Practical Guidelines For Choosing Bibliographic Databases.

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Abstract

This paper examines the decision making process for obtaining a bibliographic database within a library. When choosing a database, three primary questions should be asked: what resource meets the information need; what database meets the information need; and, what vendor should provide the database? This paper briefly examines the first two questions, while the third question, selection of database vendor, is investigated in detail. The selection of a database vendor is related to four main groups within the library: public services, acquisitions, technical services, and systems. Each of these groups has critical functions within the library's decision making process and helps ensure that the database collection is optimized so that it can be used to its fullest extent. The procedures presented here are based upon the methodology used at Virginia Tech during a recent review and update of its database collection.

I. Introduction

As bibliographic databases flourish and now provide access to nearly every subject area, it is increasingly difficult to decide which should be included in the library collection. Limited budgets dictate that not every database can be purchased, while at the same time newly arriving faculty and graduate students question why they don't have desktop access to the same resources they had at their previous institutions. Compounding the problem is the fact that databases are often seen as a panacea for every information need, while in some cases traditional print resources may be more effective.

In selecting a database there are three basic decision points to be crossed. First, it must be determined if a purchased database is the appropriate resource. Before limiting the resource search to purchased databases, it is necessary to look at all information resources and determine the best for the given situation.

Second, if a database is the best resource to meet the users' needs, a selection must be made among the many available. Databases covering the same subject vary in breadth and depth of coverage, backfile length, and other characteristics. Choosing the database that best matches the users' needs and the library's collection will assure better use of funds, and more content users.

After a specific database has been selected, the third step is to choose among the various vendors of the database. The primary focus of this paper is on the decision making process used to choose among database vendors.

The necessity for formulating a decision making process is generated by the very character of databases. A bibliographic database is not simply a print index dressed in new clothes. It is a new product with significantly different characteristics than its print counterpart. Among these differences are the following:

- Print indexes are rarely distributed by more than one publisher, while databases may have several different vendors, each competing for market share;
- Print indexes do not have license agreements, while electronic products almost always do;
- Print indexes do not set contractual limits on the number of simultaneous users, while vendors of electronic products often carefully spell this out in contracts;
- Print indexes are owned by the library and can remain on the shelves forever, while databases are normally only leased from the vendor and must be removed from the library if the subscription ceases.

Because the character of the electronic index is different than that of the print index, it is necessary to change the decision making process which brings the electronic index into the library collection. This paper looks at the decision making process as it relates to four main groups within the library: public services, acquisitions, technical services, and systems. Input from each of these groups is critical in order to ensure that the library's database collection is developed in a systematic way. The procedures enumerated here are based upon the methodology used at Virginia Tech as the librarians reviewed and updated the database collection. The procedures are written from the perspective of a public services librarian. They are not intended to cover every question that personnel in other library areas might ask. Rather, they are intended to be a starting point for a system wide process of database selection.

II. What resource format meets the information need?

This question assumes that an information need has been identified. Perhaps a faculty member or student has identified a new area of research that requires bibliographic information not currently provided for in the collection. Perhaps an access change has occurred, as when INSPEC modified its pricing structure via FirstSearch, causing a loss of low cost availability to the database. Or perhaps budget considerations have necessitated a review of the collection.

After the information need has been identified, various resources that might provide the information should be examined. Not every information need is satisfied by purchasing a database, even if such a product is available. Other viable options include paper resources and databases freely available over the WWW.

There are at least three questions to ask at this point. First, how much access is needed for the bibliographic resource? If twenty-four hour campus wide access is necessary, than a networked electronic product is required. However, if library use is sufficient the paper format may suffice. Second, is there a freely available resource that will satisfy the need? Quality information is sometimes available on the WWW. Finally, what format is the easiest for the patron to access and use?

Two examples from Virginia Tech illustrate alternatives to obtaining an electronic resource. Both of these products consisted of CD-ROM based databases used in conjunction with full text CD-ROMs.

A CD-ROM database with links to CD-ROM full text of the *ASME Boiler and Pressure Vessel Code* had been in the collection for several years. When budget constraints forced a collection review, engineering faculty indicated that the CD format was not an advantage. Because it was not campus networked, the CD provided no office desktop access and a trip to the library was still necessary. Reading the scanned pages of full text on the computer screen was more difficult than browsing through a paper copy. Printing the scanned images at the library's central printing facility was more cumbersome and expensive than photocopying from the hardcopy. Sharing the resource for team projects was difficult from the standalone computer workstation. In this case, budget considerations caused a review that resulted in better service with a paper copy of the code, at a price considerably less than that for the CD.

Similarly, the cost effectiveness of a CD-ROM based industry standards database coupled with CD-ROM full text was questioned. In a pilot program, full text CDs with a subscription value of over $25,000 were canceled. Faculty and graduate students were guaranteed industry standards through commercial document delivery. Use of industry standards indexes available on the WWW was encouraged. During the first year of the program, industry standards costing only $3,000 were purchased, saving the library over $20,000 per year.

As illustrated above, purchased databases don't always provide the best method for obtaining information. At times the cost, convenience, browsability and readability of a paper resource will make it more attractive than an electronic database with state-of-the-art hotlinks to full text. At other times, a freely available WWW index, combined with just-in-time document delivery may be the best information resource. Each institution is different, and each must consider all possibilities when answering the question "What resource format meets the information need?" Libraries gain no patron support by adopting technology simply for technology's sake. Technology should be adopted only when it meets the identified information needs of the user. If it is determined that a database is required to meet the information need, the next step is to determine the specific database with the best match.

III. What database meets the information need?

The mix of databases at an institution will be dependent upon the user needs that have been identified. Journals and conferences important to the users should be compared against the publications indexed in the database. When examining database indexing it should be noted whether critical journals are indexed cover-to-cover or only selectively. Specific subject areas of importance to the institution should be examined, and specialized databases considered if needed. Ideally, the overlap and gaps between databases should be minimized. Overlap is a waste of funds while gaps make it difficult for users to obtain citations for needed information.

In the sci/tech subject area, databases are available in a wide variety of configurations. Products such as Ei Compendex and INSPEC are quite comprehensive and index a wide variety of subjects in great depth. Other databases, such as Applied Science and Technology Index also

cover a wide variety of subjects, but index fewer resources and therefore don't have the same depth as Ei Compendex. Finally, databases such as METADEX concentrate on narrow subject areas, but because they index more resources in a particular subject they provide greater depth than Ei Compendex would for that particular subject.

As an example of the database selection process, consider a college offering degrees only in mechanical and electrical engineering. To meet the needs of these departments, the library offers online access to Applied Science and Technology Index via FirstSearch and online access to Mechanical Engineering Abstracts via Cambridge Scientific. The engineering program expands by adding environmental engineering and the library meets the need by adding online access to Water Resources Abstracts and Pollution Abstracts via Cambridge. After another year the program further expands to include industrial engineering so the library adds Ei Compendex. At this point, Mechanical Engineering Abstracts can be canceled because Cambridge produces that database in conjunction with Engineering Information, and everything contained within it is also in Ei Compendex. However, Water Resources Abstracts and Pollution Abstracts contain unique material not found in Ei Compendex and may need to be retained.

As the above example illustrates, a mixture of subject specific databases combined with comprehensive databases may be needed to gain the desired coverage. However, some specific databases may be entirely subsumed by comprehensive databases and eliminated from the collection with no loss of coverage. Unfortunately, relationships between databases are often not clear, and even in the brief example given above, there are many unanswered questions such as:

- Can the remaining Cambridge databases be canceled?
- What bibliographic access will be lost if this is done?
- After subscribing to Ei Compendex, does Applied Science and Technology Index still have enough usefulness to justify its cost?

When determining the correct database mix at an institution, it may be profitable to conduct a database inventory of all currently received databases. It's possible that the currently held databases are a collection of titles purchased as each became available, rather than being purchased because each fit into a plan. An inventory may be able to reveal collection inconsistencies. At the very least it should include the following components:

- Database name
- Database vendor
- Reason database was purchased from particular vendor
- Other vendors that provide the database
- Standalone or networked access
- Number of simultaneous users allowed
- Reason for that number of simultaneous users
- Cost
- Consortium cost savings applied to database?
- Backfile of database at the institution
- Total database backfile available from producer
- Reason for specific backfile at the institution

- Print index equivalents in the collection
- Cost of print equivalents
- Subject overlap with other databases in collection
- Subject overlap with print indexes in the collection

With this inventory it should be possible to analyze the database collection in order to maximize coverage and accessibility, while at the same time minimizing overlap and searchware interfaces.

In the summer of 1998, with the announcement that INSPEC pricing via FirstSearch would be changed, Virginia Tech looked at the major databases in its sci/tech reference area. Paper equivalent indexes of some databases were canceled, simultaneous users were decreased on other databases, discounts were gained through consortium pricing, and several subscriptions were consolidated with one vendor. As a result of this overhaul a better database mix was established for the users, including the transfer of five databases from CD-ROM standalones/LANs to campus-wide networking, and the increase of the Compendex backfile from 1987 to 1970.

Although the cost for INSPEC access increased substantially, optimizing access for the other databases did not increase their overall cost. In the past, taking advantage of package plans for print subscriptions has allowed institutions to save money, and in some cases bring in additional titles for no additional cost. Databases may now offer some of the same package cost savings, and should be examined.

There are many tradeoffs and decisions involved with choosing a specific database for the collection. Even after this decision has been made, the selection process has just begun. Although some databases are available through only one source, many are licensed to several vendors.

IV. What vendor will supply the database?

In choosing a database vendor, several groups within the library must be consulted. Without system wide decision making that incorporates suggestions from all impacted library departments, it is possible that the product selected will not be fully integrated into the library system and will be more difficult to use. A fragmented decision making process may manifest itself through out of date or incomplete catalogue records, difficulties with log on through IP verification, or lack of access to search software features.

Although organizations may differ somewhat as to the specific groups involved in the decision making process, input should be received from at least four groups: public services, acquisitions, technical services, and library systems. By involving all of these groups, features of the database will be examined from different vantage points, and a clearer understanding of the database functionality will be gained. For instance, both technical services and public services will have an interest in the capability of the database to display local holdings. However, technical services will be interested in the staff time required to provide the data that generates the display, while public services will be interested in the completeness and clarity of the display. Each group brings its strengths to the decision making process so that the library as a whole will have a realistic understanding of the implemented product's capabilities.

A. Public services input into the decision making process

The responsibility for "selling" the database to the public, as well as the task of explaining why a particular database was chosen falls on the shoulders of public services. They will also be the group using the database on a daily basis after the choice is made. Because of this, the decision making process should rely heavily on their input. There are a number of areas that they should examine.

1. Search software (searchware)

The searchware is the make or break component of a database. Other issues are important, but if the searchware is unintuitive or difficult, both librarians and patrons will be less likely to use it. In extreme cases, patrons may choose a database with inferior subject content, if that database has a search interface with which they're familiar. The goal should be to provide intuitive/familiar interfaces that patrons will readily use. There are several basic searchware questions that should be asked:

- What searchware is available for the database?

  Some databases, such as Web of Science from ISI, are only available with the producer's proprietary software. There are no other software options, and if the library wants the database it must introduce a new search interface into the library. Of course, this situation also brings an end to the database decision process. If an institution wants Web of Science, it gets it from ISI.

  A more complex and typical situation is illustrated by the Ei Compendex database, which is accessible through SilverPlatter, Ovid, and other vendors, each of which packages Ei Compendex with its own searchware. Vendors such as SilverPlatter and Ovid also use their searchware with other databases such as INSPEC and NTIS. However, Ei Village packages its version of Ei Compendex, called Ei CompendexWeb, with unique searchware that cannot be used with other databases.

  Once it is determined that there is a choice of searchware for the database, further questions should be posed.

- Does the searchware offer the needed capabilities for both novice and experienced searchers?

  A number of articles have been written which evaluate search capabilities, and a comprehensive treatment of the topic is beyond the scope of this paper. Basic functions to look for include Boolean and proximity operators, search history display with the capability to combine previous search sets, and several means of capturing search results such as downloading, printing, and e-mail.

- Does one searchware "fit" the library better than others?

If the library already has other databases from the vendor under consideration, then it could be an advantage to obtain the new database from that same vendor. A major benefit of limiting searchware varieties could occur in bibliographic instruction.

At Virginia Tech, many of the sci/tech databases such as INSPEC, Compendex, Biosis and NTIS are accessed through the SilverPlatter WebSPIRS interface. Because of this sci/tech grouping under one vendor, a SilverPlatter training session has a significant payback for faculty and students. In addition, some of the non-sci/tech databases such as ERIC and PsycINFO are SilverPlatter based, so research for non-engineering elective courses can also be done using the same skills. Further instruction for other vendors such as ISI and Cambridge Scientific is provided to meet advanced and specific needs of patrons.

Consideration must also be given to staff searching skills. Although full time staff are expected to master all searchware being used, it may be difficult to train graduate assistants and other part-time or short-term staff in the intricacies of multiple searchware systems. Minimizing searchware interfaces minimizes the training needed for short-term staff.

The popularity of the EiVillage CompendexWeb product testifies to the fact that many institutions have a different philosophy of electronic resource collection development. The added value of a site incorporating WWW links, industry standards information, and many other services outweighed any inconvenience incurred by introducing unique searchware.

- Does the searchware provide adequate help screens and online tutorials?

  One of the advantages of an online networked database is its twenty-four hour accessibility. Research and studying don't stop when the library doors close. For those users who access the database during the wee hours of the morning, available online help is a must. Yes, librarians can and do provide tutorials for database searching, but how much better it would be if the vendors provided easily accessible documentation that would answer the patron's question.

- Does the searchware utilize a WWW browser or does it require client software?

  There is a trend for searchware to be based on WWW browsers. Using Netscape or Internet Explorer, the user accesses a search screen and inputs the search statement. Searchware that requires client software to be loaded on each machine should probably be avoided. Updating and support can be very difficult.

  In some cases, vendors offer both CD-ROM and WWW based products. While the WWW based product usually requires only a browser to search the database, the CD-ROM product may require specialized client software. Therefore, although the CD-ROM product may be networkable in a technical sense, it is not practical to do so because of the logistics of client software distribution and updating. Make sure that the searchware for the format being purchased is tested and thoroughly understood.

The previous section has given a brief overview of the searchware characteristics that should be considered. In addition to the search interface, there are several other areas which public service librarians should examine.

2. Vendor support

The status of database vendors and providers changes rapidly, with mergers and takeovers commonplace. Oftentimes vendor representatives seem to change with the seasons, and it's difficult to know who's been assigned to a region. So, although there are no guarantees of continuity, some basic questions about vendor support should be asked.

- Will the vendor come on-site to train library staff and user groups?
- Geographically, where is the local representative for your region located? Does the representative have other accounts in the area? How often does the representative come into the area?
- What kind of reputation does the vendor have? Have checks been made with other customers, peer institutions, or consortia that have dealt with it?
- What types of handouts, search manuals, and cheat sheets are provided by the vendor?

3. Data updates

Two basic questions to ask in this area are:

- How often is the data updated?
- How soon is the data updated after it's compiled by the producer?

These are <u>different</u> questions. Unfortunately, oftentimes only the first question is asked. If it is critical to have the most up-to-date data then both questions must be considered.

If data is updated daily, it's often presumed that the database is current. However, frequency of updates is not equal to currency of updates. In order to establish currency, it must be determined if the data being loaded at a given time is the same for all vendors.

For instance, in a given week is the data being loaded into Dialog's SciSearch the same data that's being loaded into the Science Citation portion of ISI's Web of Science? Or, is there a lag time between ISI and Dialog? Similarly, is the data being loaded into SilverPlatter's Ei Compendex the same data that is being loaded into Ei CompendexWeb on EiVillage? This author has no evidence of currency differences between database providers. However, some database producers have established their own search sites and there may be a time lag between data loads on their sites and data loads on other vendor sites.

4. Content differences between different vendors of the same database

In comparing vendors, it's crucial to compare the content of the database. Differences can occur in several ways.

Although most databases are now accessed online, there are still CD-ROM versions of many products. Sometimes the CD version of a product may not have as much content as its online counterpart.

Backfile availability may vary between vendors. License restrictions sometimes allow a vendor to offer only a partial backfile run.

Online versions of similarly titled databases may vary between vendors. Ei Village has included Ei Page One searching in the Ei CompendexWeb search available at their site. This combined database provides indexing for a larger number of journal titles than the Ei Compendex product provided by vendors such as SilverPlatter and Ovid.

Indexing content may also vary between vendors. For instance, the FirstSearch version of INSPEC does not have the Chemical Indexing field that many other vendors include.

Online thesauri may be available from some vendors but not others. If this feature is important, vendor comparisons should be made.

5. Links to online full text

As more journals become available in online full text, the importance of being able to link from databases to the full text increases. Although some of the linking specifics may be controlled by publishers, comparisons should be made between particular vendor policies. Questions to be asked include:

- What publishers can be linked to from the database?

  Database vendors contract with individual publishers in order to provide links to the publisher's full text site. At the present time, the situation is quite fluid and varies from one vendor to another. If an institution has contracted with a publisher to access online full text, then it's essential that they also contract with a database provider that comprehensively indexes that publisher's titles and also provides hyperlinks from the database citation to the online full text.

  Recent mergers, as well as longstanding corporate ties, may play a critical role in determining the availability of full text links from databases. Ei Compendex is owned by Elsevier and at the present time the only links from Compendex to Elsevier's full text online journals are through CompendexWeb on EiVillage. Other vendors such as SilverPlatter do not have contracts with Elsevier to provide full text links. Similarly, the IEEE/IEE Electronic Library can only be accessed through a subset of INSPEC provided by IEEE/IEE. It is not accessible from databases provided by other vendors.

- What charge is there for providing full text links?

  Some vendors provide links to full text as part of the subscription fee. Other vendors have a surcharge to maintain the URLs for various publishers.

- Does the database vendor simply provide links to full text sites, or does it act as an agent with publishers to gain access to full text?

  At the present time, most database vendors seem to simply provide links to full text sites. They expect libraries to negotiate with publishers to gain access to the full text. The database vendors will then activate links to the publisher's full text.

- Do the links to full text connect by publisher or by individual journal title?

  This can be critical and may determine the usefulness of the full text links from a database. Consider the scenario where a given publisher has two hundred full text journals online, but a library subscribes to only fifty. If the vendor's full text links are publisher based, then it's possible that all links to that publisher will be activated at once. Patrons whose library only receives 25% of a publisher's journals will get messages denying full text access 75% of the time. However, if the vendor is able to provide links only to journal titles that are specified by the library, then all links to full text should be valid. The functionality of the full text links may be dependent upon the publisher's policies, but vendor capabilities should also be investigated.

- Do links to full text function with all the vendor's products?

  Full text links may not function with all of a vendor's products. As an example, SilverLinker from SilverPlatter does not currently function when a library uses the SilverPlatter internet subscription service. The SilverLinker product only works if the library loads the SilverPlatter databases on a local intranet. Of course, this necessitates a local investment in hardware and staff time to maintain the local load. Some institutions may elect to contract with a vendor that allows full text linkage through remotely mounted databases.

6. What statistics does the vendor provide to help determine simultaneous user needs?

When an online database is first introduced by an institution, it can be difficult to know how many simultaneous users will be needed. Often, an educated guesstimate is made. If too few simultaneous users are allowed, users become frustrated at being locked out of database access. If too many simultaneous users are allowed, users are happy, but thousands of dollars can be spent annually on unused capacity. Some vendors, such as ISI, will provide reports of database usage including number of simultaneous users at various times and the number of turnaways at peak times. This helpful information will facilitate fine-tuning of the contract.

7. Is cross-database searching supported?

A possible advantage of grouping databases with one vendor is the opportunity to do simultaneous searches across databases, much as one can with Dialog. SilverPlatter and Cambridge Scientific are vendors that allow cross database searching throughout their titles. FirstSearch does not. With the increased frequency of interdisciplinary studies, the advantage of cross database searches such as Compendex/Biosis, INSPEC/PsycInfo, and Agricola/Compendex

is obvious. If cross-database searching is an issue, also ask about advanced features such as duplicate removal and sorting of results across databases.

8. What demo options does the vendor allow for the library and interested academic departments?

This is usually not an issue. Vendors are normally more than happy to provide demos for at least a week and sometimes for up to a month or more.

9. What are the advantages of a local load versus remote access?

Although the local/remote access question will also be looked at from the vantage point of library systems, there are some public service considerations related to the issue.

- How much more current is the online version than the local load?

    Oftentimes the online version of a database may be loaded daily or weekly, while the local load may be updated only monthly, bimonthly, or quarterly. Given that the lag time from publication to indexing may be as much as six months, the total lag time from publication to indexing of a quarterly updated database could be as much as nine months.

- Does local or remote give more flexibility to change vendors?

    It may be easier to switch an online vendor than a local load if the service is not acceptable. If a local investment has been made in disk space, tape drives, and servers, as well as staff time to load the data locally, it may be difficult to justify switching to another vendor. Switching to another online vendor is quite a bit less involved.

B. Acquisitions input into the decision making process

For the purposes of this article, acquisitions is defined as the cost-confirming, license-altering, discount-discovering personnel in the library. In the fluid environment of electronic resources, acquisitions should propose to the vendor creative ways the contract would become more attractive to the institution. At the same time, they need to realize that there are limitations imposed by the database producers upon the vendor. In order to arrive at the best contract, it's necessary to ask questions, make suggestions and counter suggestions, and accept tradeoffs. It's also imperative to know what critical points (from the institution's standpoint) are not negotiable and must be met in order for the contract to be approved.

1. Cost related factors:

- How much does the product cost?
    What are the annual costs?
    What are the one-time or startup costs?

- What factors are used to calculate the cost?

Number of geographical sites?
Number of people at the institution?
Number of users in a specific discipline at the institution?
Concurrent print subscriptions (what results if the print is cancelled)?

- How might the cost change upon renewal?
  What is the price increase history for past years?
  Will the vendor guarantee a future price increase cap for a set number of years?

- What is the consortium pricing policy?
  Are there consortium savings?
  How many institutions constitute a consortium?
  What are the savings as consortium size increases?

- Are there multiple database incentives?
  Is there a discount for getting multiple databases from the same vendor?
  Will the vendor provide another related database for no (or reduced) cost?
  Will the vendor give extra years of backfile for no (or reduced) cost?

The above questions are the basic issues that should be explored and expanded upon to get every possible cost advantage for the library. As discussions with the vendor proceed, other cost saving measures may become evident which haven't been mentioned above.

When negotiating cost, it is critical to forcefully present facts helpful to your cause. If the cost is based on people at the institution, push for a cost based only on the number of people in the discipline that will use the database. If the cost doesn't seem negotiable, ask for a longer backfile for the same price. It may not be possible, but it certainly won't happen if the question isn't even asked.

At Virginia Tech, purchasing both Compendex and INSPEC from SilverPlatter caused the WWW accessible version of NTIS to be included at no extra cost. This allowed cost savings through canceling the NTIS CD-ROM subscription and gave campus wide access to a product that was previously available only on a library based CD-ROM workstation.

2. License related questions:

- Does the license define a site, and if so, how?
- How do site restrictions affect distance learner access?
- How many simultaneous users are allowed?
- What networking restrictions are in place?
- What provision is there for users not affiliated with the institution?
- Is the product leased or purchased?
- Are there archival rights if the subscription is canceled?
- Does the license allow the kind of use needed at the institution (e.g. print, transmit, save)?
- Will the institution be held liable for the misuse of the product by individual users?

Many license agreements limit access only to affiliates of the institution. It's common for universities to gain approval from the vendor to modify the license so nonaffiliated library "walk-ins" can use the databases. In general, vendors and database providers realize that many universities are public institutions and cannot limit the use of facilities to affiliates.

An additional license modification to guarantee access to distance learners is becoming increasingly necessary. A proxy server is often used by institutions to verify institutional affiliation and to provide a workable means for IP verification for database searching. Therefore it is not a technical problem for distance learners to gain access to databases. However, even though a proxy server solves the technical problems of remote users accessing the database, it doesn't address the legal issues that may be contained within the license. If the license agreement specifies that all users must be from a geographically defined site, it may be necessary to modify the license to allow distance learner access.

One of the major added values of WWW accessible databases is the technical capability to search them from any internet connection. If this technical capability is negated through legal restrictions, the added value may be lessened. For a given database, site restrictions may differ from one vendor to another, or they may be consistent across all vendors because of restrictions placed by the database producer. If distance learning access is an important issue, it may be worthwhile to investigate variations between vendors.

C. Technical services input into the decision making process

The third library group to be consulted in the database selection process is technical services. There are at least two technical services related factors that may vary from one vendor to another and should be investigated: links to full text and display of local holdings.

1. Full text links

Many databases have the capability of linking to full text. If technical services needs to provide a database of journal titles, ISSN numbers, or other links in order to activate this feature, it should be determined what form the database should take and the staff time required to create it.

2. Local holdings displays

Some vendors are able to link the local holdings of an institution to database search results. If the vendor claims to have this ability, several questions should be asked including:

- Has the vendor worked with the OPAC system that is used in your library?
- Can the vendor provide references from a library with the same system?
- What work must technical services do in order for local holdings to be displayed?
- What holdings information is displayed? Only a call number for the item, or are years of holdings also displayed?
- What is the procedure for changing the status of holdings information?

D. Library systems input into the decision making process

The final group to be consulted in this process is library systems. Tapping into their expertise will better enable the library to obtain a database that can be accessed easily, searched with fully functioning software, and relied upon to have good response time. Some areas that library systems should investigate are:

1. Vendor support

Although there's no guarantee that the vendor will be as eager to talk after the contract is signed as before, communication beforehand may uncover potential problems.

- Does the vendor have knowledgeable technical support people?
- Is it possible to consistently talk with the same technical support person, or is there turnover or uncertainty about who is working with your institution?
- Does the vendor return calls in a reasonable amount of time?

2. Remote versus local loads

The public services viewpoint of remote versus local was discussed previously. Library systems has its own concerns about this issue. Some questions to be considered are:

- What is the cost benefit for using remote access?
    - What is the hardware cost for maintaining a local load?
    - What is the staff cost of maintaining a local load?
- Given that library systems has a finite hardware and staff budget:
    - What other services will not be developed because staff are supporting the local load?
    - What other hardware in the system may not be upgraded because hardware resources are being committed to the local load?
- How are updates to the local load accomplished?
    - Does the vendor do it through ftp of files?
    - Is it done through tape downloads?
    - Does library systems have tape drives to accomplish this?
    - How much local staff time is involved in the process?
- How is campus wide networking accomplished with local and remote loads?
    - What are the advantages of each?
- Is there an advantage of local or remote loads with regard to:
    - Links to full text
    - Display of local holdings

3. How is database access controlled?

- Through IP verification?
    - Are there any problems including all of the institution's personnel using this method?
- Through passwords?
    - Do users need to be given passwords or can passwords be scripted?

4. Software

- Is proprietary client search software needed?
- Is the product web compliant?

5. Response time considerations

- What is the response time differential between vendors?

6. Links to full text

- Is the responsibility for full text links solely with the vendor?
- Are there local hardware/server requirements to fulfill?
- Do links to full text function with the specific product being purchased? As an example of product variance, note that SilverLinker only works with the SilverPlatter intranet service and not the SilverPlatter internet subscription service.

7. What statistics are provided?

- Is it possible to determine peak use by day, by hour?
- Does the vendor provide data on the number of user turnaways because the simultaneous quota has been met?
- Are statistics provided in a format compatible with databases used in-house, such as Microsoft Excel?

V. Conclusion

The process for choosing a bibliographic database should include every part of the library affected by the choice. Doing so increases the probability that the library's database collection will grow in a systematic way, using financial resources wisely, providing adequate coverage for all subject areas, minimizing searchware interfaces, and most importantly, making sense to the user. Neglecting to get input from critical library sectors will likely result in a hodge-podge of resources that inefficiently utilize both finances and staff, give uneven subject coverage, and hamper the patrons ability to use them to their fullest extent.

VI. Annotated bibliography

Bosch, Stephen, Patricia Promis, and Chris Sugnet. 1994. *Guide to selecting and acquiring CD-ROMs, software, and other electronic publications*. Chicago: American Library Association.

> This guide does not cover resources accessed remotely through the internet. However, the selection criteria given can be applied to remote databases and can be helpful in implementing a decision making process.

California State University. (1997, January 30). *Principles for CSU acquisition of electronic information resources*. Available http://www.co.calstate.edu/irt/seir/EIR.prin.html. Accessed 12/15/98.

> A comprehensive set of guidelines for reviewing electronic formats. It includes discussion of costs and pricing, licensing, functionality, and archiving.

Carrington, Bessie. 1996. Testing, testing . . . managing electronic access in disparate times. *Online* 20, 6: 66-70.

> Although published only three years ago, comments about 486s and Netscape 1.x demonstrate how rapidly the electronic scene changes. Still, the basic testing procedures enumerated are valid and provide a framework upon which to hang your criteria.

Corbett, Patti K. 1997. Local vs. remote information - choosing the medium for database access. In *National Online Meeting* (18th proceedings). New York: Information Today.

> This paper examines three issues to consider when deciding between local or remote access: 1) control and performance; 2) content and access; and 3) resources: money and people. It presents a balanced examination of the strengths and weaknesses of each access method.

Johnson, Peggy. 1996. Selecting electronic resources: developing a local decision-making matrix. *Cataloging & Classification Quarterly* 22, 3/4: 9-24.

> This article provides very good guidelines for developing an electronic resources collection policy. The matrix model presented is composed of two parts: one matrix for evaluating the product and the other matrix for cost analysis of the product.

Plosker, George R. and Linnea J. Christiani. 1995. The role of information professional in selecting vendor services. *Journal of Library Administration* 20, 3/4: 187-196.

> This article provides a general overview of the selection process.

Tenopir, Carol and Katie Hover. 1993. When is the same database not the same?: database differences among systems. *Online* 17, 4: 20-27.

> This article is primarily oriented towards the online searcher choosing between different vendors for a specific search. However, the considerations are often valid for the bibliographer choosing between vendors for an institutional subscription.

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