

# The Use and Economics of Computer-Generated Microfiche Catalogs

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The D. H. Hill Library of North Carolina State University is currently producing three computer-generated catalogs on microfiche. They are: *The Cooperating Raleigh Colleges History Union Catalog*, consisting of about 16,000 titles in the Library of Congress "E" and "F" classifications held in the libraries of the six colleges and universities in Raleigh, N. C.; the *NCSU Working Collections Catalog*, consisting of about 11,000 volumes located in departmental working collections on the North Carolina State University campus; and the *NCSU Serials Catalog*. Experience with these catalogs has convinced us that they have a number of advantages over printed book catalogs. They

are significantly cheaper to produce and particularly to update, and more convenient to use. They are quite acceptable to library users. Their single disadvantage, the fact that they require a microfiche reader, is far outweighed by these advantages. This article will describe the *NCSU Serials Catalog* and, using it as a model, the production processes, use, and economics of microfiche catalogs and the responses of library staff and library users will be discussed.

The *NCSU Serials Catalog* consists of approximately 30,000 main entries and cross references and is contained on five 4" x 6" microfiche produced at a reduction

ratio of 42X. Each fiche contains 224 computer page images of sixty-four 132 character lines. Each page image is formatted into two columns of entries and cross references and is, in fact, precisely the format that would have been used for a printed catalog. Each title record contains the complete main entry, location, call number, library's holdings, and the language of publication.

The 224 page images on each fiche are arranged into rows and columns. The top row contains the first 20 characters of the first entry on that fiche, the date that the fiche was created, and the sequence number of that fiche in the set — all readable without magnification. The last page image on each fiche contains an index to that fiche. The titling and indexing features enable the user to find the entry he is seeking substantially faster than he could in a printed catalog, although to use the indexing effectively the fiche must be read on a reader especially equipped for computer-generated microfiche.

The master file of serial records is contained on magnetic tape and is updated monthly. The cost of producing and updating the master tape file is the same whether the final output is a printed book catalog or microfiche. The new monthly master file is processed to produce a computer tape formatted for processing into microfiche on a COM (Computer Output Microfilm) device. This tape is sent by courier to a service bureau in Winston-Salem for processing and the microfiche are returned by courier the following day. One-hundred duplicate sets (i.e., 500 microfiche) are produced on the library's microfiche duplicator for distribution to both on- and off-campus locations. There are 17 readers located in the D. H. Hill Library and the three school libraries on the NCSU campus. Fourteen academic departments of the University have purchased readers and receive catalogs. The other 70-odd sets of the catalog are sent to other libraries in the Southeast — university, public, and special.

The serials project at NCSU was begun before the commercial development of COM techniques and the original plan envisioned the production of a printed serials catalog in book form. Fortunately, the service bureau that produces the fiche began soliciting business just at the time the catalog was ready to be printed.

The production of 300 copies of a paperbound book catalog would have cost approximately \$3500. Such a catalog would, of course, have been out of date before it was distributed and it would have been necessary to produce supplements to keep it current. The printing costs for 11 monthly supplements would have at least equalled the original printing costs so that the total annual cost for a respectably up-to-date printed catalog would have been approximately \$7000. Furthermore, the campus computing center would charge about \$35.00 for each camera-ready catalog printout. It is not necessary to produce computer printouts for production of the microfiche since the fiche are produced directly from computer tape.

In comparison, the cost of producing one original microfiche is \$3.80 so that the total cost of an original catalog set is \$19.00. The cost of duplicating a microfiche is 8 cents (4 cents for material, 4 cents for labor) so that the total cost for duplicating one catalog set is 40 cents. The total monthly cost for producing the sets needed for use in the library is \$25.80, or about \$310 per year — and there are no supplements to contend with.

There are, however, one-time equipment costs to be considered which include a reader for each location of the catalog and a microfiche duplicator for the production of multiple copies of the catalog. There are a variety of COM microfiche readers available ranging in price from about \$100 to \$250. These vary in both quality of construction and versatility. At the low end of the price range the readers are cheaply constructed and in practical

application their use is restricted to a single fiche format. The more expensive models provide better construction and optics and greater versatility in handling a variety of microfiche formats. After investigating several models the D. H. Hill Library chose the Realist "Vantage II" microfiche reader. This machine is relatively well constructed and provides the capabilities required to use the indexing feature of the microfiche system. Moreover, it offers seven different lenses that can be interchanged instantly by the machine operator so that it can be used for all fiche formats except ultra-microfiche. Most importantly, it provides for variable magnification with the same lens—a feature unique to these machines at the time they were ordered. This last feature enables the library to read government documents produced at 24X and COM catalog fiche produced at 42X on the same reader equipped with a single lens. It is true that the 24X fiche image is somewhat larger than the original and the 42X fiche image is somewhat smaller than the original computer page, but this is a trivial defect. The list price of the "Vantage II" is \$180, but, by ordering in quantity, the D. H. Hill Library obtained their readers at a cost of \$155 each. The microfiche duplicator cost about \$1100, and a binder with inserts costing \$3 is also provided with each catalog. Therefore, the total initial equipment and material cost required to issue the microfiche serials catalog and to provide readers at all useful locations in the library approximated \$3800, but these were one-time costs. Furthermore, the microfiche duplicator has made it possible to make copies of any of the microfiche in the library's collection and to preserve the integrity of this collection by eliminating the need to circulate the original fiche. Duplicates are provided at nominal charge to users who wish to take the documents from the library.

In summary, the library is able to produce newly updated and complete monthly editions of its microfiche serials catalog with one-time equipment costs of \$3800 and annual costs of about \$310 as opposed

to a book catalog with supplements at an annual cost of over \$7000.

When the decision was made to produce the catalog on microfiche, there was considerable concern about how library users and staff would receive this format. Such concern was needless. Both faculty and student users of the library have commented favorably on the catalog and the only complaints expressed related to minor adjustments needed by the readers—not to the catalog format. The library has received many unsolicited complimentary letters from the off-campus subscribers, some of whom requested information to enable them to implement such a system themselves. The reaction of the library staff has been most illuminating of all. After some initial doubt their acceptance is now complete. In fact, the most doubtful member of the staff complained rather bitterly when she was asked recently to work temporarily with a printout instead of the microfiche.

It is the conclusion of the D. H. Hill Library that computer-generated microfiche catalogs are substantially cheaper to produce, more convenient to use, and at least as acceptable to users as are printed book catalogs for applications involving fairly large catalogs and lists. Nevertheless, for some applications we regard microfiche catalogs as a transitional step between card catalogs and real-time computer catalogs accessed by remote terminal. We are presently converting our shelf-list from 1969 onward to machine-readable form using MARC II format and hope to have that portion of the general catalog available for library users at CRT terminals in the library by the end of next year. For the longer term we envision a state-wide or, better yet, a regional system encompassing shared cataloging with data entered into a central computer and made accessible to users at remote terminals in the member libraries. Yet, for some time to come, we believe that microfiche will satisfy the need for inexpensive and timely catalog maintenance.