Tailored Information Please . . . On the Spot!

Leo Waaijers
Delft University of Technology


This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.
TAILORED INFORMATION PLEASE ... ON THE SPOT!

Leo Waaijers
Delft University of Technology
Delft, The Netherlands

INTRODUCTION

The market place for information is emerging. This is a market that is developing at a rapid pace and where the traditional partners, i.e. publishers and libraries, have been joined by other groups such as online vendors and information brokers. The factors that stimulate this market are well known. On the one hand we have developments in technology that have not only eroded the barriers of time and distance in the area of information delivery, but have also made possible combinations and choices that were hitherto unworkable. On the other hand there is the information economy, i.e. the recognition that information, just like land, capital and labor is a fundamental resource. As a consequence, the focal point of a library is no longer its own collection, but rather the service it provides to its customers.

In order to satisfy its direct users the Library has decided, for the time being, to give document delivery priority over its other services and activities. The slogan: "Tailored information please ... on the spot!" provides the yardstick for this policy.

The first aspect then to be looked at is the speed of delivery. Although, with a delivery time of four to five days, the Library is relatively performing quite well, we are convinced that with the help of modern technical aids this time can be substantially reduced. The first steps along this path have already been taken.

The second question concerns the fact that only 85% of requests for copies of articles and 50% of requests for books can be met from the Library's own collection. To substantially increase the size of the collection would, as for most libraries, wreak havoc with the budget. The solution must therefore lie in intensive cooperation with other document suppliers.

I would now like to expand on both the factors of speed of delivery and cooperation.

Speed of delivery has received attention since, in March 1989, the Library started a rush line service with the help of facsimile equipment. Anyone placing an order in the morning can receive the document requested by fax on the same day. Technically speaking this development is, of course, no longer spectacularly innovative. However, it doesn't hurt to emphasize, particularly in the context of a library conference, that it is not always the available technology that proves to be the decisive factor. Acceptance by staff and the organization of internal procedures and logistics are often just as important when it comes to introducing improvements to a system. In this case the issue at hand meant that as soon as a rush order came in, the staff had to interrupt their normal work routine and give absolute priority to processing the request. This would not be a unique situation, but something that would arise on a day to day basis. To date the rush line service has been a success. Suppling a document by fax is not cheap; it costs Dfl. 2.50 (approximately $1.25 according to this morning's rate of exchange) per page in the Netherlands - but the gradually increasing demand now stands at 7,000 requests per year. The rush line service not only reduces the mailing time of the article, but also means a quicker processing time right from the moment the request is handed in to the Library. Rush line requests are usually submitted to the Library by fax or telephone, which gives further reduction of the turn around time.
Once the Library had achieved this breakthrough, it turned its attention to the preparation of the request, i.e. the completion of a form, be it paper or E-mail, with all the mundane details concerning the document requested, the mail address, the invoice address etc. In the case of books, the obstacle could easily be overcome by offering "long-distance" users terminals that give access to the circulation module of the University Library system AUBID. Companies and research institutes are, however, primarily interested in obtaining copies of journal articles, but the circulation module of AUBID is not equipped to process such orders. In September 1989 therefore an external computer consultant was engaged to develop a separate ordering module that could use the output from a search in the catalogue as direct input for an electronic order form. This product became available in May 1990 under the name "AUBID Direct", spread throughout the country and abroad, and to date we have 45 subscribers. Its use requires a PC with modem and communications software; Crosstalk. In actual practice it means that as soon as the user has traced in the library catalogue the journal that contains "his" article, he only has to type the name of the author and the page numbers of the article and tick the box for the preferred way of delivery: fax, post, or, if necessary, by courier. His name, address and the full bibliographical details of the journal are added and transmitted automatically. Apropos, even his deposit account is debited automatically.

In investigating the generating of a request, we still come across a missing link in the case of a customer who is interested in state of the art information on a specific subject. In that case he starts with a search in one of the appropriate databases that are available on CD-Rom or through hosts like Dialog, ESA, STN, etc. The hits resulting from such a search then need to be printed and later typed once again to serve as input for AUBID Direct. This problem was scheduled to be dealt with during the development of the B-version of AUBID Direct. The idea was to match the hits of a search automatically against the collection of the DUTL and, in case of a positive result, to use the bibliographic data automatically as input for AUBID Direct.

As has often happened in the past, identical ideas have been born in more than one place at the same time. In October 1989, Engineering Information Inc. of New York, producer of the well known Compendex database, announced the arrival of the EI Reference Desk: "Running under the Microsoft Windows environment, the EI Reference Desk provides online access, offline CD-Rom searching, access to EI's own Table of Content service and the ability to capture orders for full text documents from any of these three sources. EI is then able to receive and fulfill those orders in a variety of ways." If we take the phrase "EI Table of Content" out of this quotation and replace it with "DUTL's catalogue" the resulting text is an exact description of the product that could succeed AUBID Direct.

So, we didn't re-invent the wheel. Instead, one year later, in October 1990, the Library started as one of three European test sites for the EI Reference Desk, the two others are the libraries of the Royal Technological Institute of Stockholm, Sweden, and of the University of Technology in Loughborough, UK. To date there are still some teething troubles. The timetable indicates that shipping will be in January 1992. It's my guess that this could be achieved.

**COOPERATION**

An important strategic choice is made when cooperative working agreements are entered into. The general philosophy in the Netherlands, encouraged by the government, assumes cooperation on a national level between libraries from all the disciplines.

On the basis of extensive consultations of its users, the DUTL has consciously chosen to follow an alternative option namely that of international
cooperation on a disciplinary basis. This does not exclude general cooperation nationally, but it does mean that cooperation within the scientific and technical field is given priority. The management philosophy underlying this is that there must be sufficient cultural agreement between partners for the cooperation to achieve synergy. This cultural link can be found on several levels within the technical sciences, in fact, within the laboratory based sciences as a whole.

First, there is the nature of the information supplied. The content largely concerns factual data, figures, formulas, structures, models, etc. This is, for the most part, information produced with the aid of computers and based on generally accepted scientific theories and methodologies, and is automatically international by nature.

Secondly, there is a strong emphasis in this segment of the information market on speed and up-to-dateness of information. In other words, the concepts "time is money" and "the only news is the latest news" sum up the situation.

Finally, in the scientific and technical world there is almost no barrier to the use of advanced information technology. On the contrary, the end users are well informed and continually question library staff as to why the latest technical options are not already in use.

According to the DUTL, the resulting cooperation vector points in the direction of monodisciplinary cooperation on an international scale, with full use being made of all available advanced technology. It is on this level that the DUTL is now working together with the Library of the Eindhoven University of Technology to produce a common system for both the classification and the thesaurus for the two libraries. This will mean that the user has straightforward access through common keywords and indexes to both collections. Once this has been completed, work will begin at the linkage of the underlying catalogues through an interface. At the end of the day, the Delft-Eindhoven combination should be completely transparent. In other words, the end user is unable to tell in which of the two databases he is searching. As a result, about 80% of the available technical books in the Netherlands can be looked up in this seemingly merged catalogue.

A more far reaching project stems from the aforementioned Ei Reference Desk project. The outlined combination of searching and ordering facilities in one software package is a powerful vehicle on the route to substantial improvement in document delivery. Initially, every library participating in the project will serve its own group of customers directly from its own stock. If, incidentally, a document is not available the conventional interlibrary loan systems have to bring their time consuming help. However, the Reference Desk software should also be capable of interlinking the project participants creating a worldwide network of libraries that reciprocally back up each other. Finally, it contains the possibility of full text scanning and storage, which enables direct electronic delivery. Engineering Information itself decided already to automatically scan each article supplied so that any further requests for the same article can be delivered directly, eliminating the necessity of copies or fax. Apparently, a plan with a view.

Besides the three technical libraries in Europe mentioned above, about five American libraries, including Engineering Information, take part in the project and a Japanese one has shown its interest. Of course, the proof is in the eating, but so far it looks promising.

OUTLOOK FOR THE FUTURE

If we look into the not too distant future, the next step seems obvious. If the ordering system runs so smoothly, then why should document delivery
continue in such a semi-traditional way? Would not a fax at some stage become outdated? Direct delivery from a full text electronic database would bring the Delft slogan "Tailored information please... on the spot!" one step further. In his magnificent song, "The Boy in the Bubble", Paul Simon sings about "staccato signals of constant information." To date, this might still sound futuristic, but tomorrow it will be everybody's open book.

For example, INIST in Nancy, France, has started to scan 2,000 journals on a full text basis from the beginning of this year onwards. It will supply documents from the resulting database directly. As mentioned, Engineering Information will do similarly. And there are others, like Beilstein in Frankfurt, Germany, for 400 journals and the Library of the Royal Academy of Sciences in Amsterdam covering 1500 journals.

An interesting combination of image scanning and character recognition is currently being installed in the DUTL. Here the scanned page is immediately displayed on the screen. It is possible, by using the mouse, to indicate sections of text and translate them into ASCII-codes. These sections of text can be assigned to different fields on a standard format. In this way records can be created to form a database with fields such as: author, title, abstract, etc. without using the keyboard. This transformation from text to images can, if so required, be processed at night so that the speed of operations during the day is not affected. The combination can easily be connected to a network to enable transportation of both images and characters. The number of applications for such a combination is endless and can be left to the imagination of the reader. At present, the Library is testing two applications.

First, we can make tailor made files of current contents for specific research groups. The idea is to start with an appropriate selection from the ISI current contents database. Next, we customize it by adding contents of other journals, conference proceedings, grey literature and so on with the help of our new equipment. As a result, every week a disk with the new information is dispatched to the customer.

Second, we build an inter-disciplinary bibliographic database of articles concerning "Water Management" which is a central research theme for the Delft University. We not only scan and transfer into ASCII the bibliographic data and the abstract of the article involved, but also the full text of the article is stored as an image. Here, the result is an online accessible database both for the searching and the electronic delivery of documents.

As said previously, the whole set-up is still in a testing phase and does not work perfectly yet; for example, it only recognizes about 80% of the characters. As it is a "self-learning" system, which means that we can "teach" the machine unknown or unrecognized letters, this is improving gradually. The system is also rather sensitive to the gloss of the paper, requiring for every journal its own settings in the system.

CONCLUSION

As shown by this paper, a library is an outstanding field of application for all aspects of telematics. All libraries to greater or lesser extent experience the following phases in giving access to information:

- Computerization of bibliographic information with or without keywords, indexes, Boolean operators, etc. Data entry is usually carried out manually.

- Making this database available online, either within or outside the local network, in combination with a system for requests or with any other possible variations.
- Linking the library's own database with other files whereby the level of transparency is an important variable. Automated conversion also plays an important role.

In the area of document delivery:

- The use of the successive generations of facsimile equipment, depending a.o. on the quality of the datanet.

- The creation of full text collections, both electronic and optical, with direct delivery facilities. Scanning and character recognition techniques are the central force here.

- The linking of full text files irrespective of the storage techniques used (optical, electronic, or magnetic).

All libraries are progressing on this route, although there is not one that has yet crossed the finishing line. Along the way cooperation, both organized and ad hoc, as well as competition play an important role, just as in the Tour de France. The whole thing is a fantastic spectacle and moves at an incredible pace.