

A CASE STUDY IN E-JOURNAL DEVELOPMENTS: THE SCANDINAVIAN POSITION

Harald Joa

Paper presented at the Third European Serials Conference, Ireland, September 1996

A short overview of the current situation in Scandinavia is given with regard to peer-reviewed scientific and scholarly electronic journals. The emphasis is on a publisher's point of view, trying to take into account the needs of the market, and the challenges and dilemmas facing publishers when electronic publishing is part of their strategy and publishing programme.

*Harald Joa is New Media and Marketing Director of Scandinavian University Press, PO Box 2959, Toyen, N-0608 Oslo, Norway
hjo@scup.no*

Scandinavian University Press

Scandinavian University Press is one of the largest publishers of non-fiction in Scandinavia; we publish academic books and textbooks as well as academic and professional journals. In fact, we are the third largest university press in the world, after Oxford and Cambridge. Our head office is in Oslo, Norway, with editorial branch offices in Stockholm and Copenhagen, and we have offices in Oxford and Boston. However, we treat Scandinavia as our home market.

To give you an impression of the size of our operation, this year Scandinavian University Press will publish 500 new and revised book titles. The journals programme comprises 110 different journals, of which 65 are in English. We publish journals in several areas, mainly within medicine, social sciences and humanities. We also publish a few specialised magazines, for example covering sports and music and - naturally - the oil industry.

The Press publishes several CD-ROMs, mainly for the Norwegian and Scandinavian markets. So far, we are online with one electronic journal: the *Nordic Journal of Philosophical Logic*; I will go into detail about this later on. We have been on the Internet since early 1995. You can learn more about the Press by visiting our homepage on the world wide web (<http://www.scup.no>). Currently, these pages have between 35,000 and 40,000 visitors monthly.

Scandinavia

To give a few introductory words about Scandinavia, in Scandinavia, or the Nordic countries - Denmark, Finland, Iceland, Norway and Sweden - there are altogether approximately 24 million people. These five countries have their specific characteristics, but there are certainly more similarities than differences. Most Scandinavians can communicate with each other in their native tongue and, apart from some of the Finns, the

language barriers are minimal, especially on the academic level. The Scandinavian countries are well known for their high-quality education and have well-developed welfare and social security programmes.

English is a second language for most people, and in the on-going internationalisation of research and science, many scientists publish their work in English. In fact, approximately 80% of Norwegian scientists work in fields where approximately 80% of the findings are published in English, and 80% of these are published in non-Norwegian scientific publications.

Our academics and librarians are very familiar with the Internet and international databases and are active players in international academic and publishing. The level of computerisation is relatively high. In Norway, for instance, the four million inhabitants have access to some 1.4 million PCs. This year the computer industry expects to push another 400,000 units onto the market. The situation in the other Scandinavian countries is more or less the same.

The journals market

In Scandinavia there are two key players within journal publishing: the Munksgaard company, based in Copenhagen, and Scandinavian University Press. We are both competitors and friends, and in preparing this presentation of a Scandinavian perspective on electronic publishing, it was natural for me to talk to my colleague in Copenhagen, Mr Anders Geertsen. I will return to Munksgaard's activities and experiences later on.

E-journals in Scandinavia

If you wanted to get an overview of electronic journals in Scandinavia, you could start by visiting the Internet pages of The Norwegian National Library. At present there are 356 different Norwegian titles available. The VTT Information Service at the Technical University of Finland presents a collection of 69 academic online titles in Scandinavian languages on their homepage.

When you look more closely at these listings, you see that most of the titles are actually on the

borderline of what I would define as an electronic journal. The Norwegian listing is a collection of almost everything that is published online: newspapers, magazines, newsletters, profile magazines for universities, and so forth. Only three of the journals are updated on a continuous basis. The VTT listing of academic titles shows a similar pattern: very few peer-reviewed academic publications that are electronically available. Another characteristic is that most of them are free of charge.

So far we may conclude that there is a great deal of activity on the 'net' in Scandinavia, but very little in the area of academic production and publishing. The listings I have mentioned are really in need of revision and editing by a professional information specialist - a librarian or an information resource specialist. In addition to an online search, it would be natural to talk to Scandinavian librarians about which electronic journals they have discovered are being used. It seems that, so far, there is great interest, much discussion, and a lot of concern and uncertainty as to how one may enter the world of electronic journals on a more permanent basis. But there are libraries that have made initiatives into this new way of information dissemination.

At the Karolinska Institute in Sweden they have set up The Medical Information Centre, and they call it "a national centre for computerised biomedical information services" (<http://www.mic.ki.se>). This is a collection of online information services, special resources, links to external resources and sites of biomedical interest.

On the homepage of The Royal Library in Copenhagen (<http://www.kb.dk/index-en.htm>) there is a list of different online material that is available, including a listing of CD-ROMs and online databases, electronic books and periodicals, and links to useful sites on the World Wide Web.

The homepage of the Norwegian School of Management's Library and Information Resources (<http://www.bi.no/library.htm>) has links to *Encyclopaedia Britannica*, FirstSearch, news from the National News Bureau, the national bibliographic database Bibsys, Uncover, and a listing of different CD-ROMs,

just to mention some of the online information available.

A very comprehensive service has been built up at the Technical Library of Denmark (<http://www.dtv.dk>). On this server the users have access to 200 electronic journals, in addition to access to the table of contents of more than 3,000 journals. There are advanced search tools and the information resources are very well organised. This site is worth a visit for those of you who 'surf the net'.

Perhaps the most dramatic changes have taken place at the US Information Service in Copenhagen (<http://www.usis.dk/usis/>). As a consequence of electronic availability of journals and newspapers, the librarian has cancelled 100 paper titles and has gained access to 800 electronic titles. The philosophy is 'just in time' instead of 'just in case'. The librarian, Karen Kirk Sørensen, claims that there are both pros and cons, but the growth in the collection is significant!

What we have done as an academic publisher in this area

At Scandinavian University Press electronic journals and discussions about electronic publishing are on the agenda every single day and are becoming more and more important. For the last few years we have taken particular care to keep up with the electronic trends and developments in the journals market; we discuss this with our colleagues in publishing and with the other important players in the market - the academics and the librarians. We are negotiating and collaborating with several companies and organisations. We believe that 1997 will be the year when we will be 'going live' with several electronic journals. During 1995 and 1996 we have mainly carried out tests and experiments. As mentioned earlier, however, we also launched our first electronic journal in May this year: the *Nordic Journal of Philosophical Logic*.

The Scandinavian Family Therapy Journal

One of our test projects involved converting two issues of the *Scandinavian Family Therapy Journal* to HTML (HyperText Markup Language) and Acrobat PDF (Portable Document Format)

formats. The journal, which is published in Scandinavian languages, was made available free of charge on the World Wide Web (<http://www.scup.no/journals/fokus/fokus.html>). The pilot project was carried out in co-operation with VTT Information Service in Finland.

The idea of having the pilot journal in two electronic formats was to test whether the users regard page fidelity as an important factor; should the electronic version preserve the look and feel of the original publication? Another aim was to detect the readers' opinions of how an electronic journal should be developed.

Another important aspect of this pilot project was to gain hands-on experience with electronic publishing and to see how the different areas of our Journals Department could handle a project like this. We have learned a great deal and we are now in a much better position to see what training our staff need and the organisational changes we must make as a consequence of making journals electronically available in the market. As Sandra M Whisler at the University of California Press states: "The publishers' task is to prepare their staff and their organisations to live in constant change during these transitional years".¹

The opinions of the online readers of the *Scandinavian Family Therapy Journal* were surveyed by a questionnaire placed on the same Web page as the journal issue. Unfortunately, the response was low; it seems that the core readers of the journal are not yet very active Internet users. This is, of course, also a reflection of the general difficulty of getting information and feedback. A few interesting findings may be worth consideration. Readers seem to be willing to pay 20% above the regular subscription price to gain access to the online version. They also seem to prefer the HTML version; that may be because the Acrobat PDF is rather time-consuming in the downloading process. These findings must be taken with a pinch of salt, as the number of respondents was rather low.

One of the end-results of the project is that practical recommendations about how to write HTML documents were composed. For those of you who are interested, this is available at <http://www.vtt.fi/inf/nordep/projects/webpilot/cookbook/>.

The Nordic Journal of Philosophical Logic

In 1995 we were approached by three young academics from the University of Oslo, who were in the process of launching a new electronic journal called *Nordic Journal of Philosophical Logic* (<http://www.hf.uio.no/filosofi/njpl/>). They wanted us to be the publisher of the paper version, while they would take care of the electronic version themselves.

In this situation we were confronted by the new generation of academics who are used to, and exploit, the full potential of the new electronic media. In several meetings we presented to the students the full range of services, support and value-adding work the publisher can offer. A successful collaboration emerged, and in May 1996 we launched the first issue of the journal both in paper and electronically on the World Wide Web. The University of Oslo and the National Research Council entered into the project with active support. This is thus also an example of how the scientific community can become involved in these new ways of communicating scientific results.

We developed electronic format guidelines for authors, indicating the requirements for articles to be published in the journal. The journal is typeset using LaTeX, as this provides a convenient way of producing the many special characters within the closely-related fields of mathematics, computer science and logic. It is also easy to produce both prints and hypertext documents for the World Wide Web, based on LaTeX's ability to produce Postscript files. Authors who are not familiar with LaTeX may submit plain text files or RTF (Rich Text Format). The Internet is used not only for publishing but, naturally, also for submission of articles, and the peer-review process.

The journal will be freely available on the World Wide Web for two years, but users have to register to access the articles. The intention is also to make the journal a living site with discussion groups, links to related sites, etc. We look forward to the continuous evaluation of this project, as we believe will it give important user-behaviour information in the new market

for scholarly communication. So far approximately 3,000 people have visited this very specialised journal. When the period of free access comes to a close, we will evaluate the level of pricing we may introduce.

The Norwegian Health Network

Medicine and health constitute one of the fastest growing fields on the Internet. We see an enormous increase in the services offered both to the general public and to health-care professionals. We are partners in a project named The Norwegian Health Network. The idea is to produce a twofold concept: one for the general public and one for health-care professionals. This service will present a collection of information providers, service organisations, pharmaceutical companies and many other parties that have an interest in meeting and serving the health-care community. This is a very good example of regional initiatives, because differences in medical legislation make it difficult to have an international perspective. As publishers, we see this as another opportunity for dissemination of journal articles and book promotion.

Multimedia questionnaire

In addition to testing and evaluating online journals, we have also carried out a multimedia study in collaboration with Oxford University Press. We have sent out a questionnaire to the individual subscribers of two of our journals. These are journals published for learned societies. The focus of the study is to determine how the researcher identifies information today, and how he/she evaluates the different new ways and media for information identification. The study was initiated in May this year, and we are currently collating the answers that we received from the subscribers.

International electronic publishing

As you will have realised by now, activity in Scandinavia with regard to academic electronic journals in the Scandinavian languages is relatively low or preliminary, both on the publishing and the library side. When it comes

to our international English language journals, however, there is much more activity. Like most other international publishers we are participating, negotiating and talking with old and new players in the field: ADONIS, ISI, OCLC, RedSage, BioMedNet, CatchWord, BIDS/STeamLine, Ideal and SuperJournal, just to mention some of the many different projects and services that exist.

ISI Electronic Library Project

We are participating in the Institute for Scientific Information's Electronic Library Project which I am sure many of you are quite familiar with. ISI is trying to persuade 350 publishers of 1350 journals in Current Contents/Life Sciences to take part. So far, I believe 500-600 journals are participating. Ten sites - universities and companies in the US and UK - have been chosen to make the journals available to the users on their sites, in local area networks. It is up to the different sites to choose the core journals to be digitised. The rest will be available on a document delivery basis.

After long discussions, we worked out a price and access model for unlimited viewing which essentially means subscribers pay the same whether or not they take the print version. Thus, if they already subscribe to the print version, there is a supplementary charge of 20%; if not, they pay a fee which is 120% of the print subscription price.

There is no extra charge for printing up to ten printouts per issue. Above that figure there is a charge, but the cost per copy decreases as the number of copies increases. For document delivery there is a discount of 25% for the electronic subscriber.

IBM developed the software. The project is now up and running; as we speak there are no definite user data to report, but there is a lot of activity, especially at Purdue University in Indiana.

The aim of the project is to test user behaviour. For instance, how do they use the electronic access? How many printouts are produced? Does the price model work? Is the technical solution appropriate?

One-stop shops

As publishers we realise that one of the keys to success for electronic journals is that the users can easily access a comprehensive collection of quality journals from many different publishers within their field of interest. We believe that in the end the users are in favour of the one-stop shop concept. If every single publisher creates its own database, these have to be linked together in MedLine, Current Contents etc. We believe there will be several shops that present journals collections to large user groups.

Thus, one possible scenario for us might be

- journals for the libraries: ISI, OCLC, CatchWord, ADONIS etc;
- journals direct for academics: BioMedNet, ChemWeb and other dedicated services, in addition to;
- our own publisher's database.

On our way towards this scenario we have read innumerable pages of proposals, studied endless suggestions for formal agreements, and evaluated very many different concepts, and we have discussed them internally as well as with competitors, STM (scientific, technical, medical) colleagues and several secondary publishers. There is a lot of activity around, involving three main interest groups:

- librarians working within the digital library;
- secondary publishers and agents trying to build electronic collections;
- publishers figuring out the best ways to publish electronically.

I believe we all share the same vision, and I am convinced that one of the solutions will be a number of one-stop shops that satisfy the needs and requirements for specific user groups.

Evolution, not revolution

We are all familiar with the current situation in the journals business, such as the decrease in institutional journal subscriptions, the discussions about price increases, library budgets, copyright, fair use, interlibrary lending and document delivery. At the same time, there is a strong focus on digital communication and the use of networks, both locally and on the

Internet. We believe that many scientists, editors, authors - the whole range of academia - would prefer to print out articles at their own desks. We are also familiar with the fact that they use different databases to trace information and, in addition, enter different full-text databases.

Charles Clark of the International Publishers Copyright Council, put it thus: "The possibilities inherent in the merger of the most advanced technologies from three different industries: cable, computer and telephone are revolutionary....If you add the impact of multimedia CDs and the Internet and its successor networks, the sheer scale of deliverability is revolutionary".²

Our aim must be to enter scientific journals into this evolving system in a way that ensures the future of scholarly communication. We believe that academics will continue to send their best works to quality journals based on peer review and that the readers of these journals know that the articles have been through a great deal of value-adding, corrections and modifications before they reach their desk. As a publisher we will continue to develop our products and services to this very quality-conscious community.

I think Pieter Bolman, President of Academic Press, is correct when stating: "In science publishing, however, we are continuing to build on foundations constructed in the past and are dependent on them: A clean break, without taking care of building bridges from the old to the new, could lead to discontinuities and mismatches in the fabric of scientific literature that could be very difficult to remedy, if allowed to fester".³

Copyright - site licensing

Copyright is also a key issue in the new electronic environment. Publishers want authors to be empowered appropriately by copyright laws for digital work - that he/she can license the publisher appropriately. We want the sole right to digital work to rest with the copyright holder. We are all taking part in the discussions around the European

Community's Green Paper and the American White Paper that will regulate this.

The budget situation for libraries is serious. Perhaps site licensing can be a new way to solve some of our common problems in the future. To cite Charles Clark: "Site licences permitting use of works within an agreed site, eg: a college, a university or a consortium of universities where the user wishes to make many different uses of a work eg: photocopying, inclusions in course packs, loading onto a local area network in return for a fee which seeks to reflect the volume and the value of these uses.The wicked circle of increased prices and the decline in library subscriptions has to be broken. Publishers feel that interlibrary loan both in paper and electronically and so called resource sharing among libraries undermine the financial basis for publishing on a long term basis".²

René Olivieri, Managing Director of Blackwell Publishers, gave a very interesting paper on site licences at the 19th UK Serials Group Annual Conference in April this year. He talked about a UK pilot site licence initiative sponsored by the Higher Education Funding Council of England (HEFCE). He calls site licence "a clever way of buying in bulk and getting around the worst limitations of copyright. Site licences operate by pushing down the average unit price of information to the consumer and increasing usage. Maybe this is the way out of the current deadlock, a way of getting the average cost of use down and giving the customer much better value for money".⁴ We really look forward to the results of the HEFCE licence scheme. Our aim must be to enter our scientific journals into this evolving system in a way that ensures the future of scholarly communication.

Site licensing could also be considered a strategic partnership, an aspect that Sandra Whisler makes herself a spokesperson in favour of, when she says, "The strategic partnerships that publishers are undertaking with libraries, scholarly societies and with one another will, I believe, greatly enrich the whole art of publishing, beyond the success or failure of specific projects. Collaborating closely with individuals representing key markets can only

The technical side of electronic journals

It is difficult to make a presentation of electronic journals without touching on the technical aspects. I am certainly not an expert in this field, but with the help of colleagues and the partners we communicate with, I will take a look at the tip of the iceberg.

To provide optimal flexibility and re-usability, we decided to use SGML (Standard Generalised Markup Language) as an exchange format. Although SGML's functionality is well known, it is not magic and is not even easy to produce. To facilitate the production of SGML files, we have put a lot of work into the development of text-editing tools, such as styles, for authors and copy editors.

It is, however, evident that most typesetters are not at all prepared for SGML, nor do they necessarily use the appropriate software. The fact that data in the Document Type Definition (DTD) is organised differently from data on paper has also been a problem. To put it bluntly, the process has so far not gone as smoothly and quickly as we expected. The fact that many different journal DTDs exist has forced us to develop high internal skills for programming and conversion problems. Different electronic publishing services have different DTDs to suit their systems, and it is obvious to us that pre-processing will be one of our main technical tasks in the future.

Although most electronic publishing systems do support SGML for the header information, many of them require the article body to be delivered in Adobe's Acrobat PDF, a de facto industry standard for storing documents in a binary format. This format is easy to produce but is made from PostScript files and is therefore a page-based approach with less flexibility than the SGML solution.

Because different publishing systems require different technical solutions, we now have to store our files in both PDF and SGML and deal with different DTDs and pre-processing routines. We hope that, sometime in the future, one standard format will emerge, as well as better tools for editing, production and display of electronic journals.

Munksgaard

As promised, I will give a short description of the electronic activities of the other major Scandinavian publisher, Munksgaard of Copenhagen.

In a rather dramatic headline of an article in the news magazine *Børsen* one can read, "The Internet threatens Danish publishing house".⁵ In the introduction the journalist Kim Schauman states that Munksgaard is forced to publish gratis on the Internet. The users are happy. But copyright and profit are threatened. As very often is the case in newspapers, the title does not give the correct impression of the content. Having read the article and spoken with Anders Geertsen, who is responsible for electronic publishing activities at Munksgaard, it is safe to say that they are doing more or less the same as us.

Munksgaard have presented one online journal, *First Monday* (<http://www.firstmonday.dk/>). This is a journal about the different aspects of the Internet. This is only available online, and they have launched it to gain experience in electronic publishing, including the economic issues, technical issues, production processes and user behaviour.

For the printed journals they work with more or less the same partners as mentioned earlier - Ovid, ISI, OCLC and BioMedNet. They are trying, as we are, to identify the pros and cons within the different projects. They are positioning themselves and also indicate that 1997 will be the year when they 'go live' with a number of electronic journals.

Summary

I will end this paper by trying to summarise the Scandinavian University Press experiences within the field of electronic publishing.

- Still more questions than answers remain; we are at the very beginning of a new era in publishing, but we believe in evolution - not revolution.
- We are testing and entering into non-exclusive agreements and arrangements with a number of players.
- We realise that there will be many changes, players will leave and new ones will arrive,

but it is in the market place, with the end users, that the decisions of the electronic future will be made.

- We are convinced that close collaboration among authors, the academic community, the library community, subscription agents, secondary publishers and publishers is the key to a new and successful electronic future. Public authorities may also increasingly enter into this collaboration.
- It is difficult, or even impossible, to talk about the Scandinavian market as a separate unit. As an STM publisher of international academic serials, we have to have an international perspective on electronic publishing. In the words of Mr. Bolman of Academic Press: "Science is a truly international endeavour and the scientific community forms one of the few

true international markets currently in existence".³

References

1. Whisler, S.M., Electronic publishing and the indispensability of publishers, *LOGOS*, 1996, 7 (1) 120-126
2. Clark, C., The Copyright Environment for the Publisher in the Digital World, IPCC, 6th updated version, March 1996
3. Bolman, P. S. H., Journals face the electronic future, *LOGOS*, 1996, 7 (1) 86-92
4. Olivieri, R., Site Licences: a new economic paradigm, *Serials*, 1996, 9, (2) 137-142
5. Schaumann, K., Internett indhenter dansk forlag, *Børsens Nyhedsmagasinet*, 1996, Nr. 14, September 6