Security and Access to CD-ROMs Accompanying Books

Data and Recommendations

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The holdings of the Texas A&M University Libraries contain approximately 1,500 CD-ROMs that accompany books. Most are computer programming manuals or materials about the Internet. Given the increasing publication and acquisition of books with accompanying CD-ROMs, we saw a need to review the libraries' policy of separating CD-ROMs from their books and securing them behind a service desk. We believed that CD-ROMs shelved in the open stacks with their books would circulate more than when the CD-ROMs were housed separately. Further, we believed that books and their accompanying CD-ROMs, if lost or stolen, would be easily replaced. Data were gathered on the circulation rates of these materials when they were separated, the loss rates in the open stacks when they were shelved together, and the availability of replacements. Based upon the data gathered as well as other considerations, we recommend that for items with accompanying CD-ROMs, the CD-ROM should reside with its book, with no additional security beyond the book's sensitized strip.

The development of new technologies has contributed to the proliferation of media used for the dissemination of information. For many years, libraries have collected books with accompanying maps, cassettes or paper supplements. The mid-1980s saw the emergence of books with accompanying floppy disks. In just the past few years, there has been a deluge of books with accompanying CD-ROMs, particularly on technical subjects such as computing and the Internet. The prevalence of these accompanying materials amplifies the age-old dichotomy of collection goals: how to both provide convenient access to the collection, while at the same time securing and preserving the collection.

We conducted this study at the Texas A&M University Libraries, exploring two basic alternatives for housing CD-ROMs that accompany books: on the open shelves with the items they accompany; or in a restricted location, separate from the items they accompany. Other matters were raised as well. We wondered what impact separating the accompanying material might have on the circulation of each item, whether separation affects the loss rate, and the factors that might adversely affect convenient access to these materials for patrons.
Definitions

The Anglo-American Cataloguing Rules, 2d ed. (1998) defines accompanying material as "material issued with, and intended to be used with, the item being catalogued" (615). Olson (1988) elaborates: "a complementary part of a work, physically separate from the predominant part of the work and frequently in a different medium, such as a sound disc in a pocket inside a book cover; an answer book accompanying a textbook; a libretto accompanying a sound disc; or a teacher's guide and script accompanying a videorecording" (1).

Libraries state their purpose in a mission statement that in a university library usually includes collections support for curriculum and research. More specific goals and objectives for developing the collections are usually found in a collections management policy that includes considerations of access and preservation. Driessen and Smyth (1995) explain that a library whose goals include convenient access to the collection would logically follow with an objective that accompanying material would always be kept packaged together with its primary parts. On the other hand, they point out that a library that places great importance on preserving the collection would have goals that emphasize security, and objectives such as a secured environment for accompanying materials. A middle-ground approach might call for a library to provide easy access to most materials, but restrict access to selected materials to provide increased security. The middle ground is what many libraries choose to do with accompanying CD-ROMs. The book or serial is shelved in the stacks while the accompanying disk or CD-ROM is placed in a secure location, most often behind a service desk. Sometimes the book and accompanying disk or CD-ROM are shelved together in this secure location.

Literature Review

The literature on the circulation, access, and housing of accompanying materials, particularly accompanying disks and CD-ROMs, is sparse. Wehls (1991) addressed the treatment of nonbook materials, such as maps, prints, slides, and cassettes. She recommended that these materials be interfiled in the main library shelves. Most often in large academic libraries, however, these nonprint materials were housed in a separate location. As librarians began collecting computer software, either as accompanying material or primary resource, they developed policies to address how these materials would be housed, served, and circulated. In 1986, the Association of Research Libraries (ARL) examined the extent that microcomputer software, as a primary media, was acquired and circulated (ARL 1986). At that time, 28 (38%) responding ARL libraries circulated microcomputer software to library users. A smaller number, 20 (27%), had special circulation policies or limitations on circulation of software acquired for public use, most often restricting use to in-house, although the remaining 53 (72%) responded "not applicable" to the question.

Only a handful of authors address the topic of software as accompanying material. Anderson et al. (1990) examined the topic of accompanying floppy disks at the Colorado State University (CSU) libraries. Their primary concerns for the disks were access, preservation, and protection from theft. CSU libraries ultimately chose to shelve the printed material in the open stacks and put the accompanying disk material in a reserve area. The same procedures were to be used for other formats with accompanying disks. Similarly, Hutto (1994) discussed the procedures devised at Pennsylvania State University Libraries to handle paper serials with floppy disks. After determining the accompanying disk is a component piece of the serial, both items were cataloged and shelved together in the stacks. This procedure mirrored their method of handling monographs with accompanying disks. Errickson (1997) offered advantages and disadvantages of various methods of securing and providing access to disks and CD-ROMs, including the options of keeping the book and disk or CD-ROM together in the stacks, or keeping material at a circulation desk. Seaman and Carter (1997) discussed the decisions made at the University of Colorado Library to separate accompanying media from books. The book and its accompanying material had different circulation periods. Subsequently, in an effort to simplify processing, access, and preservation of the materials, a committee reexamined the policy, and decided that all accompanying disks and CDs would be kept with the parent book or serial, with one cataloging record for both.

While discussion of this topic in the printed literature is fairly limited, numerous electronic discussions have taken place regarding security, access, circulation, physical processing, and cataloging of accompanying floppy disks and CD-ROMs. One popular electronic list in the cataloging community, AUTOCAT, has messages in its archives on these topics dating from February 1992 through 2000, with requests for input on accompanying disks or CD-ROMs regularly posted a few times each year. Broyles (1994), Johnson (1996), and Feig (1998), along with numerous others, requested input from AUTOCAT readers on policies dealing with security, access, and physical processing of books with accompanying disks or CD-ROMs. Each request garnered a number of responses that included keeping the materials in the open stacks, more secure policies where the disk or CD-ROM was kept at a service desk, various technologies used to secure the materials, and reasons for and changes in the policies over time. The responses echoed many of the advantages and disadvantages enumerated by Errickson (1997).

The common theme observed in these AUTOCAT messages was that individual libraries were devising policies that
fit their particular circumstances. Materials security, staff time, budgetary restraints, and space shortages at service desks were factors in policy decisions. We observed that policies appeared to be based primarily on staff or patron opinion, or minor incidental evidence. No respondents mentioned conducting any formal studies in their library to measure the effectiveness of their policies. Comments regarding the efficacy of the decisions were general.

We noted the amount of electronic discussion on accompanying CD-ROMs, the lack of articles offering solutions, and the escalating number of books coming into the library with accompanying CD-ROMs. We saw a need for a study focused on material use and loss rate, specifically for CD-ROMs that accompany books, in order to determine the right course of action for our library.

In summary, previous authors describe several models currently or previously used in libraries for housing CD-ROMs accompanying books. These print and online discussions reveal a continuing concern with how well these methods serve the purposes of access and preservation, yet no one has conducted studies that can be used to make more informed choices and decisions on housing CD-ROMs accompanying books. We decided to compare the effects of housing accompanying CD-ROMs on the open shelves with the items to which they belong, with the effects of housing them in a restricted access location separated from the items they accompany. We did this to gather data in support of decision making on how these materials should be housed and circulated.

**Housing and Circulation Policies at Texas A&M University Libraries**

Librarians at the Texas A&M University Libraries historically processed items with accompanying material in various ways. Decisions were based first on the seriality of the primary piece (i.e., whether the item was a serial or a monograph) and then the format of the accompanying material (map, video and audiocassettes, disk, CD-ROMs). These distinctions resulted in many specialized procedures. Maps on paper were among the first kinds of accompanying material. In the past, they were separated from the books and housed with the map collection, while the book was shelved in the general collection. This practice ceased more than twenty years ago, and the maps are now placed in pockets and shelved with the book. When floppy disks began to appear, it seemed a natural extension to keep floppy disks that accompany a book with the book. Preservation concerns, however, called for making a backup copy of the disk for placement in the book. The original floppy disk was then archived in the Education and Media Services department (EdMS). Currently, however, there are no back-up floppy disks and all accompanying maps, microfiche, and floppy disks remain in the books in the open stacks.

New formats of accompanying nonprint materials have appeared in the last ten years, including CD-ROMs, videos, and music CDs, all of which are separated from the monograph they accompany. The accompanying CD-ROMs, videos, and music CDs are housed in the EdMS, which collects and provides service for multimedia materials for the entire library. The small number of nonprint materials such as disks, CD-ROMs, music CDs, and microfiche that accompany serials were generally handled on a title-by-title basis. In most cases, the accompanying pieces stayed with the serial and were bound with the volume.

All of these practices developed and changed over time. Consequently, the location and circulation of accompanying nonprint materials were not always convenient to the patrons, and some problems emerged. Despite the varying procedures in place, staff and patrons were satisfied that materials were processed in a timely fashion. Some staff expressed concerns about the procedural inconsistencies and the absence of an overall guiding principle for housing accompanying nonprint materials. The biggest problem was circulation.

Patron concerns focused primarily on circulation policies related to the separated CD-ROMs. At the beginning of this study, all CD-ROMs had a two-week circulation period regardless of the patron's normal circulation privileges. This meant that graduate students and faculty who were allowed to check out a book for up to four months were limited to two weeks for any CD-ROM, including the CD-ROMs that accompanied a four-month circulated book. Furthermore, the EdMS location in the adjacent Library Annex building—and its shorter hours of operation than the main stacks—created inconveniences for patrons at check out and return. Last, there was a circulation policy that left the CD-ROMs inaccessible when a book was checked out but its CD-ROM was not. Patrons were required to check out the book prior to checking out its accompanying CD-ROM. Patrons could and did check out the book independently and without checking out the CD-ROM. The circulation policy, however, required checking out the book first, which meant that the accompanying CD-ROM could not be checked out independently and was thus inaccessible to other patrons.

**Statement of the Problem and Research Questions**

Three specific problems brought accompanying CD-ROMs to the attention of the library's collections committee: space limitations in EdMS, preparation for a new integrated library system, and patron inconvenience. The space problems
resulted from the high numbers of accompanying CD-ROMs separated from the books and housed in the EdMS closed stacks, which also houses videos and other multimedia primary materials. The 1,800 accompanying CD-ROMs took up much-needed space. At the same time, the library was planning for a new integrated library system, which prompted review of processes in order to minimize migration problems. Finally and most significantly, library patrons were greatly inconvenienced when the books and accompanying materials were housed in different buildings and were governed by different circulation periods and other limitations. A fourth problem was security of these materials. The risk that CD-ROMs kept in the stacks with the book without additional security measures would be stolen or lost was presumed to exist although it had not been measured. Two issues were raised but not included in this study. We did not address the problems of maintaining operational software access to the content disks and CD-ROMs, nor did we investigate the circulation and loss rates of print materials accompanying serials.

The research questions were constructed to address circulation, loss and replacement rates for the books and accompanying CD-ROMs. They were:

1. Is there a difference in the circulation rate between a book shelved in open stacks and its separated CD-ROM housed in EdMS?
2. What is the loss rate of CD-ROMs housed in the open stacks with their books?
3. How easily can lost CD-ROMs be replaced?
4. What is the loss rate for accompanying materials of other formats that are housed in open stacks with their primary text?

Method

Two hypotheses underlie all four research questions addressed in this study. With regard to the circulation rates of books and accompanying CD-ROMs, we believed that CD-ROMs shelved in the open stacks with the books would circulate more than those CD-ROMs housed separately in the EdMS. Second, although we could not predict the loss rate of accompanying CD-ROMs housed in the open stacks with the books or for accompanying materials of other formats, we believed that lost CD-ROMs or the books they accompanied could be easily replaced.

To address the first question, we drew a sample of 54 book titles published in 1997 for which the accompanying CD-ROMs were housed in EdMS. Books from 1997 were selected because they had been in the collection at least one year at the time the samples were collected and were thus old enough to have had some time to circulate. These 54 titles were the total number of books and CD-ROMs published in 1997, that could be located in the library collections at the time of the study (i.e., not lost or missing). Titles with a lost piece, whether the book or its CD-ROM, were omitted because they would affect circulation rates.

The circulation statistics were collected in two steps. First, we combined three search parameters—publication date of 1997, the code for the monograph format bibliographic records, and the keyword “CD-ROMs”—and we pulled a subset of bibliographic and circulation records. Then we reviewed all records manually to identify the titles in the sample and count the number of times the book and accompanying CD-ROMs circulated. We then compared the circulation count for the books with the circulation count for the accompanying CD-ROMs shelved separately in the EdMS to determine whether the circulation patterns were different.

To address the second question, we drew a sample that consisted of 337 books with accompanying CD-ROMs published from 1995 to 1999. This sample was generated to test the change in procedure. The accompanying CD-ROMs were shelved with their books in the open stacks, and had no security beyond the security strip in the book. The newer books with accompanying CD-ROMs were purchased and cataloged in November 1998 and were shelved from day one in the open stacks with their CD-ROM. The majority of the sample consisted of books and separated accompanying CD-ROMs reintegrated for the study and shelved in the open stacks as well. These books were pulled from the shelves, reprocessed with their CD-ROMs, and shelved in the open stacks in November and December 1998. The sample included all books and accompanying CD-ROMs that were on the shelf, or returned during the early part of the study, and for which both pieces were present. Titles with missing pieces were omitted from the sample. These data were used to project a baseline loss rate for the CD-ROMs housed in open stacks. After six months in the open stacks, an inventory was made of these materials and the loss rate was calculated. Shelves and reshelving areas were searched three times during May 1999 to ensure that items in process were counted.

While the books were being collected for the study, the procedures for creating item records in the online system were modified for better tracking of circulation data. The practice was to create one item record for books with accompanying materials and record a two or more piece-count in the system. Each item record correlates to one circulation record in the system. However, it was difficult to accurately circulate, discharge, and inventory multiple physical pieces when the information had to be recorded on a single item record. The procedure was changed and applied retrospectively to all books and accompanying CD-ROMs in this sample. Unique item records were created for each of the pieces.
This sample of 337 books was used again to address the third research question. We initially consulted Global Books in Print (GBIP) to determine whether the missing CD-ROMs from the second sample could be replaced. This source did not provide details on whether accompanying CD-ROMs could be purchased separately from the book nor did it clearly indicate the presence of an accompanying CD-ROM. We determined this information would suffice and did not use any information from GBIP in determining ease of replacement. Instead, we telephoned all 64 publishers of the lost materials to inquire about the availability of the lost items. The publishers were asked whether the book with CD-ROM was still in print, whether the CD-ROM could be purchased for replacement independently, or whether a new edition was available. Only 27 (42%) of the 64 publishers provided information. In the other cases, we either could not reach a person or when we did, the person did not have the information. Despite follow-up phone calls, we were unsuccessful in obtaining responses from all publishers.

The fourth research question required another sample. Materials in this sample were selected based upon two criteria: publication dates of 1995–99 for correspondence with the publication range of titles in sample two, and the presence of accompanying materials other than floppy disks or CD-ROMs because floppy disks and CD-ROMs were handled differently from other format accompanying materials at the time. Data from this sample were used to establish a benchmark for the loss rate of accompanying materials in other formats, such as maps, fiche, or cassettes that were housed with their books on the open stacks. The total number of materials with accompanying fiche and cassettes was so small they were excluded from the sample, which then consisted of 71 books with accompanying maps published from 1995 to 1999. Again, we checked the shelves in May 1999. Due to the small size of the sample and the low circulation, we were able to obtain all data very quickly.

### Results

Results regarding the first question are shown in table 1. The circulation rates in figure 1 show that the books in this sample circulated on average 2.5 times, whereas separated CD-ROMs circulated on average 0.5 times. Circulation records also indicated that 40 of the 54 CD-ROMs (74%) had not circulated at all, and only two CD-ROMs circulated more than twice. In contrast, only 8 of the 54 books (15%) had not circulated once, and four books circulated five times or more.

The inconveniences associated with different building locations for the book and its separated CD-ROM, the shorter hours during which CD-ROMs could be checked out, and the circulation policy requiring that the book be checked out prior to checkout of a CD-ROM all appear to have had a negative effect on the patron's pursuit of checking out CD-ROMs. It could be that the accompanying CD-ROMs shelved separately were not checked out because the patrons did not see the need to do so, but we did not explore the reasons for noncheckout with the patrons.

For further analysis, the sample was sorted into two groups by topic, using the classification number for group determination: computing and noncomputing. There were 44 titles on computing topics, and 10 titles on noncomputing topics. The data revealed that both the books and the CD-ROMs on computing were approximately five times more likely to circulate than the books or CD-ROMs on other topics.

We found that CD-ROMs in the open stacks with their books had a loss rate of approximately 10%. Additionally, 11% of the books with CD-ROMs were missing for a total CD-ROM loss of 21%. The remaining 79% of the sample were either intact on the shelf, or shown in the catalog as checked out.
or pockets for the CD-ROM. At the time they were processed, staff attached self-adhesive pockets onto the inside back cover of the books. During the period of data collection, while checking in returned books and accompanying CD-ROMs from circulation, the circulation staff noted that these pockets did not close completely, and a few CD-ROMs were gone. We took preventive action, pulling books and CD-ROMs already processed from the shelves and replacing the inadequate pockets with more secure pockets. We recorded the number of missing CD-ROMs and included this number in the total loss rate for sample 2.

We did not attempt to explore reasons why CD-ROMs were missing, despite knowing that a primary reason for separate shelving was to reduce opportunities for theft. All libraries struggle with the issue of missing, lost, or stolen materials. This sample revealed that the problem is not solely attributable to the format of the material. Security for all materials should be addressed.

With regard to the third research question, we found that some replacements were available (see figure 3). Of the 64 publishers contacted, 29 (42%) responses were received. Among these 29 publishers, the majority required purchase of the complete title (book and CD-ROM together). Only a few publishers allowed the purchase of the CD-ROM alone; in 6% of the cases the replacement CD-ROMs were available without the purchase of the book. Some new editions or versions were also available. For 12% of the titles there was no replacement available, because the title was out-of-print and there was no new edition planned.

With fewer than half of the publishers responding, we can report only on 133 (39%) of the books and accompanying CD-ROMs out of the total sample number of 337. We had earlier consulted GBIP to determine whether the titles were in print, but even though our data are partial, we judged the GBIP data insufficient information for determining the presence of an accompanying CD-ROM or its availability with or separately from the book.

Microsoft Press published many of the items in the overall study and therefore some of the CD-ROMs needing replacement. Cataloging staff noted that many of the titles on these CD-ROMs were generic in nature and duplicated titles of accompanying CD-ROMs in books with different titles on the same or similar subjects. Also, many books do not mention the specific title of the accompanying CD-ROM on their covers or introductory chapters, and the CD-ROM titles are often different from the book that they accompany. These discoveries led to a change in practice. Catalogers began adding the CD-ROM title to the bibliographic record and writing the barcode number on the CD-ROM itself.

The sample to answer the fourth research question showed that accompanying maps located in the open stacks with their book had an extremely small loss rate (see figure 4). Only one item's accompanying map was missing from the 71 books in this sample. This is noticeably less than the loss of books with accompanying CD-ROMs in the open stacks described above. However, the circulation rates of the books with maps, checked out just over one time per title, is also lower than the books in sample one, which circulated on average 2.5 times each.

**Discussion and Recommendations**

We began the study with hypotheses on the circulation of accompanying CD-ROMs shelved in the books on the open stacks and whether lost items could easily be replaced. The
circulation rates for books and CD-ROMs shelved separately showed that the accompanying CD-ROMs shelved separately from the books circulated many fewer times than did the books. Second, although we could not predict the loss rate of accompanying CD-ROMs housed in the open stacks with the books or for accompanying materials of other formats, we believed that lost CD-ROMs or the books they accompanied could be easily replaced. We found easy replacement to be possible for 115 (88%) of the missing CD-ROMs.

In considering whether to keep books and accompanying CD-ROMs together in the open stacks, we used our findings to address questions and provide guidance for our recommendations on local internal processing. Driessen and Smyth (1995) included a number of these questions regarding the processing of accompanying CD-ROMs and other types of materials. They asked whether the additional time and effort spent handling CD-ROMs separately adds value to the item, makes the item more usable for the patron, or makes it less likely to be stolen or damaged.

Although not the only factor in ascertaining value, for these materials, we equated value with use of the materials and used the circulation data as the measure of use. The circulation data as shown in table 1 confirmed that accompanying CD-ROMs shelved separately circulated fewer times than the books. We concluded that the additional time and effort spent processing to separate the CD-ROMs did not add value as measured by circulation.

With regard to making the item more usable, we were unable to substantiate any conclusion. We recorded only the circulation of items shelved separately and did not examine patrons’ actual use of the item. However, it seems reasonable to assume that a complete item is potentially more useful to a patron than is an incomplete item. When shelved in the Edms, there were neither onsite facilities nor adequate staffing for use of the accompanying CD-ROM. If onsite computers were provided, it might be reasoned that separate housing adds to the usefulness.

Many of the accompanying CD-ROMs in the library’s collection are tutorials or manuals for software applications while a smaller number contain other scholarly data such as radio broadcasts, musical selections, or spoken words. Presumably all these enhance the content of the book. While we did not examine the significance of the content beyond the obvious decision to retain the CD-ROMs, the circulation data show that the CD-ROMs were more often in the hands of the user when the CD-ROMs were shelved with the book they accompany.

Accompanying CD-ROMs stored separately were decidedly less likely to be lost or stolen. As seen in the AUTOCAT messages, many libraries secure their CD-ROMs behind a service desk or in a secure container, or affix a sensitized strip to the CD-ROM itself. Our library has a magnetic security system. We affix a security strip to the book but not to the accompanying CD-ROM. The loss rate of 21% of books or accompanying CD-ROMs from the regular collection shows this is not a perfect system, although the majority of lost CD-ROMs (88%) can be readily replaced in an original or revised version. We can only speculate, however, that the loss of CD-ROMs should not be a concern that mandates separate shelving, because when the CD-ROMs are shelved separately, they seldom circulate.

Our findings were factored into the discussions where we considered a broad range of issues, including shelving space and overall costs, and were useful in formulating our recommendations on where to house accompanying CD-ROMs. We have now concluded that accompanying material should reside with its print parent with appropriate exceptions made for specific accompanying materials considered at great risk for loss. This recommendation highlights convenient patron access to the materials and simplification of the cataloging processes as shown in table 2. While different from how some libraries manage their accompanying CD-ROMs, the recommendations support the Texas A&M University Libraries collection philosophy, which emphasizes access to be of fundamental importance to its mission.

These findings will be used in the future as well. The libraries are currently undergoing a renovation that will create a more secure reading room environment. In addition to our knowledge of at-risk art books, we now have more information on other at-risk items, such as books and CD-ROMs on computing and Internet topics, which might be housed in this room.

**Conclusion**

In a world of constantly changing technologies, the CD-ROM format will surely not continue to be the dominant
Table 2. Pre-1999 and Revised Procedures for Items with Accompanying Materials

<table>
<thead>
<tr>
<th>Primary Format with Accompanying Material</th>
<th>Location</th>
<th>Pre-1999 Procedure</th>
<th>Revised Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book with CD-ROM</td>
<td>Stacks</td>
<td>Separate and send CD-ROM to EdMS</td>
<td>Keep CD-ROM in book</td>
</tr>
<tr>
<td>Book with Floppy Disk</td>
<td>Stacks</td>
<td>Copy disk, send original to EdMS, keep backup copy in book</td>
<td>Keep original floppy in book, no backup disk made</td>
</tr>
<tr>
<td>Book with Music CD</td>
<td>Stacks</td>
<td>Separate and send CD to EdMS</td>
<td>Keep CD in book</td>
</tr>
<tr>
<td>Book with Map, Fiche, Cassette, etc.</td>
<td>Stacks</td>
<td>Keep together</td>
<td>Same</td>
</tr>
<tr>
<td>Book with Floppy Disk or CD-ROM</td>
<td>West (Branch)</td>
<td>Keep together at West, at Reserve desk</td>
<td>Same</td>
</tr>
<tr>
<td>Periodical with Floppy Disk or CD-ROM</td>
<td>CPD</td>
<td>Keep together on CPD shelf, bind with volume</td>
<td>Same</td>
</tr>
<tr>
<td>Circulating Serial with Floppy Disk or CD-ROM</td>
<td>Stacks</td>
<td>Keep together</td>
<td>Same</td>
</tr>
</tbody>
</table>

format for accompanying material in the future. In this study, we presented circulation and loss data on this portion of the general collection and provided useful guidance in policy development. Future studies are needed to evaluate the importance of the content and longevity of accompanying materials in all formats. A better understanding of all library materials will assist in decision making for selection, preservation, and use of the collection.

Works Cited


