



2-1994

Quality in Distribution Channels

Carol Tenopir
University of Tennessee - Knoxville

Follow this and additional works at: https://trace.tennessee.edu/utk_infosciepubs



Part of the [Library and Information Science Commons](#)

Recommended Citation

Tenopir, Carol, "Quality in Distribution Channels" (1994). *School of Information Sciences -- Faculty Publications and Other Works*.
https://trace.tennessee.edu/utk_infosciepubs/360

This Article is brought to you for free and open access by the School of Information Sciences at Trace: Tennessee Research and Creative Exchange. It has been accepted for inclusion in School of Information Sciences -- Faculty Publications and Other Works by an authorized administrator of Trace: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

LJ INFOTECH

□ ONLINE DATABASES □

BY CAROL TENOPIR

Quality in Distribution Channels

ANNUAL DATABASE conferences are no longer limited to domestic locales. The December 1993 Latinbase '93 conference, held in conjunction with the International Book Fair in Guadalajara, Mexico, offered a venue for librarians and database producers from Mexico, Chile, Peru, Brazil, Venezuela, and other Latin American countries to focus on the quality of databases. Attendees examined every aspect of quality, from content to distribution options to intermediary services to end users.

I was invited to talk specifically about how quality relates to the information distribution channels of databases. Distribution is the middle portion of the entire information use process. Martha E. Williams ("Highlights of the Online Database Industry and the Quality of Information and Data," *National Online Meeting Proceedings, New York, May 1-3 1990*, Learned Information, 1990, p. 3) has described this information distribution and use process as a seven-link chain consisting of: 1) author, 2) primary publisher, 3) secondary publisher/producer, 4) tertiary publisher/vendor, 5) gateway, 6) searcher/analyst/intermediary, 7) end user/requestor.

Creating the intellectual side of database content occurs in links one to three—by the author, primary publisher, and secondary publisher/producer—as do the organizational and other editorial content decisions. Links six and seven—searcher/analyst/intermediary and user/requestor—focus on the people involved in searching and have been covered in previous Online Databases columns. This column will concentrate on links four and five—the links between the database content or producer and the users. As with any chain, all of the links are bound together, and there is overlap

at each stage. Information distribution concentrates on those things that facilitate people's access to databases, but the quality of the total process and product depends on the quality of all the parts.

Instead of links in a chain or a cycle, this process could also be called the "bridge" between content and users. We must assume quality content and motivated users, but high-quality distribution channels are what makes it possible to connect the two.

Choices for access

This bridge exists in myriad forms. Today, the user of electronic information products has many choices for access under two primary categories: 1) database access only at the time the user needs it, or 2) distribution of the entire database to the user's site by subscription or purchase.

The first category primarily consists of remote online access. This may be via large commercial online systems such as DIALOG, Data-Star, EPIC, and so forth, or access over less formal channels of distribution such as Internet, other libraries' online catalogs, or electronic bulletin boards. Increasingly, libraries are sharing access to databases using Internet or a shared online public access catalog (OPAC) vendor. For document delivery purposes, the first alternative can also include telefacsimile delivery of individual documents.

The most popular option in the second category is CD-ROM, but this option also includes distribution of databases on diskettes, magnetic tape, and other alternative media. When one library leases a database on magnetic tape, loads it on its local computer, then makes it accessible to others via Internet or through its OPAC system, the boundaries between remote access and local access blur. In essence, the library that loads the database fits into category two, but it has become a remote access online site for other libraries, satisfying category one.

While the proliferation of bibliographic and full-text journal article databases on magnetic tape for loading on local computers is growing quickly in the library market, CD-ROM is grow-

ing the fastest in the consumer market. Online still is number one in terms of expenditure and use of the various electronic distribution media, however. Still, print remains far ahead of all electronic formats. The percentage of remote online use is expected to grow with the continued proliferation of Internet worldwide. Internet continues to grow at a pace of seven to nine percent per month, with more than 50 million users as of August 1993.

Assuring quality

As with constructing a bridge, the process of providing access to information content is a complex task. The information distributor (called the databank, the information vendor, or just another library) takes the information content and turns it into an information product that is then distributed to or accessed by users.

Many of the quality issues for access are software issues. The content or documents are transformed into a database by loading software in the process of file loading or index creation. The search engine provides the power and capabilities to search and retrieve the transformed information content. The quality of the user interface is what makes the search and retrieval process successful or unsuccessful for individual users.

Software quality can be measured by standard checklists of features, but it is a mistake to think there is one standard for it. A large part of software quality has to do with what is appropriate for users and for the particular types of content. Interfaces can be of high or low quality, be they command-driven, menus, function keys, or natural language. Search engines may be Boolean logic-based or some alternative. "User-friendliness" is a difficult concept to generalize. Reliability and consistency, coupled with what's appropriate for a given user group, can be most important.

To software quality issues also add those related to the physical distribution medium. If a database is distributed on CD-ROM, for example, add quality of the physical mastering process, copying, and even the process of putting the disc



Carol Tenopir is Professor at the School of Library and Information Studies, University of Hawaii at Manoa, Honolulu

ONLINE DATABASES

into the mail. If a database is distributed online, quality issues are found in the telecommunications channels and even the infrastructure of the phone system. Floppy disk distribution requires a database that can be fit in reasonable chunks on a disk, and any distribution medium must be robust and appropriate for the intended users.

Do not assume there is one best distribution medium for all databases and all users. When CD-ROM first appeared in the mid-1980s, some experts forecast the end of online access. Online access in the mid-1970s had similarly been seen as the end of print. Many distribution options coexist today, and surveys show libraries choosing a variety of them. Each distribution option has its own strengths, depending on the needs of the purchasers and the type of information distributed.

Tendencies and prospects

No matter the distribution option, there are a variety of quality issues to be considered when evaluating information sources. With the increasingly vocal international quality movement, some progress has been made on some of these issues.

- **Software:** As mentioned earlier, software quality involves loading software, search engines, and user interfaces. In the last few years there have been many changes to access software, for better and for worse. One of the most promising prospects for interface software is the tendency to offer options for interfaces. Interfaces that can adapt to individual user levels and needs are still a long way off, but at least many of the online and CD-ROM systems now allow a choice of interfaces. Several systems now support commands, menus, and natural-language input.

Search engines are also breaking out of the de facto, standard Boolean logic system. Westlaw, DIALOG, and Mead Data Central, for example, now allow users to choose either exact-match Boolean logic or partial-match relevance-ranking search engines.

- **Content error detection/correction:** The information distributor's software must make error detection and correction easy. At the time a database is loaded, error detection procedures should be run to catch inconsistencies, field errors, and other obvious things. Once a database is distributed, customers should be given ways to notify distributors and database producers automatically when errors are found, and error cor-

rection must take place quickly and easily.

As fundamental as all of this seems, such error correcting procedures have not been commonplace. To date, only one online vendor (NewsNet) has implemented Anne Mintz's much publicized FIXIT command ("Quality Control and the Zen of Database Production," *Online* 14, November 1990, p. 15-23). FIXIT allows users to instantly (and without charge) notify the online vendor of errors, with corrections made quickly. Others have promised action.

- **Connections/physical reliability:** Remote online systems now typically operate many hours per day, with 23-plus hours becoming the norm. Response times have improved with improvements in hardware at both the host and customer end. The biggest remaining obstacle is dependent on forces sometimes outside the control of the information industry or its customers. Transmission quality still varies considerably with local telecommunications infrastructure, and high-access speeds depend on quality lines. Better error correcting/detecting by packet-switching networks and by modems are making online connections more reliable in most parts of the world. Physical reliability of locally distributed media is more under the control of the distributor. The CD-ROM industry has grown so quickly in large part because of international standards such as ISO 9660, which allow any disk to be played on any player. Standards such as MARC format and Z39.50 for data distributed for local loading also facilitate growth.

- **Timely delivery:** Updating databases on time is a shared responsibility between the database producer and database distributor. Update schedules have been accelerated in recent years in the online environment, and with high-speed modems more information can be transmitted faster, both from the producer to the distributor and from the distributor to the customer. CD-ROM and tapes are still typically updated once per month or less, although there are exceptions. With locally distributed databases, some delivery issues, such as postal delivery infrastructure, remain outside the control of the distributor. Improved courier services and international overnight delivery are helping here, however. Document delivery services in particular must be distributed in a timely manner.

- **Documentation/training:** The responsibility for documentation and

training is shared between database producers and distributors. Documentation and training should be available in print and electronically and at little or no cost to users. Training should also be available in person or over the telephone. From the distributor, documentation and training needs to cover the software as well as the individual database loaded on that system.

Documentation quality issues have not changed over the years, but some current developments include more documentation available online and on CD-ROM; built-in tutorials for various levels of users; and better help screens. The once-discernible line between documentation and training, and system interface and search features is fading. Online 24-hour troubleshooting is still a long way off for most distributors, however.

- **Cost:** Low costs should not be confused with high quality (in fact, sometimes they are mutually exclusive). However, some elements of cost can contribute to the quality of a distribution channel. Clear cost methods, with timely bills that explain all costs; a variety of cost options that allow each library to choose the combination it desires; and costs in line with similar products all contribute to a quality experience. Trends in online delivery are choices of connect-time or flat-fee subscriptions. CD-ROM prices should no longer be way beyond costs of print. Tapes for local loading should be based on the number of potential simultaneous users.

Progress

Progress is being made in improving the quality of distribution channels. It is a challenge to customers to demand continued improvements in areas where the information distributors have control, such as better software, more timely updates, better documentation, and improved facilities for correcting content.

Other quality issues transcend the small world of information distributors, producers, and customers. Telecommunications infrastructure, global network reliability, postal delivery, and hardware technologies all impact the quality of information delivery. The view for the long term is positive, but substantive progress may come more slowly than many of us would like. In the meantime, the single most important factor is choice. The variety of distribution options allows customers to choose and to provide the best quality resources in the most appropriate media.