

# Media Networking in Academic Institutions

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## Introduction

BEFORE COMPUTERS, LIBRARY NETWORKING was more commonly identified as library cooperation, and it traditionally provided avenues for sharing information and resources on a formal or informal basis to solve library problems.<sup>1</sup> Technological advances in telecommunications and computers have brought the term *networking* almost to buzzword status, often connoting computerization, and blurring the distinction between computer networks and information networks. In fact, the merging of computer and information networks has facilitated the access to and sharing of information and resources.

In addition to providing low-cost, powerful computers and high-speed, reliable data transmission lines, the technological revolution has helped to bring media (notably video) to the forefront. Home videocassette recorders, ease of use, and perceived limited maintenance problems have heightened the requests of school teachers, university faculty, and students to use media as an educational tool as well as for entertainment. This interest in media, coupled with the advances in networking, leads to the question of how academic libraries/audiovisual centers can share media resources.

It should be realized that, unlike printed materials, nonprint media are less than a century old. And it was not until 1952 that the Library of Congress published cataloging rules for motion pictures and filmstrips.<sup>2</sup> The growth of media collections dates back to the early

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1900s, but it was during World War II that the 16mm film gained stature as an educational tool.<sup>3</sup> Begun in schools of education, continuing education, or extension divisions under the auspices of such departments as “bureau of visual aids,” “audiovisual education,” and “audiovisual center,” a common priority of these media collections was to provide access to audiovisual materials to faculty and students for use in instruction.

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Aware of the progress that had been made in the standardization and sharing of information on printed materials, those involved in media acquisition and circulation recognized the need to share information on nonprint materials. A chronological history of the development for networking of audiovisual media can be found in the *Problems in Bibliographic Access...*, Final Report of the National Commission on Libraries and Information Sciences' (NCLIS) Project Media Base.<sup>4</sup>

Three key areas for resource sharing of nonprint materials—either through an information network or an electronic network—are (1) bibliographic access, (2) interlibrary loan, and (3) collection development. They will be discussed from the perspective of current and proposed media networking activities within a national consortium of film and video libraries and its members.

### *The Consortium of University Film Centers*

The Consortium of University Film Centers (CUFC) is a national organization (which also includes a Canadian member, the University of Toronto) of sixty-one university film/video libraries. Any institution of higher education which maintains and operates a film center whose express purpose is the extensive dissemination of films to a broad institutional or extrainstitutional audience is eligible for membership.<sup>5</sup> (Film is meant to encompass the moving image in any of its recorded forms or formats—film, videotape, videodisc, and/or recordings or delivery systems using other electronic technologies.)

Conceived as threefold in purpose: (1) problem-solving, (2) information-sharing, and (3) fellowship of a group with common interests, CUFC was founded in 1971 on the premise that film rental libraries shared highly specialized problems, and these common problems and perspectives would benefit from a separate association which could better identify and deal with needs of film rental libraries. The superstructure was kept as small as possible, with the heart of the organization being a number of working committees that, outside of structured meetings of the group, would work on agreed-upon projects.<sup>6</sup>

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Although dealing with the same issues, the profile of CUFC institutional members varies significantly. Institutional statistics for 1983-84 indicate that the smallest collection had under 1000 unique titles and prints (total number of copies) while the largest had over 14,000 titles and 30,000 prints. The average number of prints per title was 1.44. The average number of bookings (circulations) per print was 1.99, with .72 the low and 4.82 the high. Geographic areas served vary from intramural use only to national distribution. The average number of copies each institution had printed of its latest major catalog was 9,922 with 1,000 the lowest and 31,000 the highest; the average cost per copy was \$2.94.

As with collection size, full-time staff varied from one to forty-five. The level of formal training in media selection and cataloging varies as well, with personnel who have the MLS or an equivalent media degree coexisting with competent personnel trained in the established procedures of a given library. Administratively, institutional members variously report to such service units as learning resources, continuing education, or the university library. Twenty-three percent received no budget subsidy from their parent organization; 9 percent were subsidized 100 percent. Forty-seven percent received no subsidy for new film/video acquisitions; 14 percent were subsidized 100 percent. Whether subsidized or not, 52 percent provided materials at no charge for instructional use within their own institutions. Institutions use a combination of traditional methods to deliver materials off-campus, with the U.S. Postal Service being used 61 percent of the time, private carriers (predominantly United Parcel Service) being used 35 percent of the time, and other delivery methods being used only 4 percent of the time.

### **Bibliographic Access**

No matter how big or small the collection, or the size of the geographic area being served, a catalog of holdings is essential for each film center. Film centers that distribute materials outside of their institutions have users who are scattered across the country in every conceivable environment. With this in mind, one of the first committees established by CUFC was the Data Bank Committee.

The goal of this committee was the development of a union catalog of member holdings whose primary purpose was the facilitation of film catalogs for members, and secondarily, to provide other services which might be required, such as a union list of titles entered into the database. Technology at that point was neither cheap enough nor sophisticated enough to consider an online service. Printed catalogs, although time-

consuming and resource-draining, had been successful and were perceived to remain successful.

The committee's job was no small undertaking. Their biggest task was to get agreement among this similar yet diverse membership on the need for bibliographic control and, therefore, standards.<sup>7</sup> Unlike the library community, where bibliographic control is appreciated as essential to effective access, the primary emphasis within these centers was the effective use of the materials themselves.<sup>8</sup> The fact that materials circulated precluded that they were identified and described; each institution had developed their own rules for descriptive and exploitative control; needless to say, none were the same.

The Data Bank Committee also wanted to supplement rather than duplicate other available reference materials; to include as many data elements and as detailed an annotation as possible—since films cannot be "browsed" the way print materials can; to provide subject access and subject tracings so that the user might find other related materials easily; and, what would make the database unique, to include location codes for each institution which held the title.<sup>9</sup>

Eight long years after the formation of the Data Bank Committee, the *Educational Film Locator* was published by R.R. Bowker.<sup>10</sup> The second edition was published in 1980,<sup>11</sup> and a third edition will be available in the spring of 1986.<sup>12</sup>

#### *The CUFC Database and Resource Sharing*

How successful has the joint CUFC/Bowker database been in terms of resource sharing? A 1982 analysis by Don Beckwith on the effects of the *Locator* upon bibliographic control, resource availability, user access, and resource duplication concluded that CUFC has effected a vastly improved and simplified selection/retrieval process for the film user.<sup>13</sup> A 1984 survey sent by CUFC to a stratified random sample of past *Locator* buyers indicated that 80 percent of the respondents found the *Locator* to be an invaluable reference tool.

But how successful has the database been to improve resource sharing within CUFC? Nine CUFC members have used the database to generate printed catalogs and several others have expressed interest. Although all contracts included the capability by Bowker to generate catalogs for both members and nonmembers, Bowker was not prepared to devote the time and resources necessary to generate catalogs on demand. In fairness, Bowker is not a commercial firm specializing in catalog production—they are a publisher with multiple interests. Even so, CUFC institutions that realized the benefits of resource sharing

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should not be penalized by not being able to effectively use the shared database.

Because of these problems and an overall uncertainty about the continued support of the project within the membership, a survey of the membership was made prior to negotiating a contract for a third edition. A survey of fifty-three of the sixty-one member institutions indicated that only 34 percent of the members responding saw the database as a catalog/tape production and reference tool, while 66 percent saw it as a reference tool only. Support for continuation of the project was overwhelming. As pointed out by Beckwith, before the *Educational Film Locator*, users would have had to have on hand 89 percent of the educational film library catalogs to be assured of a complete film search.<sup>14</sup> With improved and simplified user access, most members had experienced an increase in their circulation statistics. New CUFC members wanted to be included and institutions that faced economic setbacks were willing to provide staff support to update their material. The project that had begun with such mixed support had evolved into a major commitment by every member.

To understand the strong commitment of CUFC members to the project, it must be realized that, to this day, although the CUFC/Bowker database is computerized, it is *not* online. It remains a serial file. This means that *all* updating of records and entering of new data must be batch processed. The amount of paper handled is tremendous. For most members, it means that they do double work; they input for their own databases and input for Bowker.

There was much discussion on the updating methodology for the third edition. As is the case for all shared databases, not only must standards be established for cataloging the material, but guidelines must also be established for submitting the data. Beginning with the third edition, CUFC would be responsible for providing holding code corrections and new data to Bowker in machine-readable form.

### *Standards for Data, Title, and Holdings Information*

It was always assumed that the Data Bank Committee (which in 1980 became the Editorial Board) should guide all of the professional decisions involved with this publication. After two publications it was obvious that these assumptions carried no weight and that the membership must understand their responsibilities regarding the updating of holdings and inputting of new data. Toward that end, the CUFC Board of Directors established directives which required that: (1) members who were included in previous editions must, at a minimum, update the

status of their holdings already on file; (2) members must meet the minimum standards established for cataloging new data; (3) members must submit the new data in the format required by the Editorial Board; (4) submitted data not meeting either of the preceding specifications would be returned to the originator; and (5) members must meet all timelines established for each phase of the updating process. Prior to participation in the revision of the third edition, each member was required to sign a statement which delineated these conditions.

In addition to the previously stated conditions, the following policies had been set. In the interest of resource availability, members who restrict their circulation to intramural or statewide use only are not to be included in the printed version of the *Educational Film Locator*. Similarly, institutions are not to enter their holdings of titles for which circulation has been restricted in some manner outside of their established policies. Titles which are restricted uniformly by all members are included, and the global restriction is noted. These policies are necessary because at present, restriction information is associated with the title and not with each institution's holding information. As such, it is not possible to identify the different ways an institution might choose to restrict a given title. There have been discussions on including restriction information as part of each institution's holdings information. This would allow random title restrictions to be included in the database but excluded from the *Educational Film Locator*.

For the most part, members have met the stated conditions. All members who were included in the second edition except one (and that member restricts its circulation to within its own state) have updated their holdings in the database. Six new members have entered their holdings. New data forms received number 17,515. Preliminary figures indicate that the degree of overlap is only about 25 percent, with 13,240 unique titles being added to the database for inclusion in the third edition.

What can be done to eliminate the redundancy and increase resource sharing? One of the first priorities is to convert the database from a serial file to an online database. Bowker has begun work on the conversion, and it is anticipated that final corrections for the third edition will be made online.

Depending on the sophistication of the online system—particularly its capacity for remote access—much of the paperwork currently associated with updating holding code information and adding holdings to titles already in the file should be eliminated. This implies, of course, that each institution will be willing to bear the cost of compatible terminals, communications protocols, and line charges for

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data transmission, and that they will have received training on the search and update modes of the online system. The more complex issue will be entering new data.

One of the major conclusions reached by Project Media Base was that "the lack of agreement on common conventions and the resultant disparity among database structures are major barriers to the development of a nationwide network for audiovisual resources."<sup>15</sup> The diverse nature of CUFC members has led, either by design or by local conditions, to the development of disparate systems. Over time, many members have automated such key functions as catalog production or circulation, while others have developed fully integrated systems. Those who have not yet automated are exploring the possibilities. Institutions that have online systems offer varying degrees of access, from minimal searching limited to internal staff to full searching on a campuswide basis. Several institutions are actively planning increased access to their collections on a campus, state, or national basis, including the integration of print and nonprint databases to create a unified electronic catalog.

No matter whether new data are submitted on paper, online, or in machine-readable form, the identification and merging of duplicate entries is very difficult, given the nature of bibliographic control for nonprint media. Anyone who has worked with nonprint materials can verify the difficulty in determining the exact title of a film or video. Variances for a single title can appear on the work itself, on the container, on descriptive literature accompanying the work, and in the distributor's catalog. Even if one takes the title directly as it appears on the work, there can be discrepancies, especially when a work is part of a series or one of several titles from the same distributor, all of which begin with the same phrase. Is the phrase a series or part of the title? To do a thorough check for duplicates, each title submitted as new data should be checked against the last printed version of the *Locator* and the data which have been added since. This process allows the editor access to several possible cross references—subtitle, earlier or variant titles, translated titles, other language versions, and series headings—which are critical in helping to identify duplicate entries.

One of the purposes of the original Data Bank Committee was the establishment of a unique number to identify film titles. Publication of the *Educational Film Locator* saw the first assignment of ISBNs for nonprint media. Today ISBNs are assigned by a few large producers, but the bulk have been assigned at the time of generating final pages for publication of the *Locator*. ISBNs are assigned by format, not title. The number of formats a nonprint title can take is limited only by the

technology of the day. To simplify user access and to eliminate file redundancy, there should be only one record for a given title with all available formats included as discrete, searchable fields. The lack of timeliness in the assignment of ISBNs and the fact that they are assigned by format diminishes the possibility of the ISBN being the unique title identifier. Library of Congress card numbers are also assigned by format and not title. A unique number to identify nonprint titles is still necessary.

The disparities have been overcome so far in the *Educational Film Locator* due to the serial nature of the database. Because of the work involved in identifying and merging duplicate entries, it has not been feasible for members to provide new data in machine-readable form. It has been possible, however, for several institutions to generate most of the information required for new data input from their data files.

The diversity in size of collections, coupled with the philosophical differences in approach to subject access and the diversity of file structures, has led to enormous differences in authority files for subject, series, and producer/distributor and the manner in which these data are encoded. In order for members to supply data in machine-readable form, they must convert their coding to that required by the CUFC/Bowker database. This issue is a bigger problem than developing a mutually acceptable machine-readable format.

A hallmark of CUFC institutional members has been their independence and their ingenuity in developing methodologies to build, maintain, and control their collections. However, the price for independence in a shared resource is double work. The necessity to rekey data that are already in machine-readable form must be eliminated.

Another issue to be examined by CUFC and Bowker is access to the online database. The quantity and quality of information included in the database make it a valuable resource for the generation of printed catalogs and for querying as a commercially available information resource.

### **Interlibrary Loan**

Once material of interest has been identified, the next step is to try to obtain a copy of the item for use. There is a basic distinction between the interlibrary loan of nonprint and print materials, aside from the fact that, because films and videocassettes are expensive, there is usually a fee of some sort associated with their use. Films and videocassettes acquired by audiovisual/media centers, more often than not, are instructional in nature. Materials are acquired with a view to how effectively they

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present concepts which cannot be taught without some visual aid or which enhance, supplement, or complement instruction.

As such, unlike the interlibrary loan of print materials—which are generally requested by and for the use of a specific individual—nonprint materials are requested for use on a specific date or dates for use with a group. A slight leeway may be possible, but the use of audiovisual materials in an educational environment usually falls within a fixed unit of instruction. Faculty will place their requests anywhere from one day (or less) to several months in advance. Because the film or videocassette is an integral part of their unit of instruction, faculty will want immediate confirmation that the title will or will not be available. To be able to accommodate this, a film/video library which circulates its materials must have a scheduling system which can maintain a calendar of future bookings.

In addition to knowing the date for which a title is requested, the system must also take into consideration the amount of time needed for the title to go to and from its destination. Transit times will vary not only from destination to destination but for the same destination, depending on the method of delivery chosen. A hold or wait list will not work.

It is also important to be able to readily identify what formats of a title are available. Since 16mm is the standard, there is no problem in the projection of 16mm films. Any 16mm projector can be used. However, because there is no standardization within video formats, video projection is equipment-dependent. Not only must one distinguish between three-quarter inch and one-half inch, but among the VHS and Beta formats as well. Determining whether the format available is compatible with the user's equipment is critical and sometimes difficult. Many users are not aware of the array of formats and therefore are not always able to accurately identify what equipment they have.

Because of the disparities in circulation policies, loan periods, rental rates, and transit times, CUFC has not yet developed a systematic plan for the interlibrary loan of materials among its members. Obviously, however, member institutions rent materials from each other, placing their requests either by telephone or mail. As noted earlier, publication of the *Educational Film Locator* made a significant contribution to the identification of materials and loan sources. Should the CUFC/Bowker database become an online resource, an electronic mail system could be established to request material from the library(ies) identified as having them.

Similarly, individual institutions are exploring the possibilities of enhancing the online search routines they have or are developing by allowing the user to check availability and then either put a hold on the material for later confirmation by the library or send an electronic mail message. Several members have added their holdings to the bibliographic utilities, such as OCLC and the Washington Library Network (WLN), and are able to receive interlibrary loan requests resulting from queries of these systems. Three among the CUFC institutions are acquiring the same integrated software package; the possibilities for networking are under consideration.

### Collection Development

Collection development is another area for resource sharing. Areas for cooperation include selection and evaluation of materials and cooperative purchasing. Recognizing that the selection and evaluation of nonprint materials present problems "prompted by the lack of a central mediagraphic tool for locating current media materials and the relative inadequacy of existing reviewing sources,"<sup>16</sup> the sharing of evaluation data has been a prime concern within CUFC.

#### *Sharing Evaluations of Media*

Working through the Selection and Evaluation Committee, the first evaluation-sharing proposal called for institutions to contribute evaluations in a subject area for which they were well known. For example, Penn State University would contribute evaluations on psychology films and the University of California—Berkeley would contribute evaluations on anthropology films. Several institutions participated in sharing on this basis, but the time involved in compiling the evaluations and duplicating costs were always a factor. In the fall of 1981, the CUFC Board of Directors and the Selection and Evaluation Committee agreed to reactivate evaluation sharing within CUFC member institutions, with funds being allocated to cover clerical, duplicating, and mailing costs. Each institution would submit evaluations to a central clearinghouse for distribution to the membership on a semiannual basis. The project was given the name Evaluation Sharing Project, or ESP.

In the fall of 1983, the CUFC Board of Directors charged the Selection and Evaluation Committee with reevaluating the project and formalizing operational guidelines. The guidelines are as follows. ESP is for the principle purpose of sharing evaluations of titles currently being considered for purchase by CUFC members. Titles are selected for

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evaluation by individual film centers, each according to its own needs and purposes, without any formally structured intent to include or exclude any given type of production or production company. However, striving for currency, titles submitted to ESP should have been released within the last three years. ESP is primarily an internal publication, but it is available upon request by subscription.

### *Cooperative Purchasing*

Although not practiced by CUFC on an organizational basis, cooperative purchasing on either an inter- or intrainstitutional basis is another advantage of networking. Cash discounts and product bonuses have been a tradition in the acquisition of nonprint materials (primarily 16mm film, and now video). Generally speaking, the greater the dollar volume of each purchase order, the greater the discount or bonus which can be negotiated.

Cooperative purchases do not have to be the result of formally established buying consortia. Audiovisual/media libraries, academic departments, or other interested groups on a single campus or multiple campuses can agree to contribute toward the acquisition of relevant materials.

A critical issue in any cooperative purchasing arrangement, however, is that the needs of the groups participating be similar. The range of materials vendors offer in given subject areas and audience levels varies widely. Planning and negotiating are extremely important both within the cooperating group as well as with the vendor. The film/video library, with its established vendor contacts, should be responsible for coordinating joint acquisitions.

Several options exist for group acquisitions, including group agreement on materials to be acquired from each vendor with the cost shared by all, or a commitment by each group member to the dollar amount each will spend with a given vendor. The latter method offers greater flexibility and control of local collection development.

The availability of licenses for video duplication and off-air taping have broadened the possibilities and lowered the costs for cooperative buying. They have also forced the audiovisual/media center to be cognizant of the copyright law<sup>17</sup> and the fair-use guidelines.<sup>18</sup> Video duplication is not legal without a license from the copyright holder. The stipulations on how programs taped off-air may be used are explicit; such programs may not be retained and used for an indeterminate amount of time without a license from the copyright holder.

Costs associated with video duplication and off-air taping will depend on (1) whether the copies made will be used on an intramural

basis or if they will circulate outside of the institution, and (2) whether the copies will be shown only by direct projection (video playback units) or whether they will be transmitted over closed circuit, Instructional Television Fixed Service (ITFS), cable, or open broadcast systems.

Although interinstitutional cooperation requires a lot of effort and few final solutions are ever found, the importance of cooperation in terms of growth and development, solving problems, and (if possible) sharing resources cannot be overstated. Technology, financial structures, and educational priorities continue to change and to cause shifts in purchasing emphasis.

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