SIMPLE SIMON'S EXPERIENCE OF BUYING A VIRTUAL PIE: THE PIEMAN'S PERSPECTIVE

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Researchers can have free access to peer-reviewed, electronic information at point of use but there has to be a charge at some point in the information chain, in order to cover production costs and to protect the rights of the publisher, author and editor. This paper focuses on twelve issues which have an effect on price and access control in the relationship between publisher, agent, librarian and end-user.

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At the risk of starting this session on a flippant note, I decided to allude to a children's nursery rhyme to kick off the vendor's perspective on pricing and access controls - a highly controversial subject. Here is an adaptation.

Simple Simon's experience of buying a virtual pie

> *Professor Simple Simon hit a Virtual Pieman while surfing the net for freeware.*
>
> *Said Professor Simon to the Virtual Pieman "Let me access, download and distribute your wares."*
>
> *Said the Virtual Pieman to Professor Simon "Show me first your credit card or digipenny."*
>
> *Said Professor Simon to the Pieman "Sir, I have not any!"*

This is a hard lesson in economics; there is no free lunch. The World Wide Web is emerging as a channel for electronic commerce. Electronic publications are moving away from experimental free 'trial' services towards a market or 'fair' for virtual wares. Access to these wares comes at a price.

The pieman's perspective

I was asked to be controversial and extreme - to talk about pricing and access controls for electronic publications from the vendor's perspective. The vendor, defined in the broader sense, includes both publishers and agents selling information and services to customers. I would like to start by exploring the difference between publishing electronically, or creating virtual pies, and providing an effective service with a diverse menu of virtual pies, in other words, serving virtual pies.

Creating virtual pies

Publishers focus on authors, editors and researchers

The researcher is the end-user: the Simple Simon who is the libraries' patron. As you know, they are demanding.

Publishers manage the process producing editorial content

This relieves the researcher of the administrative burden.

Publishers are concerned with originating, organising and presenting

Publishers have complex specialist supplier relationships with freelancers, sub-editors, designers etc., and increasingly with technology company partners.

Publishers craft electronic publications

These include:

- highly structured databases;
- discreet works like 'electronic books' or multimedia CD-ROMs;
- regular electronic news and magazines;
- electronic scholarly review journals;
- peer reviewed primary journals (the digital issues I will raise later are primarily focused on the peer reviewed primary journal, but publishers often offer a variety of publications drawn from their author and editor contacts).

Publishers sell via multiple channels

Libraries are one of many channels. For peer reviewed journals institutional purchases are vital.

Serving virtual pies

Agents provide:

- electronic service;
- electronic acquisition administration;
- electronic budgetary control;
- advice and support for electronic publications;
- assistance with electronic access;
- electronic marketing and usage information;
- arbitrating and documenting agreed terms.

Agents act as one channel for many publication or information services irrespective of the publisher. They are simplifying the process of buying for customers and fulfilling the after-sales customer service function for publishers. They exist because there is 'health in diversity', because no single publisher controls the research community in electronic publishing. The potential for diversity is exponentially increased. Choices are greater. Confusion in the market place is greater. 'A new generation of middlemen is needed'.

I will highlight twelve digital issues which have an impact on pricing and access controls from the vendor's perspective.

1. Researchers want electronic publications for different reasons

- faster publishing cycle;
- increased speed of access;
- multimedia functionality;
- on screen browsing and selection;
- local printing;
- wider dissemination of research results.

This additional functionality has a price. Most publishers are wrestling with the issue of what the end user really wants. They are experimenting with links between references and with clubs with extra services.

2. Researchers expect organisations to fund electronic access

Funding is expected through:

- departmental budgets;
- funding bodies;
- research library budgets;
- corporate information network providers;
- company credit cards.

Professor Simple Simon and even his cousin in industry expect to have information available to them in order to work effectively, paid for by their employer or sponsoring organisation.

Organisations need to balance the needs of the individual against the needs of the group.

3. Recognition of researchers' electronic publications

- peer review documents scientific progress;
- disseminates results in a timely fashion;
- provides recognition by peers;
- evidence of researcher's productivity;
- leads to promotion by organisation.

Peer-reviewed electronic publications will only be successful if they fulfil these fundamental requirements. Increasingly, electronic publications are gaining recognition, but research organisations are currently going through a transitional period; transforming the authority of print publications to electronic publications is an ongoing problem. Demand for research publications is unknown by definition; the price of the documents supports the process itself, not merely the final document.

4. New networked environments

Changing technological infrastructure

- The reach of the Internet and World Wide Web is extending. Internet 2 is on the horizon to cope with the research commuter's high-end needs.
- Campus and consortium networks;
- library systems and corporate intranets.

Information sharing being redefined

- networked environment as never before;
- work groups;
- distributed servers networking;
- intelligent agents are being developed to integrate databases or networks.

Wider band width has unleashed new possibilities in digital exchange.

5. Return on publisher's investment

This is perhaps the most contentious issue! Investment has to cover:

- cover cost of editorial process
  - peer review administration and accurate citation;
  - support editorial board;
  - editing, assembling, proofing;
- electronic production with new functionality;
- hosting or distributing;
- indirect costs of infrastructure;
- media transition: print to electronic;
- investment in new technology;
- dividends to stakeholders.

The fact is that most sales revenues have to cover costs.

6. Barriers to electronic access limit the market size

- hardware availability and speed of processor memory;
- software availability: Is a Web browser available to the user?; which type of browser, Netscape, Microsoft Explorer, Lynx?
- communication links: Will a 3D multimedia object crash the user's network?; how does a vendor provide infrastructure for transferring digital objects between parties?; supply and availability of hi-tech products varies greatly from market to market, as standards emerge and a true market emerges.
- legal restrictions on the above.

7. Fear of digital piracy

- commercial shelf life reduced;
- return on investment threatened;
- quality of publication threatened.

These aspects affect pricing policies and access controls. For digital access to take place, pricing and charging for a work has to be possible, in order to protect the author, editor and publisher.

"Uncontrolled copying has shifted the balance in the social contract between creators and consumers of digital works to the extent that most publishers and authors do not release their best work in digital form." Mark Stefik, 'Trusted Systems'[1].

8. Publishers restricting access

Acquiring, defining and dispensing rights under licence is fundamental to the business of publishing. Authors and editors by and large assign rights to their work in exchange for peer review and publication. Simplifying electronic access is in everyone's interest, as are all attempts at electronic licence definition. Collaborative efforts are now taking place to clarify and simplify electronic licences.

Ownership, licensing and rights

The publisher comes from a position of owner:

- 'site' access licences;
- simultaneous access licences;
- copying licences;
- printing licences.

Digital object identifiers

Tracking ownership changes for digital objects through their commercial life, and uniquely defining an object for accurate reference, are issues being addressed by the industry in a joint project with the Association of American Press and the American Library Association.

New encryption technologies

In addition, a variety of technology companies and their technologies, if not prohibitively expensive, may be introduced to restrict copying.

9. Electronic fair-use and loans

Current technology is open to abuse

Perhaps the most contentious issue, from a vendor's perspective, is that current technology is open to abuse.

Publishers and librarians disagree

Disagreement arises over electronic interlibrary loans. Copying of electronic publications is difficult to control and automated copying without permission is widespread.

Possible solution: trusted systems

Trusted systems can potentially reinvent the type of fair-use provisions that currently apply to libraries and some other institutions, allowing a reasonable number of free copies or a single lendable copy of a work. Librarians, researchers and teachers could receive licences from organisations such as agents representing publishers. The right to copy, transfer or borrow/loan a work needs to be distinguished.

10. New electronic pricing

Combination print and electronic subscription pricing

At present most publishers are experimenting with the following pricing models:

- bundling electronic version of publications with print versions;
- multiple year pricing contracts;
- consortium 'multi-site' deals;
- controlled electronic document delivery.

These are all being tested with varying success.

11. New roles for agents

- Validate multi-publisher electronic access (no single publisher can provide all research material);
- handle high volume electronic transactions;
- Facilitate multiple format access;
- Electronic licence administration;
- Invest in enabling technology;
- Monitor electronic usage statistics across the industry.

12. Electronic publication archiving

Access in perpetuity cannot be guaranteed by companies

National archives and libraries are logical partners for electronic archiving.

Leased vs acquired information

Information leasing is less applicable to peer review publishing. Most purchasers would expect to have permanent access to materials acquired and this is being discussed by publishers.

Data maintenance

Publishers are beginning to look at providing public free access to collection material when its commercial life has ended. Problems arise defining the commercial life, whether it is five years, ten years or more, is at present uncertain. National libraries and archives clearly have a role to play in this and agents are exploring links to archives.

Those are twelve digital issues with an impact on pricing and access controls from the vendors perspective. Vendors are seeking effective pricing and access controls to enable researchers to access virtual wares with ease. Experiments in access and pricing will lead to a better

understanding of user demand. Librarians have a vital role to play in facilitating bonafide access to shared information by paying the Virtual Pieman for appropriate access given organisational requirements.

To end as I began on a flippant note, free information at the point of access is achievable if librarians, agents and publishers work together in finding solutions to the digital issues. Professor Simon can have his virtual pie free at the point of access, if the organisation

represented by the librarian agrees with vendors to access it electronically at a fair price. Let publishers create the pies and let agents help serve them to best fill research organisations' needs.

Reference

1. *Scientific American*, March 1997. Special report: 'Internet: bringing roder from chaos'.