Concurrent session 4A

Electronic document delivery

Chair

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ADONIS: EXPERIENCES IN THE CENTRAL LIBRARY OF MEDICINE, COLOGNE

ULRICH KORWITZ

1. The History

In November 1985, after the re-emergence of the ADONIS-project the Central Library of Medicine in Cologne (ZBMED) and the Technical Information Library in Hannover decided to take part in the trial as core-libraries. The publishers in the ADONIS board had realized that the setting-up of a separate commercial document delivery center would not establish an economic advantage, the two libraries on the other side recognized that the project could be of great importance for themselves and the whole library community. They accepted the partizipation in order to learn about the impact of CD-ROM technology on their services and operations; they are well aware that the project has political implications for the relationship between publishers and libraries as well as between libraries themselves (e.g. interlibrary loan policy). As the leading document supplier in the field of biomedicine, the ZBMED plays the predominant role in the project for the German document supply centers.
The Federal Ministry for Research and Technology made a financial contribution for the purchase of two workstations and for the subscriber charge rate for two years in 1986. The station were ordered in France in October 1987 and delivered in December.
Because of technical problems (defective laser printer and interface) and problems to find maintenance service for the equipment the system was not ready for use until 26th April, 1988. Because of organizational and personal problems the incoming orders were not completely chequed for ADONIS before 21th June, 1988.

2. The Contract

For the core libraries special conditions of the ADONIS-contract are effective.
They are bound, like all other users, to process all orders for articles in ADONIS-journals by the workstation only but not to cancel any subscriptions for these periodicals. They also undertook the obligation to supply statistical data on the usage of the workstation quarterly in form of a copy of the usage-file which is build-up automatically during the search procedure and to supply on request the details of the operation-costs of the system in comparison to the costs of the conventional service. Costs for the purchase of the workstation and its operation have to be paid by the libraries.
The core libraries however are not charged for licence-fees during the trial. The other ADONIS-users have to pay 3.75 dutch guilders per article if all ADONIS-journals are subscribed and 7.50 dutch guilders if not. Licence-fees have to be paid from the 10.001st article printed-out onward.
The contract was signed in Cologne in January 1988 after the staff council had agreed and two librarians working part-time had been employed.

3. Working with the ADONIS-system

The work with the ADONIS-system differs from the conventional working routine in the library magazines:

CONVENTIONAL	ADONIS
Registration of issues received	Identification and registration of orders for articles in ADONIS-journals
Sorting and shelving new issues	Loading of new CD-ROM (Updating)
Searching the document in the stacks, verifying, using the index	Document search: entering search parameters, browsing in a list of search results, displaying documents (sometimes)
Transport of volumes or issues to the photocopiers	---
Photocopying	Batch print including loading of each disc requested by the system
Transport of volumes or issues back to the stacks, reshelving	---
Processing of orders which could not be fulfilled	Processing of orders which could not be fulfilled
Statistics, accounting and maintenance-service for the photocopiers	Statistics, accounting and maintenance-service for the work-station
---	Data-protection
Preparing of issues for the bindery: gathering issues, transport to the bindery and back, control, sorting, reshelving	--- (At the moment, no subscriptions for ADONIS-journals can be cancelled. The same wort-routines as shown left apply!)

It is characteristic of the work with the ADONIS-system that physical strain like the work between the stacks and at the photocopy-maschines is reduced. On the other hand, continuous working at a visual display unit (monitor) must be limited to 4 hours.

4. Facts and figures

Between the 26th April 1988 (the day of installation) and the 30th November 1988, 5.811 orders for articles in ADONIS-journals were identified, 4.736 of them since the 21st June 1988 (the day when the system was completely integrated into the library operations). During this period, our library received and chequed for articles in ADONIS 169.128 orders. This means that only 2,8 % of the incoming orders can be fulfilled using the ADONIS workstation. The following table shows the figures for July to November (as far as available):

	ADONIS					CONVENTIONAL				
	July	August	Sept.	Okt.	Nov.	July	August	Sept.	Okt.	Nov.
- Orders received (total)	826	1.101	756	711	946	32.585	37.187	32.020	31.485	29.768
- Orders received (per day)	39,3	47,9	34,4	35,6	47,3	1.552	1.617	1.455	1.574	1.488
- Orders fulfilled (%)	89,2	91,4	90,5	90,6	96,1			87		
- Orders rejected (%)	10,8	8,6	9,5	9,4	3,9			13		
Reasons (%):										
-ADONIS-failure or scanning-failures	2,2	1,0	1,5	0,8	0,2			-		
-Wrong informations on the order-forms	0,5	0,5	0	0,4	0,1			2,0		
-Issues (articles) not yet available	8,1	7,1	7,3	8,2	3,6			2,7		
-Issue/volume in bindery	-	-	-	-	-			4,4		
-Miscellanous	-	-	-	-	-			3,9		
- Working-time per order fulfilled (min)	4,1	3,7	3,8	3,5	3,9			3,6		
- Orders fulfilled per working-hour	14,6	16,2	15,8	17,1	15,4			16,7		
- User-groups (%):										
-Academic	34,3	44,8	35,2	44,4	37,1					
-Industrial	59,8	47,9	51,9	47,2	56,8					
-Governmental	2,3	3,6	6,3	2,8	1,3					
-Others	3,6	3,7	6,6	5,6	4,8					
- Orders from the FRG (%)	96,6	98,7	96,6	93,8	96,5					
- Orders from outside of the FRG (%)	3,1	1,3	3,4	6,2	3,5					

Some characteristic aspects of the work with ADONIS will be pointed out in the following.

4.1 Searching-time

Obviously, the system is not likely to be a bibliographic retrieval system like an online-database. The mean time for a search entering Journal title, volume and page of an article is 23 seconds (max: 65 sec, min: 10 sec). The system is not suitable when searching the publications of an author or for keyword-searching. These searches are too much time-consuming (85 seconds on an average) and they are limited to the 219 ADONIS-journals anyway. In addition, Boolean operators cannot be used. Searches without entering the publication-year last even 8 to 10 minutes.
The work with the ADONIS-system will change dramatically however if the ADONIS-number is accepted by the publisher's community and considered by the international databases. Searching for the ADONIS-number lasts only 2-3 seconds! Furthermore, search time may be reduced to only parts of a second if microprocessors working with clock-speeds of 25 or 32 MHz come into use. Perhaps an improved software-version may speed-up the system, too.

4.2 The selection of the ADONIS-journals

The publishers who take part in the trial selected the journals for the ADONIS-pool. The number was decreased from 300 (1985) to 219 at the beginning of the trial mainly because of storage problems on the CD-ROM. The first ADONIS-project was supposed to incorporate 3.000 journals!
Looking at the journals the criteria for their selection do not become apparent. The usage of the periodicals differs very much from journal to journal: the statistics for the second quarter 1988 show that we made 63 print-outs of the "Journal of the American College of Cardiology", 48 print-outs of "Neurobiology of aging" and 26 print-outs of "Cancer letters". Only 35 journals were used more than 10 times, 61 were not used at all!
Looking on a study on journal-usage in our library, performed independently from the ADONIS-project, we find that only 21 of all 219 ADONIS-journals are heavily used in Cologne for interlibrary loans and for the fulfillment of payed orders. Only these 21 journals belong to the group of the 100 mostly requested periodicals.
Finally we should remember that only 2,8% of the articles ordered since the 21st June 1988 could be satisfied with the ADONIS-system. Our ADONIS staff could only work for 4 hours daily at the station because of missing orders.

4.3 Print-out quality / Comments of our users

The print-out quality can be generally considered as good but it is often not as good as the quality of a photocopier: the letters are build-up by points. Several users wrote that they do not like this restless typeface, one said that he would prefer photocopies in the future. On the other hand, the comments about the quality of the photographs is enthusiastic - no photocopy-maschine can keep up with the ADONOS-system and its laser-printer.

4.4 Unavailability

The number of orders which could not be satisfied by the system was higher than expected: 10,8% in July, 8,6% in August, 9,5% in September and 9,4% in October. We had expected a rate of less than 5% for several reasons: no time is lost for binding, the discs do not get lost and they are always available because they are not for public usage. The reason for the high rate is the time-lag between the publication of the printed version and the availability of the disc. ADONIS had announced that it would be less than 30 days; actually we recorded an average time-lag of 42 days. It should also be mentioned that not all supplements which have been received conventionally in the library have been received and scanned by ADONIS.
The rate of unavailability decreased to 3,9% in November with a new software-version in use.

5. Costings

One of the main objectives of the trial was "to examine the economics of a new way of supplying STM articles". It was also said that the "key to the project is the reception by and influence on the work of the libraries. From the viewpoint of the libraries the project should save library costs which might be shared with the publishers".

Are there any savings for the libraries?

Costings at this stage of the project must be preliminary but calculations at this early stage are important for both partners - the ADONIS-board and the libraries:

	COSTS	SAVINGS
Present situation	-Workstation: 60.000 DM (12.000 DM/year) -Subscriber charge rate: 56.000 DM (28.000 DM/year) -Display work-station: 3.000 DM (300 DM/year) -Hard- and software maintenance incl. materials (toner, etc)	*) *):(1/4 photocopierer (1.400 DM/year) if enough orders can be processed via ADONIS plus corresponding maintenance-costs for it.)
Near future	-Juke-box: 41.000 DM (8.200 DM/year)	-1/2 employee (25.000 DM/year)
Distant future	-Licence-fees (? DM)	-Subscription-costs for ADONIS-journals: 215.000 DM/year -Costs for binding of ADONIS-journals: 10.000 DM/year -Shelving-space (? DM)

At the moment, in this experimental stage, there are only costs, no savings for the ZBMED. The situation may change if we receive enough orders which can be processed by the system and if we install a juke-box (which is not planned in Cologne at the moment because of lacking orders).
In the distant future, if ADONIS survives the trial, the ZBMED certainly will not cancel the subscriptions of the ADONIS-journals even though this would save money. We think that the printed issues must be available for our local users - for their browsing and photocopying. Additionally we will continue to loan supplements and special issues and fulfill orders for photographs. Even if the ADONIS-system were set up for self service for our clients (we would then surely need 8-10 workstations) we would not change our policy.

6. Conclusion

ADONIS is to be regarded as a trial - we do not think that it can survive in this form. The small number of orders for ADONIS-articles compared to the total number of orders received does not justify the costs even for a parttime employee after the installation of a juke-box. Technical problems will arise of more journals will be added to the ADONIS-stock: the index will grow immensely and consequently search times will grow unreasonably. The number of discs will rise too: at the end of the trial we will have 88 discs (for 219 journals of the publication-years 1987 and 1988). A juke-box could handle them easily. However, not 219 but about 2.000 journals belong to the core of heavily used periodicals in the ZBMED. Additionally, we can prove that not only the last 2 but the last 5 years of these journals are in heavy use. Altogether we would need 2.000 discs. Who could handle these?
On the other side many of the problems mentioned could be solved by developments in computer technology: search times might be reduced by microprocessors with clock-speeds up to 32 MHz; hardware-expansions might be available at low costs improving storage-space; multi-tasking-systems might be introduced.
CD-ROM-technology will develop, too: more pages on one disc? Higher compression-rates? Or will ADONIS return to 12-inch-optical discs? The final diagram sums-up our opinion about ADONIS at this stage of the trial:

Positive Aspects	Negative Aspects
-Availability is good: -no binding necessary -no material "in use" or "missed"	-Hard- and software problems -No index-search or very-time-consuming
-User friendliness: -good print-out quality of photos	-User unfriendliness: -time-lag -supplements partly missing -no loan of complete issues possible -no reproduction of photographs possible, no colour-photographs
-Staff: physical strain is reduced	
There are more aspects regarding a future situation without printed ADONIS-journals:	
-No subscription costs for ADONIS-journals	-No possibility of working when the system breaks down
-No costs for binding ADONIS-journals	-Complete confidence in the system - no control possible
-Space saved in the stacks -DOCMATCH and QUARTET-projects in connection with ADONIS: immediate supply of documents directly to the end-user	-Only 1 user at the station compared to many in the stacks -No browsing in printed issues or indices possible

7. Literature

1) - Bradbury, David: ADONIS - the view of the users.
In: IFLA journal 14 (1988) 132-136

2) - Campbell, Robert and Barrie Stern: ADONIS - a new approach to document delivery.
In: Microcomputers for information management 4 (1987) 87-107

3) - Merry, Karen: ADONIS - a new era in document delivery.
In: Interlending and document supply 16 (1988) 65-69

4) - Stern, Barrie: The status and future of ADONIS.
In: Optica '87. The international meeting for optical publishing and storage. Amsterdam 14-16 April 1987. Oxford & New Jersey: Learned Information, 1987 p. 211-218.

5) - Stern, Barrie: ADONIS-publishing on CD-ROM in mixed mode.
In: Proceedins of the 10th International Online Information Meeting, London 2-4 December, 1986. Oxford & New Jersey: Learned Information, 1987 p. 23-31

6) - Tehnzen, Jobst: Von der Bibliothek zur Diskothek? ADONIS nimmt den zweiten Anlauf.
In: ABI-Technik 7 (1987) 171-178

Dr Barrie T. Stern, Director of ADONIS introduced the project and showed a video of the system in operation. ADONIS is an experimental document delivery service which supplies 219 biomedical journals of 1987 and 1988 in full text on CD-ROM. The approximately weekly discs are delivered to major document centres in Europe, U.S.A., Mexico, Australia and Japan and are used to fulfil requests for individual articles received by centres in the course of their document delivery activities. the ADONIS project is testing the idea that publishers can gain copyright revenue by supplying their journals in machine-readable form for document delivery centres to print out individual journal articles on demand at a lower cost than photocopying from back runs stored on shelves.

Dr Falkenberg (Karolinska Institute, Stockholm) commented on ADONIS from the point of view of a user. The Institute Library handles 800-1000 requests per day of which 30 are for journals on ADONIS. Handling time is 6 minutes per request and about 300 pages per day are copied on the system. Dr Falkenberg expressed concern for the health of the operator as there was less variety to the work than in conventional photocopying. There is also a need for a jukebox disc handling system for faster operation and greater software efficiency to provide for simultaneous multifunctions. There was also a need for a faster printer. He emphasised the need to solve the copyright problem but felt that if the publishers were to charge royalties costs would rise by 100%. To become viable beyond the experimental stage the system would have to include many more journals.

Concurrent session 4B

CD-ROM I

Chair

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The Impact of CD-ROMS on the Delivery of Biomedical Information Services at the University of Sussex

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The purchase of two CD-ROMs, PsycLIT and Medline, is set within the broader context of the changing perception of a Librarian's role within one particular UK academic library, and the effect of this new technology on the Library as a whole.

I am going to concentrate on a subset of the challenges posed by CD ROM, restricting the paper to a discussion of the following four points.

- Changing perceptions
- Costs and evaluation of a CD-ROM service
- Teaching. Can the user cope? Why teaching is needed
- Completing the circle; increasing the value of the information to the user

Changing perceptions

Background

The University of Sussex was founded in 1960. It has an academic population of some 5.5 thousand. There is no Medical School, but a Biology School with flourishing groups in Biochemistry and in Genetics and Molecular Biology. There is also a Medical Research Council Cell Mutation Unit, a Centre for Medical Research and a Department of Biomedical Engineering. The Psychology area is one of the largest in the country. In common with all British Universities Sussex has suffered cuts in funding over the past few years, resulting in a decrease of both academic and supporting staff whereas student numbers have remained the same. The Library has also suffered cuts; since 1981 academic-related library staff levels have fallen by 35%, and clerical by 22%. Due to staff reductions spending on materials has been preserved; with a further 8% cut required overall this ability becomes uncertain. Nevertheless, the Library has broadened its role, diversifying into new media and new techniques. Why?

1) Information was becoming available in a variety of formats at a time when the user had less and less free time. Although the user had less time to learn new techniques, these very techniques could be precisely what he needed to make him more effective. Perhaps the Library could help break the deadlock.

2) Criteria for Government funding of Universities were changing. In the past all received basic funding for research based on size and supplemented by grants; this has now changed. Funding is now increasingly linked to research seen to be "relevant". Less successful Universities, in research terms, may lose their research funding and become merely teaching institutions. It would be in the interest of the University as a whole if the Library could help academics produce more "relevant" research.

Research support

We began testing the practicality of a more dynamic approach to supporting research with the setting up in 1986/87 of a pilot group consisting of one full, and one part-time academic-related librarian under the wing of a senior librarian with particular interests in the applications of computers in Libraries. Deciding how best to help academics

was the major problem, we had to talk, listen and test hypotheses on them. During the two years of its existence the group studied a wide range of potential new services, including full-text databases (World Reporter and Textline), the comparative benefits of SDI's + Interlibrary loans versus new periodical subscriptions, the Domesday project and the potential of the JANET network (Joint Academic Network, a wide area network linking all Universities, Polytechnics and and D.E.S. funded Research Institutions). The Library invested in microcomputers and the group trained staff to use both them and techniques such as electronic mail. Most important in the current context, the group evaluated CD-ROMs. In January 1987 we had 5 CD-ROMs on trial (one of which was PsycLIT). We were very impressed with their potential, and by the user reaction, but at that time had insufficient staff to provide a service. By 1988, our "proactive" and positive support for research was established. With a major staff reorganisation this summer (to make the best use of diminishing staff resources) the original group has become part of a larger one; there is now the capacity both to provide a CD-ROM service, and to continue to explore new ideas.

Why CD-ROMs?

I have said that the user trials of CD-ROMs were very successful. The user reaction during those trials reinforced our perception (gained while going out and talking to academics) that a major problem for users was information overload. This view was reinforced by a report by Martyn, J. (1987)[1] on literature searching which states "There were indications that the frequency with which information is discovered too late to be of use has increased ..." (compared with a similar report in 1964). We decided that providing a method for fast and efficient information retrieval would be one of the most valuable contributions we could make to research support. CD-ROMs appeared to be a way of achieving this, allowing the user total control and avoiding the problem of "noise" caused by the Library intermediary of an on-line search. Having decided on the technology, how did we afford it? We spent a year trying unsuccessfully to get money from other sources; in the end the money had to come from the Library budget. The investment is a calculated risk; a Library with a high profile and services which are seen to be valuable is less likely to suffer reduced funding in the future.

Costs

This section is in four parts

- absolute costs
- costs after offsetting savings
- possible additional costs
- evaluation of service

Absolute costs

1) **Hardware**

   Each workstation consists of a Tandon Target with 20Mb hard disk, 5.25"floppy drive (and, for one machine, an additional 3.5" drive), CD-ROM drive, and printer.

   Total cost per workstation ca. £2800

   As a one-off cost it can be spread over the expected life of the equipment; if the lifetime is 5 years the cost becomes ca.£550 p.a.

2) **Software**

   Medline (Dialog), back to 1984, £1325 p.a.

   PsycLIT, back to 1974, £3180 p.a.

Costs after offsetting savings

What can we offset?

1) some fraction of the on-line budget

In 1987/1988 numbers and costs (excluding staff costs) were as follows:

	Nos.of searches	Cost	Average cost
PsycInfo†	49 (+13‡)	£953	£19
Medline	61	£1191	£19.50
Other	421	£13456	£32

(Searching is free to senior members of the University. †PsycInfo includes PsycAlert; ‡searches done on PsycLIT which would in the past have been done on PsycInfo)

2) The hardcopy equivalent

Psychological Abstracts	£500 p.a. (excluding binding)
Index Medicus	Cancelled in 1982; replaced by online searching.

If we assume the "best case", i.e. that all our online costs for PsycInfo and Medline will disappear, the cost equation for this year looks like this

	Current cost − (Hardware + CD-ROM)	Previous cost = (Online + Hardcopy)	Increase	
PsycLIT	£3730	£1453	£2277	(+156%)
Medline	£1875	£1191	£684	(+57%)
Total	£5605	£2644	£2961	(+112%)

We can deduct staff costs for online searches on PsycInfo and Medline. At £12/search this is £1476, reducing the final "Increase" figure to £1485. This is still a substantial figure, but looks less significant when compared on a "per use" basis with online searching. Ignoring Medline/PsycInfo searches, our average online search cost is £32 — and this excludes staff costs. If we have 46 users of CD-ROMs each use "costs" £1485/46 = ca.£32. To be valid, each of these uses must be one which would not in the past have given rise to an online search. We already have 72 trained users of Medline and PsycLIT – some using both. Our evaluation sheets (to be discussed later) show that a third of these respondents would not have asked for an equivalent on-line search. This suggests that the "break-even" point described above is easily achievable. The service has been running as no more than a pilot project during the Summer; the pool of potential users remaining to be trained is large.

This approach is simplistic. On the debit side we have not allowed for three known items a) we are unlikely to cancel Psychological Abstracts without evidence that the CD-ROM can absorb the very substantial amount of use it currently receives b) a few searches will continue to be be done online c) searches done by us for readers are not truly free; staff time and printing are costs.

In addition, there are some potential but unquantifiable additional costs a) will the user want his results i) updated ii) provided from a date which pre-dates the CD-ROM? b) how many users will try the CD-ROM and fail, but, seeing the benefits, ask staff to do the searches for them? So far, none of these has occurred, despite our pointing out in each training session that option a) exists. If it happens at all, it is unlikely to be significant. Use of our set of Psychological Abstracts is concentrated on the past few years, and only the latest 3 discs of the Medline CD-ROM are heavily used.

Having shown that the costs of the CD-ROM service are neither as large nor as unreasonable as might first appear, there are significant costs and these will have to be justified.

Possible additional costs

So far I have looked at comparisons of known costs. Are there additional costs?

1) staff time spent on training

2) effect on Inter-library loans (ILL)

3) effect of increased user expectation on other Library services

1) This is clear-cut; staff time spent on training users (4 per session) is about £12 an hour. Per individual this does not seem excessive, no more than the cost (to the Library) of a difficult enquiry. The equipment is near our Enquiry Desk and post-training problems can be picked up immediately. This part of the service can be costed as part of the normal running of the desk. (The service is not available outside office hours).

2) The effect on ILL is as yet virtually non-existent. With one notable exception there have been no ILL requests resulting from CD-ROM use. (Users are asked on the evaluation sheets to tell us what % of records retrieved result in requests for Inter-library loans, and to mark on their ILL forms the fact that the source of their reference is a CD-ROM). This absence of ILL requests may continue. The survey referred to in section 1) found that users in many cases regarded the abstract as sufficient and asked for relatively few inter-library loans. The "one notable exception" to the non-use of ILL is a major perturbation to this forecast; the user selected 350 records – and asked for 130 of them on inter-library loan (he was writing a review article!).

3) It is too soon to have any real experience of the effect of increased user expectation. We may get asked for new periodical titles as users find previously unknown titles occurring in their search results; users may want a CD-ROM search continued in other databases. Other effects may be more nebulous: we may be producing an increasing climate of demand in that satisfied users tend to return and request other services. Whether this will happen, and whether if it does we can cope, remains to be seen.

Evaluation of service

Knowledge of the value of the service is critical; in future the service will have to stand on its own merits and compete against existing services for funding.

Benefits to the reader

We assume that many more access points and the speed of access make the benefits to the reader of CD-ROM over Psychological Abstracts apparent. Lynne Brindley[2] goes into this aspect in a little more depth. We have subjective impressions of user satisfaction, but are concerned to get hard evidence

Evaluation

We have produced evaluation sheets, which each user is asked to complete at the end of a session. An example of this is reproduced at the end of the paper.

Some of the results have been quoted already, others follow, and one result is discussed in the final section. (Since we have relatively few returns as yet the results should be regarded only as a possible indication of trends.)

1) Users were asked to rate their results. Without exception all rate them as Good, or Very good. Maybe this is initial euphoria; we shall see whether these answers change over the next few months.

2) We asked how many records readers selected; these are tabulated below.*

	<25	<50	<100	>100
% of readers selecting	10%	35%	20%	35%

This result seems high in terms of the amount of information that a user can sensibly deal with. It may be a function of downloading, it's easy to take the result away and browse, and the reader is reassured that he hasn't missed anything, but it may be a sign that we need to point the advantages of refining a search strategy more forcefully.

3) A third of the users said that they would not have asked for an online search; this suggests that we are beginning to pull in a new audience - as we'd both hoped and expected.

Why do we teach CD?
We do no other user training, and manuals and guide cards exist

1) **Experience of 18 months ago.**
We spent most of the evaluation period on constant call as the users struggled to learn the system; unrewarding for them, and expensive for the Library in terms of use of staff time. Our users are not necessarily very computer literate.

2) **This is a new medium – extracting information from books is an inherited skill.**
A large part of the undergraduate learning process consists of his being taught (implicitly or explicitly) how to extract information from printed materials. This technique has been handed down – there is a "folk knowledge" – each academic by the time he comes to do research will have acquired it. No such pool of expertise exists for CD-ROM.

3) **User dis-satisfaction could have long-term effects.**
Our concern is that the user knows enough to know his limitations! He needs to be aware that his search strategy defines the success of his results. We would like him to be disabused of the idea that "if it comes from the computer it must be true". It (the records selected) may be "true" in one sense, but it may also be very incomplete, or full of irrelevant material; it may also be quite unsuccessful if the logic is wrong. All of this wastes the user's time, and makes him less receptive to the next new technique, particularly if he uses poor results in a paper or a talk and is proved by colleagues to have missed relevant material.

4) **Cost-efficiency.**
The whole point of buying CD-ROMs is to allow the user to save time. It is not cost-effective to allow each user to struggle with the same problems in turn. Manuals are too copious, guide-cards too elliptic. (We have written Helpsheets as aide-memoires). Library staff, having learned the system, can pass the knowledge on relatively cheaply and efficiently. Users no longer have the time or enthusiasm to wrestle with learning new techniques until the benefits are proven.

5) **Equipment safety.**
A minor but "cost-important" point, we reduce damage to CD-ROM drive and printer!
See (3) for another view on the need for teaching.

Completing the circle; increasing the value to the user

The final point is, having got his records, what does the user do with them? Is it the most efficient use, and if not, can we make it more efficient?

We ask the user to download results if more than 20 records are selected, in order to save printing time and costs, but our evaluation sheet results show that these downloaded records are used only for printing or wordprocessing. The user may have retrieved his information fast and efficiently, but his subsequent use of it will be neither. We are attempting to solve that problem. We can reformat downloaded records so that they can be bulk-loaded into a commercial database (Cardbox) and offer limited instruction on how to use the database and the optimum format for the users' needs. The database allows searching on any field defined for indexing by the user, and with additional user defined formats can be used to output selected and sorted records in a form suitable for a bibliography at the end of a paper. So, we have given the user the ability to retrieve his information in the first place, but we have also suggested how he can most efficiently continue to use it, searching his original records to select subsets according to the needs of his research or writing of papers, and creating his bibliography as a byproduct. This is a very satisfying "rounding of the circle".

We may be asked why the Library should take on these non-traditional roles? Why not allow the user to learn for himself the advantages of databases and how to use them? With computer related techniques, why not expect the Computing Centre to offer these? I think my answer would be similar to the basic rationale for moving into CD-ROMs. Users have less time; it is not efficient for each to re-invent the wheel. As for the Computing Centre, they produce valuable technical back-up for us, but the Library has an expertise in the bibliographic needs of the user that it can exploit. Perhaps academic librarians are moving in the direction of their industrial counterparts. Industry regards information as a valuable resource and one whose implementation in the most efficient manner is worth paying highly for (cf. for example, Jackson[4]). We do not have, and are unlikely to have, their financial resources. Nevertheless, we can move towards accepting that traditional methods of information can, and should be, enhanced by new techniques.

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* Interestingly, since this paper was written in October 1988, with significantly greater use by undergraduates this pattern has changed; the figures are now

	<25	<50	<100	>100
% of readers selecting	58%	20%	8%	14%

INFORMATION SERVICES

CD-ROM Evaluation Sheet

Please tick appropriate boxes

NAME (please print)

School/Subject:

Status: Teaching Faculty ☐ Research Faculty ☐ P/g ☐ U/g year 1 ☐ 2 ☐ 3 ☐

Other (please specify)

1. CD-ROM used — PsycLIT ☐ Medline ☐ BIP ☐ Other (please specify)

2. Number of records selected (i.e. downloaded or printed) — <25 ☐ <50 ☐ <100 ☐ >100 ☐

3. If downloaded, to what — Own 5.25" ☐ Own 3.5" ☐ Hard disc, for downloading to VAX ☐

4. If downloaded, were the records for — Printing out only ☐ Use in word processor ☐ Use in machine readable database ☐

5. How would you rate your results (in terms of relevance of material retrieved) — Very good ☐ Good ☐ O.K. ☐ Not good (see *) ☐

6. Would you in the past have
   (a) asked for an online search of this topic — Yes ☐ No ☐
   (b) used hard copy abstracts/indexes — Yes ☐ No ☐

7. Updating
   If you need the search updated on-line, please let us have a copy of your CD-ROM search strategy (using Print Screen) and tick this box. ☐

Rough title of topic searched

*If you rated your search "not good", it would be very helpful if you could see a member of Library staff, and tell them in what way the search was unsuccessful. They will fill in brief details below.

ILL requests:
If the results lead to ILL requests, could you tell us what proportion fall into this category.
(And when you fill in an ILL form, please mark source as CD-ROM: Medline/PsycLIT.)

University of Sussex Library
October 1988

MANAGING CD-ROM IN AN ACADEMIC LIBRARY

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Medical and Dental Library
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In the last two years, the rapid development of optical disc technology has suddenly presented librarians with a completely new medium for information retrieval. Bibliographic data stored on optical discs and the accompanying software, on floppy disc, enables users to search that data in a variety of ways which emulate the online searching of remote databases without the financial constraints that that implied.

The system we have at Leeds, and with which I am therefore most familiar, is the Cambridge Scientific Abstracts (CSA) version of MEDLINE. We use an Opus computer and a Philips CM100 compact disc read only memory disc drive. The data is stored on discs with three quarterly cumulative updates and one annual disc. The files are identical to the MEDLINE files from 1982 to date. There are therefore seven discs at present.

Because it is a novel means of presenting information it is necessary to approach the management of the system in a novel way too. The compact discs cannot simply be put out on a shelf and left for the users to make of them what they will. There are several features which make "managing" necessary and I will examine those first before describing how this question has been approached in my library and in some others.

Features of CD-ROM that create management problems

1. Access
Most libraries will have only one set of equipment, at least at first, so the use of the equipment must be controlled so that access is available in the way we would wish and to those we want to have access.

2. Disc changes
Databases that occupy more than one compact disc, such as MEDLINE, require disc changes during the course of a search. This seems to be the most vulnerable part of the system. Ought we to let our users change the discs at will?

3. Print out/downloading to floppy disc
It is possible to print out references if there is a printer attached to the system. How do we control that if indeed we want to? There is also the facility to download to a floppy disc. Readers wanting to use this facility will, by definition, have some computing know-how but it may be only sketchy.

4. Ability of the end user
Although most users today are fairly computer orientated this is a new application for them. Most library users have been accustomed to having online searches done for them with the librarian acting as an intermediary. There is a danger that they may be very dissatisfied with the CD-ROM system because their results are poor through lack of understanding of search techniques or they may demand so much help that this creates a staffing problem.

Thus we can see that CD-ROM requires a different approach to management and that much more staff supervision is necessary than in the case of

printed bibliographies and indexes. I do not intend to discuss the selection of equipment or to deal with finance except as it crops up in relation to the features I have already enumerated.

Management methods

1. Access

First we must consider control of access to a limited amount of equipment - in fact only one set. I do not think it is realistic to think in terms of using a computer that is already used for other functions. A dedicated machine is the least that it is practical to consider.

At Leeds, as in several other libraries, we have instituted a booking system with the days subdivided into thirty minute sections. We had anticipated that that would be enough time for a user to find the information he required. In practice, sessions tend to be much longer for a number of reasons. Firstly, readers do not plan their searches before they start as librarians, used to the expensive time of an on-line search, tend to do. They seem to search the system in much the same way as they would do a manual search in Index medicus - using a single term then scanning the results sequentially, selecting the chosen references from the abstract and printing out as they go along. Secondly, many of our users come from remote sites and can only get to the library once a week so they may want to search for several topics at one sitting.

It is necessary to impose a time limit or the few will take over the equipment and other, perhaps more diffident users, will not get an opportunity to use it. That is, the library staff must take an active role in allocating time, rather than leaving readers to settle it between themselves. The booking sheet also enables library staff to plan their own time if they want to demonstrate the system or to do searches themselves.

The other aspect of access is, who should be allowed to use the facility? It is important to decide from the outset whether it is to be freely available to all comers or whether some sort of training should be insisted upon before users are permitted to search. We must also consider which groups of readers should be allowed to use the database. For example, in my institution, we planned, this year, to introduce MEDLINE on CD-ROM to medical students early in their careers but, the academic staff feel very strongly that students should learn, first, how to search the literature in the "traditional" way. We have targetted instead one particular group of undergraduates - the intercalating year - for instruction. Meanwhile, at the University of Newcastle it was seen as a valuable teaching aid and students have been encouraged to attend a one hour tutorial before being added to a register of users.

2. Disc changes

CSA MEDLINE is split up into annual discs and, large as the storage capacity of compact discs is, many databases cover several discs.

The suppliers assured us from the start that the discs were not vulnerable and would stand up to mishandling. Reports received of users putting the CD into the floppy disc drives for example did nothing to reassure me. The disc may have survived the experience but the disc drive was damaged.

Even if physical harm is not done, the cumbersome process of exiting the system and reloading for every disc change, which is still the case with CSA MEDLINE, is not well received by users.

The recently announced multiple disc players suggests that these concerns had some foundation. Compact Cambridge have announced a stacked multi-disc drive unit which will support new, enhanced software and permit searchers to load and search up to four discs at once. For users of single disc drives there will be an easier procedure for changing discs.

One solution to the problem is to make only the current disc freely available and not to permit any disc changes. I believe that one library allows readers to use the current disc to formulate a search which the library staff then run on earlier discs on their behalf while other libraries allow readers to change the discs themselves.

There is no doubt that users have to receive some instruction in this aspect of the system, perhaps more than any other.

3. Print out and down loading to floppy disc

The ability to print out the results of a search is clearly one of the big plusses for the user and it is absolutely essential, with bibliographic databases, to have a printer attached.

In the case of a database such as MEDLINE, where there are often abstracts included, references are frequently quite long. Although the reader has the option to format the output, discarding many of the fields, I wonder, in practice, how many of them do? We are then in a position where reams of paper are used - a cost that you might not have included in your calculations. Printers too are noisy things, especially at the lower end of the price range, so the positioning of the printer should be considered. If, as in my library, the computer is located in an open access area the annoyance factor in the library must also be considered. We found it necessary to purchase an acoustic hood almost at once - and the disturbance is reduced but not eliminated.

It might be possible to, at least, limit the amount of printout generated by making a charge. If the library already charges for photo-copying the easiest way is to charge the same amount per page for printout as for photocopies. It may also be possible to install a "chargecard" type of system on the printer as is sometimes used on photocopiers.

Downloading data to floppy disc for subsequent use with another personal computer is also an extremely attractive idea. I have heard people, who claim to be inexperienced computer users, enthuse about using downloaded data to create their own database, reformatting and manipulating the data with apparent ease. My experience, to the contrary, has been that readers have only a very vague idea of what to do, they need a lot of help and I have never seen the fruits of their labours.

The hazard is that, to use the popular misquotation, "A little knowledge is a dangerous thing" - as soon as a user moves into the operating system of the computer there is real scope for disaster. In one library, to my knowledge, a user succeeded in deleting the operating system from the hard disc.

4. Ability of the end user

Traditionally, in the UK anyway, readers have relied upon an intermediary for on-line literature searches though many have been anxious to do their own searches. The use of an intermediary was largely dictated by the costs of on-line searching, a large proportion of the charges being based upon connect time and telecommunication costs. The understanding of indexing and the MeSH vocabulary was also a significant factor. A search was best done after considerable preparatory work and then input as quickly as possible to the host, often requiring little editing at the on-line stage.

All the time/cost constraints of the on-line situation disappear when we are using CD-ROM but users may still search very inefficiently. It has been shown [1] that users tend to search the CD-ROM in the same way they search the hard copy of Index medicus. They retrieve references using a single term and scan the results one by one as they would search under a single subject heading.

I feel strongly that we should encourage readers to use the system to the full extent of its capabilities. To do this they have to have some knowledge of MeSH and subject indexing. The menu driven search facility leads users through simple Boolean logic and, with proper use of MeSH headings and subheadings it is possible to achieve satisfactory results. It seems sad that a busy clinician will spend half a day instead of half an hour over a search because he stubbornly refuses to construct a "proper" search. To cite but one example, a user plodded through 900 citations on a single annual disc because he was determined to use free text searching. On questioning him I was able to elicit enough information from him about the object of his search and by constructing a simple search of no more than four MeSH terms reduced the result to 27 references - but he was unwilling to try to learn to construct a search strategy and also refused to trust the indexing system because he was afraid of missing anything by relying on it.

I think that learning something about MeSH headings and the subject indexing methods used in constructing the database is an integral part of any training in the use of MEDLINE on CD-ROM.

The demands upon staff time are large - however the system is managed. Most people report this and a variety of methods have been used to try to minimise it.

CD-ROM Users Club

This is an appropriate point at which to describe the way in which we have organised the use of MEDLINE on CD-ROM at the Medical and Dental Library at the University of Leeds.

We decided to create what we called a CD-ROM USERS CLUB. For the first year the membership fee has been £50 per person. That fee bought a package consisting of the following items.

1. Training in the use of the CD-ROM hard and software.
2. Training in the use of MeSH and subject searching.
3. Documentation - a users manual and a quick reference "Crib" sheet.
4. Unlimited access, via the booking system, to the database (all years as they know how to handle the discs after training).
5. Unlimited, free, printout and the opportunity to download data to their own floppy discs.
6. Regular updating of information - if, for example, there are changes in the software and notification when a new cumulation disc arrives etc.

The idea of charging to use information was a completely new concept although, as we already have full cost recovery for on-line searching it is not such a major departure for us. We currently have 56 fully paid up members, many of whom have paid the subscription out of their own pockets. "Casual" use is allowed if no club member is using the system but advance booking is now allowed for casual use and no disc changes are permitted. Printout must also be paid for and we do not allow downloading to floppy disc. Library staff do not give more than very basic "start up"

help to these users. We have continued to offer an on-line literature search service. Although there was a fall in demand last year it is not immediately clear whether this was as a result of the availability of CD-ROM or simply a normal fluctuation because most of the club members have not been customers of the on-line service in the past.

The reasons for adopting this method of managing the CD-ROM facility were threefold. Firstly, it was seen as a means of controlling all those features already outlined as being in need of control. Secondly, it was hoped that by having the training course as part of the package we would persuade people to take the subject indexing seriously. Thirdly, and I suppose most importantly, we had to generate some income in order to be able to continue to provide the facility. The initial capital outlay was covered by some "spare" money but the ongoing commitment is not inconsiderable and has turned out to be rather more than we originally expected because of the need to update the subject indexing structure and thus reissue discs for previous years.

Reaction to the scheme has varied. When I first suggested this method to other professional colleagues last year, before it was actually tried, the reaction was very sceptical. The fact that over fifty people have now paid up suggests that we have at least convinced our own users. The Library Committee to which I report was very supportive. One voice was raised in protest on the principle that this was the thin edge of the wedge of paying for all information. The remainder, several of whom had already joined the club, supported the scheme because, while acknowledging that it was a valuable source of information it could not replace many of the other items in the library which still had to be bought out of ever shrinking resources. We could not provide this service for a few users while depriving others of printed material.

In an attempt to find out what our users thought we distributed a questionnaire after about six months of operation. I can summarise the more interesting points resulting from the replies as follows.

Asked how the had heard about the CD-ROM, 40% said they had seen leaflets in the library, 40% had responded to direct mailing. We wrote to anyone who had used the on-line search service in the last two years. Only one reply was as a result of letters we sent to Heads of Departments.

Sources of funds to pay for the club membership were 40% Departmental funds, 30% research funds and 30% from their own pockets.

All the respondents had found the training in MeSH and CD-ROM satisfactory and the majority, 60%, also liked our inhouse user manual. 30% thought that the manual produced by the database supplier was better. Without exception the respondents found the system easy to use and, while 60% used the menu driven search method, a surprising 40% claimed to use the "Dot commands" method which much more closely emulates the on-line search pattern.

We asked what they did with the results of their searches and while they all printed out results some of the time, 40% said they downloaded to floppy disc. Of those people, half of them took the results away, re-examined their references and printed out selected references, the other half used the results to create their own database on their own personal computer. About half of the people who did not already use the download facility expressed a wish to know more about it. Everyone said that they kept the printed results of their searches for future reference. They all thought that the availability of abstracts was a considerable advantage.

We then enquired about how much time they spent using CD-ROM and whether it saved them time. Only 30% of the respondents said that they used it

once a week and none said they used it more than once a week. Those sessions varied from 30 minutes to two hours, the majority being between 1.5 and 2 hours. They all said that the system saved them time and when asked if they could quantify the time saved some interesting replies were received. Two respondents said it saved them 4-5 hours a month, another said it saved "several" hours each month. One person thought the saving was as much as eight hours a month. While one user said that he could not quantify the time saved because he was led on to other ideas through the system, another said that he did better work in the same amount of library time.

We then tried to discover the degree of satisfaction with the results. Almost all (90%) of the users thought that the results they achieved were very relevant and 70% said they preferred to do their own searching. Those who were able to compare the CD-ROM system with on-line searches based on experience of both, preferred the CD-ROM. The only reservations recorded were because of the shorter time-span of the compact disc database.

Users were asked about the uses to which they put their results. They all used the system for their research, 30% giving that as the only use. Current awareness featured in 60% of the replies. Preparation of grant applications was given as a reason for the search by 30% and publications by 40%. Only 20% of the users applied their results to clinical treatment and one respondent had used the database in preparation of a student reading list.

We were interested to find out how the Users Club had been received and 80% claimed to like the idea, 70% thought that the booking system was good and 80% said that they would recommend club membership to colleagues. On the all-important subject of finance, 80% said that they would be prepared to renew their subscription for a further year at the same price, half of the remainder would renew if the price was lower and the other half were prepared to pay more. Respondents were given the opportunity to add their own comments and most of these centred upon the tediousness of changing the annual discs. Largely as a result of the timing of the questionnaire, there were some adverse comments about the delay in receiving updates - there was a slight hiatus in the middle of 1988.

Quite irrelevant to this discussion, but because it seemed a good opportunity to find out what our users thought at a time when librarians were discussing the subject, we also asked what the reaction would be to a British database limited to perhaps only the top 200 journals. The idea was greeted with an emphatic NO although one user said that it would be a nice alternative for some searches.

The object of this paper has been to point out the features of CD-ROM that need a different approach to management and to suggest some solutions. Since it is such a novel system, some novel arrangements have been tried but it would be fair to say that most are still experimental. A very small survey of a very limited group of users nevertheless shows that it is a facility which satisfies a need for information in a modern format and that users have taken to the system very happily.

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Concurrent session 4C

Document delivery

Chair

B. Blum

The Spanish Document Delivery Service in Medicine

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For the time being, the only Document Delivery Service at a national level in Biomedicine in Spain is the one at the Instituto de Información y Documentación en Ciencia y Tecnología (ICYT). By this assert one should not misunderstand that there are no other services that provide copies of articles on a nation wide basis. But either they only do that with their own holdings or they get articles from other medical libraries but only for their own library patrons.

The Document Delivery Service from the ICYT has established as many collaboration links as possible with others libraries, regardless of their institutional affiliation.

Our main purpose is that once an article has been located through the holdings catalogues, lists of titles, periodicals files, etc., we should be able to obtain it.

We use primarily the libraries belonging to the Spanish Council for Scientific Research (CSIC), since we belong to the same administration, an autonomous body of the Ministry of Education and Science. Among the 92 institutes of CSIC, with a staff of about 7.000 members, three of them are information and documentation centers whose principal aim is the dissemination of scientific information, while the rest of the institutes have the obligation to supply an effective interlending library service among them.

We employ all sorts of different methodologies to obtain copies from other libraries, giving them every possibility to cooperate. That means that we are prepared to send a member of our staff to any library located in Madrid in order to help there to do all the work involved in the photocopying process, including shelving. Usually and at least once a week we visit 19 libraries located in Madrid and we have written relations with 129 Spanish Libraries.

One of our biggest problems is that we have no updated union catalogues. The last extensive one in the area of biomedicine was published more than ten years ago, in 1976 (1). It contains 7524 entries of titles from the holdings of 479 libraries. Although it is difficult to believe, it continues to be heavily used. In Catalonia there is another union catalogue that has just been published in its second edition as an online product (2). A subset of the union catalogue from the 92 libraries of the Spanish Council for Scientific Research with the biomedical journals has appeared at the beginning of this year, as a product of the online cataloguing cooperation (3). Most recently, an Association from the Basque Country -Asociación de Lucha contra el Cáncer- has published a catalogue that contains many of the most important holdings of Spanish hospital libraries (4). They have the project of producing it in CD-ROM with the collaboration of Ebsco.

All these data show that, although the situation is far from perfect, some indications permit us to be optimistic. Interlibrary lending depends on good will and we have found it in our colleagues. Meanwhile we keep on waiting for the promised third edition of the union catalogue by the Ministry of Culture.

As for now, we have to consult aproximately a hundred catalogues and waste a lot of human effort and time in this tiresome job. Many of these individual catalogues contain journals not only on Biomedicine, but on other disciplines as well, as they come from universities with central libraries or multidisciplinary research centers.

Last year we had over 50.000 requests of documents in the biomedical area.

As a result of all these consultations we succeed to fulfill 20% of the photocopy requests that we receive with the journals kept in our own Institute. 60% comes from other Spanish libraries. We have to point out here that our library is specialized in science and technology and so we have only a few biomedical journals. Moreover, in the CSIC there are no clinical journals, which are heavily used.

For the remaining 20%, when all national resources have been exhausted, we must rely mainly on the British Library Document Supply Centre, on the Institut de l'Information Scientifique et Technique of the Centre National de la Recherche Scientifique and on other foreign lending organizations, like l'Association de Bibliothecaires Suisses, la Biblioteca Centrale de

Medicina e Chirugia de Torino and BIREME (Biblioteca Regional de Medicina de Sao Paulo, Brasil). We try not to request copies to the United States as prices are terribly expensive.

Forms used at ICYT are as simple as possible (see Fig. 1). They intend to record only the information necessary to be able to give a proper answer to every request. They are used throughout the whole country. The forms have three different copies: One is kept by the user and two are sent to ICYT. One of them is classified by the name of the client, and discarded once the copy has been served, and the other is classified by the library which has to deliver the copy. Another file which we used to keep, with entries by the name of the journals, has been eliminated as it was very expensive to maintain and we had not enough staff to make studies on the use of journals. However, some papers on the demand for photocopies from ICYT users have been published in the "Revista Española de Documentación Científica" (5).

Last June we were asked by Ebsco to find the core titles -from the list of titles included in Index Medicus- used in Spain as a result of a study of the requests received in our Institute during a year. We gave a list of 1291 titles, most of them (1098) having been requested more than five times.

We keep records of the number of requests sent to and received from other libraries and the number satisfied in each case.

The ICYT has no special barriers to the service. Anyone can use it as much as he wants. The payment of the service is made under an easy charging policy that cannot be calculated only on the number of pages, as the external lending library that cooperates with us has an influence in pricing. Therefore it is nearly impossible for the user to know "a priori" the prices and this is the reason why we try that coupons be not extensively used. Two possibilities are offered: advance payment through a deposit account and prepaid coupons. The first is preferred as it offers considerable benefits in eliminating burocracy, and saving time and personnel efforts.

The service is designed to supply the copies as quickly as possible. Therefore we admit requests by telex, telefax, data mail and, of course, mail and any other possible media.

The staff in the biomedical document delivery unit is in some cases shared with the rest of the Document Delivery Service from the ICYT. The

reprographic section and the library are, obviously, a fundamental part of the Service and it is difficult to provide an exact figure, but they are around 12 persons.

Prices are very low except for those copies that have to be obtained abroad, as we charge their cost plus 20% for posting and handling. Copies obtained in Spain are in average five times cheaper than those that come from abroad.

Every country has the responsibility for supplying, by loan or photocopy, copies of its own publications, but in the case of Spain it is difficult to cope with it. There is greater difficulty in obtaining copies from Spanish journals than from foreign ones. There are over 400 Spanish medical journals that might be considered of a certain importance from the point of view of their scientific content. We have just published a catalogue of them (6). The above mentioned difficulty has several reasons: one of them is the non commercial distribution of the majority of journals, another is the lack of editorial continuity, since many of them have a very short life, and the main one is that many professionals receive them on an individual basis and therefore they belong to private and personal collections, so librarians, who are always in need of space, do not collect them. We are planning to make an effort to store all of them in collaboration with the Institute in Valencia, Instituto de Estudios Documentales e Históricos sobre la Ciencia, that already has a big collection, as producer of the database "Indice Médico Español".

Users of our Document Delivery Service are first of all the pharmaceutical enterprises, for their R + D departments and for distribution among their customers. In second place, librarians from hospitals who have to disseminate documentation among the staff of their institutions, followed by the faculties of Medicine in Spanish universities. Then, the research institutes through the country and, finally, independent professionals. We have also some of our clients in South America and maintain some exchanges with BIREME.

We find it very useful for the Documentation Delivery Service to keep in touch with colleagues working in medical libraries. We have organized different meetings and have attended the two conferences on the subject held in Spain in these last years, Santander 86 and Barcelona 87,

contributing with several papers. We belong to every professional organization in order to promote personal interchanges as frequently as possible.

Finally we want to mention our experience with the Adonis project that has been quite satisfactory. We have obtained 832 copies from Adonis in this first year.

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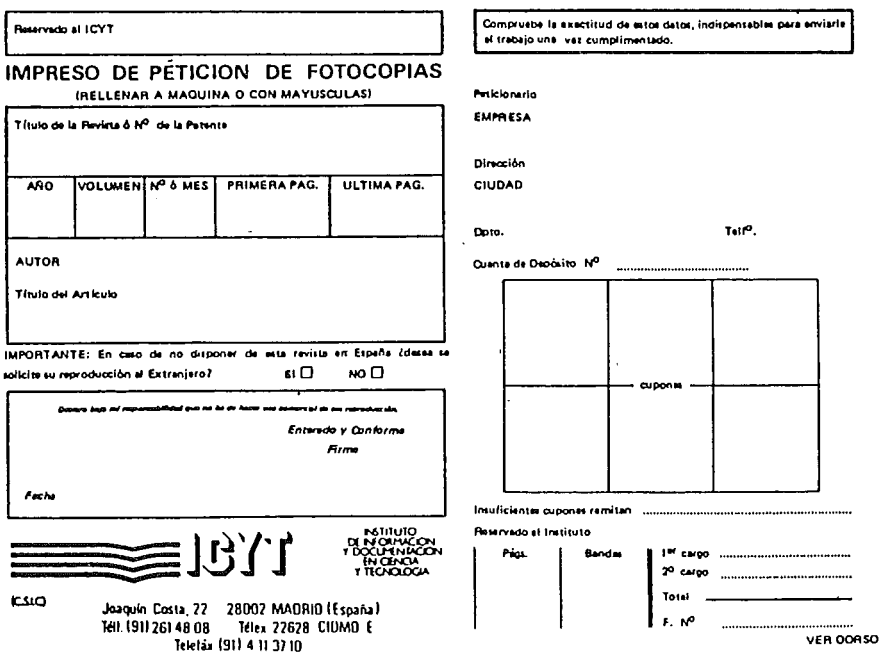

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Teletex (91) 4 11 37 10

Figure 1.- Form used at the ICYT.

DOCUMENT DELIVERY IN A SCIENTIFIC LIBRARY: A PROBLEM OF ACCOUNTING MANAGEMENT

Antonio Di Donato * *Enrico Novari***

An outline of a documentary research will show three logically distinct stages:

1. Bibliographical research through bibliographies, indexes, abstracts, data bases, etc.;
2. Identifying document location, i.e. the place or places where the required publications are available, through union catalogues for exemple;
3. Access to original documents by consulting them in libraries, or by loans, photocopies, etc.

The steady growth in primary scientific literature and the development of automatized bibliographies have enormously increased the gap between the reference collections containing the documents and the collections available in each library. After initial research has been made in the library of the scientist's own institute - and perhaps in another nearby institute - with negative results, consulting an outside library becomes inevitable. Only the total sum of collections in libraries and documentation centres on a national level can meet a good proportion of documentation requirements, though research must often be made abroad.

There are organizations which are especially well equipped and efficient in the delivery of documents in various forms, from loans to photocopies or microfilms, as well as the use of the most recent transmission technology for complete texts, such as the British Library Document Supply Centre or the INIST (Institut de l'Information Scientifique et Technique) of the CNRS (Centre National de la Recherche Scientifique).

There follows some data on these services, both as an indicative outline and to compare them with the esperiences discussed below.

The British Library Document Supply Centre is the largest and most efficient document delivery service in Europe and perhaps in the world. It receives about 3 million requests per year, out of which about 90% are met from the Library's own stock, and the rest from associated libraries.

Payment is through "coupons" purchased in sets of 20 at a price of £ 79 or $ 140 (1988). Each coupon is valid for photocopies of an article of up to 10 pages.

The Centre de documentation scientifique et technique of CNRS (now INIST) received over 440,000 requests in 1986, of which about 85% could be met.

Payment is through "unité de paiement" purchased in sets of 20 at 290 FF (1988). For example, the price for photocopying an article of up to 10 pages is 2 u.p. (58 FF).

CNR - Central Library (Consiglio nazionale delle ricerche = National research council)

Given this information, we can examine a scientific library with a document supply service based on the realization of the importance of changing from a simple strategy of increasing its collections to a strategy of widening chances of access to information.

The CNR Central Library is Italy's major technical and scientific library. The vast range of subjects covered includes more or less anything within classes 500 and 600 of the Dewey Decimal Classification.

The library has a current stock of over 500,000 volumes and 10,000 periodicals, of which about 4,000 are current Italian and foreign periodicals.

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* *CNR (National research council). Central Library.*
** *CNR. Institute for studies on research and scientific documentation.*

About a third of this stock is formed by biomedical publications. There is a proportional level of requests in this field and in the number of readers using the library; among readers with degrees, the proportion rises to nearly two thirds. It can thus be said that the CNR Library is one of the most important ones in Italy even in this sector.

As for photocopies of documents, library rules state that *photocopying is allowed only for research purposes and in lieu of the loan or manual copying of documents. The reader signs a special form accepting responsability for the use which could be made of copies, since further copying or publication for commercial or other use is forbidden.*

For outside readers, Italian and foreign, the CNR Library has long offered a service of photocopies by correspondence. The main groups of users can be summarized as follows:

1) CNR research departments;
2) Public and private research institutes in Italy and abroad, especially universities;
3) Private companies and industries;
4) Private researchers and students.

Over the past three years demand for this service has increased sharply.

Table 1 - Document supply orders

	1985	1986	1987	
Received	2.200	3.256	3.357 *+34%*	*85/87*
Filled	1.336 *60,72%*	2.106 *64,68%*	2.140 *63,74%*	
Invoicing	372	443	510	
	Orders from Italy	85%		
	Foreign orders	15%		

These figures highlight how the service is not even vaguely comparable with the ones supplied by the previously mentioned specialized institutions; nevertheless, it does have a role which can be further developed in Italy and for foreign countries.

Requests in Italy are mainly for foreign publications, while most foreign requests are naturally for Italian publications which are not readily available elsewhere. It is interesting to note that the number of requests for back issues, even up to several decades old, is very high; these are probably requests not met by other services.

After the first order, requests are made on special forms given to the users. These forms also states the limitations on the use of copies by readers as in the rules mentioned previously. Requests may also be sent by telex and telefacsimile. The average time of response is 10-15 days, apart from mailing time, since the service is carried out on a part time basis by the same staff who deal with local requests.

Mailing in Italy is by registered letter inclosing a postal current account payment form showing the price the user will pay when the copies arrive. For foreign countries mailing is by registered air mail and payment can be made through bank transfers or payments on international postal accounts.

Since the number of regular users making several requests within a year is low, the system of pre-payment through coupons has not be adopted. For the same reason annual invoicing is not applied.

In the past a system was also tried with mailing and payment "on delivery". When the receiver of a package, generally an employee of a public institute, does not have the cash on hand, the package is not left and must be taken at the post office later, resulting in a further delay in the service. It was decided to trust the customer to pay for the "package", as in fact happens.

The price was very low and till recently was Lit. 100 per photocopy, which included two pages of the original, plus postage. Since each customer generally makes several requests at the same time, there were 510 invoicing and delivery operations in 1987 amounting to Lit.4,396,100 ($ 3381), with an average of Lit.8,600 ($ 6,63) per invoice.

Table 2 - Document supply service in 1987.

Reproduced pages	32.190	
Issued invoices	510	
	Lit.	$
Cost of photocopies	1.609.500	1,238
Postage charges	2.786.600	2,143
Total receipts	4.396.100	3,381
Average for invoice	8.620	6.63

These transactions refer to the different types of users with the following percentages: CNR research departments 13,8 %; public and private scientific institutions 47,0 %; commercial and industrial companies 18,0 %; private researchers 21,2 %.

The services provided by the library (receipt of the request, identification, location, copying, invoicing, packaging) which are already loss-making in themselves, also involve a series of administrative and accounting procedures for handling and recording the amounts in the institution's accounts.

Table 3 - CNR accounting service operations for entering photocopy service items

- Checking invoice and assigning a progressive checking number;
- Recording the amount as an item under the fiscal year the service refers to, updating the *data base* for the *balance of receipts* ;
- Checking the input of the above amount;
- Recording the payment (bank or postal) made by the user on a temporary CNR cash account;
- Checking the cash account receipt; it should be recalled that when the payment is ordered in a foreign currency by the use, deposits on the CNR centralized account are subject to the operation of sending the invoice to the bank for the required cancellation;
- Issue of a corresponding cash receipt slip, which is checked and then signed jointly by the chief of the accounting department and the General Director or persons authorized by them;
- Delivery of the receipt slip to the CNR cashier;
- Cross checking of the receipt slip returned by the bank;
- Recording the receipt on the CNR current account balance.

Complex rules for public accounting require at least 10 operations for the various stages of checking and the receipt of payments, with an enormous load on the central administrative procedures, as well as high management costs which are not covered by income.

A total review of the whole system has therefore been proposed. First of all comes the basic problem, i.e. whether the user should pay for the library service. This topic has been and is still being widely discussed and various studies have appeared in specialized literature. Here we might recall only the contributions by Maurice B. Line and various articles on this subject in the British periodical *Interlending and document supply* as well as Marco Cupellaro's book with the provocative title *"La biblioteca vende" (Library sells)*, which has aroused much interest in Italy recently.

The most widespread idea is that while a "public service" should be available free, the user should pay for personalized services such as making and mailing photocopies.

The calculation of the prices should, if a commercial enterprise were involved, take into account a series of items from general investment expenses to management costs, personnel costs etc., and finally the cost of the actual operation of making and sending photocopies. In the case of a library open to the public free of charge, only the latter costs should be charged.

Three main hypotheses have thus been put forward:

1 - A reassessment of the cost of the service in economic terms; the price should include all of the costs of the institute for each service. The calculation of the price becomes rather complicated with the inclusion of an estimate for work done by administrative offices where both the service and the income are of modest dimensions.

2 - To provide a free service for everyone, counting the costs as general management costs. This drastic solution would eliminate any accounting work for income by the institute's accounting offices. It would, however, be difficult to justify this generosity when private individuals or companies are concerned, for exemple there would be a need to guarantee against improper use of the service by dishonest users.

3 - The division of users into various categories, and to provide the service either free of charge or on the basis of updated fees, according as to whether the party concerned is public or private from the juridical point of view, or whether the user, whether public or private, has scientific research as its specific function.

Free services provided to Italian and foreign scientific institutes, both public and private, could be included in a broader context of cooperation and promotion for scientific research, which is one of the aims of the CNR. This "mixed" solution would not actually eliminate the accounting problem altogether, but it would reduce it considerably.

While being aware that the problem must be reconsidered in the future in the light of new technologies and of an expansion of the service, the library management and the CNR administration decided on an experimental organizational procedure in June 1988.

In order to promote the exchange of information with other libraries and institutes, and to avoid the load of accounting work for the CNR central administration, photocopying services of the CNR Central Library by corrispondence or whenever the copies must be sent out will be organized as follows:

a) free of charge for:

- CNR research departments;
- Italian public institutes and organizations which are scientific or cultural in character, including universities, with their activity in Italy or abroad, given the function of the CNR to promote public scientific research;
- Research centres in developing countries, in the context of Italy's policy of cooperation; a list of these countries is available at the Foreign Ministry.

b) free of charge for amounts under $ 50 per annum and under condition of reciprocation for:

- Foreign public and private scientific institutes;
- Italian private scientific institutes;
- Italian and foreign companies;
- Private researchers.

In case of free services delivery costs are fully debited to CNR.

c)the users in group b), when the free amount is exceeded, will pay on the basis of Lit.400 per page for Italy and Lit.800 for foreign countries, i.e. prices corresponding to the European services already described. The customer must also pay postal charges.

The library will thus be able to perform a service of document supply, with incentives for public research institutes and small scale users, while administrative work will also be lightened considerably. The quantitative limit should serve as a protection against use of the service for illegitimate commercial purposes.

Table 4 - New rules applied to 1987.

Photocopies supplied 32.190

51,6% free		- CNR research departments - Italian institutions and public scientific institutes - Research centres of developing countries
35,4% free up to $ 50	6,7%	Public and private scientific institutions abroad
	1,2%	Italian private scientific institutes
	8,5%	Commercial and industrial companies
	19,0%	Private researchers
13,0% charged beyond $ 50	1,9%	Public and private scientific institutions abroad
	9,9%	Commercial and industrial companies
	1,2%	Private researchers

RECEIPTS

	Lit.	$
Receipts for copies charged with new fares (only 13%)	1.925.200	1,426
Real receipts in 1987	1.609.500	1,192
Difference 19,6% more than in 1987.	315.700	234

On the basis of 1987 statistics, this system should allow for 51.6 % of operations to be transferred to the free category, 35.4 % free of charge within the $ 50 level, and only 13 % with payment according to the updated prices; the result would be a 19.6 % increase in receipts over 1987.

In this way, the system will reach the goal of recovering not only the direct costs for services with payment, but also a considerable part of the indirect cost of the institute, without, however, exceeding average international prices.

In addition the Library now can receive orders by telefacsimile and reply by this way on request without any additional charge.

The application of this system to the CNR Library began a few months ago and the results cannot be assessed yet, but we believe a description is important, since it is a practical experimental approach to a problem which is widely discussed on a theoretical level, but however, in reality, it is closely linked to the amount of material dealt with, the accounting procedures used, the availability of technical instruments and of staff, all of which may vary according to the different real situations.

We realize that the choices adopted are innovative in the field of document supply, but it is thought that this experiment should be put into practice by the library of Italy's major scientific research institution, financed by public funds for serving the scientific community. Objections of excessive generosity may be raised, but there can be no criticism for insufficient diffusion of the richness of scientific information of the Library's collections.

It may be interesting after some time has passed to evaluate the results of this experience, and especially to compare them with other similar systems, and this is mainly the aim of this paper.

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Concurrent session 4D

Medical library organisation

Chair

B. Doran

PROBLEMS REGARDING THE REORGANIZATION OF A LIBRARY FOR ENVIRONMENTAL HEALTH

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THE PREVENTIVE HEALTH SERVICE AND ITS LIBRARY

The activity of the Preventive Health Service has been documented since the end of the 1800s when, with the law no.5849 of 22nd December 1888, it was decided to set up municipal laboratories for hygiene and preventive medicine, the object of which was to provide a surveillance of environmental health in the respective local authorities.

With the RD no.2889 of 30th November 1923, it was decided that the laboratories, their facilities and staff should pass from being under the local authorites to the provincial ones. The Regulation (1) which controlled the transfer clearly defined the functions and the role of the laboratories which were aimed at safeguarding public health and hygiene , and for this reason structured in two sections: the first, medico-micrographic which functioned also as a diagnostic centre for infectious and social diseases, and the second section, chemical.

It is interesting to note that in the same Regulation, article 23, it was decided that the two sections should be equipped with scientific texts and specialized periodicals as well as suitable furniture and equipment. In this way the library of the laboratory of hygiene and prevention came about. As a consequence of the law for sanitary reform of 23rd December 1978 no. 833 this laboratory became known as The Preventive Health Service (PHS), thus becoming the technical support for occupational medicine and public hygiene for the Local Health Authority (LHA) and its role has been further outlined (2) (Tab.1).

TAB.1: ORGANIZATIONAL STRUCTURE OF THE PREVENTIVE HEALTH SERVICE

Role

Control and Safeguard of Environmental Health
Prevention of Industrial Accidents and Occupational Diseases

Functions

Specialized technical supportive structure of the various Local and Provincial health services on the subjects of:
- sanitary control of food and drink;
- sanitary control of the ground and water;
- sanitary control of the air;
- control of ionizing radiation;
- hygiene and safety at work;
- control of installations and prevention of industrial accidents;
- prevention of infectious diseases.

The Preventive Health Service Library has always been used directly by

specialized staff within the institute.

As each book was bought, it was put on a shelf and according to its subject arranged in a very rudimental way, but no actual method of cataloging was used.

In 1984, with the intention of creating a more efficient policy in the purchasing of books, it was decided to reorganize completely the texts which had become too numerous to be managed without a cataloging technique.

A preliminary examination of the library contents, even though small (1500 books and 70 periodicals between those in and out of print), showed that the majority of books were about public health and the prevention of infectious diseases up to the 1960s, whereas books bought following that period showed a major prevalence in the sector dealing with chemico-toxicology and accident prevention.

In conclusion the nature of the library reflected the changes which had taken place spontaneously in time: the last case of typhoid went back to 1970, whilst the last case of diphtheria went back to 1958-60.

Even if old infectious diseases have been replaced by new ones, since 1973 the "doctor figure" is no longer to be found amongst laboratory staff especially in the field of chemico-toxicology.

POLICY OF REORGANIZATION

In these last few years it is not just the specialists who work within the institute who use the library but also those working in occupational medicine and environmental health in the Local Health Authority in the Province of Reggio Emilia, as they have found that this library is the only place they can find the professional information they need. Consequently, the principle objectives in the reorganization of the library above all were to:

a)- reorganize the cataloging of the contents of the library;
b)- set up information services;
c)- provide easy access to information.

In order to obviate the lack of staff specialized and dedicated to the functioning of the PHS library, the staff of the library in the Santa Maria Nuova Hospital collaborated on a permanent basis right from the beginning of the operation. Help was provided with the purchasing, cataloging and transferal to the PHS library of all the material used in the laboratories.

Thanks to a series of technical aids which facilitated the use of the library by internal users,it was only necessary to employ one adequately trained person whose job it was to guarantee that the library functioned properly and to maintain constant relations with the hospital library.

The measures taken for the reorganization were as follows:

1) Cataloging of the books already in the library:
   - cataloging per author;
   - classification per subject;
   - cataloging per subject heading;

2) Preparation of a Guide on the functioning of the library;

3) Organization of space;

4) Analysis of a system of marking;

5) The creation of a bibliographical information service.

Here we will only be dealing with points 1 and 2 which represent the basis of the whole operation both from the point of view of the rearrangement of the books and the rethinking on the function of the actual library.

CATALOGING PER AUTHOR

In cataloging per author the Italian rules for cataloging per author (3) were applied as far as the choice of headings was concerned, whilst the bibliographical description of the documents was done according to the ISBD (M) (4).

CLASSIFICATION PER SUBJECT

Given the diversity and the high degree of specialization of the books examined, the major problems arose at the moment of choosing the system of classification most suitable to the situation.

After examining the books already in the library composed partly of texts dealing with medico-sanitary topics, and taking into consideration that the Santa Maria Nuova Hospital library had been using the NLM Classification (5) for some time, it was decided to use the latter also in the PHS Library for all the material regarding the new tasks of the organization such as the prevention of industrial accidents, the control of environmental pollution, food hygiene, industrial hygiene, particulary regarding technological aspects, it was necessary to integrate the NLM Classification with a few classes of the LC Classification (6-11).

In this way it was possible to maintain a certain homogeneity amongst the systems of classification used by the libraries belonging to the same health authority USL no. 9 - which in a short while will have to start managing their own wealth of information by creating a network of medical and public health libraries which are connected with each other.

Outlines of classes used (12)

LC Classification

G = GEOGRAPHY. MAPS. ANTHROPOLOGY. RECREATION
H-HJ = SOCIAL SCIENCES : ECONOMICS
(HF: commerce)
HM-HX = SOCIAL SCIENCES : SOCIOLOGY
(HT: Communities. Classes. Races)
Q = SCIENCE
(QA: Mathematics. QC: Physics. QD: Chemistry. QE: Geology
QH: Natural history. Biology. QK: Botany. QL: Zoology)
S = AGRICULTURE
(SB: Plant culture. SF: Animal culture)
T = TECHNOLOGY
(TA: Engineering-general. Civil engineering-general. TC:

Hydraulic engineering. TD: Environmental technology. Sanitary engineering. TH: Building construction. TJ: Mechanical engineering and machinery. TK: Electrical engineering. Electronics. Nuclear engineering. TN: Mining engineering. Metallurgy. TP: Chemical technology. TR: Photography. TS: Manufactures. TT: Handicrafts. TX: Home economics.

NLM Classification

QS - QZ Preclinical sciences

W - WZ Medicine and related subjects

The use of the LC classification caused more problems being more suitable for the classification of material belonging to large and general libraries.

This is more obvious owing to the large articulation of the numerical notations. In order to avoid the scattering of a small number of books, the more general notation was often used even if nearly always a more specific type of classification was possible.

The use of geographical divisions also presented a few difficulties: this in fact is not based on one criterion alone, as happens on the other hand in NLM Classification,but varies from class to class.

For this reason the geographical notation has not been widely used, only when considered indispensible.

The classification of the books obviously meant new positioning; this was the biggest problem because the library users were used to having the books grouped according to their immediate use and also to having them at their disposal in their laboratories. With the new type of classification it meant that books on the same subject were not necessarily arranged near to each other, but were in different places on the shelves (E.g no.1-3)

Eg. 1 WATER
Chemical analysis QD 142
Bacteriological analysis QW 80

Eg. 2 MILK
Chemical analysis SF 253
Microbiological analysis QW 85
Public health controls WA 715

Eg. 3 HYGIENE IN THE WORKING ENVIRONMENT
Occupational medicine, occupational diseases and their prevention WA 400-495
Industrial safety, plant safety regulations T 54-55

CATALOGING PER SUBJECT HEADINGS

The choice of Medical Subject Headings (MESH) (13) being the main instrument for subject indexing was motivated by the fact that there was quite a lot of material on the safeguard of public health, prophylaxis and prevention of infectious diseases and the promotion of hygiene in the various ambits of public life.

However, the presence and large increase in publications outside the ambit of public health in the strict sense of the word, has made it necessary to resort to other means of constructing a subject index made up of terms suitable for the designation of concepts present in the bibliographical material.

When it was not possible to identify the suitable term to describe the subject using MESH, alphabetical indexes of the classes forming the Library of Congress Classification (6-11) were resorted to, the same ones that were used for the classification of publications; the voices or terms present in these indexes have been used as subjects. In spite of this, in some cases it was necessary to introduce new terms, relative to the subject in question, taken from encyclopedias, dictionaries or the publications themselves.

An additional difficulty was due to the fact that in the language used - English - there were no terms of any description to describe specific Italian concepts.

The subjects actually used were not only catalogised but listed alphabetically, using a system of cards, thus constituting the subject indexing of the library. As well as providing a network connecting the subjects, these cards contain information on the origin and the meaning of the terms. Each subject which was not drawn from MESH has been marked with a dot followed by the symbol of the class from whose index it was taken. Each term taken from other sources has been marked with an asterisk.

Whilst the subject indexing was being developed, English was maintained and an Italian translation written beside the term, with the idea of later creating an alphabetical list of Italian terms, followed by its relative reference to the English in the subject index; the intention of this being to help those people whose knowledge of English is limited, to use the material available (Eg.no 1-5).

Eg. n. 1:
PUBLIC HEALTH
Sanita' pubblica
see related
Health planning
Occupational medicine
Social medicine
Zoonoses
XR Health planning

Eg. n. 2:
SOCIAL MEDICINE
Medicina sociale
XR Public health

Eg. n. 3:
.AGRICULTURAL POLLUTION
Inquinamento agricolo
S

Eg. n. 4:
.WATER QUALITY
Qualita' dell'acqua
T

Eg. n. 5:
*ALEURONE
Aleurone (sostanza proteica
presente nel frumento)

The three types of relation between the subject present in MESH (preferential: "see"; hierarchical "see under" ; of affinity: "see related") have been reduced to two. The subject index which has been made up does not include the hierarchical relations, the "see under" becomes the preferential one "see".

The transformation of the "see under" to "see" causes the loss of a few possibilities of access to information since the synonyms of the term followed by "see under" are not included in the subject index; however the information for the user remains fundamentally correct, even if reduced as regards the possibilities offered by the terminology in the reference thesaurus (Eg. no. 6-7).

Eg. n. 6: CONSERVATION OF ENERGY RESOURCES
see under CONSERVATION OF NATURAL RESOURCES
X ENERGY RESOURCES CONSERVATION

CONSERVATION OF ENERGY RESOURCES
Conservazione delle risorse energetiche
see Conservation of natural resources

Eg. n. 7: CONSERVATION OF NATURAL RESOURCES
see related
ECOLOGY
X NATURAL RESOURCES CONSERVATION
XU CONSERVATION OF ENERGY RESOURCES

CONSERVATION OF NATURAL RESOURCES
Tutela delle risorse naturali
see related
ECOLOGY
X NATURAL RESOURCES CONSERVATION
X CONSERVATION OF ENERGY RESOURCES

As far as the subheadings are concerned, we have followed the indications given to the catalogers by the introduction to the MESH Annotated Alphabetic List (13). An exception was made for the Language subheading which was not used even in the restricted range of cases foreseen in the manual, owing to the exiguous number of texts requiring its application.

It must be specified that as far as subjects taken from sources other than MESH is concerned, they have only been given Form subheadings.

In giving Topical subheadings very strict criteria are used; the extent of their use will depend on the user as it is assumed that he will have a profound knowledge of the subject and the principles on which the thesaurus was compiled (Eg. no 8).

Eg. n. 8: WATER QUALITY--CONGRESSES
Qualita' dell'acqua--Congressi
T

GUIDE TO THE MATERIAL IN THE LIBRARY

The most important moment of the whole operation was the final meeting between the library users and librarians and the drawing up of a Guide for

the use of the library which, even though still not in its final state, represented the reading key to the arrangement of the subjects in the library.

This Guide, compiled above all from the exemplification of the criteria which form the basis of LC and NLM Classification, was completed with a list of significant cases on their application.

A synopsis and reproduction of the parts most used complete with notes and useful adjournments was supplied for every class used.

Even in the absence of a cataloging system with cards, the preparation of which would have required more time, the user was easily able to move around the volumes on the shelves, obtaining moreover further useful information by consulting the Guide.

CONCLUSION

Without disturbing the sociologists who always support us when we want to create services of even more sophisticated scientific documentation , and with the needs of the user in mind, we have undertaken an operation which we owed to all those working in the sector: to bring to their attention the existence of the assets owned by the PHS and their availability for consultation.

We must not forget that Reggio Emilia is in an unfortunate position, wedged between three important universities, Parma, Modena and Bologna which offer a disjointed library service which is often not very accessible to non-residents.

In order to obviate this drawback, it would be sufficient to extend the action taken in the PHS and recover all the books of the many services within our Local Health Authority which are piled up in a disorderly fashion, knowing that any further progress in the diffusion of medical information in our province passes through the knowledge and availability of that which is actually in our possession.

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LA CREATION DE LA BIBLIOTHEQUE DE LA FACULTE DE MEDECINE DE L'UNIVERSITE DE LIEGE : UNE EXPERIENCE INTERESSANTE

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1. INTRODUCTION

Liège, une ville de 450.000 habitants possède une Université qui fut fondée au début du 19ème siècle. Sa Faculté de Médecine compte environ 2.500 étudiants et plus de 500 médecins.
La Faculté de Médecine a occupé pendant plus d'un siècle des locaux dispersés en divers points de la ville (dont l'hôpital de Bavière, hôpital de l'assistance publique).

2. LES BIBLIOTHEQUES DE LA FACULTE DE MEDECINE AVANT 1983

A cette époque, chaque service de la Faculté possédait sa propre bibliothèque. On dénombrait ainsi quelque 50 bibliothèques de service, de taille variable, fonctionnant selon des modalités extrêmement diverses et dont l'accès était parfois très malaisé.

Parvenir à rassembler une documentation sur un sujet pluridisciplinaire était donc un véritable problème.

3. NAISSANCE DU PROJET DE LA BIBLIOTHEQUE DE LA FACULTE DE MEDECINE

En raison de ces difficultés, le Conseil Scientifique des Bibliothèques de l'Université incita, vers 1975, la Faculté de Médecine à profiter de son transfert vers le nouveau campus universitaire du Sart Tilman (situé en périphérie de la ville) pour rassembler ces bibliothèques de service en une bibliothèque unique. Dès cette époque, des locaux furent donc réservés pour la bibliothèque dans la première programmation du Centre Hospitalier Universitaire (C.H.U.) du Sart Tilman.
En fait, 12 ans plus tard, la bibliothèque s'installera dans une zone du C.H.U. différente de celle réservée initialement.

En 1982, l'auteur de cet article fut désigné comme responsable du projet. Un Comité de Gestion de la future bibliothèque, constitué de quelques professeurs et assistants, fut mis en place à la même époque. La première tâche du responsable consista à mettre à jour le catalogue collectif des périodiques de la Faculté de Médecine. Ce fut l'occasion d'entrer en contact avec les gestionnaires des différentes bibliothèques de service.

A cette époque, les nouveaux locaux de l'hôpital et des services de la Faculté de Médecine au Sart Tilman n'étaient pas terminés. Une seule des cinq tours du nouveau centre hospitalier était achevée et occupée, depuis 1975, par une dizaine de laboratoires de la Faculté. On décida, en 1982, de créer dans cette tour, un embryon de bibliothèque facultaire, par rassemblement des collections des quelque 10 bibliothèques de service déjà installées sur ce site. Cette bibliothèque fut dénommée UNITE DE DOCUMENTATION MEDECINE.

4. UNE ETAPE INTERMEDIAIRE : L'UNITE DE DOCUMENTATION MEDECINE

En créant l'Unité de Documentation Médecine, on visait deux objectifs :
- améliorer l'accès à la documentation,
- réaliser la première étape de la constitution de la bibliothèque facultaire et permettre ainsi au responsable du projet de réaliser différentes expériences à petite échelle.

L'Unité de Documentation s'est immédiatement affirmée vouloir être beaucoup plus qu'un simple lieu de conservation de documents. Elle s'est voulue un centre dynamique d'information et de documentation, véritable plaque tournante dans la Faculté, largement ouverte aussi vers les institutions extérieures.
Pendant quatre années, l'Unité de documentation va connaître un succès croissant. Elle suscite l'enthousiasme d'un grand nombre d'utilisateurs parmi lesquels se trouvent notamment des professeurs ayant un pouvoir de décision en Faculté et au C.H.U. Les membres de la Faculté prennent progressivement conscience des nombreux services que les techniques modernes de la documentation sont en mesure de leur apporter.
L'Unité de Documentation fournit ainsi des arguments bien concrets en faveur du rassemblement des bibliothèques de service. Elle est la preuve que la mise en commun permet de réaliser, avec des moyens financiers identiques, un outil bien plus performant et au service de tous.

5. PREPARATION DE LA BIBLIOTHEQUE FACULTAIRE

C'est dans ce contexte assez favorable sur le plan fonctionnel mais alors que l'Institution connaît d'énormes difficultés financières, qu'en 1986, le Comité de Gestion présentera au Doyen de la Faculté, des propositions d'organisation, de statuts et de budget (personnel, fonctionnement annuel, équipement) pour la bibliothèque.

Un an plus tard, à la veille du déménagement du vieil hôpital universitaire vers le nouveau C.H.U. du Sart Tilman, le projet sera soumis pour approbation devant le Conseil de la Faculté, où siègent l'ensemble des professeurs et des représentants du personnel scientifique.

Une décision absolument capitale pour la bonne suite du projet fut prise en 1987 par l'autorité de l'Institution : les réabonnements de périodiques des bibliothèques des services qui allaient déménager l'année suivante sur le nouveau site du C.H.U. devraient obligatoirement être effectués par l'Unité de Documentation. L'Unité de Documentation avait ainsi la certitude de posséder et de pouvoir gérer efficacement, dès 1988, les périodiques détenus jusque là dans les bibliothèques de service.

En matière de locaux, les difficultés furent nombreuses. Le projet connaîtra successivement 4 implantations différentes et ce, en raison de modifications profondes dans la programmation de l'hôpital au cours de sa construction. Le choix définitif du site d'implantation se fera seulement 5 mois avant l'occupation des locaux. L'Unité de Documentation s'installera, en août 1987, sur un véritable chantier. C'est pendant cette période qu'aura lieu le déménagement de l'hôpital vers son nouveau site. A chaque transfert de service vers le nouveau Centre Hospitalier Universitaire, de nouvelles collections viendront s'adjoindre à la bibliothèque.
L'Unité de Documentation Médecine abandonnera alors son ancienne dénomination pour s'appeler dorénavant Bibliothèque de la Faculté de Médecine.

6. LA BIBLIOTHEQUE DE LA FACULTE DE MEDECINE : options prises en matière d'aménagement et de fonctionnement

Actuellement (automne 1988), la bibliothèque n'abrite pas encore la totalité des collections prévues. Quelques bibliothèques, dont certaines de grande taille comme celle de l'Institut de Pharmacie, subsistent encore dans la ville. Elles viendront rejoindre la bibliothèque facultaire dans quelques années, au moment où ces services de la Faculté déménageront vers le C.H.U. du Sart Tilman.

a) Locaux : la bibliothèque occupe une surface d'un seul tenant représentant 2000 m2 de libre accès (fig. 1). Elle dispose en outre, dans des caves, d'une réserve dense de 300 m2 pour le stockage des collections moins consultées. Le local présente deux avantages majeurs : il jouit d'une vue superbe sur la vallée de l'Ourthe (un des plus beaux paysages de tout le C.H.U.); il est aisé d'accès, étant situé au rez-de-chaussée, à proximité de l'entrée principale de l'hôpital, du restaurant et des boutiques. Il s'agit là d'atouts considérables pour inciter le personnel du C.H.U. à fréquenter la bibliothèque. L'inconvénient principal du local réside dans son étirement en longueur : d'une extrémité à l'autre, il y a 100 mètres.

La responsable du projet a pu réaliser elle-même les plans d'aménagement de cette surface ainsi que le choix du mobilier. On a veillé à disperser largement les 160 places de lecture. Ceci présente l'avantage, d'une part, de pouvoir disposer de places de lecture en tout point de la bibliothèque et d'autre part, d'éviter les grandes zones de lecture souvent bruyantes. Cette disposition tente de créer un climat intime sur cette surface de 2000 m2. C'est dans ce même esprit que les présentoirs à périodiques ont été disposés de manière à délimiter des aires de lecture de taille réduite. Dans cette zone, les périodiques sont regroupés par matière. Ce rangement par matière des périodiques de l'année en cours a été choisi sur base des conclusions d'une enquête menée auprès des lecteurs.

b) Equipement :

Mobilier : le mobilier récupéré dans les anciennes bibliothèques a été entièrement réutilisé, principalement pour l'aménagement de la réserve compacte. Le mobilier neuf a été choisi selon des critères esthétiques et fonctionnels très précis mais tout en se limitant à du matériel peu coûteux. Le budget d'équipement était en effet très réduit (il équivalait au budget d'acquisition d'une année). Le nouveau mobilier a été choisi de couleur blanche (rayonnages en métal, tables en stratifié) avec des finitions en hêtre naturel.

En ce qui concerne les présentoirs à périodiques, nous avons recherché un équipement permettant le rangement vertical des fascicules derrière la tablette de présentation. Les avantages de ce système sont évidents : les dos des fascicules sont visibles et l'accès aux fascicules est beaucoup plus aisé que dans le cas d'un rangement horizontal.

Systèmes de contrôle d'accès : 3 systèmes électroniques de contrôle ont été installés : 1) un contrôle anti-vol par bandelettes magnétiques
2) un contrôle d'entrée par carte magnétique (cette carte porte les données d'identification du lecteur) : le rôle de cette barrière est double : d'une part limiter l'accès de la bibliothèque aux personnes en règle d'inscription, d'autre part d'obliger les lecteurs à se munir de leur carte de lecteur lorsqu'ils se rendent à la bibliothèque.

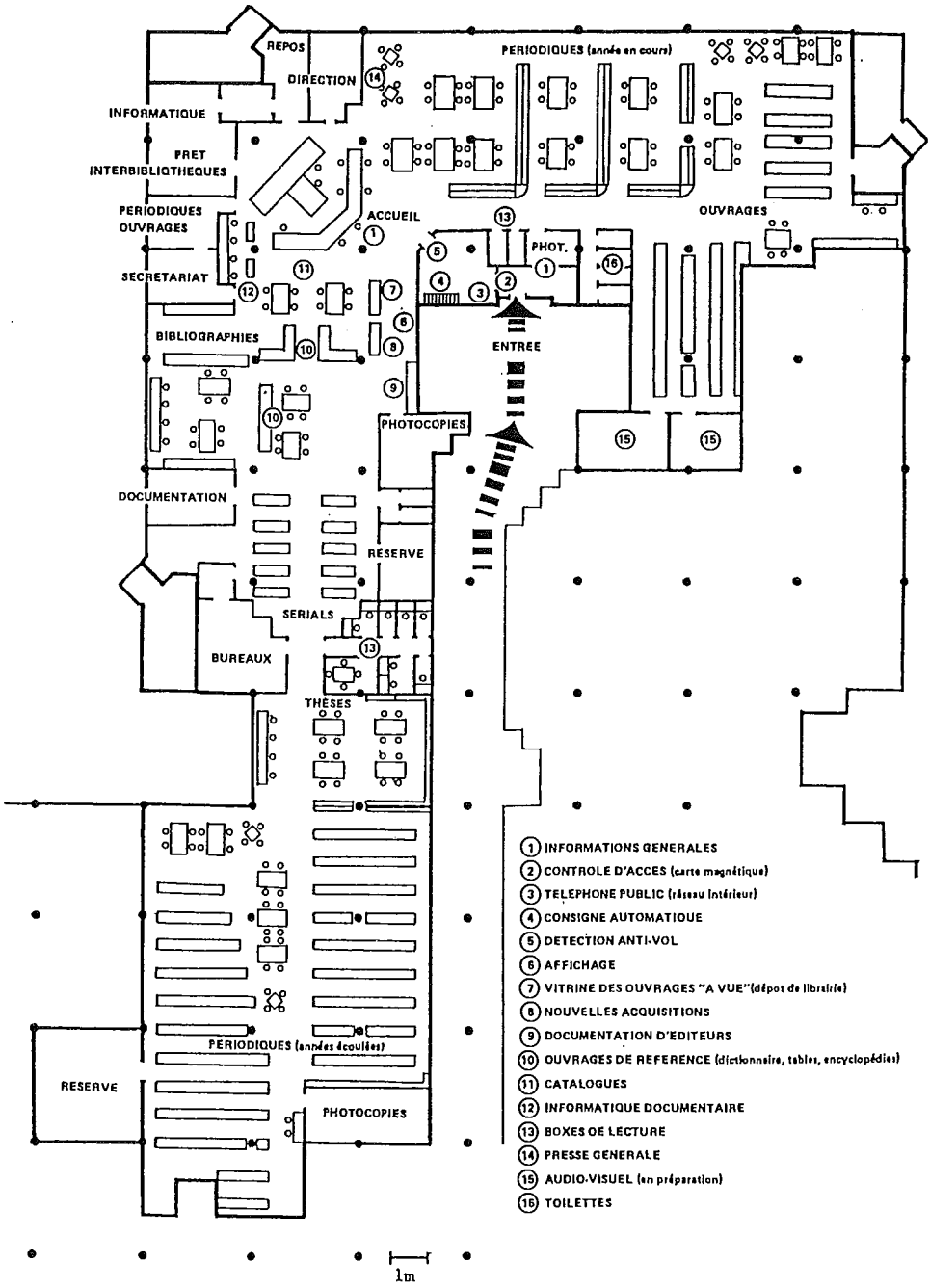

Fig. 1 : plan d'aménagement de la bibliothèque de la Faculté de Médecine de l'Université de Liège

3) contrôle d'accès aux photocopieurs par cartes magnétiques. Ce système allège considérablement la gestion des copieurs.
Informatique : la bibliothèque ne dispose malheureusement pas encore d'un système intégré de gestion de bibliothèque.
Le catalogage des périodiques et des ouvrages et la consultation des bases de données correspondantes se fait sur l'ordinateur central de l'Université (IBM 4381) auquel la bibliothèque est reliée par des terminaux (Coibion et al, 1985). Les tâches de gestion administrative et l'interrogation des serveurs de bases de données sont réalisées sur des microordinateurs IBM PS2 (Noël-Lambot et Somville, 1987 a et b).
La bibliothèque dispose aussi d'un lecteur de CD-ROM. L'enthousiasme suscité chez les lecteurs par ce nouveau produit laisse envisager une extension très rapide de ce type de matériel.
c) Périodiques : une des premières tâches d'organisation auxquelles s'est consacrée la bibliothèque concerne la reprise des abonnements de périodiques gérés précédemment par les bibliothèques de service (plus de 1200 abonnements répartis entre plus de 100 fournisseurs, soit libraires, soit éditeurs). Un budget global d'acquisition fut constitué, alimenté à parts égales par le crédit de la Faculté et les revenus de l'hôpital. Un considérable travail de rationalisation fut réalisé. Seuls trois fournisseurs furent conservés (deux éditeurs et une agence d'abonnements). Cette opération permit d'alléger considérablement la gestion et d'obtenir de nombreux services supplémentaires et cela pour des coûts moindres que dans le passé. Plus d'une centaine d'abonnements purent être résiliés pour cause de double emploi.
Il reste, à présent, plusieurs tâches à accomplir encore dans le secteur des périodiques :
1- réaliser une étude de l'adéquation des collections aux besoins des lecteurs. Au cours de sa première année de fonctionnement, la bibliothèque s'est limitée à assurer la poursuite des abonnements précédemment dispersés parmi une quarantaine de bibliothèques de service. Ceci signifie l'absence, jusqu'à ce jour, de toute politique d'acquisition globale. Nous projetons donc, dès cette année, de réaliser une étude critique des collections de périodiques détenues par la bibliothèque et ce, par plusieurs voies d'approche.
2- écouler les collections en double qui sont extrêmement nombreuses.
3- combler les nombreuses lacunes existant dans les collections.
d) Personnel : une des plus grosses difficultés rencontrées au cours de la création de la bibliothèque a été le manque de spécialisation de son personnel. L'équipe actuelle (12 personnes) a été constituée exclusivement par transfert de personnel provenant d'autres services de l'Institution et n'ayant, dans la plupart des cas, aucune expérience du travail en bibliothèque. Ces agents ont, en outre, débuté à la bibliothèque presque tous en même temps et en l'absence de tout collègue plus ancien et ils ont donc souffert d'un sous-encadrement évident. La mise en oeuvre de programmes de formation professionnelle bien adaptés constitue donc à présent une préoccupation prioritaire. Cela ne devra pas nous empêcher de nous soucier aussi de la formation des lecteurs, domaine dans lequel le retard à rattraper est également considérable.

7. CONCLUSIONS

La bibliothèque de la Faculté de Médecine de l'Université de Liège est donc devenue récemment une réalité. Le chemin parcouru en six ans constitue une aventure passionnante mais aussi éprouvante. Il a, en effet, fallu beaucoup de ténacité pour que ce projet puisse se concrétiser dans un contexte économique aussi peu favorable.

La nouvelle bibliothèque, avec des moyens semblables à ceux disponibles dans le passé, peut être bien plus performante qu'un ensemble de bibliothèques dispersées et elle est au service de tous. Les lecteurs sont en nombre sans cesse croissant. Certains d'entre eux appartiennent à des catégories qui fréquentaient peu ou pas les bibliothèques de service : étudiants en médecine, étudiants du secteur paramédical, stagiaires... Mais il est clair que la centralisation des bibliothèques perturbe aussi les habitudes de travail d'autres catégories de lecteurs. Ce sont les professeurs qui sont le plus atteints car ils ne sont plus en contact direct avec la documentation propre à leur spécialité. La centralisation impose des déplacements supplémentaires à ces lecteurs dont le temps est compté. On peut toutefois espérer que l'essor des nouvelles technologies de l'information offrira rapidement des solutions qui pallieront à cet inconvénient. Il est évident qu'un temps d'adaptation est nécessaire à l'installation de nouvelles habitudes de travail.

Quant à la bibliothèque facultaire; elle doit continuer de prouver, par la qualité, la diversité et l'évolution des services offerts, les avantages de la centralisation des bibliothèques.

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