DOCUMENT RESUME

ED 270 108 IR 051 523

AUTHOR Choi, Susan E.
TITLE Cataloging and Organizing Microcomputer Software--Where Do We Go from First Base?
PUB DATE 84
NOTE 18p.; Paper presented at the Annual Conference of the American Association of School Librarians (Atlanta, GA, November 1984).
PUB TYPE Guides - Non-Classroom Use (055) -- Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cataloging; *Computer Software; Library Administration; Library Collections; *Library Technical Processes; *Microcomputers; Position Papers; Program Descriptions
IDENTIFIERS Software Evaluation

ABSTRACT

This position paper addresses general topics to be considered when organizing library software collections. Tasks involved in organizing and cataloging educational software collections are discussed, including arrangement/classification; the type of catalog; descriptions of the software; the general materials designator; storage requirements; and identification and warning labels. This paper covers each of these areas and concludes with an explanation of how the Santa Clara County Office of Education Review (California) has handled its software collection. Attachments include a software cataloging form; worksheet scope notes and instructions; a master code sheet; a filled in cataloging form, and a sample printout listing science software with cataloging information. A six-item bibliography is included. (Author/THC)

# CATALOGING AND ORGANIZING MICROCOMPUTER SOFTWARE - WHERE DO WE GO FROM FIRST BASE?

C. 1984
By Susan E. Choi





Most library/media specialists are on first base when it comes to cataloging and organizing our computer software. We have a stack or drawer or shelf full of programs arranged in some type of order and we are wondering what to do next. While we wait for the definitive answers, our collection grows and soon our "first base" attempts at organization are not adequate to handle our needs. What I will cover in this article are the general areas which you must consider when organizing your software collection and several options available to you for each area.

First of all, let me preface everything by saying that there is no one right answer to the question of cataloging/organizing software. Each library/media specialist must decide what is best for them and their patrons. The purpose for having your collection, how it will be used and the realities of budget, staff and resources will dictate most of how you deal with your software.

## Arrangement/Classification

One of the first questions asked is, "How do I arrange the items?" The small collections can be easily arranged in any way; size, computer, subject, color. It is when you get a collection of a larger size that the arrangement becomes crucial. The standard classification systems such as the Dewey Decimal system or Library of Congress System may be appropriate, but they are not necessarily the best answer for everyone. If you have a collection of materials which has media

and print integrated and all classified using the same system, then your patrons may be used to finding materials by that system. Everything about the same subject; be it filmstrip, audio tape, computer program or book, would be under the same call number. For an integrated collection with everyone familiar with the call numbers, this may be the best solution.

Small collections used in one classroom or computer lab may not need such elaborate classification. Often for a small number of items a title arrangement may work best. Patrons will be looking for a particular piece of software to work with and will already know the title and other information about it. This does become a problem with so many pieces having the same or similar titles. MECC software includes ELEMENTARY, VOLUME 1, ELEMENTARY VOLUME 2, and so on. Several programs are titled FRACTIONS. Therefore, it is not recommended that the title arrangement be used except for very small collections.

Teacher's libraries, curriculum centers and other places which have educators as their primary patrons may use a subject arrangement related to the curriculum subjects taught in the schools. This needs to be thoroughly thought out before started because you may find that your subjects are either too broad (Mathematics) or too narrow (Solid Geometry). Also you will have to decide how you will deal with programs that cover more than one subject. The danger is that your patron will come in to look at software on a subject and not even bother to look under related subjects.

Centers which have review collections of materials donated by the publishers/producers may organize their materials alphabetically by

publisher's name. This will make it easy to identify all of the titles that a particular publisher has donated. Sometimes patrons do ask for a certain publisher's software based on the reputation of the publisher or based on a recent visit by the publisher's representative. There are some software items which are difficult to place in this system. They may be produced by a computer project through a university, published first abroad by a publisher, then sold in the U.S. by a textbook/software publisher. For that item the decision will be very difficult to make since everyone of those entities is identified on the title page or cover of the program. Actually, organizing by publisher has very limited possibilities and most of the other systems is preferred to this one.

We have chosen to arrenge our software by accession number. Each item is added to the end of the list. Through our cataloging, which I will cover later in this article, we are able to locate materials by a particular publisher, on a particular subject, by title or by any other of a number of items. The advantages are: our patrons do not expect to have all of a subject together and therefore do the extra work to find related materials; we have no problems making room in the middle of the collection if we happen to add 20 new mathematics programs; we have a great deal of flexibility through our cataloging to allow for differences in publisher/producer, etc.

Collections which have software for more than one brand of computer may be organized first of all by the computer on which it runs. The programs for one brand will not necessarily run on another brand. Patrons should approach computers in education first of all from the assessment of their student's needs, then assess the software to see what best fits those needs, and finally decide on which brand

of computer will use that software. The reality is that most schools have received a piece of computer equipment either through a donation by a computer company or from the PTA or Home and School Club. They then start to find out what that thing can do. Most of the teachers in our center come in with a specific brand of computer in mind and usually a broad subject area and grade level. Though our materials are by accession number they are first of all divided by computer brand, i.e. AP 0001 is the first Apple program.

## Catalog

Once you have decided on the arrangement the next major decision is usually what type of catalog do you want to have? A standard card catalog is usually though of first, because that is what most of us have and what we were taught in library school. Again, you must look at your patrons and your library/media center. Do you have all of your media described on catalog cards already? Do your patrons come in and go straight to your card catalog to find these materials? If so, then a card catalog may be the best for you.

We decided on a data base catalog using PFS software and an Apple IIe computer. This was partly based on our decision to have an accession number system. We are a review center for teachers and administrators to use. We need to have access to our collection through a variety of fields, i.e. publisher, subject, owner, series, etc. and a card catalog could do this through many cards and entries, but the computer data base would allow us to print out lists by any of these fields and update them each time we entered a new item. Some libraries have on-line catalogs which would allow them to do the same thing. I will cover the system we developed at the end of the article.

Two other reasons why we chose a data base system were: we wanted to utilize the technology we were collecting, (It seemed funny to use cards and typing to catalog state of the art computer software) also we were starting to catalog some materials which were part of a regional center and we wanted to be able to duplicate the disks and send them to other centers so they could print their own lists as they needed them. In fact, I have sent copies of our catalog to several people just by copying the data disks and mailing them.

Description

Further decisions need to be made when writing the descriptions of the items. Something as simple as a title can be a problem when the set/box/kit has one title, but each individual disk in the set has its own idividual title. Patrons may be familiar with the individual title of a disk, but not the whole program title. Some type of title analytics would help with this.

Authors of software are not often identified. As with some texts, it is difficult, if not impossible to find an author for an item. Most often the foreward or acknowledgements sections will give a clue as to the individual author's name, if there is one. However, disks are not easy to skim through and the accompanying documentation, if there is any, may not be complete. To catalog software you must be a detective.

Copyright date is very important. Computer software is constantly undergoing revision. In order to properly use the software and to make sure you have the right software and documentation you must have the correct copyright dates. There may be different dates for the disk and for the manual. Documentation is often revised more than the disks themselves. You may need to have two copyright dates in order to be accurate.

The collation statement for computer software will look much different from that of a book. Some information you may want to include is that concerned with the specific computer hardware needed to run the program. The brand name, model of computer, minimum memory required to use the program, the language necessary, the DOS (disk operating system) are all important items to know, especially if your collection of software is for more than one computer. Most schools will have only one brand and model of computer. This makes it easy to describe software, because it will all be for the same brand, etc. I recommend using a default description. It works like this. if most of your software is for the Apple IIe, for example, you might just say in the collation statement, "Apple IIe", or not say anything at all. If you add something different to the collection, such as software for the Macintosh, then you would put in a detailed collation statement. Your patrons would know what the standard is and expect that to be the case unless stated otherwise.

Collation statements may also state the physical contents of the package. The necessity here is to be consistent in what you call something. Is it a disk, a diskette, a floppy diskette, a 5¼ inch floppy diskette or a disc? Many different versions are used to describe the physical contents. If you have various sizes of diskettes you will want to state the size, perhaps if they are single/double density or other distinguishing characteristics. Manuals, guides, and other printed matter can be described by pagination and size of page. The containers that software arrive in can be desribed in several ways. We have used the descriptions below in our cataloging:

- Binder - a folder with hard or semi-rigid sides and rings to hold the material.
- Folder - any type of holder which folds in the middle, may have

pockets or other devices to hold materials, but does not have rings. May be paper, plastic or cardboard.

- Holder - A box-like container which has both sides attached to each other. Usually plastic or vinyl.
- Box - a holder with a lid that separates or a box-type holder with a lide that flips up. Usually cardboard, may be plastic.

General Materials Designator

The recommended GMD for microcomputer software and, indeed, any type of computer programs is Machine Readable Data File or MRDF. This is not my personal favorite and has not appeared to catch on like wild fire. It is the official term, but others seem to be more popular among those not inclined to be cataloging purists. "Microcomputer Program" or "MCP" is one term in use. So also is "Cp" for "Computer Program" or "Courseware". A selection of cards which accompany software shows a variety of terms and forms used. Until one clear standard is available, use that term which seems to make the most sense to you and to those you serve.

Storage

Computer disks and programs have several stringent storage requirements: no dust; no folding, spindling or stapling; no handling on the magnetic part of the disk; no x-ray or magnetic fields and store vertically, not horizontally, if possible. This means they should be in some type of protective covering, more than just the envelope. The ways in which software arrives from the publishers are too numerous to count. They vary from expensive padded binders to plastic holders custom designed for the disks to baggies. I do not exagerate the "baggie" holders. Many of the software pieces we get are in

baggies which are totally unacceptable for long term storage. Therefore the first question once the basics are taken care of, is, "Do we repackage or leave in the original containers?" There are a number of answers depending on the purpose for which you have your collection. We have chosen to keep items in the original packaging whereever possible because we are a review center and believe that part of reviewing an item is to look at how it is packaged. Another center also for review takes everything out of its original packaging and places it in large manila envelopes. This cuts down drastically on the space needed to store the programs, since much of the packaging is bulky and filled with empty space. Those items which we must repackage (the baggies) we use two methods. First, we use folders with clear acetate covers and brads where the rings would be on a binder. This holds the documentation. Next we take a stiff piece of cardboard, punch three holes in it and using 4" clear tape we tape the disk envelope to the cardboard. This keeps the envelope taut and holds the disk in place while providing protection from bending or folding. This carboard is placed in the folder with the documentation. Items which have larger pieces to them we place in folders with pockets on each side. This is not as good as the first method as things tend to fall out of the pockets.

If you are going to repackage the materials the other question you face is to package the whole item together or to separate disks. If you are in a review center you would probably package everything together since that is how it would arrive if you purchased it. However, if you were in a school or computer lab situation you might package each disk or sub-program separately. Students may come to work on only one program in a larger math package. Rather than tie up the whole package, they may only "check out" one piece. This would also allow you

to provide individual cataloging for each piece thus allowing teachers to locate the individual programs which may not be as easily accessible if you cataloged the whole package as one.

Labels

There should be two types of labels on items: identification and warning. The identification labels we use state the accession number, publisher, program title, copy number, and package contents (i.e. 2 disks, manual, binder) as well as an owner code (we have two collections housed together). We are fortunate to have an electronic typewriter so we can print as many labels as we need but only type it once. We put labels on each piece (disk, envelope, manual, other documentation, pocket, card, outside of package). That way if one disk or a manual becomes separated we can tell exactly where it belongs. By labeling only the front of the package you could lose items and have a difficult time locating where they should be. Everything should be property stamped.

Warning labels should be of two types: copyright and handling. If you have novices using your center you may want to have labels warning them about the handling of disks. If you circulate software you may want the standard warning about exposure to x-rays, magnetic fields, etc. All copyrighted software should have some warning label such as the one we use that says "DO NOT DUPLICATE". This, in addition to other activities that warn about copyright infringement, will help to protect you and show your concern about copyright in case a patron does manage to make illegal copies without your knowledge.

Santa Clara County System

The above are all considerations everyone needs to think over before

they catalog software. Here I will explain briefly how we are handling these issues in our center and the reasoning behind our decisions. You will see that sometimes circumstances play a large part in how things eventually get done.

First of all, we organized our software by computer brand and then used an accesion number system to file them. We did this because our patrons are not familiar with Dewey or LC; our book collection is Library of Congress and we didn't feel comfortable using it on software and we were using a data base catalog which is well suited to an accession number system. Secondly we decided to keep the original packaging whenever we could, as mentioned above. Thirdly, we were going to place the collection in a part of the library close to the microcomputer center which houses the hardware and in that location we were not allowed (by our internal office design rules) to place high shelving. Since we did not have counter high shelving available but did have several filing cabinets we decided to place them in files. We put them in the hanging file folders suspended from a rack in the file drawer. This way they do not get bent, folded or crushed. They are neat and easy to find and for the clerk to file. Also the drawers are closed allowing for a more secure environment free from dust and pilferage.

The catalog is created using PFS:File and PFS:Report (data base software available commercially) on an Apple IIe. The format we use is included as attachment A. This is a worksheet upon which we enter the information prior to the physical processing and entry onto the data base. The underlines give the limits of the field. Each underline is one character. This is done to allow printouts of several fields within one page width. The subject codes we use are included as attachment B. We use two digit codes separated by a space. We

can have up to 5 different subjects per item. Attachment C is a sample of one entry as it looks on the screen of the computer. Attachment D is a sample of the kind of lists we can produce. This one is by title of some of the science software we have cataloged.

We have found our system to work for us. It is based on considerable thought and discussion on each of the issues raised above, our own assessment of the needs and desires of our patrons and the economic and political realities of the organization in which we operate. You will find that the same combination of factors will influence your decisions regarding cataloging and organizing software.

PROFESSIONAL LIBRARY #232
Santa Clara Co. Off. of Educ.
100 Skyport Drive
San Jose, CA 95115
(408) 947-6800



# Software Cataloging Form

ID: _____

PROGRAM: _____

_____

PUB: _____ C: _____

SERIES: _____

COM: _____ TYPE: _____ MEM: _____ PERIPH: _____

SUBJ: _____ METH: _____ GR: _____

PRICE: _____

DESC: _____

_____

_____

_____

_____

LOC: _____ INV: _____

ALSO AVAIL: _____

NOTES: _____

## WORKSHEET SCOPE NOTES AND INSTRUCTIONS

ID: Refers to numerical accession number preceded by two digit code indicating type of computer. (AP=Apple, AT=Atari, PE=Pet, TR=TRS-80, IB=IBM). Numbers for each computer begin with 0001. Keep binder of each cataloging worksheet in numerial order to keep track of numbering.

PROGRAM: Program title. Note that space is limited to 2 lines of 30 characters each.

PUBLISHER: Name of publisher. Important note: always use exact same name. Refer to publisher authority list for standard name and check current adress.

SERIES: If program is a part of a series, indicate series title (important to list all in one series the same). If not part of series enter N.

COM: Indicate 2 digit code for type of computer for master list.

TYPE: Indicate any special type of model of computer needed i.e. II= for Apple etc.

MEM: Indicates minimum memory requirement to run program.

PERIPH: List any special hardware required to run program i.e. Joysticks, color monitor, etc.

SUBJ: Indicates subject area(s) covered by program. Use 2 digit code from master list. Space allows for 5 subjects. Use N/A if appropriate rather than leaving blank.

METH: Refers to the methodology or approach of the program, such as drill and practice etc. This field requires use of 2 digit code from master list.

GR: Indicate grade level.

PRICE: List price. Use standard format with decimal followed by 2 digits, no dollar sign.

DESC: Brief description of content of program (2 or 3 sentences). Space is allowed for 5 lines of 40 characters each.

LOC: Refers to location of software (who owns it). Use master list of 3 digit codes.

INV: Indicate any multiple copies at one site (i.e:SCL-2).

ALSO AVAIL: If available in another format or for another machine use standard coding.

NOTES: Use for noting exactly what is included in package, i.e. 2 disks, manual. Also use for any additional information.

Attachment B

MASTER CODE SHEET

Subject Codes

AD - Administrative
AT - Art
BE - Business Education
- AC - Accounting
- TY - Typing

BI - Bilingual/ESL
CL - Computer Literacy/Science
CP - Computer Programming
DR - Driver Education
FL - Foreign Language
- SP - Spanish
- FR - French
- GR - German
- RU - Russian

GC - Guidance and Counseling
HE - Home Economics
HL - Health
- NU - Nutrition

IN - Industrial Arts
LB - Library Management
LO - Logic/Problem Solving
MA - Math
- AL - Algebra
- AR - Arithmetic
- CA - Calculus
- GE - Geometry
- TR - Trigonometry

MU - Music
PS - Preschool Skills
RL - Reading/Language Arts
- EN - English
- LI - Literature
- SP - Spelling
- WR - Writing

SC - Science
- AS - Astronomy

Science - Contd.
- BI - Biology
- CH - Chemistry
- EE - Environmental Education
- ES - Earth Science
- PH - Physics

SN - Special Needs (Handicapped)
SS - Social Science
- EC - Economics
- GG - Geography
- GO - Government
- HI - History

WP - Word Processing

NS - Not specific to any one subject.

Attachment C

SAMPLE FORM

ID: AP 0020

PROGRAM: Pre-Algebra Part Two

PUB: SVE C: 1982

SERIES: N

COM: AP TYPE: II MEM: 48K PERIPH:

SUBJ: MA AL METH: DP GR: 5+ PRICE: 62.50

DESC: Drill and practice format covers solving an equation using one inverse operation; plotting a fraction on the number line; adding + subtracting, multiplying and dividing integers and other skills.

LOC: TEC INV:

ALSO AVAIL:

NOTES: D, teacher information sheet, holder.

SCIENCE SOFTWARE

| PROGRAM | ID | PERIPH | METH | GR | PRICE |
|---|---|---|---|---|---|
| Basic Concepts of Electricity, Series 2: Intro. to Circuits. | AP 0182 | printer | CA DT TU | | |
| Concentrated Chemical Concepts | AP 0136 | | DP | Col | 550.00 |
| Demo: Gen. Chem, Atomic Structure, Equilibrium, Acid-Base. | AP 0164 | 3.2 DOS | DP TU | 9+ | |
| Educational Catlysts Demo. | AP 0160 | | TU SI | 9+ | |
| Educational Package, Version 1. | AP 0166 | | DP UT | 9+ | 49.95 |
| EdTech Demo Disk. | AP 0164 | | DP TU SI | 6-16+ | |
| Elementary, Volume 4, #705. | AP 0210 | | DP | 2-6 | |
| Geology Search | AP 0134 | | SLI | 4+ | 180.00 |
| Heatloss, #754. | AP 0236 | | TU | | |
| MECC Apple Demonstration. | AP 0177 | | DP TU SI | | |
| Nutrition, Volume 1, #754. | AP 0240 | Printer | TU | 7-12 | |
| Nutrition, Volume 2, #753. | AP 0241 | Printer | | 7-Adult | |
| Rendezvous: Space Shuttle Flight Simulator | AP 0123 | | SI | 8+ | 39.95 |
| Sampler: Birdbreed, Target, Optics, Electric Field | AP 0073 | Color, paddles | | 9-12 | |
| Science Teacher's Aide. | AP 0173 | | SI UT | | 18.95 |
| Science, Volume 1, #708. | AP 0231 | | SI | 7-12 | |
| Science, Volume 2, #709. | AP 0232 | | SI | 7-12 | |
| Science, Volume 3, #707. | AP 0233 | | SI | 4-12 | |
| Science, Volume 4, Chemistry #745. | AP 0234 | | SI | 9-12 | |
| Three Mile Island | AP 0060 | | SI | 9-12 | 39.95 |

BEST COPY AVAILABLE

## BIBLIOGRAPHY - CATALOGING/PROCESSING SOFTWARE


Bullers, David L. and Linda L. Waddle. Processing Computer Software for the School Media Collection. Waterloo, Iowa: Bullers, 1981.

Dodd, Sue. Cataloging Machine-Readable Data Files. Chicago: American Library Association, 1982.

"For The Librarian: How to Catalog Computer Courseware," Electronic Learning, October 1983 , p. 40.

Guidelines for Processing and Cataloging Computer Software for Schools and Area Education Agencies. Chicago: American Association of School Librarians, 1983.

Lathrop, Ann and Bobby Goodson. Courseware in the Classroom: Selecting, Organizing, and Using Educational Software. Menlo Park, California: Addison Wesley, 1983.

Skoman, Lucia, "Organizing a Software Collection," Classroom Computer News, September/October 1981, p. 36-37.