



**New Wine in New Bottles:  
A Hong Kong Library's Perspective on E-books and 21<sup>st</sup>  
Century Serials Management**

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**Abstract:**

*The trend of “print to e migration” in libraries not only has no sign of slowing down, but also has spread from journals to monographs. How to effectively acquire, organize, manage, and provide access (new bottle) to this increasingly important e-book collection (new wine) of the library has been and will continue to be critical for libraries worldwide. It also requires libraries to overhaul and redesign their existing business processes and workflows, reassess the job profiles and knowledge of existing serials staff to make sure that they can meet the skills required for managing and servicing their e-book collections to library users.*

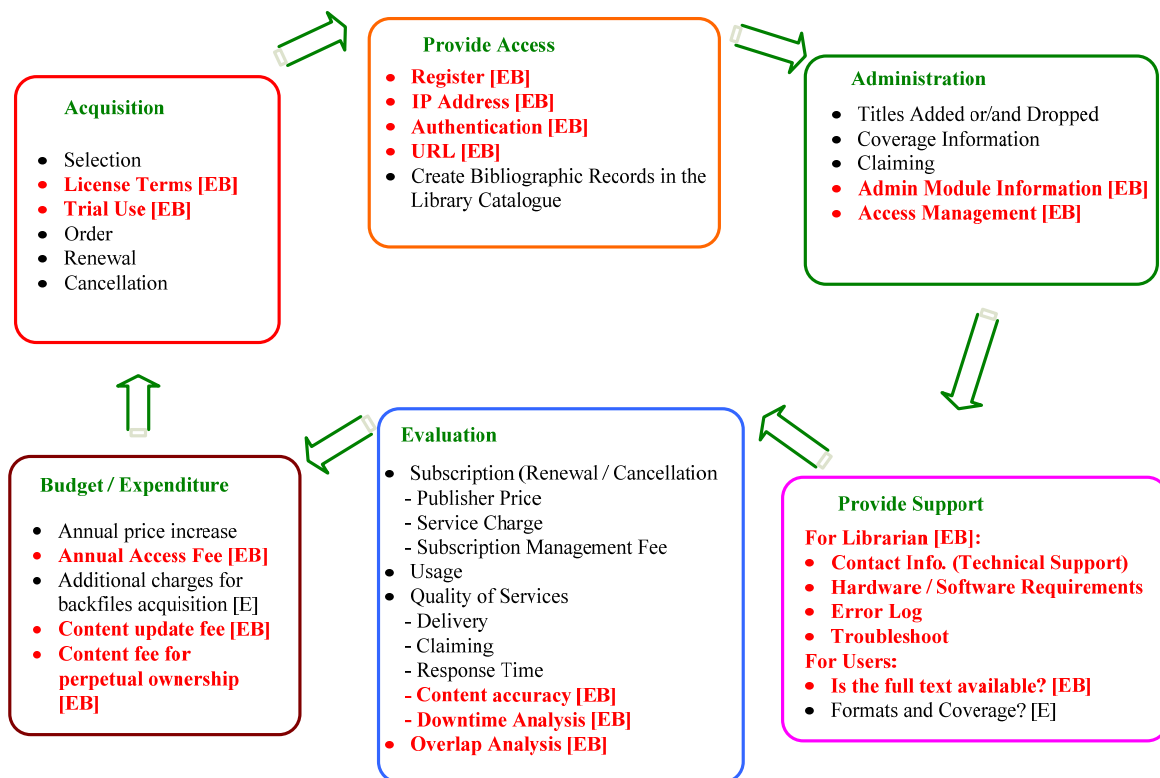
*From 2006 to 2008, the libraries of the eight government funded universities in Hong Kong were awarded a special grant from their parent intuitions and the Hong Kong Government to jointly acquire over 15,000 titles of English monographs in electronic format. As a member library of this special project, Lingnan University Library was able to enhance our e-book collection in a very short period of time. However, it also demanded us to act quickly in redesigning our business processes at the serials department to cater for this sudden surge of electronic books. In this paper, we will discuss how Lingnan University Library introduced a series of “new bottles” such as organizational restructuring and automation to embrace the new challenges generated by e-books acquisition, the “new wine”.*

### **Benefits and Important Role of E-Books:**

The amazing growth of electronic collection and the increasingly important role that it plays in academic libraries has made most of us believe that soon libraries will be centered on e-resources. According to many medical researchers drinking wine, in moderation, can help reduce the risk of heart disease. Many studies show that it keeps your heart beating in a more healthy rhythm. Likewise, acquiring e-books for the library collection can attract and facilitate users to access library resources for their studies and research since they can be delivered almost instantaneously, are easy to share, updatable, searchable, portable, save shelving space, hyper-linked and can be appended with multimedia elements such as sounds, videos and still images. The most important thing is that they are good for the environment. Thus, nowadays libraries typically acquire or subscribe to tens of thousands of e-books and we believe that e-books will soon be playing a major role in the information environment.

### **The New Challenges of E-Books Management:**

Library professionals involved in e-book management are required to deal with new challenges that are dissimilar from the world of print book management including different acquisition and subscription models, individual or consortium purchase, license negotiations with different terms and conditions, selection and evaluation, trial testing, content fluctuation, overlap analysis, perpetual ownership, usage, records creation and update, document management, record management, timeless access, and the need for IT support. Furthermore, they need to consider that sometimes the price of an e-book can be several times higher than that of its print counterpart. In addition, the endless variation in the packages offered by different players in the market, the frequent changes of business models and the lack of automated tools to deal with the complexity of e-book management, all have fundamentally changed the procedures and workflows of a traditional Resources Management Life Cycle.



(Figure 1) Resources Management Life Cycle: New challenges specifically for e-book acquisition are marked [EB]

As you can see, issues that seemed so very simple in the print environment have become overwhelmingly complex in the electronic environment.

### Embrace the New Challenges:

Since 2006, Lingnan University Library has introduced a series of organizational restructures including Business Process Reengineering (BPR), Human Resources Management (HRM), Human Resources Development (HRD) and Business Process Automation (BPA) to facilitate the development, management and service delivery of the new electronic library collection.

### Business Process Reengineering (BPR):

In the old organizational structure at Lingnan, the responsibilities for the management of E-Resources and Serials including e-books were shared by different library sections. The acquisitions and payments were handled by the Acquisitions team, the e-book cataloguing was processed by the Cataloguing team, batch loading records for e-books from aggregated databases was processed by the Systems team and the responsibilities of evaluations and license negotiations were assigned to the Reference team. Due to the expansion of the e-resources collection and the uniqueness of job nature in managing this e-collection the Library, with the support of the University, decided to centralize the responsibilities of e-resources management to one single team by applying a series of changes in the organizational structure starting in 2006.

First the Library employed a new professional librarian, a position that had been frozen since 2003, and the person was assigned as the coordinator for E-Resources and Serials Management. The Library also redesigned the job responsibilities for the team based on a new one-stop model. That means the entire responsibilities, including acquisition, negotiation, providing and managing access, administration, technical support, budget management, evaluation and renewal for e-resources (including e-books) and serials were assigned as core business of the new team to improve performance and efficiency in e-resources management.

### **Human Resources Management (HRM):**

Due to the complex and diverse nature of e-book management the team required a combination of members with solid experience in a variety of areas including subscription management, communication and negotiation skills, budget management experience, practical cataloguing experience in all formats, knowledge of LCSH and AACR 2, record keeping and management, practical experience in operating the III Millennium integrated library system and IT and programming knowledge. Building the team was just like putting together a jigsaw puzzle. We assigned one cataloguer with over 10 years experience from the Cataloguing team to join the new E-Resources Management team. Then, we employed a new staff member who had solid experience in IT and programming from another university library, together with the two existing staff who had experience in subscription management, print serials collection, and end processing. The jigsaw puzzle was completed in the middle of 2006 with a group of five team members.

### **Human Resources Development (HRD):**

To enhance the team's capability to take up new responsibilities or challenges, we encourage team members to attend library conferences, make presentations or conduct research to obtain new knowledge and experience. We also arrange in-house employee training (e.g. how to use online databases), encouraging them to share their knowledge within the team and with other library sections, allowing them to participate in or lead different development projects in the Library and job rotation, etc. Thus, each individual member of the team can accomplish their work goals and widen their horizon in managing e-books and other e-resources.

### **Business Process Automation (BPA):**

As we all realize that e-books differ from print in the way they are acquired, accessed, and licensed, members of the E-Resources Management team are required to find solutions to overcome the new challenges in record management, document management and e-book management. They need to manage the timely acquisition of e-books, closely cooperate with colleagues within different sections in the Library, the university's finance department, and members of the

consortium. Since 2007, we had introduced a series of new developments and service enhancements at Lingnan to achieve the objective of Business Process Automation for e-book management including the SUMAS, OMA and 1-Search.

### Subscription Management Solution (SUMAS):

In the summer 2007, the first major development for e-book management was the home grown Subscription Management Solution, we named it SUMAS. Sharing the same objective with other similar developments overseas, the aims of developing SUMAS was to build a small but powerful system to provide support for automating and streamlining procedures for e-resource management. The first phase of this project was completed in five months for e-journals and aggregated databases, and the development of the new e-book management module was completed in the spring of 2008. SUMAS transforms data of e-book acquisitions into readily available resources management information in web format. SUMAS provides supports for e-book management including Subscription Management, E-Resources Management, Document Management, providing automatic E-mail Alerts and generating instant reports online.

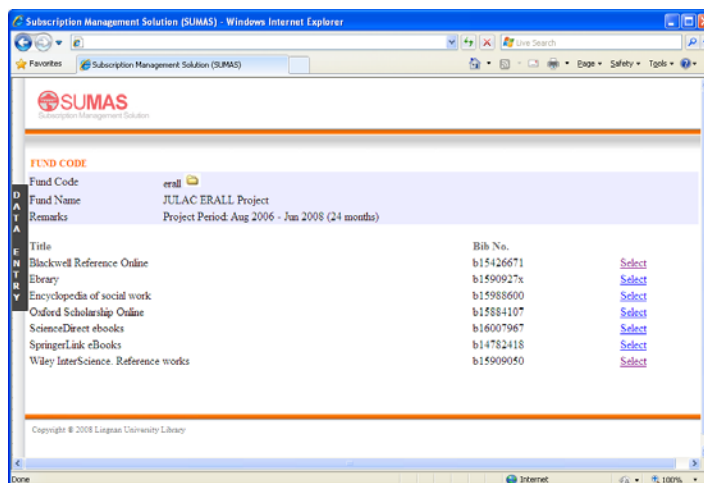


(Figure 2) Major functions of SUMAS

### Subscription Management:

The Subscription Management module of SUMAS provides instant and updated acquisition records for e-books including date of acquisition, order type such as by individual library or consortium, payment details, service/content provider, fund code and recommender, etc. For invoice information, SUMAS provides the invoice date and number, the unit price and total amount, etc. For payment details, it provides transaction amount (the amount actually settled by the finance

department) and payment date. Furthermore, SUMAS provides quotation information such as the date and price for record keeping. To serve collection development needs, SUMAS provides usage statistics. In addition, all the agenda regarding the activities of e-book acquisitions and payments can be accessed / reviewed via the online calendar generated by SUMAS for business process monitoring.



(Figure 3) Records of e-book acquisitions are managed by SUMAS

### E-Resources Management:

For the management of e-book access activation and delivery, SUMAS provides information such as the official URL, authentication and number of concurrent users, etc. It also provides URL for downloading title lists, MARC records, usage statistics and information for setting or modifying IP range configuration. For e-book administration and technical support, SUMAS provides information about the administration website with the login / password, technical contact, and also the incident reports.

### Document Management & E-Mail Alert:

To review the documents related to e-book acquisitions, digital copies of documents in PDF format such as the license agreements, supplements or addendums, quotations or invoices can be accessed online on SUMAS. To manage over a hundred payments for e-book acquisitions, SUMAS also serves as a secretary sending library staff e-mail alerts automatically to remind them to settle a payment on time.

### Online Instant Reports:

Instant reports is one of the key functions that SUMAS provides for e-book management. To serve different information seeking behaviors in e-book management, SUMAS provides instant online reports including reports on all acquired e-book packages and reports of invoices that are

being processed. For evaluation, e-book usage can be reviewed for evaluating the collection's cost effectiveness. Furthermore, the total expenditure for e-book acquisitions by each fiscal year can be reviewed on SUMAS.

**Benefits of SUMAS:**

At Lingnan, after using the E-book management module of SUMAS, procedures and workflows in e-book management are automated and streamlined respectively. The implementation of SUMAS had also brought us many benefits not only for e-book management but also for collection development. Furthermore, for the team, it especially facilitated the organizational learning and knowledge preservation, since all colleagues in the E-Resources Management team participated in the development of SUMAS.

**The New Challenges of Collaborative E-Book Acquisitions:**

From 2006 to 2008, Lingnan participated in the ERALL (Electronic Resources Academic Library Link) consortium, with the other 7 members of the Joint University Librarians Advisory Committee (JULAC). After finishing several rounds of evaluations and acquisitions, the consortium acquired over 15,000 English monographs in electronic format for shared access.

Titles/Volumes Acquired by ERALL Project				
Vendors	No. of Current Access	Publication Year	No. of Titles	No. of Volumes
Blackwell Reference Online	Unlimited	1993 -2007	278	288
Ebrary - Blackwell Titles	3 users	2006 - 2007	236	708
Ebrary - Taylor & Francis Titles	2 users	2006 - 2008	2,089	4,178
Ebrary - other titles	1 users	2006 - 2007	2,070	2,070
Oxford Digital Reference Shelf & Oxford Scholarship Online	Unlimited	1963 - 2008	1,838	1,838
SpringerLink	Unlimited	2005 - 2007	8,952	8,952
Wiley InterScience Reference Work	Unlimited	1999 - 2006	9	219
Total			15,472	18,253

(Figure 4) Number of titles/volumes acquired via ERALL Project

Subject Breakdown by Vendors							
Subject	Blackwell	Ebrary	Oxford	Springer	Wiley	Total	Percent
Business, Economics & Finance	34	379	308	577	1	1,299	9%
Humanities, Social Sciences & Art	244	2,852	1,397	811	1	5,305	34%
Science & Technology	0	563	131	6,739	7	7,440	48%
Medicine	0	425	0	825	0	1,250	8%
Miscellaneous	0	176	2	0	0	178	1%
Total	278	4,395	1,838	8,952	9	15,472	100%

(Figure 5) Subject breakdown by vendors

During the selection and evaluation process, we had to overcome various new challenges including, to review different e-book packages simultaneously, to do overlap analysis to compare the different packages with our library collection and other member libraries' collections, and also compare the e-book titles available in different packages. Furthermore, we needed to perform

access checking and monitoring, and MARC records generation for the newly acquired e-book packages.

### **Overlap Analysis, MARC Records Generation and Access Checking & Monitoring (OMA):**

To embrace the challenges, Lingnan developed and integrated a series of applications to automate workflows for e-book collection development and management including Overlap Analysis, MARC Records Generation and Access Checking and Monitoring. We named this home grown system OMA.

#### **Overlap Analysis - Lingnan's Collection:**

Library staff might not have any problem in conducting an overlap analysis manually for the 9 reference works of Wiley Inter Science against their library's existing collection. However, manually handle the analysis for the potential duplication of over 4,000 ebrary e-books with our library collection is impractical. OMA solves our problems. To conduct an overlap analysis, we just needed to request a title list of e-books from our vendor (with titles and ISBNs). OMA uses the ISBN or title of an e-book in the title list as the matching point to check against the Library catalogue to identify duplicates.

#### **Overlap Analysis - All JULAC Libraries:**

For the ERALL consortium, if a library is responsible for organizing the acquisition of an e-book package for other members, it needs to compare the titles in the package against each member's library collection. In this respect, OMA can perform an overlap analysis comparing titles in the package against all member libraries' catalogues simultaneously and report duplicates.

#### **Overlap Analysis - Different E-Book packages:**

Furthermore, OMA is able to perform an overlap analysis to evaluate titles in different packages. It can analyze up to 10 e-book packages simultaneously and creates reports for facilitating acquisition decisions as well as providing support to negotiation with vendors.

#### **Generating MARC Records for E-books:**

OMA automates the generation of MARC records to allow users to access the e-books once they are available. Obviously, libraries would have no problem to do original cataloguing for the 24 reference titles of Oxford Digital Reference Shelf. However, if you need to catalogue the package of over 9,000 SpringerLink e-books within a short period of time for users to access, you need



OMA! Based on established cataloging policies, OMA can generate access oriented MARC records automatically from title lists of e-books. Using the SpringerLink e-books as an example, after assigning the MARC tags and sub-fields for each column of the title list, OMA automatically combines those data on the list with the data in the pre-set fixed field file and convert all the data into MARC formats for OPAC records generation.

### **Access Checking & Monitoring:**

Moreover, OMA also automates some new procedures created for collection management such as access checking and monitoring. OMA is able to perform access checking to ensure that the e-books can be accessed prior to the official launch. OMA also addresses some access problems such as broken URLs or incorrect URL links which belong to another title. With OMA's instant report, we can report the problem to the content provider immediately for correction.

### **Benefits of OMA:**

When OMA is used, procedures and workflows involved in e-book acquisitions and management are automated and streamlined respectively.

### **1-Search – Search across Different E-book Collections Simultaneously:**

With the rapid growth of e-books in our Library collection, the new challenges are not only influencing colleagues involved in e-book management, but also library users. In this connection, we introduced the 1-Search federated search service in 2008.

### **New Challenges to Library Users:**

To access and obtain content from different library-acquired e-books, users are required to select from dozens or sometimes hundreds of e-books in the Library collection, to learn how to use different user interfaces and to repeat the same search many times to obtain a comprehensive result. In this connection, they expect the Library to provide an easy to use interface with one-step searching to multiple Library-acquired e-book collections. In 2007, our Library formed an E-Resources Access Enhancement Task Force. Colleagues from Acquisitions, E-Resources & Serials Management, Reference and User Education teams participated in the Task Force. We had considered and evaluated 3 major federated search products in the market including the 360 Search from Serials Solutions, MetaLib from ExLibris and Research Pro from Innovative Interfaces.

## Selection Criteria:

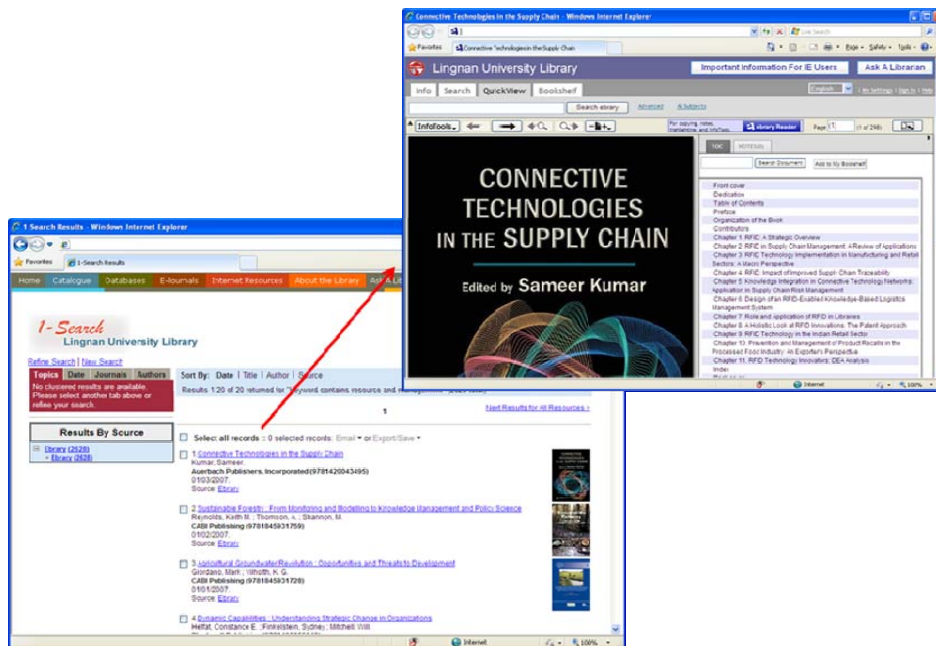
After testing the three products and considering different selection criteria including the user interface and its customization, the basic and advanced functions, the presentation of search results, performance, the compatibility with existing library-subscribed online databases and some other possible new databases, as well as short and long term cost etc., finally the 360 Search of Serials Solutions was selected, and we named it 1-Search. The new platform was launched to the public in August 2008.

With 1-Search, our users can simply find e-books by entering a few keywords, and then search the full text across 8 major e-book collections (with over 18,400 titles). With Advanced Search, they can build Boolean queries to narrow their search to the more relevant results. With Results Clustering, search results are grouped by different subject topics, dates and authors to turn a long list of disparate results into a highly faceted research interface. 1-Search helps users find answers faster by eliminating information overload. Users can also directly export the selected citations from the search results to a bibliographic manager e.g. Refworks.



(Figure 6) 1-Search: search across over 18,400 e-book titles simultaneously

With the Automatic de-duplication feature 1-Search grouped the same result or full text from multiple resources into one record. The most important thing for users is that it connects them to the full text directly.



(Figure 7) 1-Search connects users or researchers to the full text directly

## Benefits of 1-Search:

1-Search is a good place to start a research. Using it users can investigate disparate library print and e-book collections from a single, easy-to-use interface, and it accelerates user access to the richness of our Library's collections.

## Conclusion:

To include e-books in the library collection, e-resources and serials management staff are required to handle issues such as evaluating different e-book packages simultaneously, managing access, generating and batch loading MARC records to the OPAC for e-book packages, performing descriptive cataloguing for individual e-books, and updating records frequently according to titles added or dropped by content providers and the changing of URLs to full text. The staff are also required to harvest usage statistics and carry out overlap analysis during the selection.

E-book management is a complex process, both technologically and organizationally. Apart from redesigning workflows and introducing automated processes, libraries also have to reassess the job profiles and knowledge of existing e-resources staff to make sure that they can meet the skills required for managing and servicing e-books. Sometimes, reassigning staff from other departments of the library to the E-Resources Management unit may be necessary to ensure that the needs are being met by the person(s) most capable of handling them.

For the future, we envision that e-books will continue to grow among libraries worldwide. All the established business processes, arrangements for human resources management and development practices, and applications developed at Lingnan are required to be reviewed and modified on a regular basis to prepare us for the future challenges in e-book management.

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