



Newsletter of the IFLA Document Delivery and Resource Sharing Section

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This newsletter is also available on IFLANet @ www.ifla.org

A Note from the Chair

Since the last issue of this Newsletter the Section has been involved in a number of activities the most important being the 9th IFLA ILDS Conference which was held at the National Library of Estonia in Tallinn in late September 2005. The more than 160 delegates listened to presentations from around the world which are now available at the conference website:

<http://www.nlib.ee/ilds>

Here you will also find photos from the conference, a list of the delegates etc. The Standing Committee would like to thank the local organizing committee for having done an excellent job both before and during the conference. At the closing ceremony Singapore was announced to be the host of the next conference in 2007 and the planning for this event has already started. Look out for the call for papers which will go out in the autumn.

In February this year the Standing Committee met in Rome, Italy for our Mid Term Business meeting. Among the many items on our agenda were the new *IFLA Guidelines for Best Practice in Interlibrary Loan and Document Delivery* that are based upon the results of the three major performance measurement studies from Australia, North America and Scandinavia. The guidelines are ready to be published and will be presented at the World Library and Information Congress in Seoul, Korea in August where the Section will host a session on best practices in ILL.

Prior to the WLIC our Section is co-hosting a satellite meeting on “Resource Sharing, Reference and Collection Development in a Digital Age – a Practical Approach” together with the Acquisition and Collection Development Section and the Reference and Information Services Section. The satellite meeting has its own website at:

<http://www.nl.go.kr/satellitemeeting/index.php> where the full programme will be published very soon.

In connection with the Mid Term Meeting in Rome the Standing Committee had the opportunity to attend a half day seminar with approximately one hundred Italian ILL colleagues. The seminar, which focused on recent trends in interlibrary loan and document delivery in Italy and other countries, was very successful and can hopefully be used as a model for similar events in the future. Our Italian Standing Committee member Assunta Arte was in charge of organizing the seminar in cooperation with the Italian Library Association (Lazio Region), the Italian National Research Council, Research Area of Potenza Library, and the University of Rome (Roma Tre).

Between the meetings mentioned the Standing Committee has developed a new Strategic Plan for the period 2006-2007 which is accessible via IFLAnet at:

<http://www.ifla.org/VII/s15/annual/sp15.htm> in English as well as Italian, French and Russian. More translations will be added soon. A new brochure informing about the IFLA Voucher Scheme has also been published and can be downloaded from the web in PDF format. We hope that libraries can make use of the brochure when sending vouchers as payment for ILL transactions to libraries that are maybe not familiar with the system.

Poul Erlandsen

Chair, IFLA Document Delivery and Resource Sharing Section

SOME REMINISCENCES ON THE OSLO CONFERENCE



Minutes of the SC Meeting in Oslo

Meeting 1

Saturday, 13th August, 2005
8:30–11:20am

Present: Johnny Carlsson, Kannigar Chollampe, Poul Erlandsen, Nadezhda Erokhina, Jacqueline Gillet, Teresa Gonzalez, Elmelinda Lara, Lars Leon, Betty Lowery, Debra McKern, Jindriska Pospisilova, Uwe Rosemann, Carol Smale, Elisa Soares, Joan Stein, Penelope Street

Apologies: Assunta Arte, Kim Baker, Teresa Chapa, Hans Martin Fagerli, Daniel

Mattes Durrett, Margarita Moreno, Torill Redse, Li Xiaoming

Observers: Jasmine Caneron (Aus), Arlene Cohen (US).

1. *Introductions*
PE welcomed guests to the meeting. A reminder was given of the rules of attendance for committee members.
2. *Approval of Agenda*
Some items were added to the agenda which was then approved.
3. *Approval of minutes of SC Meeting in Prague, 2005*

Minutes were approved.

4. *Sub-committees*

PE outlined the structure of the Section's sub-committees to new members and asked for volunteers. Membership is now:

Principles and Guidelines – PE, DMc, PS, ES

Conference Programme – DMD, PE, JP, JG, CS

Newsletter – PS, PE, MM

Strategic Plan – PE, KB, TR, JS, EL

5. *Chair's report - PE*

PE reported on the Co-ordinating Board meeting:

- Nothing further has happened in the evaluation of Sections. Deadline is November.
- The proposal for our satellite meeting in Seoul had been accepted.
- Professional Committee had discussed how Sections find speakers. In future Sections will need to put out a call for papers. The 1 month time period for selecting papers, finding speakers was thought to be unrealistic. However, the procedure for calling for papers is yet to be finalised.
- IFLA must be more visible at satellite meetings etc hosted by Sections e.g. logo
- President-elect's programme announced.
- 2680 delegates had pre-registered.
- IFLA have established a policy re acceptance of gifts.
- New financial procedure outlined. Financial report must be sent to CB chair by 1st Oct. The account must be closed and all monies remaining in it sent to IFLA HQ (this applied to administrative monies only). Clarification on procedure is required from IFLA
- Need to consider 2006-7 strategic plan and to start thinking ahead to

2008-9 as IFLA will want more long term plans in the future.

6. *Report from the Information Coordinator*

New information co-ordinator required as TC is leaving the committee. JS volunteered to take on the role.

7. *Financial report – LL*

Account balance stands at \$1057.38. We are awaiting reimbursement from Estonia.

New treasurer required as LL is leaving the committee. DMc agreed to take on the role.

8. *Report on Voucher Scheme*

PE circulated report covering the first 2 quarters of this year. There is an anticipated profit of 2000 euros this year. The scheme is regarded as one of IFLA's most successful programmes: its continuance seems assured and Susan Schaeppman now has a permanent contract with IFLA. There is interest in any ideas for improvement. There was discussion on the possibility of distributing vouchers from a specific area in each country: this already happened in Japan and Switzerland.

Action: BL to report success of scheme to Sara Gould.

9. *Election of new officers*

PE re-elected as chair; PS re-elected as Secretary.

10. *Open Programme for Oslo*

JC outlined the programme. Need to select one of the papers presented for inclusion in IFLA Journal.

Action: PE to count attendees.

11. *IFLA Booth*

Action: PE, PS, TR volunteered to man it 1-2pm on Wednesday.

12. *Planning for Seoul Open Programme*

- Possible theme might be Resource Sharing and the Role of Google or a programme on developments taking place in the region. Discussion on whether Google would be too specific and whether the Google Digitisation Project would be relevant to Asia. General view was that it would be of interest.

- Contact Collection Development re possibility of a joint programme.

Action: PE to speak with Pentti Vattulainen.

- Need to send out a call for papers in line with new IFLA guidelines.
Action: Sub-committee to meet and report back at the next meeting.

Satellite event

Action: PE and PS meeting with representatives from Collection Development and Reference at 9.00am 15th August to discuss the programme. Any members of the committee welcome to attend. Collection Development have a committee member from Korea: it was hoped they would be able to attend the meeting to advise on local information.

13. *ILDS Conference -Tallinn*

115 registrations received. Cost and problems with language in the Baltic States was cited as the reason for lower than average registration numbers.

14. *Bids for 10th ILDS Conference 2007*

IFLA HQ had received 4 bids to host this but Russia have withdrawn due to renovation work but are likely to bid in 2009 instead and the Scottish bid was received too late. Choice is now between Singapore and Brazil. In absence of local knowledge/contacts if was agreed either bid was acceptable with a slight preference for Singapore.

Action: PE will send recommendation to Professional

Committee and venue can be announced in Tallinn.

15. *Strategic Plan*

Action; The Strategic Plan Sub-committee would meet during the week and report back at the next meeting.

16. *Report on Docdel in the developing world*

Arlene Cohen reported on the Freeline project – an international collaboration of libraries whose mission is to provide medical and allied health users in developing countries with health science journal articles free of charge.

Action: PS to contact AC re an article for the next newsletter.

Meeting 2

Friday, 19th August, 2005
8:00–10.50am

SC Members Attending: Kim Baker, Johnny Carlsson, Teresa Chapa, Kannigar Chollampe, Poul Erlandsen, Nadezhda Erokhina, Jacqueline Gillet, Teresa Gonzalez, Elmelinda Lara, Lars Leon, Betty Lowery, Debra McKern, Daniel Mattes Durrett, Jindriska Pospisilova, Uwe Rosemann, Carol Smale, Elisa Soares, Joan Stein, Penelope Street.

Absent: Assunta Arte, Hans Martin Fagerli, Margarita Moreno, Torill Redse, Li Xiaoming.

Observers: Jasmine Caneron (Aus), Cecille Cassa Fieres (France), Maria Louisa Franco (Spain).

1. *Bids for 10th ILDS Conference*

PE reported that he had discussed the Brazil bid with DMD. It had been suggested to the Brazilian bidding committee that they should try to establish contact with the Standing Committee by attending future meetings or trying to get someone nominated to serve on the Committee. Venue for 2007 will be Singapore.

2. *Strategic Plan*

Sub-committee circulated a draft plan for 2006-7.

- Goal 1 has been altered and all actions accomplished removed with new ones added as appropriate.
- 1.1. It was uncertain as to whether IFLA would mount a web based IFLA ILL request form on their website.
- 1.3. This is a new action intended to encourage libraries to put information on their homepages on how foreign libraries should approach them re borrowing.
- There was discussion on 1.4. Plans to develop an electronic IFLA voucher have been dropped and the emphasis on generating revenue for IFLA was amended to better reflect the voucher's primary purpose which is to facilitate interlending.
- 1.5. LL reported that ISO were aware of differences between ISO codes and Interlibrary Loan Response Codes. CS commented that it was unlikely the ISO ILL Codes had been revised.

Action: Re 1.3. A letter will be sent to national libraries asking them to include this information on their homepage. JS will also mention this at the midwinter ALA meeting. TR will amend draft to take account of comments and send to PS to circulate to committee.

3. *Revision of Section questionnaire*

DMc reported on figures she had obtained for part 1 of the questionnaire. Deadline for completion is 15.11.05.

Action: DMc, PE to look at part 2 before November deadline.

4. *ILL training programme for developing countries*

LL reported on the work he and KB had done to date and circulated a document designed to be a checklist for doing a training programme. Programme should be adaptable to policy maker and practitioner level and comprise a modular formula adaptable to 1 or 2 days as required.

Ideas on funding sources and what resources can be applied to the project need to be identified. Possibility of utilising individual countries' Library Associations and linking programmes to their annual meeting was mooted but this would be dependent on individual country dynamics.

Recognised that the need for a programme must arise from the country itself and that someone from the region must first approach the committee.

S Africa/Bulgaria could act as pilots. KB outlined possible funding streams with the option of exploring doing a programme for one or both countries. Costs kept to a minimum by utilising local resources as much as possible.

Action: LL and KB will continue to work on this; ES, DMc, DMD, AA volunteered to help take this forward.

5. *Revision of Section brochures*

DMc presented a draft brochure. Non-specific so that it will not need constant revision. 100 copies to be printed in each language and in brochure style. Printing needs to be done centrally to ensure standardisation.

Action: DMc will send amended draft to TR (Spanish), JG (France), UR (Germany), NE (Russian), for translation. Once translated, to be sent to JS to be mounted on IFLANET. English/Russian

versions to be ready for ILDS Conference.

6. *Model Handbook for ILL*
EL, DMc presented outline draft of how the revised Handbook layout look/what should be included under each chapter heading. More visual appeal is important. Audience defined as paraprofessionals/one person operations. Proposed title: *Handbook of Document Delivery and Resource Sharing*.
Action: EL, DMc to write draft chapters and send to SC for comment. Draft framework with bullet points added to chapters to be presented at Midwinter Business Meeting.
7. *Printed IFLA ILL request form*
Full information about the forms and how they can be purchased is now on our website. BL reported that numbers being purchased were dropping but that there were supplies for another 2-3 years.
Action: SC needs to make a decision on what to replace them with. Timescale for this should be in next 2 years before BL retires from British Library.
8. *IFLA Guidelines for Best Practice in ILL*
BL had emailed paper to SC with comments added to original document published by the Nordic Federation of Library Associations. BL outlined amendments to SC and mentioned the need to include copyright.
Action: BL will email paper to SC for comments. JG and JP volunteered to assist.
9. *Report on Oslo programme*
230 attended the programme which was considered a very good turnout given the time and venue. Andrew Braid's paper was selected for inclusion in the IFLA Journal.

Clarification was given concerning the question of publishing papers in other journals. Discussion on having individual evaluation forms for future programmes.

Action: Andrew will send paper with any amendments to JS. JS will circulate sample evaluation form to SC for comment. To be included as item on midwinter Business Meeting agenda.

10. *Complete planning for Seoul programme – 2006*
 - a. *Satellite event*
PE reported on meeting held with Reference and Collection Development earlier in week and outlined the proposed venues suggested by Korean representative who was in attendance. There are two options: National Library in Seoul or a public library in Han Pat. Programme content considered: one and a half days duration, themed approach with half a day looking at: how the 3 areas co-ordinate; guidelines and principles; use of usage statistics to assist decision making process. Satellite programme title is *Resource sharing, reference and collection development in a digital age: a practical approach*. SC preference was to hold the event in Seoul.
Action: PE/PS to take suggestions for satellite event to CB meeting. PE to liaise with PV, AO.
 - b. *Open programme*
Sub-committee reported back and outlined 3 areas for a programme: resource sharing and its relationship to Google; access policies and digital libraries; performance measures and best practice. SC preference was for last option. Title of programme must be sent to IFLA by November

for decision on whether we get a programme slot.

Action: Sub-committee will continue to work on preparing programme. Call for papers to be done.

11. IFLA Conference 2007 – Durban

a. Satellite event

If satellite event at Seoul is a success, it could be repeated in Durban. PE reported that Reference and Collection Development were happy to cooperate again.

Action: KB to check on suitable venues in Cape Town. Centre for the Book (part of the National Library) was a suggested venue. Seating capacity of 210.

c. Open programme

The theme will be *Technology as a barrier to access*. It was suggested that papers should be regional presentations on local practices/issues and should focus on success stories.

12. Midwinter Business Meeting 2006

AA has offered to host the meeting in Rome, 23rd/24th February 2006.

13. Other business

No other business.

Papers from the Open Programme

Transforming Document Delivery in the e-Content Environment

Lucie Molgat

*Director, Information Access and Delivery
Canada Institute for Scientific and Technical Information (CISTI)*

Ottawa, CANADA

Introduction

The Canada Institute for Scientific and Technical Information (CISTI) is part of Canada's National Research Council (NRC). As the library of NRC, CISTI provides electronic resources and information services to NRC scientists and researchers. CISTI is also a publisher through the NRC Research Press, Canada's largest STM publisher. Finally, CISTI has developed a large STM print collection and a Document Delivery service based on this collection.

Transforming Document Delivery in the e-content environment

In one generation, e-content has transformed the business of scholarly communication for publishers, libraries and users. It has changed the way authors seek to publish and distribute their work; the way that publishers carry out peer review, publish and seek compensation; the way users seek, find and use information; and the way the libraries collect, organize and disseminate information.

The changes in scholarly communication have inevitably changed the nature of Document Delivery. This presentation will discuss Document Delivery in the e-content environment from a Canadian perspective, and more specifically, a CISTI perspective.

1. What is different about Document Delivery based on e-content?

Document Delivery, whether print-based or digital, is based on the principle that no one library can hold everything that clients need. Every library needs to identify ways to obtain information from other sources to satisfy client needs.

In the print-based world, the Document Delivery process is linear, based on a physical item that is owned. The roles

of all the players are based on well-defined value propositions.

In an electronic environment, an author may choose to have his article peer-reviewed and published by a journal publisher, or he may choose to deposit it on his own website, an institutional repository, or an Open Access site. The publisher may publish in print, electronically or both; the publisher also determines what access rights to offer and to whom.

Clearly, the whole process is no longer linear or simple. The digital copy and its location may change over time. Access to the document is based on negotiations to lease the content. The roles of all the players are ambiguous and multi-faceted and the business models that result from these roles are still evolving.

Though the user may find an important quantity of e-content on the Internet, the user may not be able to locate the copy, or may locate but not be able to access the content. The copy may be accessible but the user may prefer Document Delivery because the fees are covered or partially covered by the library.

Document Delivery is not dead, but it is being transformed. There are four issues that we see as critical to this transformation – relationship building, negotiations, rights management and technology.

2. What is happening in Canada?

In Canada, the post-secondary academic institutions are well served with digital content as a result of special five-year funding from the Canadian government. The project proved the value of a national consortium for negotiating electronic licenses and also proved the research value of desktop access to digital

resources. The five year funding has ended and universities are now covering all the costs of the licenses.

The largest academic institution in Canada – the University of Toronto – has built an infrastructure and is locally loading all the major publisher packages. The other Ontario universities are accessing content that they have licensed from the University of Toronto site. In addition to the Ontario consortium, there are three other regional academic consortia in the Canada that negotiate licenses on behalf of their members.

The overall increase in the availability of e-content at the universities means that the academic libraries have a reduced need for Document Delivery among themselves and through document supply services.

Federal government researchers have much more limited access to e-content than colleagues in academic institutions. CISTI continues to work closely with the five major STM departments to attract more funding for electronic content.

Lastly, researchers outside the academic or federal arenas most often have very limited access to information at the desktop. These include the medical and health communities, and the provincial government ministries and research councils. This group would particularly benefit from document delivery services based on e-content.

3. What is CISTI doing to transform Document Delivery?

CISTI has the mandate and the expertise to provide digital STM information nationally. CISTI is building the platform from which to exploit the use of locally loaded e-content for Document Delivery. There

are key advantages to using the digital content. E-content is available ahead of print. The quality of the locally-loaded PDF will be superior to the scanned image made from print. Publishers now publish certain supplementary material only in electronic format. More long term, publishers may one-day stop publishing paper. The locally loaded content ensures that a copy is accessible to Canadians.

The transition to working in partnership and loading electronic content is integral to the new CISTI Strategic Plan 2005-2010. Goal one of the Strategic Plan calls for CISTI to provide universal, seamless and permanent access to information for Canadian research and development.

CISTI Canada's scientific infostructure (Csi)¹ program will be the cornerstone to implementing goal one of the Strategic Plan.

The objective of the Csi is to provide access to digital material for all Canadian researchers. This access must be:

- Barrier-free, with a single point of access at the desktop;
- Secure, to meet intellectual property and security concerns of both publishers and users;
- Rapid, available quickly, from anywhere;
- Equitable and universal, to guarantee that all Canadian researchers are not disadvantaged by geography or organizational affiliation;
- Permanent, to resolve the concerns of librarians about enduring and sovereign access to material they have paid for

¹ Infostructure is a word CISTI coined to encompass both **information** content and technology **infrastructure**.

The key elements of the Csi are infrastructure, licenses to digital content, access right management, and discovery tools and information services.

Infrastructure

CISTI has built a high-performance technical platform and is exploiting Endeavor's new EJOS (Encompass Journals On Site) software for loading and indexing full text and metadata, and for searching and displaying. To ensure reliable access, CISTI is implementing a parallel business continuity system offsite at Library and Archives Canada.

Licenses

CISTI is negotiating with publishers to locally load metadata and full text, in all subject areas, in order to provide direct access to those users who are already subscribers, pay-per-view access to non-subscribers, and Document Delivery. CISTI will use Secure Desktop Delivery to restrict the use that can be made of the document in accordance with the publisher's requirements. In time, CISTI will expand the contents repository to include additional material such as grey literature, unpublished data, and multimedia.

Access rights

Access rights includes authentication (ensuring that the user is who he says he is), and authorization (determining the services to which the user has rights). Access rights are critical to ensure that users belonging to partner organizations, whose libraries have subscribed to digital content on behalf of their users, will be able to access the content directly and without additional payment. Other users will be charged for access on a pay-per-user basis, as prescribed by the rights-holder.

Tools and services

CISTI plans to work with its partners to develop a suite of discovery and access tools that will include linking, text and data mining, and text analysis tools. The contents repository could serve as a test bed for research on such topics as interface design, archiving, service development and integration.

Based on locally loaded content, the Document Delivery process will again be simple and linear with roles of the players and business models clear and well-defined.

In developing Canada's scientific infostructure, CISTI will provide an environment that will facilitate Document Delivery for Canadians and international clients. There are four broad components to advancing the Csi program.

1. Manage relationships with partners, who could be consortia, government departments, publishers and other content providers;
2. Negotiate with publishers, to obtain access rights, including local loading rights and Document Delivery rights.
3. Manage digital rights. A digital rights management system will guarantee that subscribers (and their users) who have already paid for access do not have to pay again, and that non-subscribers pay appropriately for access.
4. Develop and maintain the technology. CISTI has already built a technology infrastructure to provide services to NRC. CISTI will now build and maintain the full-text infrastructure for the benefit of all Canadians.

Two years ago at the ILDS conference in Canberra, Australia, Mary Jackson shared her conviction that there will always be a need for Document Delivery. Users will still need libraries and librarians to locate and obtain information on their behalf. Libraries will never have all the content that clients request and therefore will need to turn to other libraries.

Through the use of e-content, CISTI will transform its Document Delivery to respond to the needs of a new generation of researchers.

Further reading

1. Canadian Research Knowledge Network and Canadian National Site Licensing Project, at <http://www.cnslp.ca/about/>
2. OCULS and the Ontario Information Infrastructure, at <http://www.ocul.on.ca/groups.html>
3. Federal Science eLibrary Business case and Feasibility Study, at http://safstl-sbstf.scitech.gc.ca/feasStudy/feasibility_e.shtml
4. CISTI Strategic Plan 2005-2010, EJOS beta test, and other CISTI documents, at http://cisti-icist.nrc-cnrc.gc.ca/cisti_e.html

The use of a Digital Rights Management System for Document Supply

Andrew Braid

The British Library, Boston Spa, United Kingdom

Andrew Braid is head of Licensing and Copyright Compliance at the British Library, where he has worked for over 30 years. He has held a variety of posts including management of the literature

stores, the reprographic unit, the conservation unit, stock relocation, building planning and service development. For the past 10 years he has been involved in negotiating licences with publishers for use of electronic journals in the British Library's document supply services and reading rooms. He has recently overseen a programme of changes to ensure that all the British Library's services conform with the EU copyright directive.

Abstract

The paper describes: (i) the use of digital rights management (DRM) systems in providing a secure electronic document supply service; (ii) the reasons for the use of DRM systems by document suppliers; (iii) the system adopted by the British Library, with reasons for the rejection of some systems; and (iv) some insight into how the chosen system has been received by users.

Introduction

The British Library is one of the world's major national libraries with a collection of over 150 million items extending to over 600 km of shelving. It also operates world-renowned document supply and interlibrary loan services. The Library is in the process of realigning its strategy. Its new vision is to 'support anyone who wants to do research' by offering services that are 'time and space independent'; supplying information to researchers whenever they want it and wherever they are located. This means that, for researchers who are not able to visit the Library's reading rooms, the speedy supply of information to the desktop is a key component to realise the vision. The only practical way of achieving desktop delivery is by electronic means and so electronic document delivery (EDD) is a major plank in achieving the British Library's vision.

EDD is a relatively new addition to the older methods that libraries have used of supplying copies of items that are not held in the local library. These are (i) inter-library loan (ILL), which involves the loan of the book or journal issue and has been in place for over 100 years and (ii) document supply, or the supply of a surrogate copy (usually a photocopy, but an electronic copy in the case of EDD), which has largely replaced ILL over the last 30 years. EDD can be very fast, almost instantaneous if the delivery can be directly to the users desktop and the article has been sourced from an electronic original. As a result EDD has proved to be very popular with researchers, who can easily and quickly obtain a copy of articles that are not held locally. However, publishers see the possibility of researchers obtaining copies of articles at almost the same speed as if they were available by subscription to an electronic journal, but without the need for that subscription, which entails loss of revenue to the publisher. Publishers are concerned that EDD gives libraries even more reason to cancel subscriptions to journals and rely on document suppliers and other libraries instead – the so called 'just-in-time' versus 'just-in-case' argument. Publishers have voiced these concerns ever since traditional document supply began in the early 1970s, well before the introduction of EDD, but EDD has greatly increased their concerns.

Libraries, on the other hand, see instant supply as a natural progression in the evolving nature of the document supply process. They want to be able to offer a service level that is equivalent to that of local supply, involving the use of both electronic journals and EDD. However, in many countries the use of electronic journals and EDD for document supply purposes would be interpreted as an infringement of copyright legislation. So, in order to use electronic journals and offer EDD, libraries need the agreement of the rights holder, normally the publisher.

Because of the concerns outlined above, many publishers are unwilling to provide such agreement unless a way of controlling EDD is in place. Attempts to control use by means of contract have been implemented by many suppliers but abuse, both deliberate and unintentional, is common. One much more secure method of control is by the use of digital rights management on the transmitted file. This paper offers a background on the use of such systems and describes the implementation of such a system by the British Library.

Digital Rights Management

Digital Rights Management (often referred to as DRM) can mean either the digital management of rights, as in the context here, or the management of digital rights. The latter term, which is a market enabling technology, encompasses the identification and description of content and includes information about the rights and permissions associated with that content; usually this is done in such a way as to be interoperable with other content and access systems.

The digital management of rights means the technical protection measures (a term that is sometimes used for this technology) that are added to (or wrapped around) a piece of content. This usually involves the use of some form of encryption and access control mechanism. As well as preventing unauthorised access, the controls limit various aspects of use of the content. For EDD such limitations include the number of copies that may be printed; whether the file may be copied; the length of time that the file may be accessed; and whether the content may be 'cut and pasted'. Unlike the management of digital rights there is little standardization in the digital management of rights.

Many systems have been developed to control the use of digital objects, for example e-books. Here the user, after

downloading the necessary access software, can obtain an e-book and obtain rights to access it using a variety of business models. These business models are usually based on analogies with the borrowing of physical books; for instance, the length of time the e-book is available can be controlled as can the ability to lend the e-book to another user.

Reasons for implementing DRM for document supply

At least three major document suppliers, the British Library, the Canada Institute for Scientific and Technical Information (CISTI) and Infotrieve (a commercial document supplier in the USA), have implemented a method of secure electronic delivery. Although the three systems differ technically, they have all been implemented for the same reason. That is, as stated above, unless such systems are in place, some publishers will not grant the necessary rights for EDD to be provided.

This may seem an irrational response from publishers, nearly all of whom allow unsecured access to their online journals for subscribers and pay-per-view customers. The main reason why publishers are unwilling to grant similar access through document suppliers is that they are not in direct control when supply is through a third party and they fear that inappropriate use might result. DRM systems give comfort to publishers by controlling inappropriate use.

The British Library and electronic document delivery

The British Library has experimented with several forms of EDD over the last twenty years and one proprietary system has been used for the last ten years. This system, called Ariel, which is essentially a method of transferring image files of higher quality than commercial fax machines over the internet, is a stand-alone system and until recently it has not been possible to

integrate Ariel into the automated request processing systems used by the British Library in its document supply services. Furthermore, Ariel is not much liked by publishers as they claim that there is little, if any, control possible. Furthermore, because Ariel is designed to be used by libraries, it is not possible to transmit documents directly to the end-user without the addition of further action on the part of an intermediary, which incurs delay and adds unnecessary work for librarians. For this reason the British Library has begun to discourage the use of Ariel among its user community.

The British Library's aim was to offer electronic access to information through a service that any user could use, and which did not require the Library to offer bespoke software. The first challenge, however, was to ensure that all of our copying created a digital file which we could then transmit securely. In 2003 the Library upgraded its copying processes and replaced all the photocopy machines with digital scanners using the Relais system. Although initially used for output in print format, this gave the possibility to supply any item from the collection by electronic delivery, including the integration of the Ariel system as well as the use of additional methods of electronic document delivery. In addition to resolving the technical issues it was also necessary obtain agreement from either individual publishers or their agent in the United Kingdom, the Copyright Licensing Agency. A secure electronic delivery system was a pre-requisite for rights being granted by publishers.

The chosen system

Several forms of secure electronic delivery were investigated. All of these were based on DRM systems. Many of the early systems were rejected for one or more of three reasons. Either they:

- (i) were too expensive;
- (ii) were too complicated; and/or

- (iii) did not work as expected.

During 2002, the British Library worked closely with Elsevier, a major journal publisher, to develop a system which, it was hoped, might develop into an industry standard. The Adobe[®] Content Server and Adobe eBook Reader[®] systems were chosen. These permit the encryption of existing Portable Document Format (PDF) files in real time and allow a variety of security levels to be set. Initially, the following parameters were used:

- Use of the file was restricted to the machine on which it was downloaded;
- Printing was set to one copy only;
- Saving and viewing of the article was permitted, but for a limited period of time.
- Forwarding and copying was disabled;
- Annotations and conversion to speech were permitted.

An added advantage for users was that the system used software that was readily available at no cost from a well-known and reputable company. Many of the other systems rely on plug-in software, often supplied by very small companies. Since the initial work Adobe has integrated its eBook Reader software into Adobe Reader from version 6 onwards. This has the added advantage that, as most users already use Adobe Reader, it is not necessary to install any additional software to use the secure document delivery system. However, the requirement for version 6 has caused some challenges – see later.

It was decided that, rather than 'push' the PDF file to the requester, it would be better for the requester to 'pull' the file from a British Library server. There were several reasons for this. For instance, many of the problems associated with the transmission of large files as email attachments and those caused by firewalls

are overcome if the requester controls the process. The drawback is that, for the standard requesting methods, the user is not online to the British Library and so cannot initiate the downloading process. However, the British Library does offer two services that can be used for online delivery.

These online services (called Inside and British Library Direct) allow users to search for, and select, individual articles from a listing of journal content pages. Individual articles can be requested for delivery through a web interface. The British Library has agreements with some publishers for the storage and use of online journals. These publishers permit the delivery of requested articles to be online (a PDF icon alongside the bibliographic citation signifies that the article is available for immediate download). When such a request is placed, the PDF file is retrieved from the electronic store and encrypted using Adobe Content Server before being downloaded by the user for viewing and printing using Adobe Reader. The file is encrypted according to the parameters listed above.

For material held in paper format a different approach has been adopted as the user cannot keep the online session open while the paper original is retrieved and scanned. After the article has been scanned it is converted to PDF format and encrypted in the same way as above. The article is then loaded onto a server. An email message containing a link to the article on the server is sent to the user. Because the security permits only the person who opens the link to download the file, it is important that the requester should be the person to do this. Thus, if the request is sent via an intermediary, the intermediary should forward the email message to the original requester before downloading takes place. An added advantage is that, as the encryption and access software is exactly the same for born-digital and scanned files, both types

can be transmitted and accessed in exactly the same way. This method has also been adopted for offline services. For all of these an email message is sent to the user or intermediary after the encrypted file has been loaded onto the server. In all instances the link to the file is only available for a limited period of time and the link is disabled after the first download has taken place.

The system in practice

The system has been rolled out in a phased manner. It began in December 2002 for Inside users, as 'Secure Electronic Delivery'. Additional phases were delayed until after Adobe changed the reader software from eBook Reader to Adobe Reader v6 (in June 2003). The version linked to scan on demand from paper originals became operational in December 2003. It is now available for almost all the services offered and, at the time of writing (March 2006), Secure Electronic Delivery is now responsible for about 25% of all items supplied.

The main issues that have arisen are:

- Some organisations have been slow to upgrade to the latest version of Adobe Reader. These are particularly large organizations with complex infrastructures and where the library does not have any influence to demand software upgrades.
- Users want to be able to share the received file between different machines, for instance a desktop machine and a PDA. This is now possible with the latest version of Adobe Reader.
- Some customers who mediate requests have asked for the ability to check the item before it is forwarded to the end user. At present the system does not permit this, but a solution is in development.

- Some customers have licences in place with publishers and their agents which permit further uses of any documents received in electronic format. Again, a solution to this problem is in development.
- Adobe has recently announced that it will stop supporting Content Server, but the timescale is at present unknown. A replacement for Content Server is currently under review.

Reaction to the system has been very positive. Many users have commented favourably on the speed of delivery and the ease of using the system.

Conclusion

Supplying information to a user's desktop is a key strategic mission of the British Library. Researchers want to be able to access information wherever they are – and helping them do so is important if libraries are to remain relevant. Given the complexities of copyright legislation, DRM has been the chosen mechanism to allow the British Library to supply documents to the desktop with the support of the copyright owners.

The DRM system chosen by the British Library has proved to be successful and well received by users. At first sight, the use of such a complex system for what is a relatively low-cost product may seem overkill, but it was the best way for the British Library to obtain the rights that it required to be able to continue to offer electronic document delivery. It is hoped that, as both publishers and users become more familiar with the use of such technology, the technology will become more sophisticated and even easier to use.

For over 40 years the British Library has adopted an innovative approach to supplying remote users. Secure Electronic Delivery is just the latest innovation in the

Library's continuing efforts to remain as a world-class library.

Appendix

Organisations and systems mentioned above

(Websites checked March 2006)

Adobe Content Server
<http://www.adobe.com/products/contentserver/overview1.html>

Ariel
http://www4.infotrieve.com/products_services/ariel.asp

The British Library
<http://www.bl.uk>

CISTI
http://cisti-icist.nrc-cnrc.gc.ca/cisti_e.html

The Copyright Licensing Agency
<http://www.cla.co.uk>

Elsevier
www.elsevier.com

Infotrieve
<http://www.infotrieve.com>

Relais
<http://www.relais-intl.com>

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