

Subscription Agents, Libraries and Others Involved in the Information Dissemination Process

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ABSTRACT

An information revolution is underway around the world. More than 108 million people world-wide have access to the Web and some 1.9 million homepages provide a wide variety of information. The move to electronic information formats is changing the processes and methods for conducting business. Timeliness is more important than ever and the focus is on easy access to information.

Those of us who are in the business of providing access to information are changing with these demands and technologies. Journals, serials, newspapers and other periodicals are becoming 'electronic,' and we still have to find ways to provide access. The major players are the same in this 'electronic age' -- libraries, publishers and subscription agents -- and the need to work together is far greater now than ever before. Changes in the roles and the functions of information professionals are apparent. The creation of the serial by the publisher remains the same, but now there are choices in formats. Whether electronic or paper, the serial is still published and circulated but how does an 'electronic' or 'online' serial get 'circulated?'

For years, libraries have found it easy to work with subscription agencies to order numerous paper-based periodicals. With many serials available, both online and in paper formats, ordering and circulation become more complex, especially since electronic formats are expected to become more commonplace. Publishers, agents and libraries are turning to the World Wide Web to distribute information and are working together to provide users access to this information.

Subscription agents can provide such online services as searching, ordering and claiming. Online services give librarians immediate access to databases at various subscription agencies, offering fast, accurate sources for locating online journals and other electronic serials. As more publishers begin to offer online serials, subscription agents will develop services to make access to those and traditional serials easier, while maintaining a traditional role as subscription management organisations. What we see as the future today may change tomorrow, however.

Thus the traditional role of the library is changing. Many libraries are forming or joining consortium groups, pooling their resources with others to provide their users with online materials efficiently. This is one solution that is beneficial for everyone involved. There are many concerns related to production of online journals, including cost, archiving and cataloguing. To find solutions, traditional boundaries will change -- formats, access methods and services. To keep up with changes, investments in technology, resources and strategies are required. The World Wide Web has provided the information industry with the best tool yet for fast access of information over the broad spectrum of users and library patrons. This valuable tool must be thoroughly utilised to manage information in the Information Age.

Technology

We are in the middle of a revolution -- an information revolution. All one has to do to realise this is merely look around. The world is linked by a computer network that just 10 years ago was almost unimaginable. There is e-mail, and of course, World Wide Web access. The latest statistics show more than 108 million people worldwide have access to the Web. There are some 1.9 million homepages that permit shopping, reading of the daily news and the ability to search for almost endless amounts of information. All this is done from the convenience of a personal computer (PC) on a desktop.

The Royal Library in The Hague, which is going to be the legal deposit library for electronic journals in The Netherlands, have identified 12 000 electronic journals using a storage capacity of 3500 gigabytes. The Royal Library estimates in five years time they will have 26 000 journals which will require a storage capacity of 11 000 gigabytes.

What does this mean for those of us in the business of providing access to information?

We all know that we must have the hardware and software to access information - I doubt we will be using Windows 95 in the year 2345. So we will need 'Technology refreshing -- whereby electronic information is transferred from one waning medium to an emerging one' (Luijendijk, 1996).

If we consider that the output of scientific information is doubling every 15 years, the storage capacity we are going to require in 100 years time -- let alone 500 years time -- is gigantic. And so 'just as back issue dealers surfaced to fulfil a need, so might software dealers emerge to offer electronic document 'can openers' that can provide access to data saved in a variety of formats....' (Luijendijk, 1996). But will we be able to get the lids off the cans of electronic documents?

I would say we have to be prepared for the future, but the future is already here. The full text of journals, serials, newspapers and many other periodicals is increasingly becoming 'online' and available in other 'electronic' formats and there arises a need to provide easy access. The major players in the 'information age' are the same -- libraries, publishers, subscription agents -- and now more than ever, there is a greater need to work together.

I believe there is a distinction between 'online' and 'electronic' journals. Online journals are a format of electronic journals and are available via the World Wide Web. Electronic journals are available in several formats such as magnetic tape, diskette, e-mail, fax and CD-ROM. Online journals pose more of a challenge than other formats of electronic journals.

With the advent of electronically published publications, there are apparent changes in the roles information professionals play in production, distribution and archiving. Whether electronic, online or paper, the serial is still published and circulated. But how does an 'electronic' or "online" serial get "circulated?" The creation of a serial by a publisher remains the same -- it is written and edited -- but now there are choices of delivery formats. Many subscription agents have provided bibliographic and ordering information for years of journals that are not only published in print, but in online and electronic formats. In many cases, these types of journals can be ordered by the same method as print.

The traditional mode of thinking is that a library and subscription agent work together to acquire the numerous journals most libraries need. This can be in the thousands or tens of thousands. With many serials and other publications available both online, electronic and in paper format, ordering and circulation become more complex. Publishers, agents and libraries are turning to the World Wide Web to distribute information and are finding solutions that will provide the end-user with greater access to the full text of journals available online.

Librarians are becoming overwhelmed by the amount of online journals. Subscription agents and publishers are developing various systems and services that will aid libraries or corporations in gaining access to and paying for online journals. A primary point of developing an online journals service includes offering a secure subscription management site that benefits both end-users and publishers. Publishers will maintain control of the information, subscription information and pricing.

The key point most subscription agents and other information providers are addressing with the development of their systems is easy access to online journals. Subscribers will need to be able to conveniently access journals in a seamless, quick system which facilitates the authentication and password control process. The systems being developed by subscription agents will take the administrative burden off both publisher and library. Additionally, fast, accurate searching capabilities for tables of contents, abstracts and full text are essential.

Clearly, this type of project is massive and requires an enormous amount of communication and cooperation among all parties involved. Agents and publishers will have to ensure that usernames, passwords (which really do not work), IP (Internet Protocol) addresses and other user information match on both ends. Then there is the issue of site licence agreements and the issue of online 'claiming'.

Information dissemination in this manner is not only revolutionary, but it is also evolutionary. As with most information technology available today, systems that provide access to online journals will change to better meet the needs of the end user. Publishers and agents are now working in ways as never before to bring this concept to reality. As more publishers begin to offer online serials, subscription agents will continue to develop services to provide easier access to them and also easier access to traditional print subscriptions. But the real challenge for agents is maintaining their traditional role as subscription management organisations.

Regardless of the format, it is still the responsibility of the subscription agent to provide serials management information to which an organisation subscribes. What we see as the future today, can very easily change tomorrow. We all have to be prepared for that change.

With online journals, the traditional boundaries of libraries will be changing as well to deal with their archiving and retrieval. Luijendijk has said "Traditionally, it has been the library's mission, perhaps, because no one else could be counted on to do it" (Luijendijk, 1996). Archiving and retrieving online journals electronically is not as simple as print materials. Once archived, access to electronic or online materials is more difficult.

By placing publications or serials of any type online, it becomes the publisher's responsibility to guarantee access to these "electronic" backfiles for which end-users have paid. If a subscriber cancels a subscription to an online journal, the publisher should offer them access to back issues up to the point that the subscription existed. This may mean maintaining that customer's password and IP for authentication over a long period of time. Authentication in itself is a major problem as Web site administrators do not know if users, trying to access their material, are affiliated to an institution which has licensed rights to the Web site content.

The traditional responsibility of libraries, which was to act as a storehouse and to archive, may be changing as subscription agents and publishers are finding some value in archiving for customers. I believe some publishers are finding that providing access to backfiles is a profitable enterprise. They may charge for access to these files from non-subscribers, and it is far easier to control this with online and electronic publications than with print subscriptions. In the world of online technology, access is becoming easier.

Archiving is a natural function for subscription agents who also provide document delivery services and full text reference databases. EBSCO Information Services has been archiving for many years, especially the full text of articles, for inclusion on our electronic reference databases, such as EBSCOhost. We have also been archiving journals of all formats for the document delivery needs of our customers. So it would appear that all the players in the "information age" will be performing some of the traditional responsibilities typically belonging to librarians in the past.

And we will also see other players entering the fray -- companies such as Cadmus (who are traditionally known as printers), Toshiba, and OCLC expanding their role to offer access to full text of electronic journals. David Brown talks of the "emergence of countless specialist electronic intermediaries eating into the functionality and profitability of the established subscription agents in future" (Brown, 1996). Libraries, too, are getting in on the act.

Outsourcing

Outsourcing is a prime example of how some traditional roles are changing. In looking at document delivery, there is evidence of this. We are seeing more libraries, research institutions and corporations turning to this method of information delivery. The supplier is the keeper of information (sometimes serving as a reference desk), and library staff develop relationships with these suppliers to acquire documents.

While some librarians may see outsourcing as a threat, others see it as a means of letting someone else do the work so they can focus on other aspects of library work, such as

interfacing more with users. Patrons will continue to visit libraries for information, but in this scenario the librarian simply contacts their supplier and requests documents. The librarian still remains the true information professional, especially in the eyes of the patron.

Journal consolidation is another form of outsourcing - particularly where this increases the speed of delivery. Subscription agents with journal consolidation services can speed up the delivery of US material to Europe by 6-7 weeks, and to Africa by as much as 15 - 16 weeks.

Partnering

We are also finding that libraries, publishers and agents are working "together" more than ever. However, libraries are increasingly becoming part of consortia, and thus, becoming more interconnected amongst themselves. Libraries benefit from consortia in a number of ways. One of the most obvious is that by working together, libraries can find and develop solutions associated with the acquisition, processing, storage and, eventually, the distribution of information for research and other purposes. There is little doubt that consortia agreements will increase in the near future as technology advances and information becomes more accessible and abundant.

There are other methods by which libraries are pooling resources. For instance, according a report in the December 9, 1996, edition of *Library Hotline*, Peking University Library will electronically deliver research materials after entering into an agreement with the University of Pittsburgh. Full text documents will be transmitted over the Internet.

This idea of resource sharing is growing among and between libraries. A particular area of expertise in which a particular library or institution specialises is made accessible to others. Information is shared between one institution and another, and the end-user benefits. This idea of 'sharing' also spurs the creation of new technologies. For example, online databases designed for research providing abstracts and full text are prevalent, and Web sites that contain interactive research and learning are on the increase. All this comes at a "shared" cost between the member institutions, which is also extremely advantageous.

As we look around, we see that the broad spectrum of information delivery is becoming increasingly 'electronic' -- that is to say more organisations are turning to the World Wide Web for their information management and access needs. The Web has provided the best tool yet for creators and end-users alike, for fast, convenient access to information. Investments in technology are vital as the Web grows and the world literally becomes a global village.

While technology is changing the way libraries and subscription agents operate, it is also changing the expectations of each partner. No longer is the service provided by the agent just about securing delivery of periodicals and other serials. Agents must achieve an understanding of how a library's computer system is arranged, and the library must understand how the agent's electronic system works. Success is now measured in how well critical data is managed and how the data results in securing periodicals for the customer.

It is the ability to work together to address common problems and create solutions that sets the information delivery industry and library profession apart from others. The common goal is the same - whether it is a publisher, library or subscription agent -- to deliver information on a regular basis. Whenever problems arise, in most cases a direct line of communication

already exists and problems can be resolved quickly. Claiming, for instance, is difficult without a relationship between a publisher and a subscription agent. The library contacts the subscription agent in the case of a claim and the subscription agent, in turn, contacts the publisher. Because of the established relationships, claims can be resolved quickly which, in the end, benefits the library.

A prime example of this is the Year 2000 problem. We at EBSCO are proactively facing the Year 2000 problem -- and are forcing the issue with publishers, automated library system suppliers and customers, because the problem is coming soon and we need to be ready for orders for multiple year subscriptions later this year.

Subscription agents' roles will continue to develop and will be more than that of a "middle man". As agents continue to find more ways to expand their services, the partnerships they have fostered between libraries and publishers are even more important. This is because direct communication is essential in addressing concerns, developing technology and in finding innovative solutions to problems.

Integration

In the not so distant future, there will come a time when libraries will be totally "integrated." Integration in the library community will consist of combining several of the most popular formats of information delivery. Doing this will offer library patrons quick, easy access to the information they need -- whether it be print or electronic.

Total integration of library services must happen if libraries are to remain as the one place for people to use for their information gathering and research needs. Convenience for patrons is one of the benefits of integrating services. The services can be accessed from halls of residence or other remote sites. Ease of access is also quite compelling -- meaning that patrons can access the library's many different resources using either their IP address, student number or some other type of identification. However, with integration there are a number of areas of concern. According to Richard Luce, Director of the Carmel Los Alamos National Laboratory Research Library (which subscribes to 1800 scientific journals, but are currently tracking 5200 electronic-based journals). At Los Alamos, researchers expect Web access with links to the library catalogue, so there is a common user interface with only one access point. The users also expect everything to be hyperlinked with easy printing capabilities, and an alerting service which can search and retrieve full text from different databases regardless of publisher.

Some of the areas of concern with integration are: timeliness -- receiving the electronic version at the same time or ahead of the print journal; unreliable service -- poor response times on the Web; usage data - this is difficult to get, so publishers are developing their own software programs to get the information they need (Academic Press announced at the United Kingdom Serials Group Conference in Edinburgh, April, that they had 79 000 logins between March 1996 and Easter 1997 to their electronic site, but are not able to identify each and every institution logging in, because some sites may be using the same login); article level identifier -- we have Publisher Item Identifier, Digital Object Identifiers and SICI (Serials Industry Contribution Identifier) and we need standardisation on this issue; printing -- most people if they want to read something want to print it out, and this can be painfully slow; linkage -- we

need to link content to indexes and abstracts, especially if content shifts from printed to electronic formats (it will be a tremendous responsibility to keep links up to date as publishers change and journals move from one place to another); digital lockboxes -- or secure containers or cryptalopes -- technology which wraps raw content (the journal article) in a protective software and determines how many times the content can be accessed - for example, you can access the content 10 times, but it may not let you print out anything- or it can enable a publisher and a library to agree to only giving two people at a time access to the digital content; simultaneous user agreements --these do not appear to work on the Web (at Los Alamos apparently they have 17 000 PCs which need access), and another issue is where the library has a licence in place, but what happens when the user has an individual subscription?

Fair usage is another integration problem -- how does the technology deal with fair use? Fair use presupposes you are able to make use of the electronic journal content in the first place, but if you are prevented from making a copy of material which is in a digital lockbox or secure container then that in itself is not fair usage. So we need to have technology which can deliver electronic journals as effectively as we have traditionally delivered print journals.

Traditional Boundaries No Longer So Traditional

The traditional boundaries in terms of which libraries, subscription agents and publishers are conducting information delivery services have changed. What we call "traditional" is no longer so traditional. Information management is more complex than ever, but is still evolving. The conventional methods of library management - such as archiving, collection development and cataloguing - are no longer just the library's responsibility: we are seeing agents and publishers more involved than in the past. But above all this new technology must be developed with the end-user in mind. Otherwise, it will become useless. According to Clifford Lynch "the key question ... is whether we can construct a system that users will find comfortable in making broad use of electronic journals as a substitute for printed ones" (Lynch,1997). New strategies, such as consortia and networked systems, are necessary to address new concerns associated with the recent flood of information. Synergy is required, and synergy can only come from a combined effort -- teamwork among all parties interested in improving the flow and management of information.

The Information Age has done much to change the way we look at our industry and the library profession and the way in which we deliver information. Changing times call for a changing mind set. While the World Wide Web has provided us with the best tool yet for fast access of information, its limitless capabilities must be taken advantage of. Our responsibility as information providers cannot be overlooked. From ancient times, libraries have provided society with a means of recording and storing the stories and great discoveries over the ages. What a responsibility we have for the age in which we live. No matter what the setting, the Web must thoroughly be utilised to manage the vast amount of information. By working together, I believe libraries, publishers and subscription agents can meet their goal of information delivery regardless of format.

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