

Integrating the Internet into the Retail Operation

ABSTRACT

This paper presents the experiences of the University Co-operative Bookshop Ltd in commercial activity on the Internet. It considers some of the business issues in developing commercial activities on the Internet, methods of order taking, content issues and product development.

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THE INTERNET MARKETPLACE

Any market place with a population exceeding 34 million commercial users will be of considerable commercial interest. Already the Internet has brought success to not a few young and dynamic companies, the brightest of recent entrants being Netscape Corporation. There will undoubtedly be sustained growth in new Online services, and training services for the Internet are thriving. However, many more traditional enterprises are also looking to establishing a presence in the Internet. This paper explores the methods by which the University Co-operative Bookshop Ltd achieved this transition and the experience we have built in operating a full Online commercial service.

The Co-op is a chain of 50 Australian book stores operating as a member-owned co-operative and with a specialisation in the Campus and School text market. Because our product encompasses the full range of academic, technical and general books, software and computer hardware, we have without rival the most comprehensive database of technical and general books in the Pacific region. The Co-op is entering its fifth full year of trading on the Internet, and was the first “.com.au” site in Australia. Precisely because it has a large base in University campuses, the Co-op has had to confront the vagaries and difficulties of Internet service provision in order to complement our on-campus role. The Universities were the crucible in which the information wealth of the Internet was formed, and academics have not been idle in asking for a window into their local campus book store.

In its paradigm of open connectivity, the Internet has indeed created a melting-pot of creative interest that goes well beyond commercial concerns. The Internet has re-invented itself several times, and in its current incarnation it is itself a child of the Personal Computer revolution. The early indicators of the present success of the Internet were already heralded by the phenomenal growth in the use of Bulletin Board systems in the early 1990's. The World Wide Web represents a happy union of the network connectivity of TCP/IP, the mass availability of home computing, and the amenability network access provided by the World Wide Web. The research by Philipson (1995) indicates that 35% of organisations expect to have external electronic mail implemented, 18% expect to have Internet access, and over 50% are standardising on the Microsoft Intel platform for office Workstations, with an overwhelming move to LAN networking. Connectivity to the Internet through Compuserve, the Microsoft Network and other proprietary services have so far sustained its role as the preeminent vehicle for online business activity.

There is, however, a difference between the Internet as a tool for public communication and dissemination of information, and the Internet as a market-place. Value in any marketplace is created by a perceived customer need and a product, service or resource that can be offered for commercial exchange. Careful product development therefore remains a keen priority for those trading on the Internet.

Also crucial, however, for the Retail operation, is proper integration of an Internet trading operation into the normal operational flow of the Retail organisation. This includes development of a Point of Sale operation for the Internet that is simple and direct and which integrates seamlessly into the existing order fulfillment mechanisms.

Finally, the market place must be seen to be secure for commercial activity.

PRODUCT DEVELOPMENT ON THE INTERNET

There are some products uniquely applicable to a network such as the Internet. Online database services, Internet Access provision and News Groups are all very specific to the Online service market. Many mainstream businesses will have to find their role in this new trading environment. In formulating our product on the Internet, we can indicate a few principles that underscore building an effective trading vehicle. Those which have shaped the success of the Co-op on the Internet are:

1. Development of effective order fulfilment mechanisms
2. Provision of multiple modes of access
3. Graduated evolution of the service
4. Customer involvement in product development
5. Development of significant content levels.

Principle 1: Effective Order Fulfilment Mechanisms

Any business that has an existing mail order function as part of its business operation is well positioned to trade on the Internet. The Internet provides an economical vehicle for achieving a wide audience reach at low incremental cost of advertising. The massive costs of physical mail-out campaigns have generally implied quite significant entry costs for traditional mail order and telemarketing services. While these barriers to entry are in some ways lower on the Internet, the business that seeks to achieve product sales over the Internet must develop a core set of effective mail order delivery functions.

In the book trade, order fulfilment can be a complex process involving the use of bibliographic tools to search for and identify product suppliers. The customer may or may not know the author and title of the work, and even then, may not have the authors name correctly spelt. For the Co-op, our existing database of 300,000 titles is the core bibliographic tool, but we supplement this with the use of CD-ROM-based information services, and the use of library-based services available on the Internet. Similarly, having sourced the supplier for a title, good ordering facilities are needed - at the Co-op these include automatic overnight facsimile services, EDI links to 14 suppliers, and order followup functions. Finally, account management and invoicing facilities must be responsive to different forms of customer interaction, including account customers, deposit customers, cash customers, and customers who pick up at their local store.

Principle 2: Multiple modes of Access

Since 1991, the Co-op has been providing an Internet-based service for Account Customers to allow interrogation of this database and ordering. Over these years, comprehensive order fulfilment functions have been built into the Co-op systems to allow the customer to browse our database, review stores with stock and place orders directly on our system. Customer access was initially provided using Internet-based **telnet** services, direct dialup and AUSTPAC (an X.25 packet-switched network which libraries have traditionally used to access the Australian Bibliographic Network).

Demand for Online access to ordering facilities came primarily for Institutional customers in the early stages - most commonly from Libraries. The Online ordering service is distributed, allowing customers to nominate the store to which their order is placed. In the last two years, with the explosive growth of individual access to the Internet, we have seen a considerable increase in interest in our Online ordering services. In early 1994 we began a programme to expand our service delivery to allow additional modes of access. These now include:

- a) dialup access within Australia
- b) Internet access via **telnet** terminal access
- c) Internet access via **gopher**
- d) Customer contact and followup through Electronic Mail
- e) World Wide Web services
- f) EDI customer orders via Electronic Mail and GEISCO.

These alternative modes of access have been entirely driven by customer demand, and it is of considerable importance to scrutinise new forms of communication and access as they materialise. The two key modes of undertaking for the Co-op are expected to be World Wide Web trading and EDI over the Internet.

Principle 3: Graduated development

The rate of technological development is certainly faster than can easily be captured in the normal Corporate Five Year Plan. With few examples of mature Internet operations to take as a model, we have undertaken instead a graduated development of the Internet product in line with the mainstream development of our basic computer services. To invest in Internet product development as the sole business activity of the organisation is certainly possible for some, but was certainly not conceivable for the Coop.

In June 1994, a strategic review of IT services in the Co-op was undertaken. Three principal development strategies were envisaged in this plan for the 1994/95 timeframe:

- a) the migration of basic system operation to an open systems framework (Unix), as part of an upgrade of general processing capacity within the Co-op.
- b) the extension of Internet services to provide:
 - i) Internet access to our stores.
 - ii) to expand the Internet trading activities to encompass emerging Internet services.
- c) the introduction of Point Of Sale systems in all stores.

By September 1994 a small Unixware-based system was installed to allow product development of Web-based services while a tender was undertaken for a full mid-range Unix processor. Electronic mail services were introduced by December 1994. In January 1995 a McDonnell-Douglas Unix SVR4 processor was installed, giving the organisation a solid base from which to develop more extensive services. The parallel development of trial Web services on the UnixWare platform allowed the full launch of the Co-op Web page by early February 1995. Since the introduction of this service, and its integration with our database, we have had a steady increase in ordering activity through the Web service. It is important to note, however, that dialup, electronic mail and direct telnet access remain very popular modes of access and ordering. New Point of Sale systems will enhance our information on stock availability in our stores.

The incremental migration of Legacy systems to an "Open" systems framework has kept the direct expenditure on Internet service delivery to a minimum.

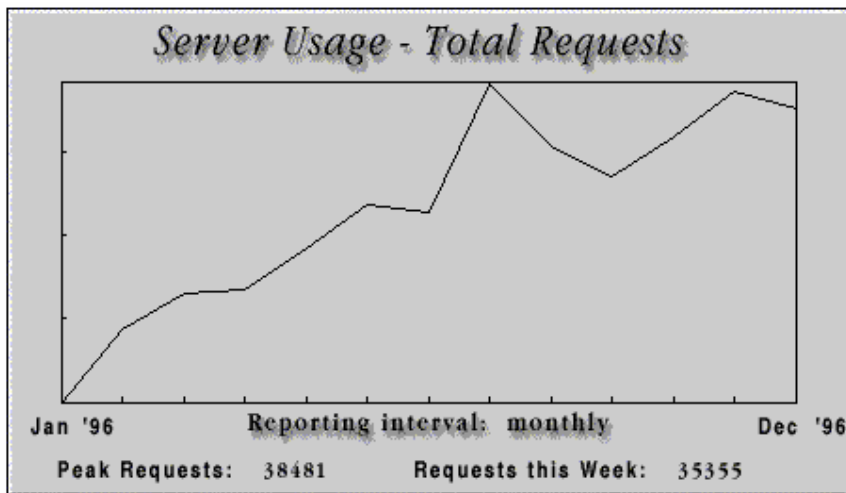
Having established an effective infrastructure, our focus over the last 6 months has been on the enhancement of the product itself, leading to a planned launch of our new web page in March 1997.

Principle 4: Customer involvement

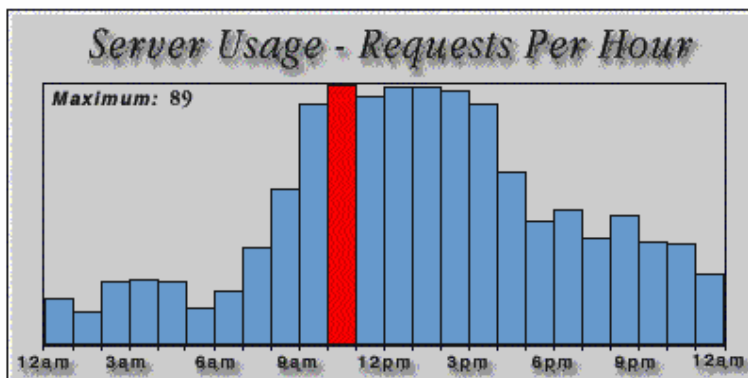
The Co-op has been careful at all times to seek feedback from our customers on the development of the service. Our customers are among the most critical and demanding in the market! Their feedback is crucial to our development plans. McGrath & McMillan (1995) pointed to some dangerous implicit assumptions in establishing new projects. Five of them are particularly relevant to commercial trading on the Internet:

1. Customers will buy our product because we think it is good
2. The product will sell itself
3. We can develop the product on time and on budget
4. We can insulate our product from competition
5. The rest of our company will gladly support our strategy *and provide help as needed.*

Unless the product development is framed around customer involvement there is a very great risk of irrelevance. There are several ways to measure the interest levels in the public access of your service. The most popular measure in the World Wide Web - "hits" on the home page - is of questionable value from a commercial sense, given that it gives no measure of the variety of custom, indicates no measure of actual orders, and can be extremely deceptive depending on the measurement used for these "hits". Taken simply as a count of service requests fulfilled by the Web server, it can be deceptively large if there are multiple images and components of the Home page. We have seen a migration of established customer account users from dialup to telnet access, but also an increase in direct dialup activity as our customer base has broadened.



Average Number of Accesses Per Hour of the Day:



Principle 5: Content issues

The Co-op trades in books. Even now, our primary revenue stream comes from textbooks for required courses on Campus. Even with the technological revolution in use of PC's and communications, the future of books has never been so secure! The sale of Computing texts and manuals alone attests to the myth of the paperless office. The primary product offered by the Co-op remains the traditional book and the service we offer is that of effective and efficient ordering and delivery of requested titles, on-campus location and a membership discount. Our service levels are generally high through an un-matched range of stock distributed across our stores and an efficient mail-order fulfilment system.

The key to sustained customer interest in any site on the Internet is **content** and **service**. NGO's and Universities have long used the Internet as a medium for information exchange - and here the Internet has excelled well before the introduction of the World Wide Web. The use of email and the development of ftp (file transfer) services have been exceptionally important in the facilitation of information exchange, and has well-justified the investment by Governments and Universities in fostering this information-rich environment. Nevertheless, with literally millions of possible sites to visit, navigating the net is an increasingly interesting experience. The Web, with its seamless user interface and hyper-text links between systems, provides an exceptional vehicle to undertake this navigation.

There is reason for caution in expecting excessive commercial interest in the Internet. For service providers, advertising revenue has been slow to materialise, and the current architecture does not necessarily lend itself to traditional advertising (Young, 1995a). While a tidal wave of "whats new" visits may look impressive if your organisation gets a listing on a popular "Hot Sites" page, it will do little good to the bottom line if the best it has achieved is an over-loaded Web server at your site.

The areas of focus for content development at the Co-op are fourfold:

- a) Developing database browsing facilities. The Co-op database of 300,000 titles across 50 stores in Australia is unparalleled in the Asia-Pacific region and would stand up well internationally. It represents a comprehensive range of academic and general titles across all disciplines. Many of our customers visit the site simply to search this database. Commercially, each visit is potentially a customer through the door, and we have been careful to build ordering facilities at each relevant stage of searching.
- b) Developing other relevant content areas. The Co-op is encouraging publishers to post their Web pages on the Co-op server, with book reviews and other relevant information.
- c) Participating in other relevant literary activity and profiling events, trade fairs and other notable book-related affairs.
- d) Exploring avenues whereby links from other sites to the Co-op system can be established.

Having motivated that customer to visit us by virtue of our product and service offering, it is important to encourage that customer to develop a long-term trading relationship with the Co-op. Despite rosy predictions about the potential profits to be made on the Internet, it is unlikely that the Internet will generate commercial activity in existing products where there was none before. That is, the Internet commercial activity is likely to be as much at the expense of existing main-stream commercial activity as it is to develop an entirely new product base. Customer service levels and differential pricing strategies such as the Co-op membership discount will still be needed to sustain long term customer interest.

INTEGRATION INTO THE ORGANISATION

The Co-op has an IT department of 6 staff, and manages its own Class-C Internet domain, with a full Domain Name Server operational. This technical support structure has allow the Co-op to extent its Internet access

service to all stores. Through a mixed network of lease lines and dialup, most store now have some form of Internet access.

Fulfilling this role of Internet access provision internally to the organisation has been crucial in raising the awareness of the importance of the Internet as a component of everyday business activity. Academics and Students had for some time been demanding an email address for stores. The internal use of the Internet is still most commonly through:

Electronic Mail. More customers are using Electronic Mail as their preferred medium of correspondence with stores. For example, our Lismore branch store receives a significant volume of orders directly from the UNE Lismore Library via Email. The Co-op email address has been registered into their Library ordering system, and Lismore Library orders are automatically sent to our on-campus store. In another example, a customer complaint letter was sent to the Co-op webmaster address when that customer could not get through by phone to one of the stores.

Telnet services. A crucial factor in the ordering cycle for product in a campus setting is information about what courses are being offered, what texts are set and the stock holdings of the University Library. Telnet services have allowed access from many stores to relevant University services to allow them access to library services and relevant course information. Similarly, telnet ordering services are **not** to be neglected as a mode of access for many clients on Internet. The market penetration of Web access is significant, but many customers are still using character-based gateways to the Internet.

Branch-specific Web pages. The Co-op has invested significant effort in training at the Branch level. Facilities are being enhanced at the branch level to allow each branch to project a unique “on-campus” profile on the Internet through management of their own Web page.

ISSUES AND AREAS OF CONCERN

Trading on the Internet does not come without a degree of business risk. The concerns of the Co-op have been echoed widely in the industry, and relate primarily to the security of the Internet as a medium of connectivity. The risk of a hacker gaining access to the system is considerable, and the Co-op regularly reviews new security measures - as a member of AUSCERT and through consultation with our suppliers. The use of firewall technology ameliorates but does not eliminate this risk. The only relative safety lies in physical isolation of relevant systems from any form of network and dialup access.

A further area of concern regarding network security is also shared widely in the business community: security of commercial transactions and privacy of information exchange. Very few customers currently make use of our Online customer registration - they will commonly telephone with their credit card number after initial placement of their order over the Internet! We have made this a major focus of our revised web service, including the integration of Secure Socket Layer (SSL) registration.

There are **still** architectural concerns with the current TCP/IP protocol and with Internet network connectivity. Young(1995) profiles the considerable difficulty experienced by new customers in domain name allocation. The formulation of Melbourne IT may help in this matter, but there remains considerable contention concerning the management of the .com domain. Off-shoots recently discussed in the press such as “.biz” and “.shop” are not necessarily helpful.

Finally, the costs of network connectivity in Australia are still a considerable burden both for business and private users. Any significant form of bandwidth use is still prohibitively expensive.

CONCLUSION AND A FEW TIPS

The Co-op has managed an effective transition to trading on the Internet. In the process we have made a significant mark in the book industry with our new services and achieved additional sales at a manageable incremental cost. A few tips based on this experience may be helpful to those venturing into this new business marketplace.

1. Provide a contact address

Provide a simple means for the customer to provide feedback, preferably an email form. We get 2-3 message a day with comments, ideas and questions about our service.:

“Dialogue begins with access. To converse with customers, companies must build interactive links to the marketplace.” McKenna (1995)

We feed these comments back into our design process and we build our Internet service platform based on customer response.

“Smart companies today see the customer not as a target but as a partner to be involved in development and production.” McKenna (1995)

2. Keep It Simple

Don't go overboard in fonts, layout and presentation and backgrounds. The Internet is already grossly over-represented as a forum for the quick ego trip. The novelty factor may attract a visit, but not much more.

3. The Home Page from Hell

Don't go overboard in graphics. The network architecture supporting the Internet will be problematic for some time. While attractive graphics will work well on a design workstation and within a given LAN locale, remember that many users are accessing services over very low capacity links, often dial-up.

4. Build internal organisational awareness of the product

You may be surprised at the existing resources in your organisation. Nevertheless, it is important to build a programme for the introduction of Internet services to a wide base of staff. Commitment of the organisation to these new services is important.

5. Provide content, not just colour.

A colourful web page may attract some initial interest, but the primary consideration of the Co-op is building a sustained business activity. We draw considerable activity on our web page through provision of a valuable search resource, comprising the stock holdings across 50 superb bookstores.

APPENDIX 1: SNAPSHOT OF ACCESS BY COUNTRY

Domain	:	Number of Accesses	:	Percentage of total.
Australia	:	21,246	:	60.1
Unresolved	:	5,157	:	14.6
Local Domain	:	1,919	:	5.4
US Commercial	:	1,895	:	5.4
Network	:	1,532	:	4.3
US Educational	:	1,148	:	3.2
US Organization	:	314	:	0.9
Japan	:	305	:	0.9
New Zealand	:	273	:	0.8
Germany	:	238	:	0.7
United Kingdom	:	149	:	0.4
Canada	:	99	:	0.3
US Government	:	89	:	0.3
Sweden	:	83	:	0.2
Cyprus	:	79	:	0.2
Spain	:	76	:	0.2
Norway	:	72	:	0.2
Singapore	:	71	:	0.2
Hong Kong	:	70	:	0.2
Israel	:	68	:	0.2
Malaysia	:	65	:	0.2
South Africa	:	50	:	0.1
Brazil	:	41	:	0.1
Netherlands	:	36	:	0.1
United States of America	:	35	:	0.1
Switzerland	:	35	:	0.1
Belgium	:	26	:	0.1
Korea, Republic of	:	24	:	0.1
Argentina	:	18	:	0.1
Italy	:	17	:	0.0
Ireland	:	17	:	0.0
Slovenia	:	16	:	0.0
Thailand	:	14	:	0.0
Czech Republic	:	13	:	0.0
Austria	:	11	:	0.0
Indonesia	:	10	:	0.0
Portugal	:	10	:	0.0
Bahrain	:	6	:	0.0
Croatia (Hrvatska)	:	6	:	0.0
Kuwait	:	6	:	0.0
Latvia	:	6	:	0.0

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- <http://mail.coop-bookshop.com.au/>** - the Co-op Bookshop Home Page
- <http://www.bookweb.org/directory/>**- a good index of online Bookstores