

## **Electronic intermediation - new challenges for the subscription agent**

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Subscription agents have a long tradition of serving libraries in the acquisitions of printed journals. The move towards electronic publishing has major implications for agents. What are these changes? How is the agent facing new challenges which electronic information presents? What intermediary roles are needed in the new scholarly communications process?

### **Background**

Agents are in the business of service and added value. Apart from some exceptions, such as the creation of their own databases, they are generally neither owners or producers of primary information. They exist to make things easier for their customers, who on the whole are libraries. The service is in the area of journal subscriptions - as a link between publishers and libraries. Libraries use agents as a single source for ordering, paying, dealing with missing and damages issues, delivering journals etc. Agents have built up a wide range of additional value added services around the this core function of handling subscriptions. I will refer to some of these services as background, but will give particular attention to new and developing services relating to electronic serials and serials information, as well as areas that agents may be looking at regarding future services.

Global journals purchasing is large. The value of institutional journal subscriptions worldwide is in the region of \$2500 million. This is predominantly institutional buying by academic and research libraries, the main customers of subscription agents. The Publishers Association in the UK estimates that the value of UK publishers' journal sales in 1995 was £326m. The total value of purchases of journals by higher education institutions in the UK is estimated at around £52m in 1995. Around 40 percent or so of this is for titles from UK publishers and of the remainder a high percentage represents US journals.

### **Who are the agents?**

The Association of Subscription Agents, which is based in the UK but is an international body, has some 32 members. Many of these however, provide a service only within their own countries or regions. There are four major international subscription agents: Blackwell, Dawson/Faxon, Ebsco and Swets. These agents provide a global service, from offices in various countries and are generally significantly larger than the other agents. The numbers of agents have declined with a concentration of business amongst the leading four, with smaller companies selling out or merging, faced with the declining margins and the need for considerable investment in the systems etc.

My own company, Swets and Zeitlinger, handles over 1.5m subscriptions a year, has offices in 18 countries and over 650 staff. We trade with some 30,000 publishers and handle 130,000 serial titles, although about 200 of these publishers represent 80 percent of our sales. Our customers number in the thousands worldwide and include most types of library.

## **Automated services for libraries**

Agents have been active in developing additional support services, over and above the core function of processing and maintaining annual subscriptions to journals. These include a wide range of information, invoicing and financial services as well as systems to improve the overall efficiency of their operations, for example extensive EDI links with both publishers and customers. But they have also developed a number of major automated products and services for libraries:

For example, their comprehensive databases of journals information have proved to be attractive to libraries looking for up-to-date bibliographical details of journals, journal prices, publications dates etc. The larger agents began to offer *online access* to this information, with libraries dialling into the databases and more recently using the WorldWide Web. These online links also allowed customers to access other journals information such as the status of their journal subscriptions orders, availability of single issues, as well as to send electronic orders, claims and messages to customer service staff at the agents. Some of the products launched include Ebsconet, DataSwets, and Blackwell's Connect.

Because of their particular expertise in the area of serials, agents also offered PC based *software for journals management* in libraries. This software could be used by libraries to undertake a range of serials functions including journal ordering, check-in of issues and inventory management, automatic claiming of missing issues, budgetary control and binding management. The packages proved to be particularly attractive to libraries, as serials management functions in the integrated library automation systems offered by the dedicated library systems suppliers, were often inadequate or neglected. Serials management is a deceptively difficult area to automate, because of the complexities and vagaries of journals publishing and has generally been the Cinderella in the development programmes of the systems companies.

The arrival of the first *CD ROMs* followed by a rapid growth in the numbers of CD ROM titles available also offered opportunities for agents. CD ROMS are often priced on an annual subscription basis and are effectively electronic offline serial titles. Agents created broad service packages for CD ROMs for libraries, who have seen the benefits of using an agent for CD ROMS - consolidated invoicing, a single source for orders and queries, technical support etc. This type of service was further developed more recently, by offering Internet access to secondary databases, hosted on agents' servers, such as the ERL products of Silver Platter.

## **Electronic current awareness**

Facilitating access to serials as physical objects and providing services to assist in the administration of serials, have traditionally been the core of the agents' businesses. In recent years however they have launched services based on electronic tables of contents of journals (ETOCs), creating very up-to-date electronic files of the contents pages of anything between 10,000 and 28,000 serials titles. In part this was to meet the anticipated demand from libraries moving to policies of 'access rather than holdings', a situation in

which a library would rely heavily on comprehensive information services on what articles were being published, backed up by facilities to obtain the document or article if required - as opposed to subscriptions to large numbers of journals at considerable expense, many of which might remain unread. Technology also made such services possible, through the arrival of electronic scanning systems and services from organisation set up to handle conversion of vast amounts of scholarly information into electronic format.

A number of these electronic current awareness services from agents have been supported by document delivery services, usually not developed by the agents themselves but through the investment in document delivery companies or links to existing document delivery suppliers. Whilst one or two of the agents have moved heavily into this area, for example Ebsco, paper-based document delivery has on the whole, not become a major activity for agents, although ETOCs have been considerably more successful. ETOC services have been offered on CD ROM, as batch files for loading on institutions' networks and more recently via the World Wide Web. Products include Faxon Finder, Current Citations, Ebscodoc, Uncover and SwetScan.

### **The growth of electronic information**

The services above have been given to illustrate the way agents have adapted to meet changing customer needs and to take advantage of the technology available at the time.

More recently agents have been committing considerable time and resources to developing services for full text electronic journals. Over the last two years electronic journal have moved from being more than just experiments, with the launch by commercial publishers of electronic versions of existing print titles, so-called parallel editions. The 'electronic only' journals which have existed for some time and more of which have been introduced recently have had relatively little impact on subscription agents or library purchasing, generally because they have either been experimental, free or directed at a very limited user group. Major publishers however, such as Chapman and Hall, Blackwell Science, Academic Press and the Institute of Physics Publishing have now offered electronic editions of major commercial print titles already purchased in large numbers by libraries. The National Pilot Site License initiative between four publishers and the UK Higher Education Funding Councils has also accelerated the take-up of many of these electronic versions by UK academic institutions.

### **Electronic journals - impact on libraries and users**

Electronic journals offer benefits for users they have also resulted in administrative difficulties and challenges for libraries: it has been necessary for libraries to work with each individual publisher to set up electronic access arrangements on behalf of users, to obtain passwords, to handle registration and license arrangements etc. Users themselves have been faced with a variety of different interfaces and search services from each of the publishers. Whilst the numbers of electronic titles has been small in relation to the total numbers of journals being purchased, these administrative and access difficulties become of major concern as numbers of titles grow. Libraries are now looking for services to streamline and simplify access to electronic journals: single points for ordering, access, information and payment - intermediaries who can offer a comprehensive support service.

Endusers have also shown their need for a simpler and more uniform approach to using electronic journals as indicated by the Report of the TULIP project, the electronic journals experiment carried out by Elsevier:

- users want access to all information from *one source*
- sufficient *journal coverage* is needed.
- *critical mass* is important
- *linking* of information is needed
- a familiar *interface* is important

In general neither libraries nor users appear to feel that 'one publisher' solutions are the preferred approach for electronic journals.

### **The need for the intermediary**

It might be argued at this point that neither subscription agents or indeed libraries will be needed anyway, as producers and users of scholarly information will interact directly with each other in the electronic environment. Different services will be needed and different players may be involved but there are no major signs that disintermediation is imminent and that the agent is about to disappear. It will be more a case of re-intermediation as each player now redefines his or her role and the relationship with the other players. Why intermediaries?

- The electronic environment is bringing more chaos rather than less - options, formats, delivery methods etc
- the 'many to many' concept still applies
- the subscription model is still being used by publishers - with a growth in licensing
- libraries are faced with new administrative and access tasks - passwords, IP numbers, registration, dealing with each publisher
- institutional buying is still the norm - there is no immediate switch to enduser purchasing

Agents have been developing services to address these issues and - 'one stop shopping' or 'single sources' to provide access and ordering of Internet based serials. A broad range of functions have been built into these services with the aim of offering a simplified approach for libraries and users. The following functions that we at Swets have included in our service are also offered by a number of the other agents:

- single interfaces and search engines for accessing a range of titles from multiple publishers, with relevance ranking.
- keyword searching across all the titles offered in the service, usually searching within the tables of contents and abstracts.
- browsing the contents of selected or favourite journals, as new electronic issues become available.
- simplified password administration, usually on the basis that one, or a small number of passwords allows access by all members of an institution to all titles in the agent's service

- library management functions. Whilst these services are designed for end users, the services offer a range of library functions, including the facility to input information on holdings of print titles, the creation of departmental collections etc
- regular data for libraries on the usage by faculty of the electronic journals, often reporting on access at the level of tables of contents, abstracts and full text.
- services to alert end users of new tables of contents as well as more comprehensive SDI services
- electronic access to earlier years.
- information and support services.

Extra functions that are being added in or considered including links to secondary databases such as Medline, ways to integrate into library catalogues and automated library systems including the use of Z39.50, and meeting specific publisher requirements such as limitations on concurrent users as well as strategies for longer term archiving. Some of the services offer publisher branding on user screens with links to publishers' WWW Websites, to allow extended browsing of publishers' services and products.

Access to these full text services is via the Web, and earlier on CD ROM from one of the agents. 'Header' information - article titles and abstracts etc, are usually held on the agents' servers in HTML. Full texts, often in Portable Document Format (PDF) but also other formats such as RealPage from Catchword are also stored on the agents' servers or accessed on publishers' servers, depending on individual arrangements. The agents are now each in negotiation with a wide range of publishers to secure the content they need in order to provide customers with critical mass.

Each of the major agents have either now launched such fulltext journal services or have services under development: These include Electronic Journals Navigator from Blackwell, Ebscohost from Ebsco, IQ - Information Quest from Dawson/Faxon and SwetsNet from my own company. No doubt agents other than these also have services in the pipeline.

### **Why subscription agents for electronic journals?**

Agents are strongly placed to provide electronic journals services. They have close links with the library community; their trading relationships with publishers are long established, as are payment and financial systems. While electronic information is offered on a subscription basis and while titles are linked to print versions, agents feel they are an obvious choice for use by institutions. Libraries are also asking them for such services.

They are of course competing with other intermediaries in the delivery of electronic fulltext. These include library cooperatives, such as OCLC as well as information providers and database hosts such as Ovid, Silver Platter, ISI and UMI. Universities themselves are also offering services, an example being the HighWire project at Stanford University and specialist university based organisations such as BIDS here in the UK. A number of major systems companies have entered the field including ICL, AT&T and IBM. Publishers themselves have also offered services which go beyond coverage of their own titles, for example Elsevier with ScienceDirect and the Current Science Group with Biomednet, its community 'club' directed at biomedical end users.

## **New and developing services**

Agents' full text journals services, or 'electronic warehouses', described above will continue to grow both in content and functions. Increasing numbers of serials titles will of course be added as agreements are reached with individual publishers and as more content becomes available electronically from individual publishers. Services which may look a little shaky with only a few hundred titles will become very attractive when they offer single access points to thousands of electronic journals. The services may become vehicles for offering access to other types of information, eg grey literature and other non-serials information, whether stored on the agents' servers or providing gateway links to servers at publishers, other rights holders or libraries themselves.

They will increasingly link to, or add in, secondary information databases, to offer end users seamless access to full texts from a range of resource discovery tools. Agents will also explore ways in which they can provide links between the articles and citations of the information offered in their services, thus giving users a truer network of related information and enhancing the value of publishers' titles in these services.

Customised information services will become more important, with profiles of users' subject interests delivering information from the 'electronic warehouses' to users as it is published. Intelligent agent technology will be used to support this.

Agents may also see opportunities to 'package' information from their electronic warehouses in subject packages to meet the particular requirements of their various customer types.

In the coming twelve months or so, agents will also define their position more clearly regarding longer term archiving, and access to, the growing volume of electronic serials information

## **Site licence management**

Increasing numbers of publishers are offering electronic access to their products and titles by way of institutional site licenses, or a licenses to consortia of institutions. Academic Press has been one of the publishers at the forefront of these developments in the area of journals full text journals. Under the terms of such licenses, authorised members of the institutions are often able to make unlimited local use of the electronic information, including for example the creation of electronic course packs, short loan reserve collections etc. An annual site license fee is paid by the consortium or institution to the publisher.

As the numbers of these agreements grow, libraries will increasingly be looking for subscription agents or other intermediaries to help in the administration and management, and possibly the negotiation, of these licenses. Agents' services would include:

- maintenance of an up-to-date database of publisher options and prices,
- the availability of individual publishers license agreements and forms,
- liaising with publishers regarding changes to the agreements, for example in relation to new title requirements or additional libraries joining the consortium,
- handling renewals of licenses,

- acting as a distribution point for passwords and IP numbers,
- providing general advice on contracts and licensing,
- assisting with access etc

Publishers can similarly benefit from shifting some of the routine administrative work of licensing to agents and in particular those tasks involved in direct communications with libraries and the consortia. Agents are already actively involved in license administration through their CD ROM and Internet services and will build on this knowledge and expertise.

### **Transactional pricing**

Whilst the annual subscription model is currently still the predominant pricing model for electronic serials, with licensing for electronic access, a number of publishers will additionally be offering pay-as-you-view or transactional charging options for some or all of the articles in journals they publish. Agents will increasingly be offering this type of service, depending on arrangements negotiated with individual publishers. Users will view and print individual articles on payment to the agent of an article fee, either by way of a deposit account, invoicing or credit card in due course. Publishers will set their own article prices with agents adding their handling charges per transaction. Such transactional based services are increasingly possible from agents as publishers make more of their information available electronically and as a number of them test the water in this area. It is too early however to gauge the likely growth and volume of such article sales, the extent and speed to which publishers will offer this and the relationship to subscription income.

Agents are involved in the discussions with other interested parties on the application of unique identifiers for electronic information, such as the Digital Object Identifiers, SICI and the PII, in order to arrive at standards that can be used in a number of their services such as pay-as-you-view, ETOCs etc. One publisher has made the interesting proposal to create 'unique institution identifiers' for academic and research institutions in order to facilitate even more the delivery of electronic information.

### **Digital libraries and copyright management**

The scale of serials information available electronically is small and covers recently published information or that which is available from the larger publishers who have invested in 'electronification' programmes. Libraries and institutions have a growing demand however for broader based and earlier material in digital form, in order for example to create electronic courseware, short loan reserve collections or indeed as part or larger scale moves towards the creation of digital libraries.

If unavailable electronically from the publisher, it is necessary to convert the material from paper to digital form, using for example electronic scanning systems. It also involves seeking the permission of publishers, if material under copyright, to allow the digitisation to be undertaken, with agreements as to how the information may then be used and what payment may need to be made to publishers. My own company is involved in the ACORN Project at Loughborough University in the UK which is a research project funded through the Electronic Libraries Programme in which print versions of articles on course reading lists are made available electronically to students via the university network

One of the aims of the project is to review the role of a third party, in this case Swets and Zeitlinger, in the digitisation activities and the copyright permissions and management processes. Swets Microstore, a separate division within Swets, provides a growing service dedicated to data conversion and optical disk services. The project and results so far have been reported earlier at this conference by Paula Kingston, the ACORN Project Manager.

Libraries will increasingly look to intermediaries to help with copyright management permissions and agents may play a key role in this area. The ACORN Project along with a number of the on-demand and short loan projects funded by the UK Electronic Libraries Programme have shown that seeking permissions is particularly time consuming, lacking in standardisation, involving a variety of publishers' charging levels and one in which knowledge of, and contact with, publishers is particularly valuable.

Digitisation is of interest to libraries and academic institutions, but there is also an interest from small and medium sized publishers. As I indicated earlier, at Swets we currently trade with some 30,000 publishers, many of which are small companies. An increasing number are exploring the possibilities of using third parties to convert their current titles, and older material, to suitable electronic formats in order to make them available, for example, on the Internet, as new services for their customers.

At least two of the major agents are involved in digitisation activities and projects, either on behalf of libraries and publishers, or to create their own information products.

Subscription agents have shown the ability to adapt in order to meet changing customer needs. The growth of electronic publishing presents them now with fundamental challenges and opportunities, which they are tackling with vigour to ensure their continued position as the link between producers and consumers of information.