Online information services: present plans and future projects. The "Pergamon InfoLine view"

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THE PERGAMON INFOLINE VIEW

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Introduction
Good morning, ladies and gentlemen. We are in the middle of a revolution. A revolution in the way information is created, stored and disseminated. A revolution which will have a profound impact on your profession. The revolution is new technology.

In this short paper, I want to tell you a little about what is happening in new technology. Let me immediately put your mind at rest on one point. It amused me to see that the concern of two of the referees of this paper. One said "This will be something of a sales talk." The other said "This looks like advertising dressed up as a paper." It is clear that neither referee knows me. Charles Oppenheim is not in the business of giving sales talks, and this will not be one. Whilst we are on the subject, let me make it clear that the views I express are personal, and do not necessarily represent the views of Pergamon InfoLine, my employers.

Online hosts
The last ten years has seen a dramatic growth in the use of online information retrieval. It has also witnessed a dramatic growth in the numbers of databases available online, and the numbers of host computer services has grown in a similarly dramatic fashion. Essentially, there are two types of host computers service - the so-called 'supermarket' host and the so-called 'boutique' host. A 'supermarket' host, such as DIALOG, SDC, and ESA-IRS, attempts to cover as many subject areas as possible. Subjects as diverse as science, technology, social sciences and humanities will be covered, and few subjects will be overlooked. Supermarket hosts are characterised by having a large number of databases available - typically in the range 50 - 200, and a stress on the breadth of services and cleverness of the software. It is common to find two or more directly competing databases on the same supermarket host.

Pergamon InfoLine is a typical boutique host. Instead of trying to cover all subjects, a boutique host chooses to specialise in a few particular subjects. In general, it offers complementary databases rather than competing ones, and the stress is on in-depth information. Boutique hosts have typically less than 20 databases online. Pergamon InfoLine is unusual in having as many as 50.
There are pros and cons for supermarkets and boutiques from the point of view of both database producer AND the searcher. Let us look at some of them:

Let us imagine you are a manufacturer of chocolate, and you want to sell your chocolate. You have essentially three choices - go to a supermarket chain, such as Tesco's; go to a specialist shop, such as sweet shops; and set up your own chain of chocolate shops. Of course, you can follow more than one route. If you go to the supermarket, you get the advantage of a large volume of casual customers, but the disadvantage that your product gets placed where the supermarket manager chooses to place it, the manager pays no special attention to your product and adopts a 'take it or leave it' approach to you. The staff have no special knowledge of chocolates, and a direct competitor product may be next to yours. Also, the supermarket will make no effort to advertise your chocolates - it is up to you to push them yourself.

If you offer it to sweet shops, you know that there will be fewer customers, but those that come in will be looking for goods like yours. The staff will give your product a higher profile and will be more knowledgeable on chocolate. They may even advertise your particular product.

If you set up your own shop, of course you retain all the control, but have the problems of setting up the shops and managing them.

I hope you will appreciate that you can substitute "database producer" for "chocolate manufacturer" and the analogy is complete.

The analogy holds for the customer, too. The supermarket offers convenience and a large range of goods, but lacks individual attention or knowledge. The specialist shop is less convenient to visit, and if you have a lot of shopping to do it means a lot of foot slogging.

**Impact of new technology**

The online database business is very young. InfoLine started in 1977, and is one of the longest-established hosts. Few databases have been available online for more than ten years. Yet they have become a permanent and important part of the information business. Will they continue to do so in the future? You can expect major changes in technology in the near future - in particular in the areas of more powerful microcomputers, the advent of expert systems, both on host computer services as well as on local microcomputers. Also, expect novel information storage devices such as compact discs and digital optical discs, and even more efficient telecommunications systems based on satellites and cable, so that data will be transmitted even faster, with no errors, and diagrams can be sent to you just as fast as text.
I foresee that this will lead to greater use of in-house systems. Librarians will search compact and digital optical discs with fast and powerful microcomputers. They will particularly use such systems for information which is static, e.g. encyclopedia and directory type information, for information needing sophisticated graphics, for example involving photos, moving pictures and so on, and for backfiles of heavily used databases such as Chemical Abstracts.

Online will continue to be used for fast-moving information and for searching databases not used that often. For such cases, expert systems will help the searcher formulate the search correctly and will advise the searcher on search terms. User-friendly software - and current systems are most certainly not user-friendly - will take the searcher gently by the hand, will identify obvious typing and spelling errors and correct them, and will use the same simple search language irrespective of which host is being used. In addition, hosts will be interconnected by gateways, so you will be able to switch from host to host with the minimum of effort - or perhaps, without you even being aware of the switch.

Pricing of online will change. There will be far less emphasis on connect hour charging, and far more on display and print charging. I could foresee in five years' time a typical database costing $50 per hour to search - no more than today, despite inflation - but costing $10 for each item output. Do not just think of output as items displayed online or printed offline. There would be other output formats, too. Typically, people would ask for output on floppy disc or magnetic tape as well. This pricing policy makes sense. Returning to our supermarket customer, surely he should be charged for the value of the goods he takes out, NOT for how long he spent browsing in the shop?

InfoLine as a typesetter
In one regard, InfoLine is unusual as a host. We are not just an online host, but we are also heavily into computer typesetting and database maintenance. We regard information as a commodity to be manipulated in a variety of forms, rather than being a print product with an online spin-off.

Our database maintenance services offer a database producer data capture, data validation, thesaurus control, updating of records and so on. The resulting database may be mounted online on InfoLine, but certainly does not have to be. The database owner, of course, carries on with editorial control, the actual scanning of the literature and so on. Data capture can be by microcomputer, word processor or directly online to the InfoLine computer.

The resulting database can be loaded online, or one can generate microform output, drive a laser printer, typeset the material or output onto floppy disc. We see information as a product to be packaged in many ways.
InfoLine carries out computer typesetting from a database, or it will typeset from other sources. InfoLine particularly likes to win a contract to both offer a database online AND to computer typeset. However, many publications are not suitable for online access, and some online databases have no printed equivalents.

In my view, printed publications will continue for a long time. The age of the paperless society is a long way off. I find the arguments in favour of the electronic journal dubious because they totally ignore the wishes of human beings to read print on paper. I therefore have no doubt that the printed journal as we know it will continue long into the future.

Summing up
So where do all these developments leave you, the University Librarians? You will still be handling a lot of print publications, but the trend will be steadily towards electronic information sources. You will be under increased budgetary pressures as the price of online increases. You will find many of your traditional tasks taken by expert systems. I am not just referring to the simple online search, but also a whole variety of routine and clerical tasks, such as journal subscriptions, book ordering and chasing, inter-library loans, recall and discharge of books - and perhaps even cataloguing and classification - taken over by expert systems. Organisations such as IATUL should be monitoring these developments and making recommendations to its members.

InfoLine plays a small part in the University Librarian's life at the moment. I think this will change. We are experimenting with compact discs, with downloading onto floppy discs and magnetic tape, with gateways to other hosts, with user-friendly menus and with pseudo-expert systems. I am sure you will be using us more in the years to come.