC(1), Census Tracts; Population, Volumes I through III; Housing, Volumes I through VII.

A Microfilm Order Form lists prices for paper copy of the individual reports.

Format: Paper copy microfilm.

1970

Bureau of the Census
Library
Washington, D.C. 20233

1970 Censuses of Population and Housing final reports.

Price quotations furnished upon request.

Format: Microfiche.

Other Publications

Greenwood Press, Inc.
51 Riverside Avenue
Westport, Connecticut 06880

United States Census Publications, 1820-1945 (Exclusive of Decennial Census Publications). Based on entries in Part 2 of United States Library of Congress. Census Library Project. *Catalog of United States Census Publications, 1790 - 1945.*

A checklist with schedule of prices is available.

Has in process United States Census Publications, 1946-1967 (Exclusive of Decennial Census Publications).

Format: Microfiche.

Congressional Information Service (CIS)
4720 Montgomery Lane
Washington, D.C. 20014

Census publications listed in the *American Statistics Index 1974 Annual and Retrospective Edition* and its *Supplements*. Includes publications from the 1970 decennial census and other publications beginning largely in 1973.

Format: Microfiche.

Readex Microprint Corporation
101 Fifth Avenue
New York, New York 10003

Census publications listed in the *Monthly Catalog of United States Government Publications*, 1958 to date.

A catalog and price list is available.

Format: Microprint.

Bureau of the Census
Library
Washington, D.C. 20233

Census publications containing final data issued January 1968 and subsequently. Some series (e.g., Working Papers, Technical Papers, P-Series) are available from date of origin. Beginning with the 1973 reports, each census publication has been filmed as issued.

Price quotations furnished upon request.

Format: Microfiche.

Appendix B

Unpublished Census Data in Microform

The following 1970 census files are available on computer output microfilm. Further information may be obtained

from the Customer Services Branch, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

Master Enumeration District List. List of all states, counties, county subdivisions (townships, etc., or census county divisions), places (cities, villages, unincorporated places, etc.) enumeration districts and block groups in hierarchical order, along with 1970 population and housing counts and the codes used for identifying areas on 1970 census summary tapes.

First Count Microfilm. Display of numbers from First Count summary tape, providing complete count data (age, sex, race, family type and relationship, basic housing unit characters) for states, counties, county subdivisions, places, enumeration districts (ED's) and block groups (BG's). Only source of data for ED's or BG's other than computer tapes. Documentation required for reading.

School District Microfilm. Same summaries as for First Count microfilm, for all school districts as defined in 1970.

MCD/CCD Microfilm. Broad range of census statistics (complete count and sample data) for counties and county subdivisions (minor civil divisions — towns in New England, townships, etc., and census

county divisions). Only source of data based on sample (income, education, occupation, etc.) for MCD's/CCD's other than computer tapes.

Household Income Special Tabulations. Tabulation for each SMSA, county, and place of 25,000 of households by tenure and race of head, household size, and household income.

Selected unpublished data from the 1960 census are also available on microfilm (35mm). These include data for census tracts, wards in cities of 25,000 inhabitants or more, places, minor civil divisions, and enumeration districts in selected states. These data are described in *Data Access Description No. 35 "1960 Census of Population and Housing: Availability of Published and Unpublished Data,"* available on request from the Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

One commercial source, the National Planning Data Corporation, 20 Terrace Hill, Ithaca, New York 14850, offers microfiche and microfilm of First Count data, described above, in a form easier to use than the Census Bureau's microfilm of those data. NPDC also has some Second and Fourth Count data for selected areas on microform.

bibliographic control

robert grey cole
assistant to the dean of library affairs
southern illinois university
carbondale

Until adequate bibliographical control is established for micropublications all other efforts toward the effective utilization of microforms in libraries will be either frustrated or wasted. No matter how fine an environment is created for reading microforms, no matter how precise the standards of production, and no matter how important the information in microform, if adequate bibliographic control is lacking, patrons of libraries will not read microforms simply because they will never know what is in them. Most people have a pattern which they follow when seeking information in the library — for instance, first consulting the card catalog, then periodical indexes, and finally reference books. They usually do not digress much

from this pattern no matter what the subject of their inquiry. If microforms are not included in these sources, they will be missed. Recent studies in the library literature have clearly indicated that people consult those resources which are most easily accessible. The more difficult it is for one to obtain a certain work, the less likely he is to seek it out. If it takes extra effort to find microforms, then they will not be used. It is also true in libraries that the less people use a particular form of information, the less they want to use it. This phenomena is especially applicable to microforms because of the need to use a reader, the difficulties often encountered in obtaining copies, and the restrictions placed on the pa-

tron's mobility. Consequently the farther we remove microforms from the normal channels of bibliographic access within each individual library, the more we insure that those microforms will not be utilized. If most microforms do nothing but gather dust on library shelves, librarians will be reluctant to buy them and the market for micropublications will remain unnecessarily limited.

There is disagreement among librarians as to just what constitutes adequate bibliographic control of microforms. Some people would argue that if it is possible to determine by any means that a particular micropublication is in a specific library, then bibliographic control exists. While this might be true if a person knows exactly what he is after and has a good reference librarian to help him, I think that adequate bibliographic control of microforms should mean that when all library materials are divided into their generic bibliographic formats — that is, monographs, serials, documents, manuscripts, etc. — materials in microform are as equally accessible as paper materials of the same type. This definition would require that if paper monographs are fully cataloged, then monographs in microform should also be fully cataloged. If paper federal documents are not cataloged, but rather are bibliographically recorded in a check-in file, then documents in microform should be entered in that file also. If there is a computer print-out of serials in the library, then microform serials should be included in it. The print-out should contain both those periodicals for which the library has current subscriptions and the titles in such large collections as the Early American Periodicals Series. Knowledgeable writers on the problems of bibliographical control of microforms have been advocating this same basic concept for nearly forty years. Articles written on the subject in the 1930s and early 1940s by Keyes Metcalf, Ralph Carruthers, Wyllis Wright, and Herman Fussler all stressed two primary considerations: first, if bibliographic control were to be established for microforms, professional librarians would have to shoulder the burden; and second, if the job were to be done effectively, microforms would have to be treated the same as other materials in the library.¹ However, despite the exhortations of those experts, the infrequent surveys of actual library practices during the period between 1935 and 1950 revealed that only a few libraries were giving microforms full cataloging or any other bibliographic control comparable to the treatment of paper materials.

A number of reasons have been offered for why

¹Keyes D. Metcalf, "Care and Cataloging of Microform," *American Library Association Bulletin* 31 (February 2, 1937) pp. 72-74.

Ralph H. Carruthers and Wyllis E. Wright, "Library Methods of Handling Microfilm," *American Library Association Bulletin* 32 (June 1938) pp. 385-387.

Wyllis E. Wright, "The Cataloging of Microfilm," *Library Journal* 63 (July 1938) pp. 530-532.

Herman H. Fussler, "Some Implications of Microphotography for Librarians," *The Journal of Documentary Reproduction* 2 (September 1939) pp. 184-188.

libraries did not catalog microforms or otherwise include them in their normal bibliographic channels during this early period when the volume of micropublishing was small and the number of titles being added to any one library would not have overwhelmed its staff. The first reason is that since microforms were new, there were initially no established rules for cataloging them, and thus some libraries decided to set microforms aside and wait until standard procedures had been formulated. Unfortunately some of these libraries are still waiting. Next, in many libraries the first microforms acquired were copies of rare books or manuscripts. These items had an aura of bibliographic mystery about them which made it easy to decide not to try to put them into the card catalog. Instead, frequently the microform collections were made an annex to the Special Collections Department which often had bibliographic files that were separate from those of the rest of the library. Thus, an early impression was formed in the minds of many librarians that microforms were little used, esoteric materials that only the highly trained specialist would be seeking. Since these people would be sophisticated enough to ask a librarian to help them find their needs, there seemed to be little reason to provide detailed bibliographic access to these materials. A third reason for not cataloging microforms is that many of the early films had insufficient internal bibliographic identification which made cataloging them very time-consuming. Thus catalogers were forced by the pressures of their backlogs either to ignore microforms or else only give them cursory treatment. Finally, since microforms made it possible for libraries to acquire large collections of valuable materials which they had wanted for years, they bought them, even though they knew they could not properly process the titles bibliographically. While no one that I can find, has ever had the temerity to advocate in print the notion that microforms should be bibliographically ignored, for a variety of reasons many libraries have done just that. Moreover, since librarians did not voice great concern over the lack of bibliographical control of microforms, micropublishers continued to produce ever larger collections with insufficient or nonexistent bibliographic access.

During the 1950s the boom in micropublishing began in earnest. The library literature of the period encouraged this development with numerous articles on how microforms could be used to expand collections inexpensively while saving space. However, no more attention was paid to bibliographic control of these collections than had been in the past. By the end of the decade an obvious crisis had arisen. About this time, the Association of Research Libraries sponsored a study by Wesley Simonton to develop a comprehensive mechanism for bringing scholarly materials in microform under bibliographic control and to study the problems that would

have to be solved before such a mechanism could be implemented.² Mr. Simonton produced what is undoubtedly the finest study on the subject to date. His report included three primary recommendations. First, he noted that "internal bibliographic control, that is the controls provided by the bibliographic information included on the microform itself," were almost universally insufficient. Simonton pointed out that the main reason for the lack of effective internal bibliographic controls was that microreproductions were prepared by "people uninterested in or unaware of the information which should be included" on them. As a corrective he recommended that the following items should always be included on each microreproduction:

1. An eye legible brief bibliographic citation for each item on the microform.
2. A full bibliographic citation prepared according to some standard cataloging rules. If this had been done with every microform produced, since Simonton's study, we would not have the problems we do today with bibliographic control. This procedure would essentially have been cataloging in publication, and it would not have been that difficult to implement. For instance whenever a library copied a book, they could have included a frame containing their own catalog cards for it. Moreover, if micropublishers had obtained copies of the cataloging from the libraries from whom they borrowed the materials for their large collections, then they would not have had to produce secondary bibliographic guides to the collections later.

In addition to these two basic items, Simonton suggested that additional notes be included on each microform: the reduction ratio used; the intended location of the master film; the location of the original material; contents or gaps; reference to a separate index or description of the material; any necessary statements concerning literary rights, provenance, restrictions on use, etc.

Second, if bibliographical control of microforms were to be improved, Simonton argued that they would have to be cataloged. In order to facilitate this he recommended that libraries adopt the facsimile theory of cataloging copies of paper books in microform as opposed to the edition theory. This is essentially the stance taken in the *Anglo-American Cataloging Rules*.³

Finally, Simonton recommended that a new bibliographical record be established which would be devoted to listing those titles for which a master negative exists.

²Wesley Simonton, "The Bibliographical Control of Microforms," *Library Resources and Technical Services* 6 (Winter 1962) pp 29-40

³*Anglo-American Cataloging Rules North American Text, Chapter 6* (Chicago, American Library Association, 1974) pp 106-109

He thought this list should be a compilation of serials, newspapers, separately published monographs and manuscripts in microform held by libraries or produced by micropublishers.

The Association of Research Libraries endorsed Mr. Simonton's report and most of his recommendations were adopted by official groups. However, once they were adopted, little was done to insure that they would be widely implemented. Most of his suggestions for information that should be contained on microform to provide internal bibliographic control were included in ALA's *Microfilm Norms*.⁴ However, one will look far and wide before he will find a microform containing a full bibliographic description. As stated before, Simonton's recommendations on cataloging were adopted into the *Anglo-American Cataloging Rules*, but still very few libraries gave full cataloging to microforms. In 1965, the Library of Congress established the *National Register of Microform Masters* in order "to provide a complete listing from which libraries might acquire prints when needed and thus avoid the expense of making a new master."⁵ Moreover, it could serve as a finding tool for those interested in locating particular materials in microform. Unfortunately, the *National Register* initially had a very clumsy format and before the needed improvements could be made, many libraries had apparently decided it was a lost cause. Felix Reichmann has estimated that only 20 percent of all libraries report their microform masters to the *National Register*, and a quick survey of the microform evaluations in *Microform Review* indicates that only a slightly larger percentage of micropublishers report.⁶ Thus, although the apparatus for implementing the Simonton recommendations was established, libraries and micropublishers failed to support these efforts.

During the 1960s the crisis in bibliographical control of microforms became a catastrophe. This was the period during which it was not uncommon for a library director to receive significant sums of federal funds on May 15 which he was told to spend by the end of June. Large microform collections were an ideal way to spend lots of money for valuable materials with just one easily and quickly processed invoice. Once again little or no thought was put into how these collections would be bibliographically recorded once they were in the library. At the end of the decade the Association of Research Libraries sponsored another study, this one funded by the Office of Education, which was to determine "the elements of an effective system of bibliographic control of microforms which would permit the expeditious selection, acquisition,

⁴American Library Association Copying Methods Section Library Standards for Microfilm Committee, *Microfilm Norms: Recommended Standards for Libraries* (Chicago: ALA Resources and Technical Services Division, 1966) p 21

⁵Felix Reichmann, "Bibliographical Control of Microforms," *Microform Review* 1 (October 1972) p 280.

⁶ibid

cataloging, and use of micropublications." After an exhaustive study of the literature on the subject and having surveyed hundreds of American libraries and scholarly organizations, the project directors, Felix Reichmann and Josephine Tharpe, concluded that bibliographic control of microforms could be established if the following steps were taken:

1. The Library of Congress would have to give high priority to the cataloging of microforms. Microforms should be included in the MARC project and presumably in the Cataloging-in-Publication project as well.
2. Librarians should publish more papers and speak more often on the importance of assigning adequate manpower to the processing and servicing of microforms.
3. Somewhat contradicting their arguments for including microforms in the MARC project, Reichmann and Tharpe argued that libraries could not afford to file the series analytics for large microform collections because the costs involved would more than offset the savings gained by purchasing the materials in microform. Therefore, they recommended the creation of an additional national bibliographic tool which would fully index microform series. They thought this should be a machine-readable index that could be frequently updated and which could supply each library with a complete listing of all the series it owned. They suggested that the index should provide a variety of access points, such as author, title, subject, or series entry. They further suggested that a special machine be developed for this index which would be a combination of microfilm and computer and would be capable of furnishing indexes in tape, microfilm, or book form.
4. Reichmann and Tharpe next suggested that more efforts be extended towards supporting the *National Register of Microform Masters*. They felt the Library of Congress should engage in a major publicity campaign to explain the objectives, scope, and uses of the *National Register*. Moreover, they suggested that the Library of Congress identify departments and individuals in American libraries, and presumably, at micropublishing firms who were responsible for reporting to the *National Register* and that systematic contact be maintained with these people.
5. One of Reichmann and Tharpe's major suggestions was that a national microforms agency should be established which would set standards

for both production and bibliographic control of microform publications. It would evaluate all forthcoming microforms and promote the proper processing and servicing of microform collections. They also called for an up-to-date international microform bibliography and a directory of microform publishers. Both of these suggestions of course have been satisfied by the new publications from *Microform Review: MTLA: The Micropublishers Trade List Annual, International Microforms in Print: A Guide to Microforms of Non-United States Micropublishers*, and by the *Microform Market Place: An International Directory of Micropublishing*.

6. Next Reichmann and Tharpe pointed out that provisions should be made in the copyright legislation for protection of original micropublications in microform.
7. Finally they recommended that all their suggestions be pursued internationally so that bibliographic control of microforms would be worldwide.

Although the Reichmann-Tharpe study contained a number of good recommendations, the final published report was poorly organized and insufficiently documented, and thus, it was highly criticized by its reviewers. Subsequently, no great attention was given the report by the library world, and very little has been done to follow up on the recommended course of action.

So, at present there is no agreed upon system for establishing bibliographic control of microforms. Both librarians and micropublishers are paying a heavy price for the lack of bibliographic control. Because microforms have not been cataloged and because no adequate comprehensive indexing of any sort has been provided for them, the burden of informing library users of the availability of microform collections has fallen on reference librarians. These already overworked people have done what they could to facilitate access to their holdings in microform. A number of them have prepared special indexes and cooperative catalogs for microforms, but they know and acknowledge that these guides are not the answer to the problem. No matter how energetically they promote the use of these guides, the reference librarians are fighting a losing battle simply because people do not seek information by format. The preparation of these guides and the extensive searching these librarians must do to service microforms takes an inordinate amount of time that could be better spent in other pursuits.

An unnecessary strain also is being placed upon interlibrary loan facilities as people request materials on loan which they already have in their own libraries in microform, but can not find. Moreover, these patrons

Felix Reichmann and Josephine M. Tharpe, *Bibliographic Control of Microforms* (Westport, Connecticut: Greenwood Press, 1972) p. 3

should not have to wait two weeks to a month for the delivery of a needed item through interlibrary loan, when it is in their own collections all the time. Acquisitions librarians and bibliographers can not find out if materials they wish to purchase in microform are available in that format. This problem of course could be overcome if all reprographic services and micropublishers would report to the *National Register of Microform Masters*. An even more serious problem for today's libraries occurs when money is spent for paper copies of materials which are already in the library in microform, but since they are not recorded in the regular bibliographic channels, preorder searching does not discover them.

Micropublishers, unable to find out what has been previously filmed, are duplicating the publications of their competitors. Moreover, since libraries have developed no adequate system for bibliographic control of microforms, micropublishers have been forced to try to fill the void with assorted secondary guides which have been highly criticized by librarians for being inadequate and/or incomplete. Undoubtedly micropublishers should have communicated more with librarians prior to the preparation of some of these guides, but librarians should realize that preparing these bibliographic controls is an expensive undertaking, and if the costs make the overall price for the micropublications too high, then the micropublishers can not sell them. Nothing is more discouraging for a micropublisher than to go to the expense of preparing catalog cards for a collection of microforms and then not have libraries buy them because they are too costly.

Because the efforts to establish bibliographic control of microforms in the past have been ignored, we are presently facing a grim situation. However, there is hope on the horizon. The recently-established Advisory Group on National Bibliographic Control, which is jointly supported by the National Science Foundation, the National Commission of Libraries and Information Science, and the Council on Library Resources, is beginning work developing a comprehensive approach to national bibliographic control of all recorded information. Two of the objectives of this project are to establish standard formats for bibliographic description and to concentrate on the coordination of bibliographic files. The desire is to develop a system whereby a single record for any type of information in microform will be generated at the source of the item and this record will then be introduced into the national bibliographic system, making it available to anyone.

The completion of the work of the Advisory Group on National Bibliographic Control is far in the future. In the meantime much work needs to be and can be done by both librarians and micropublishers. In their report to the Association of Research Libraries, Reichmann and

Tharpe recommended that a national microform agency should be established. Other knowledgeable people have strongly supported this proposal. However, since no progress has been made toward this end, perhaps an alternative should be tried. A committee of librarians and micropublishers under the auspices of some national association agency should be clearly identified as the body to officially deal with the problems of bibliographic control of microforms. Once this is done, the committee could undertake the following tasks:

1. The committee would be available to advise micropublishers on the bibliographic controls necessary for their proposed micropublications. If necessary, they could survey libraries on the requirements for specific collections and report their findings to the micropublishers.

2. The committee could undertake a survey of all cooperating libraries to determine what collections of microforms they had acquired. The committee could find out which libraries might have cataloged certain collections, and they could try to induce these libraries to make their copy available for conversion into machine readable form so that it could be added to automated cooperative cataloging systems. For those collections which have not been cataloged by any library, perhaps the committee could coordinate an effort to divide up the collections among the libraries holding them, have each catalog portions of them, and then share their copy.

3. The committee could develop means for encouraging the reporting of microform masters to the *National Register*.

4. The committee could survey micropublishers to insure that they realize the importance of including standard bibliographic information on each microform unit.

Much can be done along these lines on the national level to improve the bibliographic control of microforms, but ultimately the responsibility for this task must rest with the professional librarians in each individual library. Every library has its own unique overall system for recording the various types of materials it collects, and thus each library must survey its system and figure out how microforms can be included in the regular channels of bibliographic control. Neither a national committee on microforms nor micropublishers can devise a means of bibliographic control which will comply with all local variations. For instance, a few libraries in the country catalog all federal documents. However, most do not, but rather they rely upon a check-in file and the *Monthly Catalog*, along with various commercially produced indexes, to provide bibliographical control and access to their documents collections. It would be unreasonable for those libraries that catalog documents to expect the micropublisher of a large collection of federal documents to provide cataloging for each item. But it would not be unreasona-

ble for the patrons of these libraries to expect that if paper documents are cataloged, then microforms should be also.

Whenever one starts to recommend that microforms be cataloged, someone immediately will state that his library simply can not afford either the catalogers or the materials for such an undertaking. If one were to visit these people's libraries, however, he would invariably find their catalogers spending time diligently cataloging paper materials that will not be used by one person in a million, and yet they do not catalog microforms which probably would be highly used, if anyone could find them. The problem lies, of course, in the categorical rejection of microforms without regard to their contents. If it is impossible to provide bibliographical control for everything in the library, then the most important and needed works should be cataloged first with no regard given to the format in which the information is presented.

Our plans for establishing bibliographic control of our microforms at Southern Illinois University at Carbondale are quite simple. After a certain date in the near future, we are going to begin to catalog all microforms that we would catalog if they were paper. We will use the provisions for microforms in the *Anglo-American Cataloging Rules* to guide us. The microforms will be cataloged fully and a complete set of analytics will be produced and filed in our card catalogs. Since we belong to OCLC and input all other cataloging into that data base, the microforms will be added also. This will mean that all the other libraries belonging to that system will have access to these records. If all these other libraries were also inputting cataloging for their microforms, the burden for any one library would be greatly reduced.

Having adopted this policy, we will be highly in-

terested in the bibliographic access provided for any microform collections we are considering for purchase. There are two basic publications we will use to guide us in determining the adequacy of the bibliographical controls of any microform collection. The first is Allen Veaner's *The Evaluation of Micropublications* and the second is the recently approved American National Standard Institute *Standard for the Advertising of Micropublications* (ANSI Z39.26-75). If we find that adequate controls are not provided and if we can not afford to catalog or otherwise bibliographically record the microform materials ourselves, then we will not buy the collection.

In summary, if bibliographical control is to be established for microforms then librarians must analyze their own internal bibliographic control system in order to find means for including all types of microform materials in it. The copy for microforms which are cataloged should be made available to automated shared cataloging systems. Librarians should report the microform masters they hold to the *National Register*. If essential internal and external bibliographic controls are not provided for specific micropublications, then libraries should not buy them.

Micropublishers should communicate with librarians about what bibliographic controls are needed for microforms. They also should report their microform masters to the *National Register*. And they should participate in the Library of Congress's Cataloging-in-Publications project if they publish original materials in microform.

Finally, a committee consisting of librarians and micropublishers should be clearly identified as the body to deal with the problems associated with bibliographic control of microforms. This committee could facilitate and coordinate efforts to insure that microforms are included in the national bibliographic system.

the user's point of view

candace morgan
head, legislative and general
reference and information branch
illinois state library
springfield

When I was asked to speak about documents in microform from the user's point of view, I immediately thought of an exchange I had with a patron several years ago. He asked for the green book which had what went on before the Senate Banking Committee about the Se-

curities Exchange Act. After checking I discovered that because of the Government Printing Office's backlog we had not yet received the hearing but that it was available in our Congressional Information Service microfiche collection. I was very pleased at my success, but when I

presented my find to the patron I was rewarded with a blank stare. After a long silence he said, "No. You don't understand. I want that green book!" I tried my best in the next few minutes to explain that what I was offering him was a film of that green book but I could see that I was getting nowhere. Finally, I at least convinced him that he should take a look at what I had on a reader. As I explained to him how to put the microfiche in the machine, I silently cursed CIS for not being as forward looking as *Playboy* and filming in color. For I knew the fact that the cover of the hearing would not appear as green on the screen would cause me trouble. The negotiation process with the patron took about five more minutes, but he finally agreed that he had what he wanted and he stayed and used it.

Thank goodness I have never since encountered a patron like that, but I think that the incident, even as typical as it was, does illustrate several important things, both positive and negative, about the user's reaction to documents in microform.

Microforms, of course, are not new to libraries. Many library patrons, particularly researchers, have been using them for years. The points which I discuss will, therefore, not sound new to you. Users of government publications in microform have many things in common with users of any kind of microform. In fact, I think it is worthwhile to ask, is there anything different? When you are considering whether to use microforms for government publications should you take anything into consideration which you would not also consider when deciding upon any other type of publication in microform? I would say yes, when you are deciding whether to acquire government publications in microform, you must always keep in mind your special obligations for making documents available to the people. Particularly if you are a depository library you have obligations above and beyond the normal responsibility of a library to make materials available to your users. You are, in fact, as a depository acting as an extension of, or agent for the government. You are at least partially fulfilling its responsibility to inform its citizens concerning its activities. You must be sure therefore, that your conversion to microform does not create a significant barrier to access to the documents. You must keep in mind the fact that the potential users for government publications differ somewhat from the potential users of other forms of library materials which you might consider putting on microform. For example, you may decide that the main users of back issues of periodicals in your library are students and that they are used to using microform reading equipment so that having this type of material exclusively on microform would not decrease the level of service which you are offering to them. With many types of library materials it is possible to identify the

users and then to evaluate the effect of microform upon the service offered to them. Your depository status, however, is conferred upon you on a geographic basis so that you will make available to anyone within those boundaries the government publications which you receive in this manner. It is much more difficult under these circumstances to determine the possible effect of microforms upon access to the publications and the level of service which you offer. Unfortunately, the format and access to government publications in hard copy, as well as the way they are sometimes hidden away in libraries, already acts as a barrier to their general usage. I am not saying that this means, from the point of view of the user, that you should never choose microforms for government publications — I am saying that these factors should be taken into consideration.

Government publications on microform, as has already been mentioned, share all the characteristics, both positive and negative, of any other publications in microform. So let us now consider the general disadvantages and advantages of microforms from a user's point of view. Let's take the disadvantages first, not because they are overpowering, but because it will enable us to end on a more positive note.

Some of the problems faced by microform users in libraries are:

1. *The quality of the product.* It is not unusual to find blurred images, streaks, and wide variations in reduction ratios which make it difficult for eyes to adjust. Even when an excellent job of filming has been done, the quality of the original publication greatly affects the quality of the film. Government publications which are difficult to read in the original, may be impossible to read on film.
2. *Equipment quality.* Much of the equipment currently in use to read microforms is inferior. One of the biggest problems for infrequent users of microform is the lack of standardization of machines. Each one seems to load, feed, and focus differently. This puts the patron in an inferior situation, he/she must rely upon others to help. In a busy library it is sometimes difficult to get immediate help which results in time loss and frustration. Furthermore equipment breakdown happens far too often. If the library does not have enough machines to accommodate patrons who wish to use them, waiting lines may develop.
3. *Environmental problems.* Many libraries seem to relegate microforms to the darkest, dingiest corner of the library. They do not provide adequate light or workspace to make notes.
4. *Bibliographic Control.* Inadequate or non-existent cataloging and indexing of microforms make

it difficult for the user to find out what the library has and difficult to use the material once it is located.

5. *Usage problems.* In many libraries microforms do not circulate, or if they do, microform reading equipment is not available for home or office use. Thus, usage is restricted to in the library during library hours.

The format of microforms also creates some usage problems. It is difficult to browse or skim with microforms and unless the library has enough equipment conveniently arranged it is difficult to go back and forth comparing one document with another.

I am sure that you could come up with additional problems which users of microforms face, but this list does, I think, cover the major ones.

There are also benefits to the user when a library acquires government publications on microform.

1. *Availability of publications.* Some previously unavailable or scarce publications are now being made available in microform. This includes federal congressional committee prints, retrospective collections of federal congressional bills, and collections of state publications. Although microforms may pose problems for the users of these publications, the alternative would be not to have them at all or to have to travel long distances to use them.
2. *Ease of use.* Some publications are easier to use in microform. This is the case when the original material is bulky or when the pages vary greatly in size. It is also true when the originals are very brittle and prone to crumble when pages are turned. Microforms may be used as a substitute for binding. Bound publications are often very difficult to read and photocopy because of a lack of margins. In this case microforms are easier to use.
3. *Bibliographic Access.* Although it is certainly true that many libraries treat microforms as poor relations, giving them little or no cataloging, some microform publishers such as the Congressional Information Service have provided such detailed indexes to their microform collections that it is much easier to locate and retrieve the publications in microform than it is to find them even in a fully cataloged hard copy federal documents collection.
4. *Circulation.* Many depository libraries interpret the provisions of the depository regulations to mean that the federal documents collection is to be always available in the library for use. Thus,

they will not circulate the documents unless they have purchased additional copies. Since most libraries have both space and money problems users usually are restricted to using federal documents in the library. If a library collects federal documents in microform and retains the hard copy both the need of the library to have copies always available and the need of the user to check them out can be satisfied.

5. *Ease of duplication.* If you have microfiche duplicating equipment and if your patrons have readers, you will always be able to provide what your patron wants.

How then, taking into consideration the advantages and disadvantages of microforms, do you make a decision which takes the user's viewpoint into account? There is no blanket answer to that since the format and content and, consequently, the patterns of usage of federal publications have very little uniformity. It is necessary to weigh the advantages and disadvantages of each major type of publication you wish to acquire in microform. It is worth pointing out, however, that it is possible to take steps within the library to lessen some of the disadvantages of microforms. Some things which can be done are:

1. Produce a microform handbook for your users. It could include an annotated list of available microforms, a description of available machines and their use, and any other information which would make it easier for the user.
2. Post a chart near or on each machine which indicates what type of microforms can be read on it and include explicit diagrams illustrating how to load, focus, adjust, rewind, etc.
3. Locate the machines and microforms in a place as convenient to the user as possible. Have adequate lighting and workspace.
4. Provide proper training for the library staff and be sure that their and your attitude toward microforms is positive. Nothing will create a negative attitude in users faster than a librarian who makes it clear that she/he considers microforms to be a problem and difficult to use.
5. Purchase microform reading equipment to loan to patrons.
6. Support local, state, and national organizations which are working for the improvement in quality and standards for microforms and microform equipment.

In conclusion the most important guideline which I can leave with you is to keep the user in mind as you make decisions concerning government publications in microform. Far too often microforms and microform

equipment are selected with the convenience of the library staff and not the need of the patron as the major consideration. Furthermore, microform reading areas are also frequently located for the convenience of the library and not the users. It is my belief that if you keep the user in mind and if you and the other staff in your library have a positive attitude, which they communicate to the patrons, it is possible to utilize microforms in such a way as to benefit both the library and the user.

SELECTED BIBLIOGRAPHY

"Copying with Microforms in Libraries." *Publishers Weekly* 208(November 11, 1975): p. 30.

- Edwards, Mary Jane. "Microforms: A View From the State Library of Pennsylvania." *The Journal of Micrographics* 8(May 1975): pp. 245-250.
- Greene, Robert J. "Microform Altitude and Frequency of Microform Use." *The Journal of Micrographics* 8(January 1975): pp. 131-134.
- Herm, Kathleen M. "The Role of Microforms in the Small College Library." *Microform Review* 3(October 1974): pp. 254-259.
- Lewis, Ralph W. "User's Reaction to Microfiche. A Preliminary Study." *College and Research Libraries* 31(July 1970): pp. 260-268.
- Lynden, Frederick C. "Replacement of Hard Copy by Microforms." *Microform Review* 4(January 1975): pp. 15-24.
- Miller, Roger C. "Why Don't They Make Microform Machines for Libraries?" *Microform Review* 2(April 1973): pp. 91-92.
- Salmon, Stephen R. "User Resistance to Microforms in the Research Library." *Microform Review* 3(July 1974): pp. 194-199.
- Schwarz, Philip. "Learning to Use Microform Equipment: A Self-Instructional Approach." *Microform Review* 4(October 1975): pp. 262-265.

hardware and software: questions you were not afraid to ask

joyce horney
head, circulation and special services branch
illinois state library
springfield

Questions at the conclusion of the 1975 Documents Workshop pointed up the wide range of knowledge and experience in the acquisition and use of documents microforms that existed among the workshop participants. Some questions, such as how to set up a microform program and what is available in microform, had already been addressed in general terms by several of the speakers. The fact that they were asked at the end of the session illustrated the general lack of practical, hands-on experience with documents microforms. Other questions concerned sophisticated or technical matters, such as costs of on-line searches of data bases and production standards, which were of interest chiefly to very large or specialized libraries.

Equipment questions were answered in part by reference to the exhibits and to items in the bibliography, and particularly to the Veaner book (Veaner, Allen B. *The Evaluation of Micropublications: A Handbook for Librarians*. Chicago, ALA Library Technology Program, 1971). Mr. McConaghey described the use of an intermediate duplicating master in the production of microforms. This step is, or should be, part of any manufacturer's process, and results in the capacity to supply either negative or positive products at the same price.

Therefore, he said, there should be no difficulty in getting negative film, and no higher price should be charged for it.

None of the panelists were willing to recommend a particular brand of fiche reader, but Mr. Miele and Mr. LaHart suggested examining the models displayed and consulting such publications as *Microform Review* and *Library Technology Reports*. Mr. Miele warned against very cheap "sale" items which may not be good buys.

A question about jackets for microfiche probably was meant to refer to the paper envelopes sometimes used to protect fiche in the file drawers. Mr. LaHart interpreted it to mean the "jacketization" of producing the fiche and emphasized the importance of cleanliness in the manufacturing process. The question of scratches and fingerprints as the result of use and how damaging they are was never directly addressed; one would assume that reasonable care would prolong the life of the film. How much protection is offered by the paper jackets relative to the space and extra filing time required to use them is moot.

Emily Brownfield of the State Library asked about the feasibility of cartridge-type handling of microfiche, with capacity to keyboard an index code to bring the area

wanted into viewing range. Bill Powers described the general principle of the \$70,000 machines being used by some businesses for this purpose, and Mr. Miele called attention to the devices on display which offer manual index and retrieval of fiche in cartridges. These are in the \$2,500 — \$3,000 price range.

Questions concerning the organization and management of microform programs in libraries included a query about the advantages and disadvantages of different types of microforms. Mr. Cole suggested the advantages of having serials on film. Mr. McConaghey pointed out that often there is no choice since the title you need may be available in only one form. In response to an earlier question about opaque microcards, Mr. McConaghey mentioned the minad microform systems that have been introduced and urged librarians to concentrate on six main systems: 16 and 35mm film, 3M and Kodak cartridge, 24X fiche, and ultrafiche. Others he called "orphans" and warned that too many "orphans" are extremely expensive to maintain. Again the Veaner book was cited as required reading for any librarian responsible for the management of microforms.

John Beil, in response to a question about the time lag between learning of a government publication and receiving the microform version, said that CIS gets its copy at the same time the GPO supplies the staff of the committee that produced the document. If there has been advance news-media publicity about the publication, it may be sixty days between the time of the newspaper article or television mention and library receipt of the fiche. In other cases, the fiche is distributed thirty days after the first hard copy becomes available to the author agency.

On the matter of the relative costs of microform versus hard copy documents collections, Mr. Beil cited a Detroit study which put their cost of being a regional depository at \$278,000. ASI and CIS together run about \$11,000, and Beil estimated that represents about 70

percent of what is available to depositories. A comprehensive comparison of staffing, space, and equipment needs as well as cost of materials was not attempted. Mr. Miele promised to make the Detroit report available to the Illinois State Library for interlibrary loan.

Another question concerned subscriptions to the microfilm edition of the publications of the State of Illinois announced sometime ago by Research Publications. Janet Lyons reported that the project has been abandoned, giving as reasons the proliferation of state documents, the inflated cost of the project, and the difficulty of marketing the product because of its high price and its film format.

In response to a question about what documents the Illinois State Library has in microform, Candy Morgan mentioned a few of the main items, including CIS, ASI, some areas of NTIS, the CIS serial set, and dissertations about Illinois. She and Janet Lyons are compiling a comprehensive listing of the State Library's holdings which will be available sometime next year.

That libraries have become aware of their responsibilities and opportunities in the field of local documents was illustrated by a request for information about how to get these publications put in microform. Mr. Miele described his arrangement with Jack LaHart for the filming of various Illinois documents and suggested three possible routes. (1) The library may have the budget to purchase the equipment and employ the staff to microfilm or microfiche not only local documents but other materials. (2) Microform production facilities and/or services may be available to the library from other agencies of the local government. (3) If the budget permits, a service bureau can be hired to put local documents on fiche or film.

Mr. Miele closed the session with the comment that some budget money and an interest in documents are essential for building a good documents microform program.



background information on microfilming activities carried out at united nations headquarters

giuseppe s. martini
chief, documentation division
dag hammar skjold library
united nations plaza

A. Introduction

1. The microfilming of United Nations documents started at United Nations Headquarters in 1947. The primary purpose of the activity was to ensure the preservation of documents in a form suitable for official use and only subordinately to supply copies of the films produced to other institutions interested in obtaining them. Microfiches were introduced starting in 1969 as the full-text component of the computer-assisted indexing of United Nations documents. Up to date some 3,500 reels of film (for the most part in 16mm) and 50,000 microfiche masters have been produced.
 2. In order to avoid overlapping of efforts, late in 1972 the responsibility for carrying out the microfilming of documents was assigned to the Documentation Services Division of the library. A review of the objectives and procedures of microfilming both in roll-film and microfiche was carried out in 1973. Efforts to promote the use of microfiches, particularly by official users, were started late in 1972 and were intensified in subsequent years. Also a work program was prepared and production targets for each program year were set.
 3. The extension of the application of microform technologies to other areas of activity (such as original micropublishing, conversion to film of office files, computer output in microform rather than in paper form, use of microfiches as a medium for the reprinting of texts out of stock, etc..) are at present the object of a comprehensive study conducted at headquarters by the Administrative Management Service.
- (a) to preserve the material for an indefinite period beyond the date at which paper, particularly paper used for mimeographing, deteriorates;
 - (b) to reduce substantially the space needed for the storage and preservation of the material;
 - (c) to facilitate the dissemination of bulky documents and publications by compressing their volume to more manageable proportions;
 - (d) to provide official users with the possibility of obtaining, at moderate cost, copies of the official documents in microform;
 - (e) to provide for the storage in microform of the full texts of documents and publications to which reference is made in the records stored in computer-based files;
 - (f) to provide a better medium for copying services;
 - (g) to contain costs for additional shelving equipment;
 - (h) to reduce, and possibly eliminate, binding costs;
 - (i) to reduce mailing and shipping costs.

B. Objectives of Conversion to Microform

4. The overall objectives of converting materials from paper form to microform have been defined as follows:

C. Scope of the Present Activity

5. At present, only documents and publications of the United Nations itself and of the International Court of Justice are included in the program. Excluded are documents of the United Nations Industrial Development Organization (UNIDO), the United Nations Conference on Trade and Development (UNCTAD), the regional economic commissions, and of other organizations and programs within the United Nations system.

This limitation in scope provides a certain

measure of automatic safeguard against the possibility of overlapping and duplication of efforts. However, since it is not the result of an agreed policy of cooperative arrangements, both at the intra-UN and interagency levels, it does not provide for the coordination of activities and programs.

It should be noted that several of the organizations and programs within the United Nations system are currently producing microfilm or microfiche editions of their documents and publications.

D. Types of Microform in Use

6. Among the various types of microform available, microfiche and 16mm roll-film are in use at present.

Microfiche is a better medium for the storage of research material in frequent use. Therefore, microfiche is the type of microform chosen for the storage of texts within the scope of the United Nations Documentation Information System (UNDIS) and of all other texts which are likely to be in more frequent use or to be disseminated selectively by title or portions of series.

Roll-film is well-suited for the storage of texts used less frequently but to be preserved permanently for archival purposes. Roll-film is cheaper to produce, but more burdensome to use. Roll-film, therefore, is the type of microform chosen for the preservation of series of documents less frequently used, such as runs of periodicals, documentation of lesser subsidiary organs, administrative issuances, and the like. It is also used in all those instances in which technical reasons preclude the use of microfiche, such as they exist at present for the microfiche of texts in Arabic and Chinese.

7. Microfiches are produced at present under contract and in accordance with the specifications of the United Nations Microfiche Standard (document ST/PB/30) which conforms with recommended international standards and has been adopted by all organizations in the United Nations system.

Roll-film is produced in-house according to the specifications and procedures established by the Reproduction Section, Publishing Division, Department of Conference Services.

E. Types of Material Reproduced in Microform

8. Materials reproduced in *microfiche* are:

- (a) English, French, Spanish, and Russian versions of the Official Records of the General Assembly, the Security Council, the Economic and Social Council and the Trusteeship Council;
- (b) Studies and reports included in the United Nations publications program and issued as sales publications or for general distribution, with the exception of texts in Arabic and Chinese;
- (c) All yearbooks in all language versions except Arabic and Chinese;
- (d) Proceedings, papers, and reports of conferences, seminars, workshops, etc., convened by or under the sponsorship of the United Nations, in all language versions except Arabic and Chinese;
- (e) Volumes of the United Nations Treaty Series;
- (f) Printed publications of the International Court of Justice;
- (g) Documents of the Administrative Committee on Coordination;
- (h) Mimeographed documents included in the scope of UNDIS;
- (i) Technical cooperation reports (subject to extra-budgetary resources being made available for the purpose by the Office of Technical Cooperation).

9. Materials reproduced in *roll-film* are:

- (a) Arabic and Chinese versions of documents and publications, whether printed or mimeographed;
- (b) Periodicals, newsletters, serials, and other recurrent publications, in all language versions;
- (c) Mimeographed documents not included in the scope of UNDIS;
- (d) Documents issued in restricted series, or for participants only (including materials issued in conference room series), or in provisional form;
- (e) Press releases, leaflets, and other similar public information materials;
- (f) Documents issued for internal distribution only, such as administrative circulars, organizational manuals and handbooks, directories, and materials of a similar nature;
- (g) Papers of the United Nations Publications Board;
- (h) Staff Union issuances.

F. Program of Work and Priorities

10. At the beginning of each program year, in consultation with the Sales Section, Publishing Division, and the Reproduction Section, Publishing Division, a work program is established for execution during the year. In drawing up a program the following factors are taken into account:
 - (a) level of available budgetary resources;
 - (b) requirements of the sales program;
 - (c) staff availability for the preparation of the material for filming;
 - (d) capacity available in the Reproduction Section.
11. Materials are converted to microform according to the following priorities:
 - (a) Microfiche.
 - Priority 1. Documents and publications falling under the scope of UNDIS.
 - Priority 2. Official Records; volumes of the United Nations Treaty Series; titles required for the sales program.
 - Priority 3. All other materials (see paragraph 8 above).
 - (b) Roll-film.
 - Priority 1. Texts in Arabic and Chinese.
 - Priority 2. Periodicals and mimeographed materials not included in the scope of UNDIS.
 - Priority 3. All other materials (see paragraph 9 above).
12. The production targets set for each of the program years during the period 1974 to 1977 are as follows:
 - (a) Microfiche.
 - (i) Masters containing texts of documents issued currently. 8,000
 - (ii) Masters containing texts of documents issued in previous years (back files). 7,000
 - (iii) Total masters per year. 15,000
 - (iv) Approximate number of pages of text reproduced in microfiche form. 750,000
 - (v) Number of silver halide duplicates. 75,000
 - (b) Roll-film.
 - (i) Master reels (original negative). 75
 - (ii) Duplicate reels (positive copy). 75
 - (iii) Approximate number of pages of texts reproduced in roll-film. 600,000

G. Outline of Major Processing Steps

13. The processing flow for the reproduction in microfiche is as follows:
 - (a) Material is assembled, inspected, collated, and prepared for filming by the Microfiche Subunit of the Processing and Microforms Unit, Computer Operations Section.
 - (b) After all preparatory work and the drafting of instructions for processing have been completed, the material is sent for filming to the contractor, who maintains a filming facility on library premises.
 - (c) The preparation of title headings and filming is done on equipment provided by the contractor (a step-and-repeat camera is used for filming) and by contractor's personnel.
 - (d) Processing of the exposed film and duplication in silver-halide, colour-stripped microfiches is done away from headquarters by the contractor, according to the instructions supplied for each item by the library staff.
 - (e) Five sets of duplicates, contained in colour-coded envelopes according to the language of the text, are shipped by the contractor to the library at recurrent intervals. (Sets of duplicates for sale are sent directly by the contractor to the Sales Section.)
 - (f) Upon receipt, the quality of the duplicates is spot-checked. (Defective material is returned to the contractor for replacement.) The five sets are distributed as follows:
 - Set No. 1: to the Microfiche Subunit, where it is filed by microfiche number and used for fiche-to-fiche reproduction and for control purposes.
 - Set No. 2 and No. 3: to the Documents Reference and Collections Section, Documentation Services Division, where they are filed according to document symbols and are made available to users for reading, or used for enlarged copying.
 - Set No. 4 is shipped by pouch to the United Nations Library at Geneva, for use in the Geneva office.
 - Set No. 5 is sent to the Documentation and Terminology Section of the Translation Division, Department of Conference Services, where it is used to support the research needs of translators.

14. The processing flow for the reproduction in roll-film is as follows:
- (a) Material is assembled, collated, and prepared for filming by the Microfilm Subunit of the Processing and Microforms Unit, Computer Operations Section.
 - (b) When sufficient material has been accumulated for the production of one reel of film, processing instructions and a list of documents included in the reel are prepared. Then the material is sent for filming to the Reproduction Section, Publishing Division, Department of Conference Services.
 - (c) The Reproduction Section produces, on the film processing equipment available in the unit, a master negative. (A rotary camera is used for the purpose.) A positive copy is also produced for reference use.
 - (d) Both master negative and positive copy are sent to the library where they are filed in separate files and cross-reference cards from document symbols to reels are prepared. The reels are maintained in a separate collection in the Documents Reference and Collections Section. The positive copy is made available to users on the premises for reading. The negative master is used for enlargements and for the production of additional positive copies for sales purposes and upon request from the Sales Section.

H. Availability of Products and Servicing Arrangements

15. Complete sets of microfiches containing texts of the Official Records (in English, French,

Spanish, and some Russian), of the Treaty Series and of selected yearbooks are available for sale from the United Nations Sales Section in New York. An updated list of the series available for sale is prepared each year.

Official users can obtain the materials available at 50 percent discount on the price charged to other users. Orders must be prepaid. Normally, delivery of prepaid orders takes about three months from the date the order is received.

Copies of microfilms are also available from the Sales Section. Lists of the microfilms produced up-to-date are available from the Documentation Services Division of the Headquarters Library.

16. Diazo copies of microfiches of single documents are available from the Documentation Services Division. Copies are supplied free of charge to internal users. Official users (government agencies, staff of permanent missions, and of delegations to organizations in the United Nations system, press correspondents accredited at headquarters, United Nations depository libraries, and organizations in the United Nations system) may obtain copies at the following conditions:
- up to 10 copies free of charge; more than 10 copies, \$U.S.1.00 per document. (A document may be contained in one or more microfiches.)
17. Also available from the same source are enlargements of single pages from microfiche and/or roll-film. Enlargements are supplied free of charge to internal users. Official users may obtain up to 10 pages free of charge; more than 10 pages are supplied at a charge of \$U.S.0.15 per page.

revised microform procurement standards*

Part I: Human Factors

1. General.

- a. In this document, the term reader also refers to a reader-printer, and the term microform includes microfilm, microfiche, and micro-

opaque.

- b. The reader should be sturdily constructed and capable of withstanding hard usage. Controls, especially gears, should be made of high-quality materials.
- c. The reader should operate on standard 110-120 volts AC, 60 cycles. The electric connection

*Prepared by the California State University and Colleges Library Microfilm Committee. Chairman Ernest W. Toy, University Librarian, California State University at Fullerton. The Standards appeared in *Microform Review* April 1975. They are reprinted by permission of the Committee and *Microform Review*.

- of the reader should fit a standard outlet.
- d. A portable reader should be lightweight and trimly designed, with a carrying handle securely fastened to the machine. Durability is a particularly important consideration in a portable reader.
 - e. When in use, the reader should create a minimum of noise from the operation of motors and fans.
 - f. All reader lenses should be coated.
2. Instructions.
 - a. Instructions should be simple, with nontechnical diagrams explaining loading, unloading, and operation.
 - b. Instructions shall be printed on each reader or on a plate attached to the reader. Information indicating the proper orientation of the microform to the reader is helpful and should be required.
 3. Loading and Unloading.
 - a. The process of inserting and removing microforms should be simple to accomplish and easily understandable after the initial instruction.
 - b. Loading shall be external to the reader and the reader so designed that all loading apparatus is free of obstructions to the hands. Ideally, the user should be able to load and unload the reader while seated. Take-up reels shall be affixed to the reader by a mechanical locking device which can be removed for maintenance.
 - c. Inserting and unloading a microform must be possible without scratching or damaging it.
 4. Controls.
 - a. All controls shall be clearly visible, labeled, and readily accessible from an operator's normal viewing position.
 - b. The user should be able to manipulate the controls without significantly changing his position at the reader. The controls should require a minimum of effort — physical and mental — to operate. They should advance and reverse the microform smoothly and evenly. Motorized controls should have no less than two speeds, a fast forward and a scanning speed. The clutch or brake device on readers with motorized controls should be guaranteed to operate in such a way that it does not damage film under normal operating conditions. All machines shall have manual controls for positioning the film, including the ability to rotate images through 180° in both directions.
 - c. There should be mechanical control of carrier motion and image location. Direct manipulation of the microform is not acceptable.
 - d. For fiche readers, the ability to indicate row and column coordinates of the image projected on the screen is highly desirable.
5. Screen.
 - a. The screen shall be made of unbreakable or shatterproof material. It shall be resistant to scratching, and the coating shall resist cracking or peeling. The screen shall be accessible for cleaning and shall have a nonglare and, except for opaque screens, nonreflective surface. Screens shall not be excessively directional.
 - b. A lightly tinted screen is desirable to minimize eyestrain, although it is recognized that the tint may interfere with the fidelity of color film. Green is the preferred color tone of the screen, although gray is acceptable. Adjustment of room illumination can compensate for unsatisfactory screen tint.
 - c. The screen shall be large enough to permit the display of the full width of a page of text of a book or periodical.
 - d. The screen shall be in the normal sight line of the average-sized operator when he is seated before it and shall permit the operator to adopt a natural reading position.
 - e. The best screen angle and distance between the viewer and the screen will vary among users. Ideally, the screen angle should be adjustable to allow for individual differences. A screen angle of 75° to 80° is recommended. Perpendicular screens are not acceptable.
 6. Image.
 - a. For ease in viewing, the projected image shall be at least the approximate size of the original. The quality of the projected image should compare favorably with the original document. Image resolution for small screen readers (not exceeding 12 inches in any direction) shall be at least 3.6 lines/mm in the screen corners and for large readers not less than 3.2 lines/mm in the corners measured using NBS.1010 microcopying test charts.
 - b. The image shall be legible under all likely ambient lighting conditions.
 - c. The image shall remain in focus while the film is in slow motion or stationary following a change in frames.
 7. Luminance.
 - a. A reader designed for ambient light of 275 ± 10 lux (30 ± 1 ft. candles) shall have a minimum screen brightness of 109 candelas/sq. meter

(32 ft. lamberts) at the center of the screen, a fall off at the corners for small-screen readers (screens not exceeding 12 inches in any direction) or not more than 75 percent, and a fall off at the corners of large-screen readers of not more than 90 percent, as measured by the American National Standard Method for Measuring the Screen Luminance of Microform Readers with Translucent Screens, PH5.10-1969.

- b. Ideally, the illumination should be adjustable to permit a user to dim or brighten it in order to adjust for ambient lighting or individual preference.
8. Adaptability.
 - a. Quality shall not be sacrificed for the sake of versatility.
 - b. A reader should accept several sizes of a given type of microform:
 - Microfilm: 16 and 35mm
 - Microfiche: 3 × 5 and 4 × 6 inches
 - Micro-opaque: 3 × 5 and 6 × 9 inches
 - c. Variable magnification is desirable. The method for changing from one magnification to another shall be simple and provide for the security of the lenses.
 9. Maintenance.
 - a. The design of the exterior of a reader is an important factor in keeping it clean. A machine with multiple surfaces will catch and hold dust, which in turn can damage the machine and the microform. Therefore, readers shall be easy to clean, maintain, and repair. Simple instructions and diagrams explaining the construction, cleaning, and repair, plus recommendations for maintenance, shall accompany each reader.
 - b. Maintenance and repair service of microform equipment shall be *guaranteed* by the manufacturer.
 - c. Lenses and all glass surfaces shall be easily accessible for dusting with a camel's hair brush.
 - d. The lamp shall be readily accessible to maintenance personnel for changing, simple to replace, fit readily into its socket, and have a long life expectancy. *Proprietary systems of illumination shall be avoided.*
 - e. For reader-printers, standard maintenance operations (such as changing paper, replenishing chemicals, and removing and cleaning the printing mechanisms) shall be simple to perform.
 - f. Coin receptacles on coin-operated reader-printers shall remain secure when machines are opened to replenish paper supplies and to accomplish other maintenance work.

10. Safety.

- a. The machine shall conform to all UL (Underwriters Laboratory) and other safety requirements, such as the following:
 - The reader shall be stable on its base.
 - No external part of the reader shall exceed 125°F (52° Celsius) during machine operation. Temperature of the film gate shall not exceed 167°F (75° Celsius) during machine operation.
 - All surfaces, corners, and edges shall be free of burrs and rough spots.

11. Environment.

- a. The ideal environment for reading microforms in a library is a carrel for each reader with individual light control and a facility for both vertical and horizontal positioning of the machine. The reader should be mounted on a surface no higher than 26 inches.
- b. Prospective purchasers of microform readers should consider how much surface area the reader occupies on the table or desk, since there should be enough work space at each machine to accommodate books and the taking of notes. A pull-out shelf can add to available space.
- c. Ambient light control is required. Ideally, room lights should have a dimmer control. Dim light is best for viewing, since a blackened room can contribute to eyestrain, while a fully lit room can interfere with the contrast on the screen. Direct window light should be avoided.
- d. Reading room areas should be adequately ventilated for safety and comfort.

Part II: Acquisition of Microforms and Microform Equipment

1. The libraries will limit the purchase of microform reading equipment to that which is designed primarily to operate between 16x and 24x. For machines providing additional magnification capability, libraries may select an auxiliary magnification in the 42x-48x range to accommodate COM output. Libraries will avoid the acquisition of microform materials produced at a higher reduction ratio than 48x until such time as industry-wide standard reduction ratios are established and acceptable to the library directors.
2. The libraries will not purchase large microform sets or collections unless the publisher of such sets will:
 - a. *guarantee in writing* that the material is fully indexed;

- b. offer to the purchasing library full bibliographic information for *all separate units* within the microfilmed collection;
 - c. guarantee that each reel or cassette pertaining to such collection will have content labels attached to each box or cassette; and
 - d. provide bibliographic information that conforms to Anglo-American cataloging rules.
3. The libraries will, where a choice of microforms exists, purchase the materials in microfiche and/or 35mm roll-film depending upon the content of the material filmed, provided that the microfiche shall not be larger than 4 x 6 inches in size.
 4. For silver-gelatin films used for masters and archival types of storage, CSUC libraries will purchase only film conforming to ANSI standard PH.1.28-1973 for permanent record film on Cellulose Ester base and ANSI standard PH.1.41 for archival record films on polyester bases. For nonarchival films in the working collection, other types of film with a reasonable working life, such as diazo and vesicular films that have been proven not to emit destructive chemicals under normal library storage conditions, are acceptable.
 5. Microform materials will not be considered for purchase unless data are provided by the vendor on reduction ratios, image format, and film type.
6. The library directors will request funds in the next budget cycle for their institutions to acquire equipment which will quickly and inexpensively duplicate microfiche for the benefit of patrons. This policy is made in recognition of these advantages:
 - a. Microfiche resources could be made available to more patrons.
 - b. The integrity of the microfiche collection could be better protected and preserved.
 7. The libraries will phase out all purchases of roll microfilm which appear on 16mm film and limit purchases of such microfilm materials to those which are available on 35mm film.
 8. The libraries will abandon the purchase of micro-opaque cards and microprint except where necessary to complete sets to support academic programs because reliable and inexpensive printers for these materials are not available.
 9. The California State University and Colleges will use every opportunity to urge micropublishers who produce micro-opaque materials to make these materials available in microfiche form.
 10. Standards for the acquisition of microforms and microform equipment shall be reviewed by the Council of Library Directors at least every third year from the adoption of this policy.

bibliography on government publications in microform

geneva finn
 doctoral student
 graduate library school
 indiana university
 bloomington, indiana

The plan for this bibliography included review of relevant literature related to government publications in microform, on micrographic techniques, on government producers and distributors, and the activities of various groups working to improve microform management in libraries.

The material seemed to divide naturally into two parts: a selected list of references on micrographics including some on government micropublishing; and a selected list of reports from the newsletter of GODORT (Government Documents Round Table of the American Library Association), *Documents to the People*. The

events recorded in *Documents to the People* are written up from other perspectives in other periodicals, such as *Microform Review*, *LC Information Bulletin*, and others. For the sake of brevity these parallel accounts were not cited.

The bibliography is annotated with some editorializing. I attempted to bring out aspects of special relevance to government publications specialists. To make the paper more useful, I listed only the more accessible sources, preferably those with bibliographies leading the reader to other sources.

Selected References

- ANSI Advertising of Micropublications Completed. *Microform Review* 4, no. 3 (July 1975) pp. 177-179. Contains the text of the final draft of ANSI standard Z39.26-75. This standard was based on *The Evaluation of Micropublications* by Allen Veaner.
- Beck, William L. "A Realistic Approach to Microfilm Management." *Microform Review* 2, no. 3 (July 1973) pp. 172-176. Discusses the responsibilities of a micromedia librarian charged with managing a microform collection in a medium-sized college library. Highlights principles involved in bibliographic control, acquisitions, reference services, and public relations.
- Beim, Alexander. "Micrographics Management for the Federal Government." *Journal of Micrographics* 9, no. 1 (September 1975) pp. 23-28. Discusses an organization named Federal Government Micrographics Council whose role is to foster better management of micrographics in the federal government and to serve as a forum for federal government employees. The council has members from most federal agencies and strives to reflect the views of the government.
- Butler, Brett. "Updating the Reference Book through Microform Supplements." *Microform Review* 3, no. 1 (January 1974) pp. 30-33. Microform technology offers the possibility of keeping reference and other loose-leaf services up-to-date through use of COM.
- Fenaughty, A. L. "Demand Printing Revolution in Publishing." *Journal of Micrographics* 8, no. 4 (1975) pp. 201-206. Suggests that it will become economically feasible to custom-tailor newspapers, magazines, books, and reference data for small specialized groups of readers. This might well have implications for government information.
- Harmon, G. H. "A Service Bureau — How to Select One." *Journal of Micrographics* 8, no. 3 (1975) pp. 135-137. Defines "service bureau" as the term applies in micrographics and suggests questions to ask in selecting one.
- Lessing, Laurence. "Microfilm Emerges From Its Dusty Corner." *Fortune* 86 (1972) pp. 140-141, 196-208. Traces the history of microfilm and presents some potential uses for several microformats.
- Lynden, Frederick C. "Replacement of Hard Copy by Microform." *Microform Review* 4, no. 1 (1975) pp. 15-24. Discusses the practical aspects of hard copy conversion to microform including criteria for selecting appropriate materials for replacement, sources for locating suitable film and equipment, and standards for servicing and maintenance of microform products. Also examines space savings and user resistance.
- Materazzi, Albert R. "Materials Shortages." *Journal of Micrographics* 8, no. 6 (July 1975) pp. 293-296. The author is manager of the quality control and technical department of the Government Printing Office. Discusses the reasons for materials shortages.
- Micropublishing and the Government Printing Office: Three Viewpoints. *Microform Review* 3, no. 2 (April 1974) pp. 85-95. The viewpoints are those of James Adler, president of the Congressional Information Service, Inc., a spokesman for the Government Printing Office, and Catherine Reynolds, a noted authority in government publications librarianship.
- Miller, L. "Micrographic Applications in the Federal Government." *Journal of Micrographics* 8, no. 1 (1974) pp. 3-8. Notes that the United States government is the largest user of microfilm in the world and that the government's willingness to introduce new procedures before their economic justification was fully established was a major factor in the growth of the microfilm industry.
- Morehead, Joe. *Introduction to United States Public Documents*. Littleton, Colo.: Libraries Unlimited, 1975. Includes background on the Government Printing Office, its computer technology and micro-publishing program.
- Ramey, James W. "The Human Element: Why Nonprint Managers Turn Grey." *Drexel Library Quarterly* 7, no. 2 (April 1971) pp. 91-106. "Nonprint" in this article refers to media such as films, filmstrips, audiotapes, videotapes, microfilm, fiche, cassettes, wet carrels, etc. Discusses the reasons for passive resistance to all forms of nonprint media.
- "Revised Microform Procurement Standards." *Microform Review* 4, no. 2 (April 1975) pp. 96-99. Contains revised criteria for procurement and use of microforms and related equipment from the California state university and college system. Has much information useful to librarians outside the system.
- Salmon, Stephen R. "User Resistance to Microforms in the Research Library." *Microform Review* 3, no. 3 (July 1974) pp. 194-199. Discusses a number of studies which indicate that improper production, inadequate bibliographic access, defects in equipment design and poor environments and other factors combine to make the use of microforms inconvenient.
- "Specifications for a Superior Microtext Reading Machine." *American Documentation* (July 1965) pp. 246-247. Describes a machine that still has not come into existence.
- Spigel, Frances G. *The Invisible Medium: The State of the Art of Microform and A Guide to the Literature*. Washington, D.C.: American Society for Information Science, 1973. ED 075 029. A wonderfully well-organized paper in three sections: aspects of micropublication; an overview of equipment; and a select guide to the micrographic literature.
- U.S. National Archives and Records Service. *Computer Output Microfilm. Records Management Handbook*. Washington, D.C.: Government Printing Office, 1975. (GS 4.6/2 M58/3) The purpose of this handbook is to provide a broad understanding of computer output microfilm (COM). It is especially directed to those in the federal government who have a limited knowledge of computers, microfilm, and information systems. It is intended to provide guidelines in the application, design, evaluation, and use of COM systems.
- U.S. National Archives and Records Service. *Microfilming Records. Records Management Handbook*. Washington, D.C.: Government Printing Office, 1975. (GS 4.6/2 M58/2) The purpose of this handbook is to provide guidelines on when to microfilm and on how to design a microfilm system, select the microform format that best meets users requirements, obtain quality microforms and operate a microfilm system after its installation.
- U.S. National Archives and Records Service. *Microform Retrieval Equipment Guide. Records Management Handbook*. Washington, D.C.: Government Printing Office, 1974. (GS 4.6/2 M58 1974) Not intended to serve as an equipment catalog, nor does it attempt to evaluate any individual manufacturer's equipment. Its basic purpose is to provide a prospective user or purchaser of microfilm retrieval equipment with a basis for comparing available equipment against his requirements to aid in selecting the most appropriate equipment.
- Veaner, Allen B. "Microreproduction and Micropublication Technical Standards: What They Mean to You, the User." *Microform Review* 3, no. 2 (April 1974) pp. 80-84. Discusses the significance of ANSI standards applicable to micrographics such as choice of film stock, processing chemicals, silver-gelatin films, filming research materials, testing archival qualities, and testing legibility and sharpness. Also makes some remarks on promoting standardization.
- Wooster, Harold. *Microfiche 1969 — A User Survey*. Arlington, Va.: Air Force Office of Scientific Research, 1969. AD 695 049. An interesting summary of comments elicited from a wide range of users. Supplies a much-needed touch of humor to a subject ordinarily discussed with deadly seriousness.

Chronological List of Selected References from Documents to the People

These references are arranged chronologically by date of publication. This list does not pretend to include everything relating to microforms from *Documents to the People* because every aspect of government publications work touches on the subject. However, I think the high points are included.

"Microforms Task Force." *Documents to the People* 1, no. 1 (September 1972): p. 11. First report from the Microforms Task Force of ALA-GODORT. Mentions a plan for a survey of 2,000 libraries of all types and sizes in the United States and Canada to determine their

- current microform holdings and equipment as well as their plans for the future
- Adler, James. "GPO Micropublishing: An Information Publisher's View." *Documents to the People* 1, no. 3 (May 1973): pp. 35-37. A statement by a leader in the information industry.
- "Survey of Microforms: Summary." *Documents to the People* 1, no. 4 (September 1973): pp. 19-21. "The most extensive survey ever made on microforms holdings of libraries in the United States and Canada" has been completed by the Microforms Task Force of ALA-GODORT.
- "State Documents Microfilming Projects." *Documents to the People* 2, no. 1 (October 1973): pp. 8-10. Outlines the results of a survey attempting to ascertain what state agencies are doing in regard to microfilming state documents.
- "Microform Information: First Sources." *Documents to the People* 3, no. 3 (January 1975): pp. 10-12. A short annotated list directed to the librarian faced with the problems of making a decision concerning some aspect of microforms.
- "Microforms Task Force Conference Report." *Documents to the People* 3, no. 3 (January 1975): pp. 9-10. Includes notes on remarks by Jesse Shera, Bernard Fry, and others.
- "Proposed Government Printing Office Micropublishing Pilot Project." *Documents to the People* 3, no. 3 (January 1975): pp. 32-39. Although somewhat outdated this is a good summary of the background of the project. Also includes details of film format, film classes, indexing techniques, and bibliographical control, etc.
- "Report of the Ad Hoc Committee on the Depository Library System." *Documents to the People* 3, no. 3 (January 1975): pp. 44-49. This report was accepted by ALA Council at the 1974 annual conference. In addition to the text of the report reviews by Edith Beh, Mary Lou Knobbe, Leroy Schwarzkopf, and Linda Wyman are included.
- Dyer, Sue. "Government Documents in Microform." *Documents to the People* 3, no. 5 (May 1975): pp. 18-23. Synopsis of her remarks at the American Association of Law Librarians Government Documents Workshop, St. Paul, June 24, 1974.
- "GODORT Microforms Task Force." *Documents to the People* 3, no. 5 (May 1975): pp. 34-35. Discusses further details of the Government Printing Office pilot project in micropublishing.

documents in microform: a selective bibliography

janet lyons
head, government documents branch
illinois state library
springfield

The following bibliography is primarily one of reviews of documents in microform and is therefore intended to be useful for selection purposes. It also includes reviews of some materials that can be considered supplementary to a government publications collection and some sets that partially contain document material.

Federal

- ASI Microliche Library*. 1960-1974. 1974-. Congressional Information Service, 1973-. Reviewed by Peter Herson. 4 *MR* 112 (April 1975).
- American Archives*. Johnson Reprint Corp., 1972. Reviewed by Robert Grey Cole. 2 *MR* 213 (July 1973).
- CIS:Microliche Library*. Congressional Information Service, 1970-. Reviewed by Robert J. Fortado. 1 *MR* 133 (April 1972).
- Complete Congressional Voting Records*. Congressional Quarterly, Inc., 1973-. 1961-1974. Reviewed by Laurance R. Mittin. 4 *MR* 194 (July 1975).
- Decisions of Federal Administrative Agencies and of Federal Courts in Agency Cases, Prior to 1958*. Reviewed by A. Jerome Dupont. 3 *MR* 58 (January 1974).
- Documents Relating to the Military and Naval Service of Blacks Awarded the Congressional Medal of Honor From the Civil War to the Spanish-American War*. National Archives and Records Service, 1973. Reviewed by Russell F. Weigley. 4 *MR* 39 (January 1975).
- Dual Media Editions of the Proceedings of the United States Congress 1789-1970*. United States Historical Documents Institute, Inc., 1972. Reviewed by Robert Grey Cole. 4 *MR* 122 (April 1975).
- Headcount 70*. U.S. Bureau of the Census. State and County Data File. Complete Count One 1970 U.S. Census Information. National Planning Data Corporation. (Infomark Corporation), 1971. Reviewed by Marcia Jebb. 1 *MR* 139 (April 1972).
- The Ku Klux Klan Conspiracy*. United States Congress, Report of the Joint Select Committee to Enquire into the Condition of Affairs in the Late Insurrectionary States. AMS Press, Inc., 1969. Reviewed by Richard Lowe. 2 *MR* 218 (July 1973).

- Legislative History of the Securities Act of 1933 and Securities Exchange Act of 1934.* Fred B. Rothman & Co., 1974. Reviewed by Edwin M. Schroeder. 4 MR 133 (April 1975).
- Legislative History Subscription Service.* Microcard Editions, 1951- . Reviewed by Edward F. Hess, Jr. 3 MR 215 (July 1974).
- Library of Congress / National Union Catalog.* 1898-1971. 1972- . Microcard Editions. Reviewed by Kenneth S. Allen. 3 MR 218 (July 1974).
- NTIS Reference File.* Princeton Microfilm Corp. and Microforms International Marketing Corp., 1972. Reviewed by John E. Bell. 2 MR 225 (July 1973).
- The National Union Catalog.* Microfilm Card Reproduction Edition, 1953-1972, and Decennial Index to the National Union Catalog, 1958-1967 (An Index to LC Card Numbers). Information Design Press, 1973. Reviewed by C. Edward Carroll. 4 MR 214 (July 1975).
- The Negro in the Military Service of the United States, 1639-1886.* National Archives and Records Service. Reviewed by Russell F. Weigley. 4 MR 39 (January 1975).
- Nuclear Science Abstracts Cumulative Index 1967-1971.* Xerox University Microfilms, 1973. Reviewed by Martha J. Bailey. 4 MR 139 (April 1975).
- PCMI Library Ultrafiche System.* The National Cash Register Co. Reviewed by John Webb. 1 MR 149 (April 1972).
- Presidential Press Conferences 1913-1952.* National Micropublishing Corp., 1971. Reviewed by William K. Ach. 1 MR 234 (July 1972).
- The Press Conferences of Franklin D. Roosevelt, 1933-1945.* Franklin D. Roosevelt Library, 1971. Reviewed by William K. Ach. 3 MR 300 (October 1974).
- Records of the Committee on Fair Employment Practice.* Microfilming Corporation of America, 1970. Reviewed by William K. Ach. 3 MR 302 (October 1974).
- S.E.C. Releases on Microfiche.* Redgrave Information Resources Corp., 1973. Reviewed by Ronald Weiher. 2 MR 302 (October 1973).
- Securities and Exchange Commission Releases.* Xerox University Microfilms. Developed and compiled by Redgrave Information Resources, 1974. Reviewed by Carol M. Bratton. 4 MR 146 (April 1975).
- United States Army in the World War, 1917-1919.* Library of Congress, Photoduplication Service, 1971. Reviewed by Carl Boyd. 3 MR 225 (July 1974).
- U.S. Bureau of Education. The Annual Report of the United States Commissioner of Education, 1867-1907.* Northern Micrographics, Inc., 1974. Reviewed by Laurance R. Mitlin. 3 MR 273 (October 1974).
- United States Census Publications, 1820-1945.* (Exclusive of Decennial Census Publications). Greenwood Press, 1972. Reviewed by Irene Schubert. 2 MR 228 (July 1973).
- U.S. Congress. Joint Committee on the Investigation of the Pearl Harbor Attack.* Northern Micrographics, Inc., 1974. Reviewed by Robert Erwin Johnson. 4 MR 150 (April 1975).
- U.S. Congressional Hearings. 41st-73rd Congress (1869-1934).* Greenwood Publishing Co., 1971. Reviewed by John E. Bell. 1 MR 59 (January 1972).
- U.S. Laws, Statutes, Etc. (Bills) [Bills and Resolutions]. 1st-72nd Congress.* The Library of Congress, Photoduplication Service, 1966- . Reviewed by Ronald Weiher. 2 MR 230 (July 1973).
- _____. *Congressional Bills on Microfiche.* Congressional Information Service, 1974- . Reviewed by Theodore Foster. 4 MR 190 (July 1975).
- U.S. Serial Set (15th to the 59th Congress) 1817-1907, and the American State Papers (1789-1838).* Readex Microprint Corp., 1956- . Reviewed by Ruth Dahlgren Hartman. 1 MR 240 (July 1972).
- United States Supreme Court Records and Briefs.* Microcard Editions. Reviewed by Edwin M. Schroeder. 4 MR 227 (July 1975).
- United States Supreme Court Records and Briefs.* Law Reprints, Inc. 1974- . Reviewed by Margaret A. Leary. 4 MR 224 (July 1975).
- The Warren G. Harding Papers.* The Ohio Historical Society, Archives and Manuscript Division, 1970. Reviewed by Theresa Blake. 1 MR 303 (October 1972).

State and Local

- Attorneys General Series.* Reports and Opinions of State Attorneys General. Temple University School of Law Library, 1961- . Reviewed by Edwin M. Schroeder. 2 MR 43 (January 1973).

- Early State Records*. Library of Congress in Association with the University of North Carolina, 1951. Reviewed by Mark R. Yerburgh. 3 *MR* 286 (October 1974).
- Index to Current Urban Documents*. Greenwood Press, 1972-. 2 *MR* 233 (July 1973). *Urban Documents Microfiche Collection*. Greenwood Press. 3 *MR* 118 (April 1974). Both reviewed by Peter Hernon.
- Session Laws of the United States and Territories*. Compiled by Redgrave Information Resources Corp., 1973. Reviewed by John E. Bell. 3 *MR* 52 (January 1974).
- State Constitutional Conventions from Independence to the Completion of the Present Union, 1776-1959. Series I: The Thirteen Original States*. Greenwood Publishing Co., 1972. Reviewed by Theodore S. Foster. 1 *MR* 308 (October 1972).
- _____. *A Bibliography*. Compiled by Cynthia E. Browne with an introduction by Richard H. Leach. Greenwood Press, Inc., 1973. Reviewed by Theodore S. Foster. 3 *MR* 233 (July 1974).
- State Labor Reports from the End of the Civil War to the Start of the Twentieth Century*. Greenwood Publishing Co., 1971. Reviewed by Richmond D. Williams. 1 *MR* 156 (April 1972).
- State Reports on Correction and Punishment, Poverty and Public Welfare, Prior to 1930*. Redgrave Information Resources, 1973. Reviewed by Mark R. Yerburgh. 3 *MR* 55 (January 1974).
- State Transportation and Public Utilities Reports, Phase 1*. Greenwood Press, Inc., 1974. Reviewed by John F. Stover. 3 *MR* 59 (January 1974).

International and Foreign

- Archives Parlementaires de 1787 a 1860: Recueil Complet Débats Legislatifs et Politiques des Chambres Françaises*. NCR Microcard Editions, 1967-69. Reviewed by James E. Brink. 1 *MR* 129 (April 1972).
- Canada. Public Archives of Canada. *Annual Reports 1872-1949*. Includes *Documents Relating to the Constitutional History of Canada, 1759-1828*. Micromedia, Ltd., 1972. Reviewed by Anne Yandle. 2 *MR* 135 (April 1973).
- The Census of India, 1872-1951*. Inter Documentation Company, 1973. Reviewed by N. Gerald Barrier. 4 *MR* 35 (January 1974).
- France. *Journal Officiel. Débats Parlementaires Chambre des Deputes, 1881-1940*. NCR Microcard Editions, 1965. Reviewed by Nancy D. McReel. 1 *MR* 228 (July 1972).
- Great Britain. Colonial Office. *Annual Reports on the Colonies*. Nos. 1-1936 (1889-1938). Andronicus Publishing Co. Reviewed by James C. Armstrong. 3 *MR* 58 (January 1974).
- Great Britain Colonial Office Pamphlets about Africa*. Contents listed by Donald Vrabel. Duquense University Library, 1974. Reviewed by Peter Duignan. 4 *MR* 234 (July 1975).
- House of Lords Sessional Papers, 1806-1859*. Trans-Media Publishing Co., 1973. Reviewed by William A. Moffett. 4 *MR* 130 (April 1975).
- The Journals of the House of Commons, 1547-1900*. Readex Microprint Corp., 1955. Reviewed by Bentley B. Gilbert. 2 *MR* 50 (January 1973).
- League of National Documents and Serial Publications, 1919-1946*. Research Publications, Inc., 1973. Reviewed by Catharine J. Reynolds. 2 *MR* 272 (October 1973).
- _____. Reviewed by Donald F. Wisdom. 19 *LRTS* 182 (Spring 1975).
- _____. Reviewed by Joe Morehead. 13 *RQ* (Spring 1974).
- League of Nations. *Reports of Mandatory Powers*. Andronicus Publishing Co., 1972. Reviewed by James C. Armstrong. 2 *MR* 290 (October 1973).
- League of Nations Treaty Series, Volumes 1-205 (1920-1946)*. Datamics, Inc., 1970. Reviewed by Hildegard Pestel. 2 *MR* 52 (January 1973).
- Official Gazettes*. KTO Microform Division in Association with the New York Public Library. Reviewed by Irene Schubert. 4 *MR* 54 (January 1975).
- Profile: Canadian Provincial and Municipal Publications on Microfiche*. Micro-Media, Ltd., 1973-. Reviewed by Suzanne Dodson. 2 *MR* 292 (October 1973).
- Reports from Committees of the House of Commons 1715-1801. Printed but not Inserted in the Journals of the House 1803-1806*. Chadwyck-Healey, Ltd., 1973. Reviewed by Roger Howell, Jr. 3 *MR* 223 (July 1974).
- Statutes of the Realm, 1215-1714*. Trans-Media Publishing Co., 1973. Reviewed by A. Jerome DuPont. 3 *MR* 304 (October 1974).
- United Nations Treaty Series, Volumes 1-500*. Trans-Media Publishing Co., 1972. Reviewed by Bernard D. Reams, Jr. 3 *MR* 130 (April 1974).

Urban Sources. Canadian Documents in Urban and Regional Affairs. Micro-Media, Ltd., 1973. Reviewed by Joan Whitney. 4 MR 229 (July 1975).
Western European Census Reports, 1960 Census Period. Redgrave Information Resources Corp., 1973. Reviewed by William Betcher. 2 MR 297 (October 1973).

Articles

- Avedon, Don M. "The Federal Government Takes Three Giant Steps for Micrographics." 5 *Journal of Micrographics* 165 (March/April 1972).
- Buchanan, William W. "Product Planning for Document Collections." 56 *Illinois Libraries* 304 (April 1974).
- Cole, John Y. "Foreign Official Gazette Microfilming: A Renewed Effort." 4 MR 101 (April 1975).
- Crossey, Moore. "A Survey of Africana in Microform." 3 MR 96 (April 1974). (See page 99 for documents.)
- Dale, Doris Cruger. "Availability and Use of United Nations Documents in Microform." 55 *Illinois Libraries* 150 (March 1973).
- Donovan, Jerry J. "Making Foreign Census Documents Available and Accessible." 64 *Special Libraries* 374 (September 1973).
- Edgerton, Curtis. "The Mine Map Repository — A Source of Mine Map Data." 8 *Journal of Micrographics* 235 (May/June 1975). (Reprinted from U.S. Bureau of Mines, *Information Circular* No. 8657, 1974).
- Finzi, John C. "Foreign Official Gazette Microfilming Project." 32 *LC Information Bulletin* A54 (March 2, 1973).
- Kruger, Lester O. "Patent Literature Information System Has Wide Application." 7 *Journal of Micrographics* 23 (September/October 1973).
- Maucher, Peter. "Disclosure — Access and Distribution to the Securities and Exchange Commission Public Corporate Filings." 56 *Illinois Libraries* 300 (April 1974).
- "Micropublishing and the Government Printing Office/Three Viewpoints." 3 MR 85 (April 1974).
- Morehead, Joe. "The Declassified Documents Reference System." 15 *RQ* 63 (Fall 1975).
- Open Forum: Micropublishing of Government Information.* (Shoreham Hotel, Washington, D.C., May 27, 1971). Bethesda, MD.: ERIC Documents Reproduction Service, 1972. ED 058 930.
- Reynolds, Catharine J. "The Public Documents Department Microfiche Information Retrieval System." 3 MR 269 (October 1974).
- Windsor, Allan F. "New UN Microfiche Service Augurs Large Storage Economies." 65 *Special Libraries* 234 (May/June 1974).
- Yun, Jai Liong. "Readex Microprint and the GPO." 12 *RQ* 279 (Spring 1973).

questionnaire on documents in microform federal and state documents

In order to gather information about libraries collecting documents in microform, the Workshop Planning Committee devised a two part questionnaire which was sent to public, academic, special, and system libraries in the state. Part one of the questionnaire is printed below, followed by a key to the responding libraries.

Part I — Public Service

Library _____
Address _____
Name of Respondent and Position _____

- CIRCLE: 1. Public 2. Academic 3. School 4. Special 5. Other _____
6. If you belong to a library system, identify: _____
 7. Size of total library collection: _____
 8. Do you have a documents collection: ___ Yes ___ No (If No, skip to question 17)
 9. Are you a depository for documents: a. ___ Federal b. ___ State c. ___ Local
 10. Do you collect documents in microform? ___ Yes ___ No (If No, skip to question 12, 17)
 11. If answer to number 10 is Yes,
 - a. ___ Microfilm b. ___ Microfiche c. ___ Microcard d. ___ Microprint
 12. Do you have microform equipment? (If your equipment is adapted for more than one microform please check all applicable spaces)

a. ___ Microfilm reader	___ 8mm	___ 16mm	___ 35mm	
b. ___ Microfilm reader/printer	___ 8mm	___ 16mm	___ 35mm	
c. ___ Microfiche reader	___ Magnification			
d. ___ Microfiche reader/printer	___ Magnification			
e. ___ Microcard reader	___ Magnification			
f. ___ Microcard reader/printer	___ Magnification			
g. ___ Microprint reader	___ Magnification			
h. ___ Microprint reader/printer	___ Magnification			
 13. Total number of documents in microform by number of reels or cards, etc.

	A. Less than 100	B. 100-500	C. 500-1000	D. Approximate No.
a. Microfilm	_____	_____	_____	_____
b. Microfiche	_____	_____	_____	_____
c. Microcard	_____	_____	_____	_____
d. Microprint	_____	_____	_____	_____
 14. Do you provide access to your documents in microform through:
 - a. Public card catalog _____
 - b. Monthly catalog _____
 - c. CIS Index _____
 - d. Other commercial index (Please name): _____
 - e. Other means (Please explain): _____
 15. Do you permit documents in microform to circulate on interlibrary loan?

Yes ___ No ___

If yes, a. ___ Without any restrictions

b. ___ With some restrictions (explain)
 16. Do you provide photoduplication service? Yes ___ No ___
 - a. ___ Patron operated copier
 - b. ___ Staff operated copier
 - c. ___ Through library system (Charge?)
 - d. ___ Direct at cost
 17. If you do not collect documents in microform, is it because:
 - a. ___ You do not have enough staff to maintain a collection
 - b. ___ You can refer patrons to nearby collections
 - c. ___ You maintain documents in other form
 - d. ___ Other reasons, please explain
 18. Are there any questions you would like discussed at the workshop?

Key 10 Responding Libraries

- 27 Graves Public Library, Mendota
- 31 Shawnee College, Ullin
- 43 National Dairy Council Library, Rosemont
- 66 Archer Daniels Midland Co., Research Library, Decatur

- 90 Carmi Public Library, Carmi
- 97 Travenol Laboratories Inc., Morton Grove
- 98 Withers Public Library & Information Center, Bloomington
- 107 Carrollton Public Library, Carrollton
- 131 State Farm Insurance Companies, Bloomington
- 146 Adolph Meyer Center Professional Library, Decatur
- 156 Mayfair College, Chicago
- 157 Lake Land College, Mattoon
- 162 Wallgren Library, North Park College, Chicago
- 169 Learning Resources Center, Galesburg
- 173 Sangamon State University, Springfield
- 195 Oakton Community College, Morton Grove
- 211 Learning Resources Center, Joliet Junior College, Joliet
- 237 Marshall Brooks Library, Principia College, Elsah
- 240 Monmouth College Library, Monmouth
- 258 Glenview Public Library, Glenview
- 266 Niles Public Library District, Niles
- 271 Eisenhower Public Library District, Harwood Heights
- 274 Rockford Public Library, Rockford
- 275 Concordia Teachers College, River Forest
- 279 Tri-County Public Library District, Augusta
- 281 Loyola University Chicago Law Library, Chicago
- 282 Library of the Health Sciences, U. of IL. at Medical Center, Chicago
- 289 Lincoln Library, Springfield
- 300 A. C. Buehler Library, Elmhurst College, Elmhurst
- 304 Lumpkin Library, Blackburn College, Carlinville
- 307 Research Library, Harris Trust & Savings Bank, Chicago
- 309 A. B. Dick Co., Library, Chicago
- 311 Cumberland Trail Library System, Flora
- 324 Western Illinois University, Documents & Legal Reference Dept., Macomb
- 325 Applied Science & Technology Division, Chicago Public Library, Chicago
- 335 Rebecca Crown Library, Rosary College, River Forest
- 348 Joliet Public Library, Reference Dept., Joliet
- 349 Lewis University Library, Lockport
- 351 Morris Library, Southern Illinois University at Carbondale
- 354 Wheaton College Library, Wheaton
- 355 Booth Library, Eastern Illinois University, Charleston
- 356 Mount Prospect Public Library, Mount Prospect
- 368 Argonne National Laboratories, Technical Information Services Dept., Argonne
- 371 Northeastern Illinois University, Bryn Mawr at St. Louis, Chicago
- 374 Chicago Public Library, Chicago
- 375 Gould Information Center, Rolling Meadows
- 377 Governors State University, Park Forest South
- 379 Peoria Public Library, Peoria
- 382 University of Illinois at Urbana-Champaign
- 385 Northern Illinois University, Swen Franklin Parson Library, DeKalb
- 386 Borg-Warner Corp., Des Plaines
- 387 Northwestern University, Evanston
- 388 University of Chicago Law Library, Chicago
- 389 Illinois State Library, Springfield
- 400 Miiner Library, Illinois State University, Normal

Part I — Public Service

There were 388 respondents to Part I of the questionnaire.

The most frequently cited reason for not collecting documents in microform was lack of funds. Other reasons included lack of storage space, no need or demand and expense of equipment. A few libraries added that what they need is not available in microform. Others said they can borrow from other libraries.

Summary of Response to Questions 8, 9, and 10

Type of Library	Public	Academic	Special	System	TOTALS
Number Responding	257	69	54	8	= 388
8. Documents Collection	43	31	24	5	= 103
9. Depository-Federal, State or Local	21	22	1	2	= 46
10. Documents in Microform	17	26	11	1	= 55

Library number	Question number	Response
27	15.	Yes. a.
	16.	No.
31	14.	d — listing.
	15.	Yes. a.
	16.	Yes. a.
43	14.	a, b, d — Resources in Education (ERIC).
	15.	Yes. b — prefer to send paper copies of microform.
	16.	Yes. b, c — no charge.
66	14.	a, b, c, e — Termatrix (coordinate indexing).
	15.	No.
	16.	Yes. b.
156	14.	a.
	15.	No.
	16.	Yes. a.
162	14.	a, b.
	15.	No.
	16.	Yes. a.
169	14.	a.
	15.	Yes. a.
	16.	Yes. a.
173	14.	c, d — Research in Education. e — a guide to sources is in preparation.
	15.	Yes. a.
	16.	Yes. a, b, c.
195	16.	b.
237	14.	b.
	15.	Yes. b — for use within borrowing library
	16.	Yes. b — 10¢ per page, d — 10¢ per page
240	14.	a.
	15.	Yes. b — only if large amounts need to be copied.
	16.	Yes. c.
258	16.	Yes. a, c — no charge
266	16.	Yes. a.

See Key to Responding Libraries

- 274 14. Comprehensive Serials List.
15. Yes.
16. Yes. b.
- 275 14. d — ERIC
15. Yes. a.
16. Yes. a, b.
- 279 15. Yes. b — loaned only to responsible persons.
16. Yes. b, d — 10¢ per copy
- 281 14. a, b, e — Visible index — location chart.
15. Yes. b — locally only.
16. Yes. a, c — 5¢ per page, or \$2.00 minimum. d.
- 282 14. a.
15. Yes.
16. Yes. a.
- 289 16. Yes. a.
- 300 14. a — special drawer for ERIC. d — Readers' Guide, PAIS Business Periodicals index, ERIC documents in *Resources* (formerly *Research in Education*).
15. Yes. a.
16. Yes. a, d.
- 304 14. a, b.
15. Yes. a.
16. Yes. b.
- 307 14. e — SEC filings, filed by corporate name.
15. Yes. a.
16. No.
- 309 15. No.
16. No.
- 311 15. No.
16. Yes. b.
- 324 14. a, b, c.
15. Yes. a.
16. Yes. b, d.
- 325 14. e — Patent indexes.
15. No.
16. Yes. a, other — allow patents to circulate to commercial photocopy companies for a fee, which in turn charge customers for copies.
- 335 14. a, e — wood blocks in document collection wherever the hard copy would be filed, handouts and posters.
15. Yes. b — if an entire class is working on a project the items are kept on reserve.
16. Yes. a.
- 348 14. a, e — finding aids in Reference Dept.
15. Yes. b — some reference items do not circulate but would supply print-out.
16. Yes. a, b — for BOLS libraries.
- 351 14. a, b.
15. Yes. a.
16. Yes. b, c.
- 354 14. a, b.
15. No.
16. Yes. a.

See Key to Responding Libraries

- 355 14. a, b, c.
15. Yes. a.
16. Yes. a, d.
- 356 14. d — Readers' Guide, Business Periodicals Index.
16. No.
- 368 14. b, c, d — Nuclear Science Abstracts, e — Government Reports Announcements/Index, Scientific and Technical Aerospace Reports, ERDA Reports Abstracts.
15. No.
16. Yes. ANL staff only — Central Library only.
- 371 14. a, b, e — Serials department print-out.
15. Yes. a.
16. Yes. a, b, d.
- 374 14. b, e — Natural Sciences Dept. has a shelflist; Applied Science & Technology Dept. uses various patent indexes (depository items).
15. Yes. b — must be used at the borrowing library only.
16. a, b, c, other — allow patents to circulate to commercial photocopy companies, who in turn charge customers for copies.
- 375 14. d — GRA, NSA.
15. No.
16. Yes. d.
- 377 14. a — documents card catalog, b, c.
15. Yes. microfilm a, microfiche b — provide first 10 microfiche duplicated free then charge of 10¢ per fiche. Microfiche does not circulate.
16. Yes. a.
- 379 14. a, e — periodical list.
15. No.
16. Yes. a, c — no charge under 10 copies, d.
- 382 14. a, b, c — limited edition microfiche, Reference Dept. — Resources in Education (ERIC); AEC & ERDA documents indexed in Nuclear Science abstracts.
15. No.
16. Yes. a, b, c — for a charge, d.
- 385 14. a, b, c, d — ADI.
15. No.
16. Yes. a, b.
- 386 14. e — computer print-out journal holdings list.
15. Yes. a.
16. Yes. a — depends on workload, b.
- 387 14. a, d — Disclosure Index.
15. Yes. a.
16. Yes. Microfilm — a; microfiche print & card — b.
- 400 14. a, b, c, d — ASI.
15. Yes. b — no entire series as a single loan.
16. Yes. a, b.

See Key to Responding Libraries

Part II -- Holdings Survey

Titles in this list were selected from the *Guide to Microforms in Publication, 1975*. Some titles are those assigned to collections by micropublishers. Some titles are not "documents", and may or may not be so considered by individual libraries. Certain titles from the National Archives are identified by the microfilm number listed in the *National Archives Microfilm Publications Catalog, 1974*.

Titles are listed under two general sections — federal and state. Format and holding library are indicated for each. For serial or periodical titles the years, congresses, or volume numbers held are shown. If continuing subscriptions are maintained an open entry symbol is used. Where respondents indicated "selected" or "scattered" holdings the word "some" has been used for brevity.

This list differs from the questionnaire distributed. The sample entry section is omitted. The titles for which no libraries indicated holdings are omitted and titles added are included. A listing of omitted titles is available on request.

For tabulation purposes identification numbers were assigned to libraries as questionnaires were received. In each format entry the library identification number appears first, followed by an equal sign and the holdings by volumes, etc.

FEDERAL

Author-Title	Microcard	Microprint	Microfiche	Microfilm
AGING				371 = 1951-
AMERICAN EDUCATION				304 = 1965-
				371 = 1964-
AMERICAN STATISTICS INDEX				
Depository			389 = all	
Non-depository			389 = all	
Atomic Energy Commission				
Nuclear Science Abstracts				389 = v. 1, 1948
Unclassified Reports	368 = 50,000		368 = 300,000	
	387 = 1958-		375 = X	
	mid '70		382 = X	
Bureau of American Ethnology				
Annual Report				385 = v. 1-81
Bulletin				385 = no. 1-157
CAPTURED GERMAN RECORDS filmed at Alexandria, Va. indexes				389 = X
				400 = X
Census Office				
Decennial Census			146 = 1970	385 = 1900-60
			169 = 1970	389 = 1790-1960
			240 = some	
			311 = 1970	
			389 = 1820-1945	
Non-decennial Census				382 = all
Population schedules of				90 = 1830-80
Illinois				98 = 1840-80'
				348 = 1830-80'
				351 = 1820-80
				385 = 1820-50
				379 = 1820-40,
				1850-80, some
				400 = 1820-80
				400 = 1860
				98 = 1810-20, some
				351 = 1810-30
				355 = 1820, v. 7-10
				400 = 1810-60

McLean County
With Kendall, Grundy, Hancock Counties

PART II — HOLDINGS SURVEY, FEDERAL continued

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
New York				98=1810, some
Ohio				98=1820, some
				400=1820-60
Pennsylvania				400=1800-40
Tennessee				379=1810, some
Virginia				98-1820, some
Washington, D.C.				98=1800
Heads of Families, 1790				258=X
				400=X
				304=1961-64
				371=1954-
CHILDREN (CHILDREN TODAY)				
CODE OF FEDERAL REGULATIONS			375=X	
Commissioner of Labor				
Annual Reports			389=1886-1910	
Congress				
AMERICAN STATE PAPERS		385=X		173, 324, 335, &
		351=X		355=all
		400=X		
ANNALS OF CONGRESS			162=all	324, 355, &
			389=all	377=all
				385=X
Bills and Resolutions		400=1965	389=93d Cong. 2d Session	324=all
				385=1-39th Cong.
				389=1st-72d Cong.
CONGRESSIONAL GLOBE			389=all	90=23-24 Cong.
				all at 162, 324,
				354, 355, 377
				371=1836-73
				385=X
CONGRESSIONAL RECORD				162=1873-
				281=1957-
				324=all
				354=all
				355=all
				371=1873-10/1964
				335=years?
				385=v.1-89, 1873-
				389=v.1, 1873-
REGISTER OF DEBATES	374=1824-37		162=1824-37	324, 355=all
			389=all	371, 377=all
				385=all
PROCEEDINGS SERIAL SET	387=no.1-200	351=1789-1865	389=all	324=thru 1974
		400=thru 40-	173=1970-	
		3d Congress	324=1789-1871,	
		385=1-	1911-13	
			389=69th-73d	
			Cong.	
Senate JOURNALS	374=1789-1909		355=1789-1909	
Journal of the Executive				
Proceedings			389=1st-60th	
			Cong.	
CIS Microfiche library				
complete			389=1970-	
			173=1970-74	
limited edition			173=1975-	
			400=1970-	
			382=all	
			324=1974- ³	
parts			368=some	

³All committee prints.

PART II — HOLDINGS SURVEY, FEDERAL continued

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
Hearings and committee prints		400=1956-62, 1967-74	374=1869-1934*	
Greenwood edition Greenwood's supplements			389=1-89th Cong. 374=all 389=all	
Witness Index			374=25-89th Cong. 400=25-73d Cong. 385=25-77th Cong. 389=25-77th Cong.	
Supp. to 41-73d Cong.			385=X 400=X	
Continental Congress PAPERS				382=all 400=all 400=X 400=1774-76
Foreign letters . . .				
JOURNALS				
Copyright Office CATALOG OF ENTRIES CATALOG OF ENTRIES. New Series Third Series		400=1958-		389=1906-1945 389=1945-1967
Court of Claims Cases decided . . .			389=v.1-100	
Department of State BULLETIN			348=1973-	98=1947-73 156=1955-72 355=1939-47 400=1939-49 389=1939-
PAPERS RELATING TO FOREIGN RELATIONS OF THE U.S.			385=1901-42 162=1861-1942	
Consular dispatches, by city				351 ^a 324, ^a 400 ^c 385=T-134 387=some 382=some
Diplomatic dispatches, by country				351 ^a 324, ^a 400 ^c 385 ^a 382=some 387=some
Records relating to internal affairs of . . .				351 ^a 400 ^c 382=some
Records . . . political relations between U.S. and . . .				400 ^c
Records . . . political relations between . . . & other states				400 ^c

*Also Documented hearings, 23d, 34th-72d Congresses, joint committee hearings, 79th Congress; House committee hearings, 48th-79th Congresses; Senate committee hearings, 49th-79th Congresses; Special Senate committee hearings, 73d Congress.
^aReported 12,000 reels in these categories.
^bConsular dispatches, T-192, T-512, T-426 and T-556. Diplomatic dispatches: T-52.
^cConsular dispatches, T-503, T-45, T-509, T-512, T-367, T-334, T-116, M-140, T-44, M-155, T-599, T-192, T-193, T-194, T-335, T-197, T-336, T-566, T-337, T-209, M-144, T-471, M-84, T-338, M-154, T-62, T-341, M-139, T-658, T-229, T-425, T-427, T-238, T-305, T-353.
 Records . . . internal affairs of . . . M-514, M-855, M-644, M-610, M-487, M-647, M-668, M-274, M-626, M-832, M-571, M-607, M-658, M-353, M-488, M-368.
 Records . . . political relations between U.S. and . . . M-515, M-648, M-525, M-314, M-489, M-633, M-670, M-606, M-509, M-365, M-572, M-368.
 Records . . . political relations between . . . and other states: M-515, M-315, M-646, M-835, M-490, M-609, M-510, M-363, M-573, M-369.
 Diplomatic dispatches: T-51, T-30, M-10, T-52, T-33, M-46, T-50, M-79.
 Notes from the . . . Legation, T-795, T-160, M-51, T-802, M-73, T-815, T-810, T-93.
 M-324, M-488, M-626.



PART II — HOLDINGS SURVEY, FEDERAL continued

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
Notes from the . . . Legation is U.S. to Dept. of State				400*
List of diplomatic officers				400=M-586
Diplomatic & consular instructions, 1791-1801.				400=M-28
1801-1896				400=M-77
Commission to Central & South America				400=T-908
TERRITORIAL PAPERS				351*
EMPLOYMENT SECURITY REVIEW				304=1954-63
ERIC			10	
FEDERAL REGISTER	281=1953-73	400=1962-70	281=1974	90=1966- 173=1936- 382=1972- 389=1936- 281=1936-52 374=1936- 400=1971- 388=1937-60 156=1967-72 169=1960- 173=1915-39 355=1915-23 371=1915-19 400=1915-26 389=1915-
FEDERAL RESERVE BULLETIN				
FEDERAL WRITERS PROJECT				
Slave narratives			400=X	385=X
Selected titles				387=some
Foreign Broadcast Information Service — DAILY REPORTS				400=1966-70
Geological Survey MONOGRAPHS			374=all 389=v.1-55	
GOVERNMENT REPORTS ANNOUNCE- MENTS:INDEX — (NTIS)**			382 ¹³ 386=some 173=some 375=X 400=some 282=Scim cate- gory 95G 389=Fields 5, 10, 13, 6I, 6J, 21D	47=1968- 324=1964-67 389=1943-
INDEX MEDICUS			348=1974 400=1879-99, 1903-27	348=1961-73
INDIAN AFFAIRS BUREAU				400= ¹²
Annual Report			389=1824-1949	
INDUSTRIAL COMMISSION REPORTS			389=1900-1902	
J.P.R.S.				
Publications			368=some	351=X
Translations (Readex)		400=1965-	371=some	385 ¹⁴

*Reported 12,000 reels in these categories.

¹⁰Complete collections at libraries: 173, 275, 324, 351, 355, 371, 374, 375, 385, 387, 400.

Selective collections at libraries: 43, 156, 169, 211, 348, 300, 375.

¹¹Do the entries under microfiche refer to individual titles, and the entries under microfilm to the indexes?

¹²Files or agency correspondence: M-74, M-208, T-500, M-4, T-494, M-142, M-18, M-271, M-15, M-58, M-16.

¹³Field 5B, Aug. '74.

¹⁴Vietnam-Indonesia, 1957-62; China & Asia 1965-

PART II — HOLDINGS SURVEY, FEDERAL continued

Author-Title Library of Congress	Microcard	Microprint	Microfiche	Microfilm
BOOKS: SUBJECTS			347=current 371=1950-64	
PRESIDENTIAL PAPERS OF . . .				387=some 382=most 351=2400 reels 400=all 385 ¹⁾ 389=v.1, 1915- 98=1933, 1954-57 156=1957-72 157=1960- "
MONTHLY LABOR REVIEW			173=1960-68, 1970	
N.A.S.A. TECHNICAL NOTES			368=some 387=1969-	
National Bureau of Standards				355=v.1-62, 63B-68B 389=v.1, 1928-
JOURNAL OF RESEARCH National Labor Relations Board Decisions and orders Patent Office			389=v.1-104	
CHEMICAL PATENTS				325=9/1969- 374=9/1969 375=all 389=all 375=all 389=all 375=all
INDEX OF PATENTS				
INDEX OF TRADEMARKS				
OFFICIAL GAZETTE			309=1970-75	274=1872-1971 325=1872- 351=X 374=1872- 375=all 385=1906-17 386=1950- 389=all
Publications (Readex) Index to Classifications, 1973		400=1963-		325=X 374=X 389=1790-1871
Annual report of the Commissioner Presidents				
MESSAGES & PAPERS (Richardson) EXECUTIVE ORDERS Press Releases			324=1789-1902	385=all to 1936 389=Jan. 20, 1953-May 31, 1963 371=1952/61 371=1968
PROBLEMS OF COMMUNISM PUBLIC HEALTH REPORTS Securities & Exchange Comm. 10K-Annual Reports			173=some 307=NY & ASE 324=all 355=1973- 374=1970- 400=NY & ASE 382=X 388=some 387=X 389=1970-1973	

¹⁾Arthur, Jackson, Madison, Polk, Van Buren.

²⁾Also 195=1965-71, 354=1974, 355=1926-36, 356=1962, 374=1915-68, 1971-74; 377=1915-68, 400=1953-63.

PART II — HOLDINGS SURVEY, FEDERAL continued

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
Registration Statements			307=all 400=NY 70-73 ASE 71-73	
N-1R Annual Reports Final Prospectuses			389=1970-73 400=NY 1969- 173=some 374=1970- 400=NY 1970	
Annual Report to Shareholders	382=X		382=X 386=some 173=1966- ¹ 307=NY & ASE 400=1969-74 387=X	
Smithsonian Institution Annual Report STATUTES AT LARGE			389=1846-1946 324=1789-1964 389=1789-1964	
Supt. of Documents MONTHLY CATALOG			371=1895-1960	173=1895-1964 351=X
Readex complete ed. Readex non-deposit ed. Readex depository ed. DOCUMENTS CATALOG		351=1953- 355=1953-75 355=1956-		324=all
SUPREME COURT RECORDS & BRIEFS	281=1960-71		281=1972-	
Surgeon General's Office INDEX-CATALOGUE . . . SURVEY OF CURRENT BUSINESS				400=all 289=1899-1971 304=1956-63 354=1906-26
Vital Statistics of the United States WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS			389=1937-1967	354=1965- 355=1985-71
Women's Bureau BULLETIN			389=no.1-233	

STATE

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
Official State Education Directories			374=1972 400=X 400 ¹	
State Labor Reports Illinois CONSTITUTIONAL CONVENTIONS			385=1818-1958 169=to 1970 173=all 374= ¹ 389=all 385=1818-99 389=all	351=all 400=all
SESSION LAWS				
Attorney General REPORTS & OPINIONS				389=1872-1967 281=1872-1967

¹Godfrey Memorial Library Set.

²Includes Calif., Colo., Conn., Ill., Mass., Mich., N.J., N.Y., Ohio, Pa., Tenn., W.Va.

³Includes 1818, 1847, 1862, 1869-70, 1920-22. Also miscellaneous reports for 1862, 1919, 1934, 1950.

PART II — HOLDINGS SURVEY, STATE continued

<i>Author-Title</i>	<i>Microcard</i>	<i>Microprint</i>	<i>Microfiche</i>	<i>Microfilm</i>
Board of Administration ANNUAL REPORT			389= 1-7, 1910-1914/16	
Board of Arbitration ANNUAL REPORT			324= 1895-1900 385= 1-6 389= 1-5, 1896- 1900/01	
Board/Commissioners of Public Charities ANNUAL REPORT			389= 1869= 1916 400= 1869-1916	
Board of Labor Statistics BIENNIAL REPORT			324= X 374= 1891-1900 385= 1891-1900 389= 1891-1900	
Dept. of Factory Inspection ANNUAL REPORT			374= 1893-1900 385= 1893-1900 389= 1893-1900	
Dept. of Public Welfare ANNUAL REPORT			389= 1-13, 1917/ 18-1929/30	
Census (Incomplete)				389= 1855-1865
Illinois Information Service (Press Releases)				389= 1964-
Illinois Historical Society JOURNAL				162= 1908/09- 1909/10
Legislative BILLS				173= 1877- 400= 1877- 385= 1877- 389= 1877-
Secretary of State CERTIFIED LIST OF FOREIGN AND DOMESTIC CORPORATIONS (Annual) ELECTION RETURNS				389= 1902- 173= 1818-1950 385 ^o 389= 1818-1964
State Board of Prison Industries ANNUAL REPORT			389= 1904/5- 1913/14	

^o1818-1873, 1882-1920, 1928-1964