

Behaviour and Perceptions of the Interlibrary Loan and Document Delivery Service Users: High Energy Physicists at CERN- a Case Study

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Abstract

CERN, the European Laboratory for Particle Physics, situated in Geneva, Switzerland, has a rare user population, which consists of more than 10,000 high energy physicists coming from other institutes scattered in Europe and the rest of the world. They come to CERN to share accelerators and research infrastructures and services. Therefore, the library and particularly the ILL-DD Service have a substantial number of potential users. As it is a research library, with many varied subject interests, and experiences the 'normal' budget restrictions, the CERN Library collection cannot accommodate all the documents in all of the subjects potentially required. Therefore, the ILL-DD Service is performing an important task.

During a one month period this year, we distributed a User Survey. Primarily this was to gauge the level of user satisfaction and to discover if the Service was performing competently. Using these results along with statistics collected about the users requests, drawing on experience, and consulting published observations we have collected

interesting information in this paper which portrays not only high energy physicists behaviour, but also user perceptions that may shape the future work of all ILL-DD Services.

Introduction

CERN is the European Laboratory for Particle Physics, one of the world's largest research centres. Situated near Geneva, Switzerland, CERN provides large facilities such as particle accelerators and detectors to over ten thousand scientists, representing 85 nationalities and 500 universities. Staff members and guests include a large number of technicians, mostly engineers dealing with electronics, computing, cryogenics and magnets, all working at building, maintaining and running the complex CERN machines. Fundamental research on the structure of matter is performed, but CERN also plays a vital role in developing the technologies of tomorrow, from materials science to computing, from engineering to medicine.

CERN Scientific Information Service primarily serves high-energy physicists. From our viewpoint as service providers, it is essential to realize that at CERN there are researchers who represent almost every country in the world. This fosters basic linguistic problems. Also, diverse cultural differences imply varied service requirements. CERN 'guest' physicists often work day and night, and timing is essential in their research. Therefore, the library is open 24 hours a day. However, not being staffed at nights and weekends, the library is often misused, and this leads to a lot of extra work for staff, e.g. dealing with misplaced or missing documents. Moreover, as any other library suffering from budget restrictions, CERN library cannot extend its collection to all the subjects potentially required. Therefore, the Interlibrary Loan and Document Delivery Service (ILL-DD service) is performing a crucial task. The dramatic growth of demand, by 100% in 1995, shows the success achieved by our staff, together with the steadily growing needs of CERN users. The decision taken by the new management to increase the staff of the ILL-DD service is a successful investment towards the fulfilment of users' needs, as well as increasing popularity of the library services. Also, the new skills acquired by ILL-DD staff in computing, database searching, exploitation of Internet resources, and chasing information and document suppliers, has made the service almost 100% reliable.

Following the substantial changes over the last two years in the CERN ILL-DD Service, we decided to perform an evaluation to gauge how satisfying the service is for the users. Firstly, we have taken 1996 service statistics and collated them to create an overall presentation of actual usage; including, how many requests we receive, who uses our service and who are our primary suppliers. This information gives us insight into the level of importance that the service has gained in the workings of the organisation, as well as allowing us to adjust our service policy.

Also, we believe that users' perceptions of a service are interesting to gauge as they affect their behaviour towards that service. Therefore, through two paper surveys [both in the Appendix] that we distributed to a group of our users [explained in the 'Survey details' section of this paper], we have gained insight into how satisfied with, as well as what they expect from, the service. We also questioned them regarding a more end-user oriented ILL-DD system, utilizing electronic methods of delivery which we do not use currently. A number of the survey respondents were interested enough to comment and we have collected a number of interesting and salient points for consideration. The result of the whole evaluation process is that we believe the existence of a staffed ILL-DD service in research organizations is not only appreciated but essential. With regard to the ever-increasing adoption of new technology, we discovered that new technology works best in tandem with human-beings. Instead of replacing staff members, the technology aides their work: technology is not a complete substitute, even in such a highly computerised environment such as CERN.

In the ILL-DD field, there have been a great number of user surveys conducted. However, as far as we are aware, there have been no studies in our field of interest: high-energy physics. Therefore, our contribution could be used as a measuring-stick for other science/research library services.

CERN ILL-DD Service

Organization

Staff

At present the ILL-DD Service is run by one librarian with a term contract, performing 2,000 to 3,000 requests per year. Also, a considerable amount of time regularly has to be devoted to development and research, since technologies, approaches, and services meet with change rapidly in a scientific environment.

Working methods

To put our work into some context, the basics of how we organize our service are explained below.

Ordering

Web-based request forms have been used for 2 years. We have found that our users feel more comfortable with a request form for each type of document. However, there can sometimes be a problem when the information our users have is very specific; for example, if they only need a chapter from a book, they become uncertain how to request it as there is not a specific box on our request form for this option.

The electronic forms have been a success. At the moment, this is where our electronic-based service ends. From the Web form, we receive an email message of the request, and then print it and maintain the request on paper. This method works well, because the number of requests is still not so large as to require sophisticated automation.

Delivery methods

Once a document has arrived we send an email to the user, giving them two choices; they can pick up the document directly from our office, or they can wait and receive it through our internal mail system. Recently, our internal mail system has cut back on delivery; they only deliver once a day

instead of twice. This has obviously had an affect on how long documents take to get to their destination. In some cases, it may take up to two days for a user to receive their document this way. Even so, 50% of users still choose this option. However, with the same percentage personally collecting the documents from our office, we feel this is a legitimate delivery option. Our working procedures are mostly manual, and this organization continues to work well.

Automation

The introduction of electronic forms for ILL-DD requests on the WWW library pages has turned out to be a success; we only receive 5% of requests on paper. Filling in the WWW forms helps to get more precise and complete references from patrons, and saves an appreciable amount of time for ILL staff.

Integration with the automated ILL module in the CERN Library Automation System would improve the management of the service and produce statistics easily, but from the tests carried out there is no feeling that it will speed up the present procedure. Out of the multiple complex tasks to be performed to fulfil an ILL-DD request [Zeeman 1995, 7], only the registration is possible via the module, and there is no integration with the OPAC: users should be able to place ILL requests via the OPAC, check progress and receive notifications from the system [Russell 1994].

On the other hand, automation is working better and better from the providers' point of view. The dramatic increase of computer knowledge in our section, and the adoption of procedures on the recent CERN UNIX systems [Cremel 1996], allows us to profit from newly available technologies and have faster and better quality communication with our usual information and document providers. Such technology also allows us to explore and exploit a significant amount of new suppliers. Email, online orders, and WWW forms are more widely spread. All the aforementioned methods of access are independent of one another: they work in quite different ways, and need to be accessed using different languages and communication protocols. This causes difficulties that are being considered within our field.

Another aspect we are still unsatisfied with is the lack of electronic doc-

ument delivery from our main providers' side. A well known software product, Ariel, creates problems for high-volume lenders [Bennett 1994], and it is mainly adopted to exchange articles between USA public and academic libraries [Jackson 1992]. UNIX mail is MIME compliant, allowing the exchange of files in any format, an easy way to send full-text documents via the Internet. A prototype study in electronic information delivery using email attachments has been lead successfully [Smith 1996]. We hope this solution will soon be adopted by all major document suppliers. In the 'Survey 2' section of this paper, we explore how our users feel about the possibility of such delivery methods.

Budget

At CERN, the ILL-DD Service is fully subsidized, and is provided for research purposes. If the service were not subsidized, costs would be paid for by individual research groups. By subsidizing this service, CERN provides the same opportunities of documentation both to "rich" and "poor" groups. Moreover, the CERN system of internal invoicing is rather complex. Invoicing research groups would probably require staff time that is not repaid by the income.

An important aspect of budget issues to be taken into consideration is the existence of different payment methods, which makes multiple providers a rather annoying and expensive matter for ILL-DD services. Our major provider, ETH in Zurich, sends an invoice every third month including all transactions. BLDSC, our second major supplier, requires a deposit account. Libraries that are seldom addressed usually accept payment in "coupons-reponse internationaux", which can be bought at the mail office (although after a rather complicated administrative procedure). IFLA is testing the use of an international voucher in US dollars: this will help as it becomes more widely accepted by our major providers. With commercial providers that are seldom used problems arise. Opening a deposit account means advancing money that may not be recouped in services immediately or even within the foreseeable future. The only alternatives are a single invoice or credit card payment. Asking for an invoice every time an item is ordered means high administrative costs within our organization, but they occur regularly.

Within public institutions such as ours credit card payment is usually not allowed.

Usage statistics from 1996.

The number of requests received and processed has increased by nearly 100% between 1994 and 1995, that is from 1200/year to 2400/year, without any marketing of our service. 1996 figures have slightly fallen: at this stage, a further sizable increase needs a reorganization of connected library services such as reference, preprints, purchase, and users sections, without mentioning a GUI for the catalogue which would include an option for ILL-DD requests. We have started to explore such options by placing a link to the ILL-DD service web pages whenever a general catalogue search has been unsuccessful. We should be able to provide any item in a satisfactory time, no matter where it comes from: our collection, ILL-DD, preprints servers, CERN divisions, or satellite libraries.

The following figures originate from the 1996 service statistics.

Reasons for service demand

NOT HELD — 90%

NOT AVAILABLE — 10%

”Not available” mostly means ”missing”. 1% of requested items are on loan, on order, or at binding.

Type of materials

DOCUMENT DELIVERY — 64%

LOAN/PURCHASE — 36%

It is interesting to note that the ’loan/purchase’ figure is a little higher than thought usual. In many libraries, the job of the ILL office is, almost exclusively, to locate photocopies for their users. The high figure of loans

that the CERN Library ILL department has to deal with points to some possibility of unsatisfactory collection management: where a number of users' basic subject needs are not being met. Also, the high number of documents missing increases our loan figures.

For several reasons (including copyright protection) a few items are not available for loan: unpublished reports, standards, patents. Until a few months ago those items were part of the "abandoned" ones (see problems below). Our recent policy is exhaustive searching, followed by a purchase out of ILL resources for speed's sake, if unsuccessful.

Age of requested documents

1991 to present year— 45%
1971 to 1990 — 42%
before 1970 — 13%

There seems to be a widespread, as well as unfounded belief, that members of the HEP environment only require documents that are 3/5 years old. Figures above prove that this is not the case, since requested items older than 5 years represent over 50% of the requests.

Requests sorted by CERN groups

Engineers (accelerators and computing) — 50%
Experimental Physicists — 34%
Services and Administration — 9%
Theoretical Physicists — 7%

These figures show that our "privileged" users, HEP physicists (experimental and theoretical), appear to be satisfied with the documentation available at CERN, while the engineers appear to require extended library services.

There are at least four reasons why this may be true:

- * our library collection is mostly devoted to HEP;
- * HEP physicists need recent papers than can be found on preprint servers;
- * these physicists are visitors, and primarily use library services from their home institutes;
- * engineers are under pressure because of the new LHC project.

There are still a significant number of potential "customers" among the physicists, and their possible document needs should be taken into account.

Coverage by supplier

ETH - Zurich — 73%
 BLDSC — 13%
 SIBIL/ETHICS Swiss libraries — 10%
 others — 4%

Eidgenossische Technische Hochschule in Zurich (ETH) is a "historical" supplier of ILL-DD at CERN. Its vast collection concentrating on science and technology, fast delivery within Switzerland, low prices for Swiss customers, and the speed of its online order catalogue make it a suitable partner for CERN.

Nonetheless, in 1996, 27% of the requested items could not be found in ETH and had to be ordered elsewhere. British Library Document Supply Centre (BLDSC) is a more expensive but very efficient delivery service. Swiss French libraries in RERO-Switch (SIBIL) and Swiss German ones in the ETHICS online catalogue profit from the well organized Swiss postal service, which makes delivery time competitive.

"Others" can be just anywhere else ILL staff are able to locate a document; including classical libraries such as DELFT in Netherlands and TIB in Hannover to academic and research institutes and various commercial providers.

Large reciprocity contracts with local libraries [Ponnappa 1995] are impracticable for several reasons: we have a highly specialised collection, the collection is unreliable because of missing items, and our delivery time is

often slow, due to the lack of time staff have for photocopying [Walters 1995 and Koehler 1995].

In the electronic age, it would be more profitable to drive resource sharing toward agreements that involve peers with comparable collections, such as HEP libraries in our case, rather than geographical proximity [Bennett 1994]. In recent months, solid links have started to be built between the Interlibrary Loan offices of other HEP laboratories and ourselves. At the moment, we primarily exchange copies of our own Laboratories unpublished papers (which are difficult to find elsewhere and regularly requested).

Chasing 'problem' requests is significantly time-consuming: it can amount to 40% of staff time to satisfy 4% of requests. Professionally, it is necessary for staff to continue and improve this performance.

Delivery time

	E T H	B L D S C	S w i s s L i b s.	O t h e r s	A v. T i m e
1 to 2 days	46%	5%	15%	46%	39%
3 to 7 days	49%	69%	75%	21%	53%
more than 7	5%	26%	10%	33%	8%

(Av.Time = Average time, out of number of items.)

The average delivery time is satisfactory for our users from a professional point of view. When compared to standard public and academic libraries deadlines, often exceeding a two-month wait, it appears efficient.

Figures above refer to standard delivery. Urgent delivery (within one day) has not been considered here, since it is a special service that implies a higher cost and is rarely requested (1 to 5 times per month). The majority of users are satisfied with receiving items in one week to 10 days.

Multiple requests for the same document were performed in some of the cases, due to unavailability of those particular documents by the suppliers contacted first: figures above only show the delivery time of items actually supplied.

By studying the statistics we find that books arrive before articles from Swiss-French libraries and articles arrive faster than books from BLDSC. Better performance of Swiss libraries compared to BLDSC is due to postal service and demand.

Problems in identification/supply

Ease of identification mainly depends on the user's precision in quoting the bibliographic reference. When the source is reliable, ILL staff usually do not experience problems in locating the items. Unfortunately, when the source is not reliable problems arise. Articles are generally easier to find since the quotation is usually copied from another articles list of references, or can be checked with searches in bibliographic databases, while books can be more often heard about or quoted by heart.

As for locating a document, there is a significant difference between articles and books. Once identified, an article is rather easy to find, since all document providers maintain journal collections. On the other hand books are only provided by libraries. Problems arise because many libraries do not have any online catalogue and, in any case, books older than 20 years are rarely catalogued online. Locating a book can easily go through several requests to different libraries, often sent at the same time in the hope that at least one will hold the item, and accepting the possibility of having to pay for more than one copy.

Last year 7% of requests were cancelled, out of which:

5% were cancelled by the ILL-DD Service. These can be split up into sections:

* could not trace: 90% (does not appear to exist: 48% or inconsistent bibliographic details: 42%)

* not yet published/too new: 10%

2% of these requests were cancelled by the user, out of which:

* the patron did not want the item (too much waiting, patron leaving, waiting for purchase): 54%

* the office asked them to locate new bibliographic information, but they never answered: 31%

* easier/prefer to purchase the document themselves: 15%

Survey Details

All of the information below concerns both SURVEY 1 and SURVEY 2.

Choice of paper survey:

A paper survey offered the most straightforward method of receiving information from our users, especially in terms of time: they were given a month to return the survey to our office. On the other hand, there was no obligation to return the completed questionnaire. Considering this, we were pleased with the 51% response rate. Of course, this method has negative factors. Paper surveys widen the possibility of ambiguous responses and we suffered substantially from bad handwriting, which slightly hampered our evaluation. It should also be noted that the survey was not anonymous; the only reason for this was to avoid duplicate sending. A copy of both surveys can be found in the Appendix to this paper.

Choice of users:

Our survey group consisted of all the users who had ordered documents during the month before our survey was conducted, as well as during the actual month of the survey. In addition to these, we also sent a survey to a number of users we regarded as 'regular' users, even if they had not submitted a request in the last two months. This totaled 118 different users. It is essential to remember that all the comments and decisions recorded are subjective. The respondents perspectives are obviously affected by how their own requests had been dealt with/satisfied. It should also be noted that because the survey was unsupervised there were a number of instances when

a respondent did not leave a comment or left a question blank. Without a written explanation from them, we noted the non-responses but did not assume reasons. The survey was in English. This was chosen because the official CERN languages are English and French, with the majority of people understanding more English than French. This, most certainly, had an effect on WHO responded and how they responded.

Survey 1 1997: Users Behaviour and Perceptions Towards the CERN ILL-DD Service

Below are the main points gathered from the survey.

General Comments.

17% of respondents gave us unprompted comments. A number of users took this opportunity to present the problems they have with the whole library service. Such comments were of no use for our study. However, the comments worth noting included basic appreciation for the ILL-DD Service. One user explained the value of the Service in these practical terms: 'The CERN Library is not very comprehensive for many fields that are crucial for theoretical research! Your Service is therefore essential'. This comment reinforces the access vs ownership debate.

A couple of users offered practical solutions to what they perceived to be lacking in our Service. They proposed the creation of auxiliary catalogues; one containing bibliographic information and abstracts, the other pointing to searchable local library catalogues. These suggestions show that a number of our users would profit from having more control over their document choices. From the service point of view, this would save time and money. The user would receive a document they knew to be of use.

How Users Discovered the Service.

Having more knowledge about how users locate your service may help to ascertain what assumptions, if any, they carry with them. Also, their responses

could help pinpoint future areas of promotion, as well as 'test' the success of existing marketing strategies. In our survey, only one person admitted to not remembering how they found out about the service, and two people did not fill in the box.

Considering how important networking and group work is at CERN, it is understandable that 28.3% of respondents heard about our service from 'a colleague'. The 'library WWW homepage link' claimed 36.6% of responses. 6.6% of respondents heard about our service through the new INSPEC database link. This is an encouraging result for a new promotional method. We invited users to name other ways they had discovered the service. 15% of respondents remembered hearing about our service from library staff, mainly whilst making enquiries for a document at our enquiry desk. 8.3% of respondents responded that they have used the service for a long time.

In summary, it was noticeable that the Web technology is substantially affecting how users are introduced to services. However, it is also important to understand that 'word-of-mouth' still holds considerable weight in our organisation, and is no doubt the same in other organisations.

How Many Times do Users Use the Service.

It is interesting to note that our users appeared to answer the question in terms of time and not in quantity of requests. With only 9.8% who wrote in their own choice, every respondent had a definite idea as to how often they use our service. In figures, the responses were:

VERY OFTEN: 34.4%

OFTEN: 40.9%

SOMETIMES: 8.1%

RARELY: 6.5%

One user ticked both 'OFTEN' and 'SOMETIMES' and explained that it was 'time dependent'. It is certain that this is the case for almost all of our users. It happens often that within one day we get a list of 20 requests from one user, and then not have another request from that user for a substantial period of time. This is the nature of researchers who spend set periods of time studying one area, and then move onto another topic.

Users Satisfaction with:

Web Procedures Form.

The comments that accompanied the completed questionnaires concerning this question encompassed a wide range, including: 'it is clear and easy to use' and 'the Web instructions are not always so clear for me'. Generally, 95% were either 'VERY SATISFIED' or 'SATISFIED'.

Web Request Forms

The survey respondents appear to be very comfortable with the concept, with 97% being "VERY SATISFIED" or "SATISFIED". One user offered the practical suggestion of creating a link to an example of a completed request form, so that the users are shown how to fill one in correctly. This intimates that the users are a little apprehensive that important information will be overlooked if not in the 'correct' field.

Delivery Time.

"Time is the key. Anything, which a researcher can get in less than it takes him to to take a sip of coffee is great." [Uhlig 1996]. This is spoken by a researcher himself, and is generally how the topic of delivery time and timeliness is considered; the quicker the better. However, in a survey conducted at Louisiana State University in 1995, their result showed that : "...obtaining the materials regardless of speed...ranked as the highest priority..." [Fong 1996].

85% of our respondents were a mixture of "VERY SATISFIED" and "SATISFIED" with the delivery time. A few respondents had practical suggestions for the problem of slow delivery time; 'Maybe extending the net of libraries will shorten delivery time?'. Staff recognize there is currently an internal mail organisation problem, and it was interesting to see that our users also understand that this is a big problem effecting delivery time : '(only delay) CERN internal courier'. There were 14% who were "UNSATISFIED" with the delivery time.

Feedback From/Contact with Staff.

The Web request forms and the ever-increasing use of email messages, has reduced the occurrence of face-to-face contact with our users. However, we are still aware that how we relate to them using these mediums is important. It was with relief that we recorded a 87% 'VERY SATISFIED' and 'SATISFIED' response. A number of people maintained that they did not feel 'qualified' enough to make a decision, and left the whole question blank or wrote only a comment, such as: 'almost no contact' or 'I have no contact but for the time being I did not need any'.

General Quality of the Service.

62% were 'VERY SATISFIED' with our service, and 35% were 'SATISFIED'. One user felt they had 'not enough experience to comment'. This response from our user group makes us feel that we are generally satisfying our users needs.

How Important is the Service to their Work.

In a 1995 study, it was discovered that: "Respondents clearly acknowledged the value of ILL to their research" [Fong 1996]. This is also true for our sample group. No respondent considered the service as "NOT IMPORTANT" to their work, and only 8% claimed it as "MODERATELY IMPORTANT". No user left this question unanswered. It would appear that our users understand that our service is essential to their work. Some users supported these statements by commenting: '90% of the books and articles I need are not available at CERN'.

Survey 2 1997:

Users Opinions About End-User and Electronic ILL-DD

It is informative to split our users responses to this survey into the periods in the life of a document request. The findings are detailed below.

Searching and Locating:

Here are the two questions from Survey 2 that are explored in this section:

- Would you spend some of your time in document searches (ie browsing library catalogues, locating the document you require, and ordering it from them yourself), instead of asking the Library Service?

- Do you often use the WWW for document searches?

CERN is an environment in which every desk has at least one computer terminal. It is known that our researchers are used to searching for documents on the Web, as a substantial number of full-text versions of newly researched preprints are now available through this medium. This being the case, we believe that our user community is comfortable with electronic manipulation of documents and information. Whether this also includes a willingness to, or actual use of, extended information gathering and document searching was uncertain. It should be noted that 12% did not fill in the two questions that were regarding this subject.

The results collected concludes that 52% are extremely willing to spend time searching for document information. In fact, 72% responded that they already used the WWW for 'document searching'. Encouragingly, the main reason why 40% answered that they do not spend time searching for documents appeared to be because they believed they lacked the qualities needed by an information professional. One respondent wrote: 'in fact it is not so easy to find what you want' and another 'a librarian is much more efficient in this matter than myself..'.

Other reasons why users would not want to spend much time searching included the more obvious reason, in a research environment: 'I have no time for searching...', to a worrying comment (aired by a number of respondents): 'It is not my job!'. We believe that a significant reason why 72% respondents claim they already use the WWW for searching is because it is one of the main entry ways into all main CERN Services. Many comments supported these assumptions, including; 'it is available in my office' and 'it is fast and easy from my office'. The 22% who replied that they did not currently use the Web for document searches, strongly bemoaned the device as being slow, and that the 'ratio time/result is low' One respondent specified that they

would do more searching only if: ‘...a clear link for each journal exist [sic]’. From this comment, it can be deduced that many of our users automatically believe that we were referring to full-text documents. The appeal of full-text is that a minimal amount of effort is needed to make searches. Another user understood our question in terms of document information: ‘that could be important if having better research engines on Web, specialized for bibliographic searches’. These two different comments highlight the diversity of perceptions and expectations of our users.

Ordering.

We asked our survey group:

- **Would you appreciate being able to order directly from document providers?**
- **Do you feel that a direct order (bypassing the Library Service) would speed up delivery time?**

The responses to these questions were overwhelmingly supportive of the library services role. It should be noted that 25% of respondents did not choose any option. Overall, 53% said they would not prefer to deal directly with a supplier during an order, and this was complemented by 55% saying that they believed that going straight to the supplier would not speed up delivery. One respondent believed that doing so would require: ‘...more time since less experience with [the] process of ordering [would be] available’ and another supported this claim, saying: ‘I need the... experience of the Service’. There is a particularly telling comment by one user who desired the ‘possibility to order every day and night’. This users responded that he would be very glad to order directly from suppliers as it would quicken delivery time.

Receiving

The questions asked were:

- **Do you think it is preferable to receive documents directly in your office, and deal with wrong ones yourself?**

- If no, would you prefer the Library Service to deal with incorrect delivery?

It should be noted that 23% did not answer the two questions related to the 'receiving' of documents. This part of the document delivery process gave our respondents concern. 63% did not want to have to deal with delivery, especially concerning wrong delivery. One user specified that: 'a buffer is needed' and another supported this: 'I would prefer to rely on professionals'. These comments show that although most of our users want to get a document as quickly as possible, they are not encouraged by the idea of having to deal with problems that may arise. However, a number thought it would save time, and they did want to deal with the situation themselves. Of the 63% who specified that they would rather the library service deal with delivery, one typically good reason was pinpointed: 'I am not always at CERN when [the] document arrives'. There is the possibility that this could happen often at CERN. Many researchers come for a period of time to CERN from their home institutes. There is never any guarantee that a user is at CERN during the document delivery lifecycle, although we do specify that they should be present for 5 weeks after ordering. Another respondent put his views in a more basic manner: 'less work for me'. Which ties in with the users speedy, no-fuss document delivery ethic, and the well known researchers "lack of time" problem.

Delivery Formats.

Concerning this section we asked:

- Would you like to get documents as email attachments instead of photocopies?

- Do you think interpretation of formats and printing of email attachments would be as easy as getting photocopies?

We chose as an example a basic email attachment-based delivery format to give them something they could envisage. In fact, their responses could be applicable to all document delivery packages. It should be noted that 12% did not fill in any answer to the questions related to the delivery formats of documents. 43% of respondents would like to get documents delivered to

them as email attachments, while 43% did not like the idea. Comments were also well mixed. One user, who liked the idea, pointed out that such a method would be ‘...faster and cheaper’, which has both the user and the service in mind, as our users do not pay any fee. Another supporter of this method mentioned that it may eradicate the problem of bad quality photocopies. In fact, we do not receive many badly copied articles, but it is a point to consider. Out of the 43% who did not like the idea, a number brought our attention to the fact that they: ‘..prefer a printout...’ and even, ‘I would have to print out the attachment anyway’. Of course, the issue of time came up, mostly mentioned by people who liked the idea of electronic delivery. Many expected that it would speed up the process a great deal, and did not appear to worry about printing: to actually have the document would appear more important to them than economical or practical considerations.

When comparing the ease of use of email attachments with photocopies, a number of interesting comments arose. 53% believed that receiving an electronic document would not be easier than receiving photocopies. A number of them believed it would actually not speed the process up, and others worried that ‘some people would certainly not know what to do with them’. This last comment was a surprise. It was also interesting to note how many respondents prefer the PostScript format, which is widely used at CERN. At the moment, most HEP preprints are available on online preprint servers in this format.

This shows that our users may not be as predisposed to new technologies as they appear, and that adopting new technology, just because it exists, may not always be the only path to follow.

Future Development and Directions for the CERN ILL-DD Service.

A number of observations can be drawn from our exploratory statistics and surveys, as well as from existing literature. ILL-DD related services such as current awareness services and end-user document delivery could significantly contribute to an increase in ILL-DD demand and improve CERN users’ perceptions of our service. Nonetheless, evaluation of literature shows that the introduction of these services results in higher demand on ILL staff time and

resources. A 300% increase in document delivery demand can be expected from utilizing the end-user services that are available. However, 30% of unsupervised orders still appear to require ILL staff intervention. This means that a decrease in ILL workload cannot be expected, and although some automation could help in managing standard issues, when difficulties arise they can only be solved by experienced manpower [Walters 1995]. Moreover, all present competing document delivery services have poor early years coverage, together with the lack of coverage in specialized research-oriented journals [Leach 1993]. This means that materials that are currently difficult to locate will continue to require the same amount of manpower. The British Library has a project, Inside, a current awareness service that allows users to identify information of interest and order documents [Oliver 1996]. Having the British Library as the organiser of such a service may solve coverage problems, due to the size and comprehensiveness of their historical collection.

Last, but not least, existing services do not cover electronic journals: a major limitation, unless changes in citation styles are introduced [Mountifield 1995]. A significant evolution of traditional interlibrary loan and document delivery services could be caused by the growing volume of electronic publishing, which may soon make the electronic journal a third factor in information supply [Kilpatrick 1996]. For this reason, the possibility of negotiating convenient site licenses for electronic access should be investigated [Campbell 1996]. This could reduce the need for ILL-DD services while increasing access speed to information.

There is overwhelming importance put upon 'new' electronic equipment which, in certain environments, can better the existing services. In time, it could be true that actual interlibrary loan service staff will not have such an important role, only perhaps as problem-solvers. Loans are a different matter, and a bigger problem. This process requires more time and supervision, since a physical object needs to be handled and transferred. However, more books and reports are being scanned, so in the future they can be made available electronically, by controlled methods; for example, through the WWW.

Ethically, the role and concept of the ILL-DD services have not changed; it is just the means to achieve the results which vary. In this sense, users perceptions of the service can change as often as the technology introduced, because packages affect the front-end of the service. Presently, in many institutions, the users' interface with the services are largely through electronic

means. Therefore, our users expect services to run as smoothly, efficiently and quickly as promised by technology-based systems [Uhlig 1996]. This is important as users' perceptions are integral to how they behave with the service, and how they speak about the service.

In view of our survey results, CERN users seem slightly cautious about technology where the ILL-DD service is concerned. A substantial number of them do not feel confident enough to accept the possibility of instigating and seeing through the whole document delivery process. This observation is complemented by comments explaining that they do not have the "expertise", or the time to deal with, what they perceive to be, the complicated matter of locating, ordering and receiving of documents. On the other hand, some users can envisage a very advanced environment where they dream of digital documents that appear on their desktops in a matter of minutes. All expectations have to be taken into account.

What is required is extreme flexibility to cope with different users' expectations; ranging from a fully supervised service to a request not concerning the in-house ILL-DD service at all. Presently, it is more likely that the ILL-DD at CERN could exist in a more remote role; aiding users to receive the documents they require with as little face-to-face contact as possible. It is our aim to make the service appear seamless to users. This will be achieved by utilizing some advanced electronic equipment, but not becoming dependent on such methods. The need for technology should be considered in light of how many requests are being processed and what kind of documents are being requested, as well as the types of electronic methods being used by usual suppliers. Generally, our survey highlighted that in the near future CERN users do not envisage losing the support of a staffed library service, and they respect the professionalism required to effectively spend time dealing with such research. Also, a number of researchers appreciate the opportunity to discuss their needs with a professional, who knows which tools to use to find the relevant information.

Conclusion.

In summary, a survey aided the CERN Interlibrary Loan and Document Delivery Service in discovering how users perceive the service. This was coupled with the previous year statistics gathered about the users' actual behaviour

and use of our service, to gain a more complete picture. It seems certain that ILL-DD Services will continue to be staffed, with their work complemented by 'new' electronic packages modified for our types of transactions. Our study supports the opinion that new technology is considered a useful medium to get documents a little faster than old methods, but the expertise of information professionals is also a precious resource which should not be discarded. It is now time to follow up with studies in similar research libraries, and then some healthy comparison may help to further improve ILL-DD services to users and relationships between the services themselves.

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Appendix

SURVEY 1:

GENERAL INFORMATION

- 1) What division are you in?
- 2) How did you hear about the Service?
 - a colleague
 - link from Library Web homepage
 - CERN's INSPEC Service Web page
 - other (please specify)
- 3) How many times(approximately) do you use the Service?
 - very often
 - often
 - sometimes
 - rarely
 - other (please specify)
- 4) Do you use the CERN Library collection of documents?
- 5) Do you use any other Institute (eg your home Institute)ILL-DD Service?
 - 5a) If yes, how does it compare?
- 6) Do you expect anything from our Service that is not/badly supplied?
 - 6a) If yes, please specify.

SATISFACTION WITH USE OF OUR SERVICE

- 1) How satisfied are you with the WEB instructions/procedures pages? (in terms of understanding what to expect from the Service)
 - very satisfied
 - satisfied
 - unsatisfied
 - very unsatisfied

COMMENTS (if any):
- 2) How satisfied are you with the WEB request forms?

- very satisfied
 - satisfied
 - unsatisfied
 - very unsatisfied
- COMMENTS (if any):

3) How satisfied are you with the delivery time? (the time from placing the request to receiving the document)

- very satisfied
 - satisfied
 - unsatisfied
 - very unsatisfied
- COMMENTS (if any):

4) How satisfied are you with the feedback/contact you have with the staff of the ILL-DD Service at any time during your request?

- very satisfied
 - satisfied
 - unsatisfied
 - very unsatisfied
- COMMENTS (if any):

5) How satisfied are you with the general quality of the Service?

- very satisfied
 - satisfied
 - unsatisfied
 - very unsatisfied
- COMMENTS (if any):

6) How important to your work is our Service?

- very important
- important
- moderately important
- not important

COMMENTS (if any):

GENERAL COMMENTS

If there are any opinions/observations you would like to express about our Service , here is the place to write them!

SURVEY 2:

In order to study the possible need for and outcome of developments in end-user document delivery services (i.e. photocopies sent to the requester directly) we would like to investigate your preferences.

Please spend a little of your time completing this questionnaire.

1) Would you spend some of your time in document searches (ie browsing library catalogues, locating the document you require, and ordering it from them yourself), instead of asking the Library Service?

yes/ no

please explain answer:

2) Do you often use the WWW for document searches?

yes/no

please explain answer:

3) Would you appreciate being able to order directly from document providers?

yes/no

please explain answer:

4) Do you feel that a direct order (bypassing the Library Service) would speed up delivery time?

yes/no

please explain answer:

5) Do you think it is preferable to receive documents directly in your office, and deal with wrong ones yourself?

yes/no

please explain answer:

5a) If no, would you prefer the Library Service to deal with incorrect delivery?

yes/no

please explain answer:

6) Would you like to get documents as email attachments instead of photocopies?

yes/no

please explain answer:

6a) Do you think interpretation of formats and printing of email attachments would be as easy as getting photocopies?

yes/no

please explain answer: