

Paper to be presented at the 2003 IATUL Conference

Irma Pasanen
Helsinki University of Technology Library

Committed to licensed information

1. Introduction

Access to a timely, up-to-date, and appropriate information resource is a strategic asset for any research organization. Today, creating and maintaining a sufficient information infrastructure within an academic organization means providing access to selected networked information resources. Facilitating the use of electronic resources – rather than providing access to physical collections – has indeed become a very important task of the modern academic library. In certain fields of science the volume of resources in electronic format has already vastly exceeded that of the printed material.

Jeremy Rifkin has characterized the 21st century as the age of access where products are turning into electronic services, ownership turns into licensed access and where premium is put on immediate access to colleagues and information. In academic libraries these effects of the networked environment are becoming more and more visible.

When information becomes a commodity of the networked society the rules, methods and actions related to the trade and exchange of any commodity will become applicable. Bonding the customer to a long-term relationship instead of ownership is the key concept of the network society commerce. At the time when the Open Access journals and other similar initiatives¹ are emerging the existing services are being enhanced and further developed. This paper aims to discuss the licensed electronic journals from the viewpoint of commerce by exploring definitions and studies conducted in the marketing science rather than in the library environment. The library context is, however, highlighted via examples and recent information concerning the use of the Finnish national electronic library, the FinELib resources.

2. From ownership to licensing, from goods to services

Charles Oppenheimer explains contracts and licenses(Oppenheim 2001):

“A particular characteristic of intellectual property is the existence of contracts (often called licenses) for the exploitation of that material. This is particularly true in the electronic information industry. The owner of the intellectual property permits (licenses) one or more third parties to use the property (usually) on payment of a fee, for example a one-off fee, a percentage of sales, or a license fee based upon the amount of usage. Such a license does not pass the ownership of the property to the third party, it merely gives the 3rd party rights to enjoy the fruits of the owner’s labor. It is therefore equivalent to renting out your (physical) property. In short, the license is a promise that the copyright owner will not sue for infringement, provided the license terms and conditions are met.”

¹ For an overview of the current activities please see document titled ” Open Access to Scientific and Technical Information: The state of the art” at URL http://www.inist.fr/openaccess/en/etat_art.php

In Finland, the national electronic library consortium FinELib <http://www.lib.helsinki.fi/finelib/> launched by the Ministry of Education in 1997 has been the major facilitator of licensing networked scholarly information resources in Finland. In less than five years a tremendous shift from print to electronic has occurred. Currently, the volume of the FinELib field of activities can be described with the following:

- 8400 electronic journals
- 120 reference (indexing and abstracting) databases
- dictionaries
- reference works
- 2 million retrieved full-text articles
- 13 million searches
- turnover 10 million euros

The FinELib consortia are formed by the Finnish universities and polytechnics together with other research institute libraries as well as public libraries. The license agreements made by the FinELib consortia include the walk-in-users of libraries among the authenticated users. Therefore the libraries play an important role in the national information infrastructure.

The electronic journal systems that are currently subscribed via licenses by libraries bear no longer the characteristics of the physical goods such as printed journals. They are no longer tangible, homogeneous things which are produced in printing houses and distributed via mail. Nor are they stored or owned by their subscribers. Instead, the electronic journals reside on external servers and remain intangible until an individual article regains its physical form at the moment it is printed out by someone who has a predefined permission to use the system. Furthermore, these license-based journal systems encompass a number of enhanced features, not present in the physical journal.

For a well-known marketing specialist Christian Grönroos the following conditions characterize services (Grönroos 1990):

1. Services are more or less intangible
2. Services are activities or a series of activities rather than things
3. Services are at least to some extent produced and consumed simultaneously
4. The customer participates in the production process at least to some extent

Clearly, the electronic journal delivery systems currently licensed bear the characteristics of services. An advance release of the Oxford English Dictionary gives the following additional definition to the noun service: *"service provider, an organization that (or occasionally a person who) supplies a service of some kind; (in later use freq. spec.) a company which offers subscribers access to the Internet, or to a telephone network"* (Oxford English Dictionary New Edition: draft entry Dec. 2002)

Jennifer Rowley has explored the electronic information marketplace and she argues information products are not goods but not pure services either (Rowley 2002). According to Rowley, information products have unique characteristics both in terms of comparison to other products as well as to the features of goods and services. For Rowley,

"an information product is any product whose core or primary product is information or knowledge"

and

"a product is a physical good, service, idea, person or place that is capable of offering tangible and intangible attributes that individuals or organizations regard as

so necessary, worthwhile or satisfying that they are prepared to exchange money, patronage or some other unit of value in order to acquire it”.

Therefore, in the spirit of Rawley, it may be concluded that the core product of the now licensed services are the electronic journal contents, the articles. Initially the customer demand was focused on the journal contents. However, in economics and marketing in general a product is seen as a compilation of different product levels. According to Philip Kotler, another famous marketing specialist, a product consists of five different levels, each of which adds value to the product in terms of customer benefit. The first level is the core benefit: the service or the benefit the customer is buying. The second level includes the core product: the core benefit turned into a marketable product. In the third level the core product is supplemented with expected attributes and conditions describing the core product. The 4th level is the augmented product which exceeds the customer expectations. This is the level where differentiation can be and is currently being made to a great extent. The fifth level of a product is the potential product, i.e. a future product not yet in the market (Kotler 2003).

Another important point in differentiating products is branding. A brand may be a name, a term, sign, symbol, or design intended to identify goods and services from one seller group and to differentiate them from those of competitors. Thus a brand identifies the seller or maker. Under trademark law, the seller is granted exclusive right to use the brand name into perpetuity. A brand then conveys several meanings which reside in the minds of the consumers. These meanings may include attributes (good, reliable, high-prestige etc.), perceived benefits (quality), values, culture, personality, and user (the brand suggests the kinds of consumers who will use it) (Kotler 2003).

Indeed, a good number of scholarly publishers have protected their brand names via trademarks in recent years. The importance of commercial branding is emphasized in the online environment where consumers are naturally cautious, traders may be remotely located and there is little or no physical contact to reassure purchasers of a company's financial security and/or good intentions. Consumers increasingly rely upon strong brand awareness and brand performance for the confidence to engage in e-commerce. The International Classification for Goods and Services of the World Intellectual Property Organization (WIPO) reserves the Class 042 for the following items: “Scientific and technological services and research and design relating thereto; industrial analysis and research services; design and development of computer hardware and software; legal services.” More specifically, there are subclasses to 042 such as “Licensing of intellectual property” and “Creating and maintaining web sites for others” (<http://www.wipo.int/classifications/en/>). The class 042 has been used in describing the nature of a service activity in order to obtain a Service Mark (SM) issued by the U.S. Patent Office. Brand names protected by a service mark include names familiar to scholarly publishing such as IEEE Xplore (IEEE), ScienceDirect by Elsevier, ISI Web of Knowledge, Science and others.

These services all have an augmented level to the core product. These enhanced features include alerting services, forums and bulletin boards to facilitate online communication and interaction among peers, there are polling and user surveys etc. Some service providers have augmented their service with special members-only areas. Today one of the most interesting augmentations is the Crossref service, which enables cross-searching in reference databases and cross-linking among full-text documents. Also Crossref is a brand name, Crossref Search and Crossref are protected trademarks for a service, which enables searching and resource discovery for authorized and authentic scientific, technical, medical and other scholarly articles, and other works as well as provision of reference citation links to scholarly and research materials published by others, via a global computer network. The owner of the trademark Crossref is the Publishers International

Linking Association, which consists of both commercial and learned society publishers as well as a number of libraries.

It is important to note here that augmentation always adds costs and that augmented benefits soon become expected benefits (Kotler 2003).

Finally, Jeremy Rifkin is concerned with the fact that the whole concept of human interaction is becoming increasingly based on monetary exchanges (Rifkin 2000). He writes:

“Services do not qualify as property. They are immaterial and intangible. They are performed, not produced. They exist only at the moment they are rendered. They cannot be held, accumulated or inherited. While products are bought, services are made available. In a service economy, it is human time that is being commodified, not places or things. Services always invoke a relationship between human beings as opposed to a relationship between a human being and a thing. Access to one another, as social being, becomes increasingly mediated by pecuniary relationships.”

Clearly, the emergence of the scholarly communities within the licensed information resources supports these fears that only money can buy the access to one's peers.

3. Service marketing is about relationships

Services – by definition – require an act, a performance between the parties involved, the customer and the service provider (Grönroos 1990; Kotler 2003). During the process of delivering the service relationships are born and cultivated. When this notion is transformed into a marketing and management concept the following definition becomes appropriate:

“Relationship marketing is to identify and establish, maintain, and enhance relationships with customers and other stakeholders, at a profit, so that the objectives of all parties involved are met, and that this is done by a mutual exchange and fulfillment of promises” (Grönroos 1995)

In a service environment presented in figure 1 there are relationships between the service provider and the customer(s), the service provider and the consumers as well as relationships between the customer(s) and consumers.

The relationships between the provider and the consortium are first formed during license negotiations which may well last for a long period of time, sometimes even over a year. The audience, the user community, may grow impatient when more rapid action is expected and tension might emerge among the consortia members and also in the consumer level. Another perception concerns the contents of the negotiated agreement which often are compromises in terms of the content. On the one hand a large journal collection may include not only the core journals but also journals of secondary importance but on the other hand such a license gives a much broader access to the user community. After the license agreement has been signed, relations emerge between the provider and the user community, including both the organization level as well as individual consumers. Often the service provider sees fit to encourage local organization to play an active role in marketing the service and is thereby forming relations with the middleman organization as well. Also the consortium may have a role in organizing training sessions aimed for both organizations for consumers.

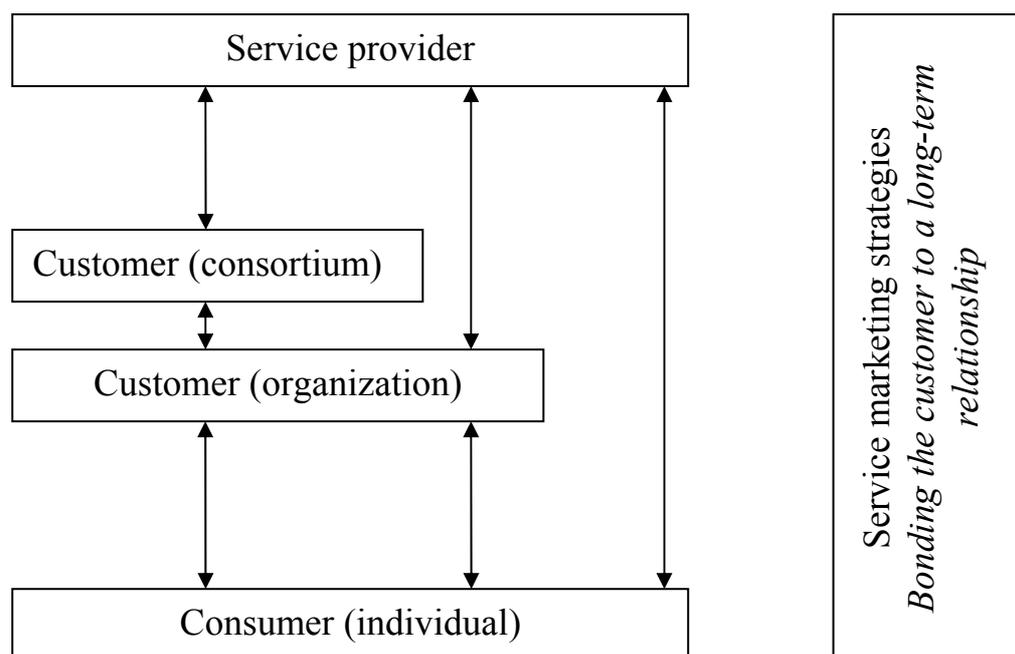


Figure 1. There are market driven relationships between the service providers, the customers and consumers. Here the customer is the organization primarily involved in the purchase and sometimes use of a service whereas the consumer is an individual primarily using (and sometimes buying) the services.

Of course individual organizations may bypass consortia and enter into license agreements by themselves. However, this often supplements consortium agreements which are aimed for very high-demand services whereas access to more specialized digital resources with lower demand can be provided locally. These license negotiations then form relationships between the service provider and the organization. In terms of time these negotiations tend to be short because there usually is little room to bargain.

4. Short-term licenses for long-term relationships

As mentioned in the beginning of this paper, a license does not grant ownership. Instead, it is a lease with a defined term of contract. From the business perspective it is important to be able to continue the business relationship with the existing customers because it is always more costly to obtain new customers. In general, consumer satisfaction is the main driver of sustainable customer relationships. However, it has been proposed that the mere satisfaction as such is not sufficient but there are other factors as well which deal with customer defection (Jones, Mothersbaugh et al. 2000; Arantola 2002). These factors can make it more difficult or costly for consumers to change providers but they can also enhance the willingness to stay in the relationship with the provider. In other words, they are bonds that keep the consumers with the service even if an alternative service offering similar content would emerge in the market.

Arantola has studied bonding in customer relationships in her recent dissertation (Arantola 2002) and she proposes the following definition for bonds in customer relationships:

“Bond is a perception of an actor in a customer relationship of a driver for continuing the relationship. The context of bonds is a relationship, and there can be several bonds in a relationship. Bonds can be negative, neutral or positive.

The combination of bonds constitutes the state of commitment for an actor. In the case of negative commitment a bond/bonds can act as barriers to exit when an actor has an incentive to leave the relationship. When a commitment is positive, there is a will to continue the relationship in the future.”

Arantola divides the bond types into nine categories each of which may include a negative, neutral or positive commitment. Set against these general consumer bonding categories the commitments dealing with licensed information resources may include the following:

- **Economic bond** relates to the monetary agreements and the perceptions thereof. The bond may encourage staying in the relationship even if the customer is tied to the supplier due to relational investments or special pricing, but perceives relationship as beneficial and the situation positive.
- **Legal bond** relates to formal agreements that exist between the supplier and the consumer. The customer may be bound by an agreement that prevents the desired exit. The term of contract in libraries is usually one to three years and there might be sanctions in case of a break of agreement. This type of legal bond typically exists between the customer and the supplier but is rarely extended to consumers.
- **Knowledge bond** has the customer in a learning relationship with the service provider. Sometimes it is perceived too costly and time consuming to teach another provider to deliver the same level of service, even though exit is desired. However, familiarity to the service reduces risk and increases comfort levels, and the customer may hence be motivated to stay in the relationship.
- **Social bonds** are personal relationships with the customers and the contact persons of the service provider. These bonds are formed in all levels, between providers and consortiums, libraries, and individual consumers.
- **Technical bond** is formed when the customer has invested special technology (or knowledge of it) for the use of the service. Familiar technology reduces risk and increases comfort levels, thus making the customer motivated to stay in the relationship.
- **Psychological, emotional, value, cultural, language bond** make the consumer emotionally attached to the provider. The mere fact of having information on the desktop may well appeal to the younger generation. Also, the friends among peers one meets in the communities provided by the service may be valued highly.
- **Time bond** relates to the service hours of delivery. Service breaks and update time-outs may be inconvenient if planned foremost to suit the needs of another continent. Document delivery times may also be important.
- **Structural bond** represents the ability of the provider to offer a value added service that is not available elsewhere. It would be expensive to build a relationship history and reach the service level elsewhere, which prevents desired exit. The prestige name and market penetration of journals is very highly valued among scholars making the core product (i.e. the journal articles) the essence of this bond.
- **Geographical bond** relates to the location of the service provider.

The bonds are formed in the different levels of the product, from the core to the augmented product and they measure the customer satisfaction as well as expectations by perceptions. In order to switch to an alternative the bonds need to be broken. Jones, Mothersbaugh et al. found in their study

concerning the switching barriers that the effect of core-service satisfaction on repurchase intentions was reduced when customers perceived high switching barriers (Jones, Mothersbaugh et al. 2000). They suggest companies should build up various switching barriers in order to keep the customers despite of their lack of satisfaction with the core service offering. They warn, however, that the creation of switching barriers is not successful if the dissatisfaction with the core service is a continuing perception or if customers feel entrapped with the barriers.

5. Pricing and bundling

In consumer service economics the heterogeneity of the buyers generates costs. This is because supply must meet demand at all times and as services are not produced in stock there is a need to stabilize the supply. In other words, one must be prepared to deliver the service even if the demand is incidental. In this respect bundling, the selling of two or more products and/or services in a single package has provided a solution. When the cost structure of services in general is characterized by the high ratio of fixed costs to variable costs and by small marginal costs² (cost of producing an additional unit) the idea of bundling is attractive: it unifies the customer demand and is thus profitable. Typically, the seller may have a monopoly of at least one of the elements of the bundle and the services/products being bundled are independent in demand. Bundling can also be used to attract new customers from competitors and the bundled services may have a complimentary relationship (Gultinan 1987).

Bundling can reduce the need to identify customers if the bundle is to be sold as “one-size-fits-all” bundle where all customers are treated the same price- and service-wise. It may be, however, sometimes more profitable to offer different pricing models to different consumers. For every service/product there are high demand and low demand customers, and there are high value and low value services/products. For high demand (consumers requiring frequent access to service) but low value (customers value for an individual service/product is not necessarily significant) a bundled pricing will bring in more profit than selling the products individually. The low demand, high value consumers are not using the service often but are willing to pay a good price for the individual piece they need at that time (Bakos and Brynjolfsson 1999; Jain and Kannan 2002).

Bundling can be done in different ways. It may be based on a discount price offered in selling two or more separate products as a package but where the two products are not integrated in any way. The products may be integrated into a service and sold as a package (but not necessarily with a discount). Further, the provider may decide to sell the service as one package only and offer no individual purchasing or the service may be sold as one or more packages supplemented with offering individual products for sale separately as well (Stremersch and Tellis 2002).

Consumer and customer behavior can be predicted based on their previous valuations. Customers may reveal information about their valuations via their choices of bundles not forgetting their previous buying behavior. Also, the detailed information regarding individual consumer behavior while using the service brings value at this point. In relation marketing the knowledge of customer (and consumer) behavior is extremely important and detailed information about the customer's service encounters needs to be recorded (Grönroos 1995).

² Fixed costs are costs not directly associated to the amount of being produced, for example the rent of production facilities, heating, capital costs, insurance etc. Variable costs depend on the amount of being produced and they include e.g. raw materials, transportation costs, and taxes. Marginal cost is the variation of costs per produced unit increase.

In marketing literature several studies investigate the cost-effectiveness of product bundling. These studies analyze and demonstrate with calculations under which circumstances it is most profitable to bundle and how to optimize pricing. Not surprisingly, selling information products and services for universities has been singled out as an optimal subject for bundling (Bakos and Brynjolfsson 1999; Jain and Kannan 2002; Stremersch and Tellis 2002).

However, Kotler has predicted that unbundling will become the next trend in service marketing. In terms of electronic journal services this can materialize in the pay-per-view type of approach when articles are offered individually for sale without a subscription. This notion is supported by recent studies: experts responding to the study of Keller believed the access to electronic journals via pay-per-view was to grow rapidly with an estimate that by 2010 roughly 30 % of required articles would be acquired via pay-per-view (Keller 2001). Almost half of the respondents of the study reported by Worlock reported that they had ordered full-text articles on a pay-per-item basis (Worlock 2002).

6. Use of licensed services

Longitudinal studies concerning the use of scholarly electronic resources are scarce due to the fact that the services in question have only been on the market for some years. However, FinELib has organized annual user surveys over the years it has been in existence. The survey results are available (in Finnish) through URL: <http://www.lib.helsinki.fi/finelib/aineistot/index.html>. Selected results from 2000-2002 are compiled in figures 2 and 3 in order to highlight the trend in the use of electronic materials within the Finnish universities.

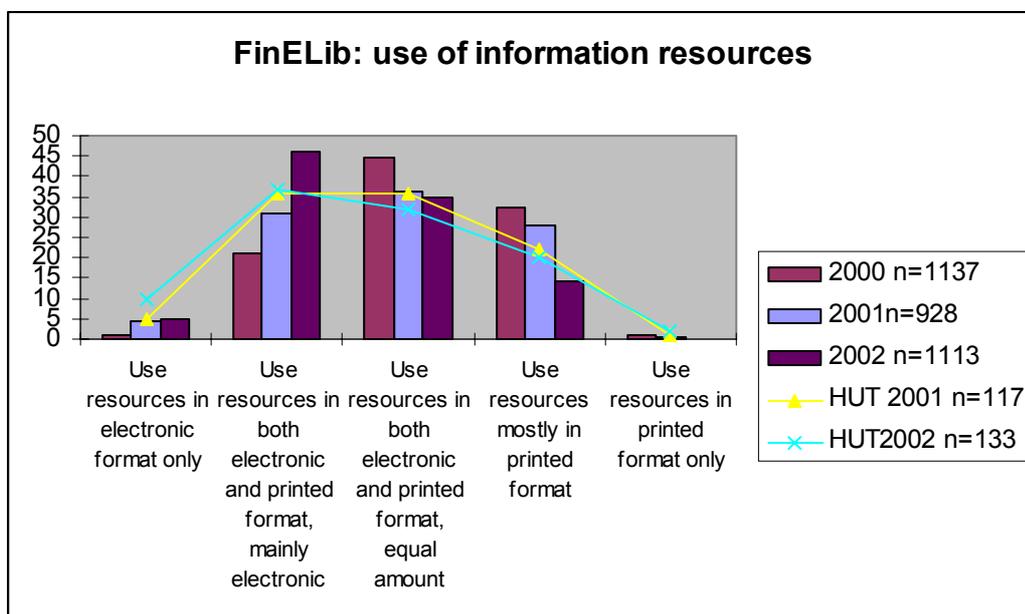


Figure 2. The use of information resources in 2000-2002 as percentage value of different types of use. Responses by all university sector respondents and those from the Helsinki University of Technology (HUT).

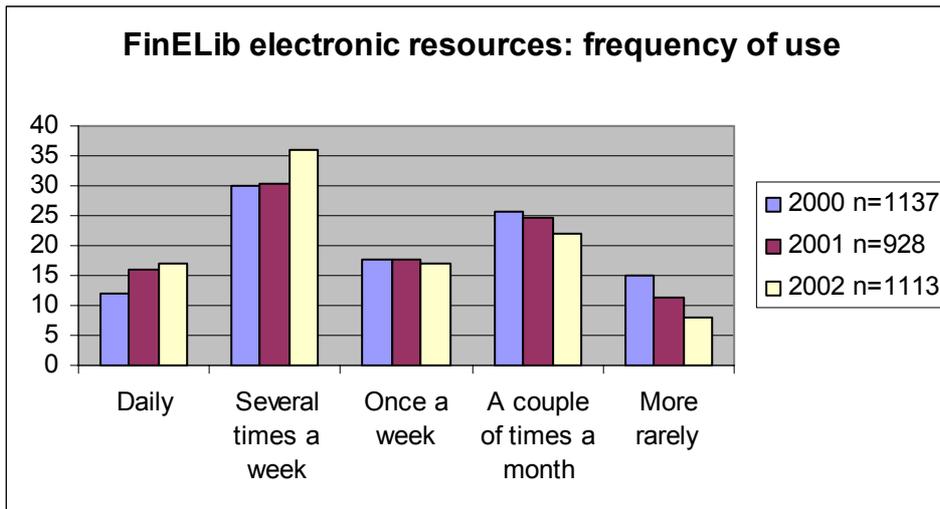


Figure 3. The frequency of use of FinELib electronic resources among the FinELib clientele in 2000-2002 as percentage value. Responses by all university sector respondents.

Regarding the resources there is a steady growth both in terms of frequency of use as well as preferred format and the latter seems to be on the expense of the printed material. In graph 2 the response from HUT illustrates that in certain fields, such as in science and technology, the use of electronic materials is heavier than in universities in general.

The user statistics delivered by the service providers are at the moment quite heterogeneous but there is a clear objective to develop a generally accepted way to measure the usage of online services. In this respect an essential requirement is an agreed international Code of Practice governing the recording and exchange of online usage data. The response from service providers, has been an international project called COUNTER which has developed such a Code of Practice and its first release is available at URL http://www.projectcounter.org/code_practice.html.

Obviously any standard or a code of good practice is always based on something already in existence. Hence the usage of the more recent and/or tentative features of the licensed services (the augmented service) is not listed among these indicators that measure the use of the service. Nevertheless, it is highly important to find ways to assess the user behavior regarding these features, whether it is through service-providers logs or polling the customers/consumers. The service providers are most certainly doing it.

7. Conclusion

While the Open Access movement is still in its infancy the services currently subscribed and licensed continue their development, based partly on the direction the current customer/consumer behavior is pointing. Especially the use of the augmented services are of interest. Firstly, the augmented services are the means to differentiate from others offering similar or equal core services. Secondly, the successful augmented services will soon become expected services and thus they become a part of the core service the customers/consumers require and a new feature will become the augmented service. And thirdly, augmentation always adds costs.

Another interesting question relates to the issue of perpetuity. The licensing principles of libraries emphasize permanent rights to information that has been paid for, including reimbursement if a journal that initially was included in the agreement is subsequently cancelled. One copy of the files

may be preserved by the licensee for archiving and for use in perpetuity (LIBER Licensing Principles for Electronic Information <http://www.kb.dk/guests/intl/liber/news/981116.htm>). Given the nature of services, their tendency of being produced and consumed concurrently this demand of permanency can only be applied to the core product of the service. The individual journal articles – not necessarily bundled into journal issues – are the most stable feature of the licensed services.

The relationships which are formed between the customer/consumer and the service provider are also extremely important. In certain circumstances the consumer perceived total service quality may well over-ride that of the customer perceived economic/legal quality. In such a case the switch to another service provider may become very difficult even if substantial economic benefits would be in sight.

Finally, the dependency on access to online services is certainly going to grow. The libraries will no doubt continue to license these services but evidently they will face the dilemma of growing consumer expectations towards the services. There will be a variety of differentiated services on the market and thus an increased freedom in pricing. No doubt the selling of online scholarly services will resemble the selling of any other services. In this respect the future library professions may well include a specialist in purchasing, the requirements of which include³: *a specialist in economics supplemented with good accounting, IT and negotiating skills and an ability to make swift decisions of one's own. Knowledge of (e-)commerce is essential and requires good language skills. Business in general requires a focused and target-oriented attitude and skills in bargaining, as well as in compromising. Social skills are required in the acquisition and maintenance of trade relations at large. The responsibilities related to the extensive amount of money involved and to the reliability of the delivery of the service may cause stress.*

References

- Arantola, H. (2002). Relationship drivers in provider - consumer relationships. Empirical studies of customer loyalty programs. Helsingfors, Svenska handelshögskolan.
- Bakos, Y. and E. Brynjolfsson (1999). "Bundling information goods: Pricing, profits, and efficiency." Management Science **45**(12): 1613-1630.
- Grönroos, C. (1990). Service management and marketing managing the moments of truth in service competition, Lexington Books.
- Grönroos, C. (1995). The rebirth of modern marketing six propositions about relationship marketing. Helsingfors, Svenska handelshögskolan.
- Guiltinan, J. P. (1987). "The Price Bundling of Services - a Normative Framework." Journal of Marketing **51**(2): 74-85.
- Jain, S. and P. K. Kannan (2002). "Pricing of information products on online servers: Issues, models, and analysis." Management Science **48**(9): 1123-1142.
- Jones, M. A., D. L. Mothersbaugh, et al. (2000). "Switching barriers and repurchase intentions in services." Journal of Retailing **76**(2): 259-274.
- Keller, A. (2001). "Delphi Survey on the Future Development of Electronic Journals." Serials **14**(2): 121-128.
- Kotler, P. (2003). Marketing management. Upper Saddle River (NJ), Pearson Education.
- Oppenheim, C. (2001). The legal and regulatory environment for electronic information. Tetbury, UK, Infonortics.
- Rifkin, J. (2000). The Age of Access. How the shift from ownership to access is transforming modern life., Penguin Books.

³ The descriptions and the respective requirements of professions. The educational and vocational information services provided by the Finnish Ministry of Labor <http://www.mol.fi/webammatti.cgi>

- Rowley, J. (2002). "Information marketing in a digital world." Library Hi Tech **20**(3): 352 - 358.
- Stremersch, S. and G. J. Tellis (2002). "Strategic bundling of products and prices: A new synthesis for marketing." Journal of Marketing **66**(1): 55-72.
- Worlock, K. (2002). "Electronic journals: user realities - the truth about content usage among the STM community." Learned Publishing **15**(3): 223-226.