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Sharing an ERMS: mutualisation for an efficient management of electronic resources metadata

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Abstract

Locally created, purchased or subscribed, ERMS (Electronic Resource Management Systems) is a useful tool for any library that wishes:

- 1) to perpetually preserve administrative and technical electronic resource metadata,*
- 2) to measure their development through time and*
- 3) to facilitate the management of the key steps of their flow.*

In addition to this, an ERMS and its knowledge base are interesting tools for obtaining relevant information on resources. In this article, we will talk about the French consortium Couperin project, now in its analysis phase, which aims to provide its members with a centralized electronic resources management system (ERMS). This shared system would serve as a source of mutual information on electronic resources. We begin with a presentation of the French academic electronic resources environment and then examine the reasons why the working group has focused on this scenario, what services are expected from the shared ERMS and what are the limits of such a project.

Introduction

French academic electronic resources

In the 1990's, electronic resources began to be a part of French academic library collections. Evaluation of these libraries in terms of quantity and usage has, since 1998, been performed by the sub-directorate for libraries of the French Ministry of

Higher Education¹ and, since 2006, in association with the Couperin consortium². In 2006, university libraries, information centres in post-graduate teacher training institutes and libraries of leading public research institutes globally subscribed to 524,000 electronic resources. On average, each institution participating in the Couperin working group manages about 10,500 online journals and about forty databases with an average budget of approximately 206,000 euros.

The French consortium environment

In France, the vast majority of academic libraries depend on the French Ministry of Higher Education and the networking of these libraries has been helped by a centralized management. However, the French consortium environment remains complex with the emergence of various kinds of groupings. These groupings buy electronic resources together. However these geographical, thematic, scientific, groupings do not often constitute a "legal person" when signing contracts with commercial publishers. This is why there is an additional level of complexity (at the national level) in the French consortium environment.

The Couperin consortium

From the beginning, the aim of the consortium was to negotiate the best price conditions for electronic journals for academic libraries. However, it is not a legal structure (it is a non-profit association) and this is problematic when it had to order for several institutions. Therefore, for bulk orders, it often calls on one of its members or the ABES, presented below. The Couperin consortium now has over 210 members.

Groupings

Groupings can be made between state public institutions, local authorities and private associations. In this case, a convention is signed by members of the grouping which defines the terms of the agreement and designates a coordinator among members of the grouping. Each member of the grouping undertakes

- 1) to sign the convention with the chosen counterparty, and
- 2) to sign a contract to live up to its own needs.

The grouping is the legal procedure that allows several institutions to buy an electronic resource together, since it only request one invoice from the publisher.

ABES³

The bibliographical agency of Higher Education was established in 1994 to create the catalogue of higher education libraries (Sudoc), opened in 2001. It promotes the acquisition of electronic resources of academic institutions by supporting order groupings. It is, in this function, the financial partner of the consortium Couperin.

¹ <http://www.sup.adc.education.fr/bib/>

² <http://www.couperin.org/>

³ <http://www.abes.fr/abes/index.html>

Regional Digital Universities (RDUs)⁴

Regional Digital Universities were initiated in 2002 by the French Government. RDU projects are based on tripartite target contracts (government, regions, establishments and other partners) and they exist for the development of digital services.

They can provide access to electronic resources, services and tools related to higher education. The development of Digital Workspaces (DW) in a regional area has increased the offer of electronic resources in libraries covered by these RDUs. RDUs acquire digital resources on their own and through the Couperin consortium.

Poles of research and higher education (PRHE)

Poles of research and higher education (founded in 2006) are an attempt to provide a way, for relatively close (geographically speaking) public or private institutions and organizations of research and higher education, to share activities and capacities. In doing this, PRHEs may take various forms. PRHEs do not necessarily consider the documentation question in their convention, but the component institutions may decide to acquire electronic resources at this level.

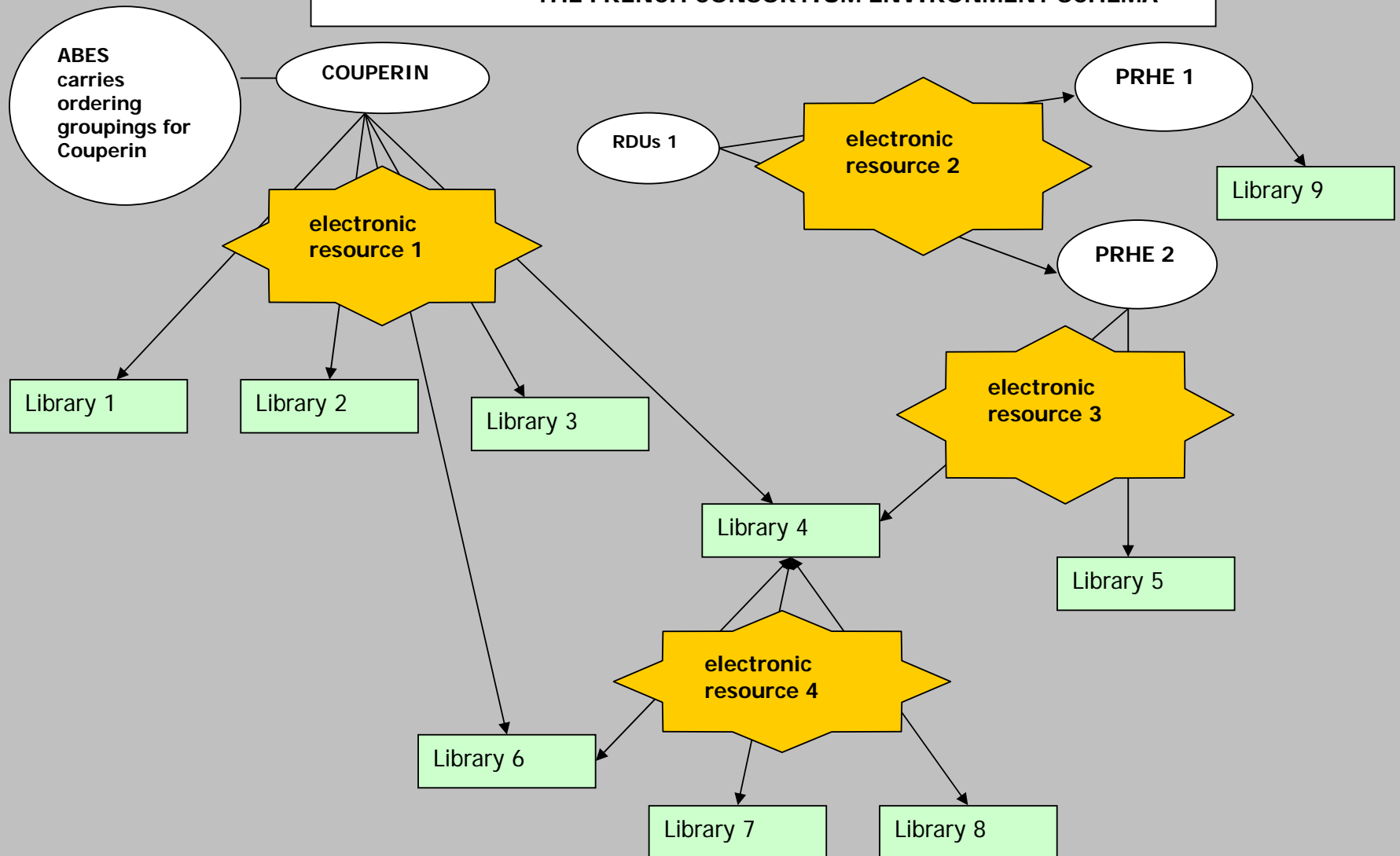
Other groupings

Institutions may decide to acquire electronic resources in an informal way. For example, the following Paris institutions – the Descartes University Libraries, the Interuniversity Library of Medicine and the Interuniversity Library of Pharmacy, geographically close and partially linked administratively – buy EMBASE together, without Couperin.

The figure below shows how these groupings can be linked and how they allow libraries to provide electronic resources for their users.

⁴ <http://www.educnet.education.fr/superieur/unr.htm>

THE FRENCH CONSORTIUM ENVIRONMENT SCHEMA



Electronic resource management tools used by French libraries

Few French academic libraries currently have real ERMS. The limited size of electronic collections in libraries, the lack of staff resources and funding, and the immaturity of existing ERMS slow the adoption of such tools. In the management and preservation of the huge quantity of administrative, technical and usage data related to their electronic resources, in the monitoring of the flow of that data, and the collection of information for the direction of development policy, the assertion of property rights, and for the justification of spending, libraries continue to use one or more of the following tools: paper files, client email address books, spreadsheet files containing a large number of columns, small local databases mainly designed with office RDBMS.

The Couperin consortium is aware of this problem and, whilst it too has no adequate device for monitoring its negotiations, it nevertheless created in 2007 a working group on ERMS⁵, including members and non members of the consortium, with the aim of drawing up a statement of needs, of proposing solution scenarios adapted to its members situations, and of testing the feasibility of those scenarios. The general needs of the libraries and of the consortium are listed below.

General needs of French Academic libraries

- Libraries and the Couperin consortium wish to use ERMS with knowledge base covering francophone resources and which have descriptive, contractual and technical data for resources present in most academic institutions in France.
- The ERMS should not be used only for professional management but should also be used by end users for accessing electronic resources, just like an ILS and its OPAC.
- Libraries would like to spend as little as possible for such a tool.
- On the other hand, the consortium and several libraries desire the creation of a central knowledge base from which librarians could get full information on electronic resources and from which end users could get information on libraries offering these resources. Indeed, as only few French university libraries today catalogue their electronic resources, the central catalogue of academic libraries⁶ is not a useful device for discovering electronic resources.

At the end of its second working meeting, the group chose to focus its study on a shared ERMS implementation project, this solution having appeared to be the most relevant, both functionally and financially.

⁵ <http://gterms.wikidot.com/>

⁶ Catalogue collectif du Système universitaire de documentation (SUDOC)

http://www.sudoc.abes.fr/LNG=FR/DB=2.1/IMPLAND=Y/CHARSET=ISO-8859-1/DB_START

The reasons choosing to study a shared ERMS implementation project

Four reasons prompted the working group to study the possibility for the consortium and its members to share an ERMS.

- 1) A shared ERMS would suit libraries with small collections of electronic resources, libraries whose size was insufficient to justify a local implementation of an ERMS, and libraries that are not satisfied with hosted ERMS offered by the French market.
- 2) It would also suit libraries with large collections of electronic resources but which lack staff and do not want to purchase or bear alone the weight of the implementation and management of an ERMS. It may be difficult for a library to establish and maintain even a minimal set of data that would enable it to manage its electronic resources effectively, to evaluate the relevance of those resources, and to get prospective information on emerging trends in pricing, licensing and technology. Since most of the electronic resources used by Couperin members, whether purchased or not via the consortium, are present in at least two of members, and since 70 to 80% of the descriptive and administrative metadata needed in France for college and research libraries do not change from one institution to another, it can clearly be seen that a collective management of these data would be very useful for these libraries.
- 3) Finally, by its very nature, such a solution would ease the negotiating and purchasing activities of consortium Couperin, by offering its negotiators:
 - Full and instant access to key, up-to-date information on members on behalf of which the negotiations are being carried out (full-time equivalent numbers, IP addresses, etc.).
 - A better knowledge of resources purchased by members.
 - Simplified procedures for exchanging information with members and validating each step of negotiation.
- 4) Similarly, such a solution would meet all the conditions for being used as a mutual source of information on electronic resources. Since members would have the opportunity to enrich descriptions of resources with critical analyses from several librarians, the ERMS shared in this way would be in line with the following two information tools on electronic resources present in France over the last few years, namely:
 - The database of mutual information on electronic serials (BIMPE)⁷, set up in 2002 for checking electronic journals packages. This database was created by Dominique Rouger, a librarian at University Jean Monnet, is very well known and is greatly appreciated in the French library world.
 - The science & technology watch website⁸ for electronic resources of

⁷ Université Jean Monnet. Service Commun de Documentation, *Base d'Information Mutuelle sur les Périodiques Electroniques (BIMPE)*. <http://bimpe.free.fr/>

⁸ Ministère de l'Éducation Nationale. Direction générale de l'enseignement supérieur. Sous-direction des bibliothèques et de l'information scientifique, *La documentation électronique : veille scientifique et technologique*. <http://veille.abes.fr/>

the French Ministry of Higher Education which gives access to critical analyses of electronic resources.

The articulation between members' and consortium's needs that the shared ERMS should provide

The working group based itself on the Digital Library Federation ERMI report⁹ and on the work of a few French libraries when defining the data and functionality expected from a shared ERMS. The first stage of the work was to extract and select from those documents the metadata deemed useful to the group and the completion of their description, in particular, by indicating three characteristics for each of them: whether the metadata was local or shared, or whether it was repeatable and whether it could be made public. Since this list is very long, for this paper, we have chosen to present only a selection of data, in an appendix.

The group then worked on the services expected by the consortium, its members and their local groupings. Again, the group sought to promote complementarity between shared and local services.

Services required are:

- Flexible librarian rights and privileges management so as to allow the possibility:
 - For each member to access its data and all shared data, with varied rights assigned to librarians as regards writing.
 - For consortium managers and negotiators to access certain elements of members' local data (acquisition cost and usage statistics for resources purchased through the consortium, IP addresses of all members).

- Provision of a knowledge base regularly updated by the supplier and authorizing the recording of data not covered by it.

- The possibility to manage the full range of existing electronic resources (databases, e-books, multimedia resources, and so on.) and hosted digital services (link resolvers, bibliographic software, etc.)

- The collective management of all shared data related to electronic resources, as defined by the working group, in complementarity with each member's management of its local data.

- The possibility to compare contents of e-journals or e-books packages.

- The possibility for each member to manage workflows related to selection, evaluation, acquisition, fund raising control, maintenance and access to its electronic resources in compliance with legal rules and licenses applicable to them.

- The possibility for negotiations and acquisitions to be managed by one member only on own its behalf, by a group of members only on their behalf, or by the

⁹ Timothy D. Jewell, Ivy Anderson, Adam Chandler, Sharon E. Farb, Kimberly Parker, Angela Riggio, and Nathan DM Robertson, *Electronic Resource Management: Report of the DLF Resource Management Initiative (Washington, D.C.: Digital Library Federation, 2004)*. <http://www.diglib.org/pubs/dlf102/>

consortium for a part or all of its members.

- Support for:
 - Cost simulation.
 - The provision of annual data required by different Couperin supervisory authorities and its members.
 - The provision of reliable indicators to enable libraries to carry out their collection development policy and Couperin to manage its activities effectively.

- The possibility to use ERMS for electronic resources discovery in the following way:
 - On the consortium's site, the final user interface will allow searches in all public resource metadata. In this way, the whole academic community in France will have access to an information tool on e-resources and places where they are accessible.
 - On web sites of participating members; the ERMS final user interface will also be accessible with a default search limited to resources offered by these libraries.

- The ability to export data in any standards-format to local library systems or services.

Partnership model and commercial model for this tool

A useful model for collaboration in the management of this tool and its content is that used by The Colorado Alliance of Research Libraries for Gold Rush¹⁰. This is an ERMS which offers services similar to those required for this project.

The consortium may consider three economic models for this shared ERMS:

- 1) Acquisition and local installation of a commercial ERMS.
- 2) Subscription to hosted software.
- 3) Financing the development of an open-source ERMS.

The two first possibilities will not provide the consortium with a tool which meets all its needs. On the other hand, an acquisition will provide a more flexible ERMS whilst a subscription will allow it to take advantage of the continuing improvement of ERMS at a cheaper price: it must be said that ERMS are still very much in their infancy. The development of a tool, following the example of The Colorado Alliance of Research Libraries, will undoubtedly be much better for our needs, but it will require much more time.

The limits and issues of a shared ERMS

As with any collective project, the success of a shared ERMS depends on an effective, continuous and disciplined participation of each component. However, the services offered by a shared ERMS in terms of day to day management will increase

¹⁰ *Gold Rush* <http://grweb.coalliance.org/>

component interest, with the result that the tool would be efficient for all.

A problem to be considered is the inclusion of such a tool in many different local information systems. Simply on the level the Couperin working group (which represents thirty members of the consortium), more than five types of ILS are used. Moreover, a shared ERMS would also have to take into account local variables, namely the directory of patrons allowed to access resources, remote access solutions, portals, link resolvers, and federated search engines.

The importance of the role of library consortia in the acquisition of electronic resources ought to encourage commercial providers to make their ERMS offer 'sharing' compatible. Initiatives such as the project of the Portuguese consortium *Biblioteca do conhecimento online B-on* and that of the SCELC (Statewide California Electronic Library Consortium) which is working with commercial suppliers to develop features for their consortium, show that a shared approach is technically possible for ERMS.

The problem of interoperability immediately raises the question of the capabilities of ERMS to be part of the back office as well of the front. It is this ability to be used by patrons and / or to communicate with other tools used by patrons which is stressed. We have seen it in the expectations of the working group: communication with users of electronic resources is essential. But while it is one thing to design a tool that would be an additional brick in an integrated information system alongside other tools (catalogue, link resolver, federated search engine and portal), it is an entirely different thing to build software which would aim to integrate functions previously performed by other tools.

A tool such as Gold Rush, which combines a link resolver, an A to Z list and a subscriptions management system, suggests that the border between librarian and patron tool is becoming blurry. As an example: Ex-Libris has recently taken the decision to sell a package combining Verde (its own ERMS) and SFX (its own link resolver).

As can be seen, both libraries and commercial and non-profit suppliers the world over are currently considering the limits (indeed the very nature) of ERMS. The fact that products fulfilling the consortia's needs are in their infancy proves that neither of the two directions (a management and global access tool or an additional brick of existing systems) is yet preferred. Partnerships between technical solution providers and libraries or the development of open source software could provide constructive responses to this complex and crucial issue.

To conclude, then, the electronic resource metadata which feed the knowledge base of ERMS ought to make it possible to display a customized view of these data, though the complexity, duration and cost of the development remain to be seen.

Appendix: Extract of the data list managed by a shared ERMS

Data	Content Type	Data Status	Repeatability	Public data
Description (extract)				
Resource Title	Text	Shared	N	Y
Resource Type	List	Shared	N	Y
Publication Dates (e-book, serials etc.)	Text	Shared	N	Y
Local Holdings (serials)	Text	Local	N	Y
License, licensing terms (extract)				
Agreement Title	Text	Shared	N	N
Agreement Type	List	Shared	N	N
Negotiated agreement	Yes/No	Shared	N	N
Negotiating organisation	Identifier	Shared	N	N
Negotiator	Identifier	Shared	Y	Y
Agreement Start Date	Date	Shared	N	N
Agreement End Date	Date	Shared	N	N
Legal languages of the License	Text	Shared	Y	N
Authorized users	List or Text	Shared	Y	Y
Licensee	Identifier	Shared	Y	Y
License Start Date (linked to Licensee)	Date	Local	Y	N
License End Date (linked to Licensee)	Date	Local	Y	N
License End data tickler (linked to Licensee)	Numeric	Local	Y	N
Local Authorized (linked to Licensee)	List or Text	Local	Y	Y
Declared FTEs (linked to Licensee)	Text	Local	Y	N
Declared Data Origin Note (linked to Licensee)	Text	Local	Y	N
Pricing Model (extract)				
Validity Duration	Text	Shared	N	N
Pricing criteria	List	Shared	Y	N
Pricing Model	Text	Shared	N	N
Acquisition (extract)				
Customer number	Numeric	Local	Y	N
Name of provider	Text	Local	N	N
Type of order	List	Local	Y	N
Paid price to provider	Numeric	Local	N	N
Paid price currency	List	Local	N	N
Conversion rate	Numeric	Shared	N	N
VAT rate	%	Shared or Local	Y	N

Data	Content Type	Data Status	Repeatability	Public data
Conversion date	Date	Local	N	N
Organisation (extract)				
Organisation name	Text	Shared	N	Y
Activity	List	Shared	N	Y
Attached Ministry	List	Shared	N	Y
Member of Couperin / PRHE /RDUs	Identifier	Shared	Y	Y
Negotiations (extract)				
Negotiating organisation (Couperin, PRHE /RDUs...)	Identifier	Shared or Local	N	Y
Negotiation statement	List	Shared or Local	N	N
Product	Identifier	Shared or Local	N	Y
Members interested in negotiation	Identifier	Shared or Local	Y	N
FTE taken into account	Text	Shared or Local	Y	N
Collections considered (data linked with member data)	Text	Shared or Local	Y	N
Publisher total turnover (data linked with member data)	Text	Shared or Local	Y	N
Estimated price in original currency, exclusive of VAT	Numeric	Shared or Local	Y	N
Converted estimated price in euros, exclusive of VAT	Numeric	Shared or Local	Y	N
VAT rate	%	Shared or Local	Y	N
Organisation subsidy	Numeric	Shared or Local	Y	N

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