Next Generation ILS and Information Discovery

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http://library.ust.hk
Part One
HKUST PowerSearch
ILS related systems at HKUST Library

✓ Integrated Library System
  图书馆集成管理系统

✓ Information Discovery Platform
  资源发现平台

✓ OpenURL Resolver
  学术信息链接系统
Planning to migrate ILS to Next Generation

Lead by JULAC (香港特別行政区大学图书馆长联席会)

A system for all eight universities

Shared ILS
Evolution of HKUST PowerSearch

✓ Nov 2009: Installed MetaLib and SFX
✓ Federated Searching (联邦检索)
Evolution of HKUST PowerSearch [cont.]

- Nov 2011: Migrated to MetaLib+
- One stop searching of Primo Central Index (一站式检索)
- Primo interface
- No Catalog
Evolution of HKUST PowerSearch [cont.]

✓ March 2014: Migrated to Primo
✓ One stop searching of Primo Central Index and Library Catalog

http://lbdiscover.ust.hk
Primo Customization at HKUST

- Bib record cleaning - from Millennium to Primo
  - Removed parallel MARC tag 880; but keep romanization (拼音) data for indexing
  - Cleaned up field data
  - Captured course reserve data – course names and instructors
  - Harvest Amazon reviews and cover images
Bib record clean up

Default display in a Primo site

Customized display in HKUST’s Primo
✓ Availability tab

Merging three tabs:

View Online (在线查看)
Locations (馆藏信息)
Request (预约请求)

Into one tab:

Availability (可用性)
Primo Customization at HKUST [cont.]

✓ Enhanced OvP (OPAC via Primo)
   ✓ Fixing bugs/incompleteness in My Account (我的借阅信息)
      ✓ Hyperlinks of “Title” pointed to nowhere
      ✓ “Fine Balance” total was away 0.0
      ✓ “Renew All” not working
      ✓ “Reading History” not working
   ✓ Title level request not working
   ✓ Confusing messages

✓ Streamline Request (预约请求) and Renew (续借)
✓ Added Opt-In/Out (选择加入/退出) feature to “Reading History” (借阅记录)
Streamline the procedures of Item Request (预约请求)

1. Click Request Button

2. Select item(s) and click Submit Button

3. Done!
Primo Customization at HKUST [cont.]

✓ Front-end interface customization
  ✓ Cleaned up “Details” tab (详细信息)
  ✓ Replaced text of Available line to “Library Item”
  ✓ Cleaned up SFX display in “Availability” tab
  ✓ Added “Location” link to display floor plan showing where the item is on the shelf (Item Locator)
  ✓ Added “Redirect Search To” Google Scholar and HKALL
  ✓ Display cover images in Record Display Page; and from multiple sources
    ✓ Not just from Google Book and Amazon
    ✓ E.g. locally created images
Cantonese version: Open Access
Putonghua version: Open Access

Concurrent Users
Unlimited

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<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CALL NUMBER</th>
<th>STATUS</th>
</tr>
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<tbody>
<tr>
<td>MEDIA RESOURCES</td>
<td>LG51.H65 A5322 2001</td>
<td>AVAILABLE</td>
</tr>
<tr>
<td>MEDIA RESOURCES</td>
<td>LG51.H65 A5322 2001 c.2</td>
<td>AVAILABLE</td>
</tr>
</tbody>
</table>
Primo Customization at HKUST [cont.]

✓ Shorten the Permalink (永久链接)
   From:
   http://lbdiscover.ust.hk/HKUST:iii.b1329133
   To:
   http://lbdiscover.ust.hk/bib/b1329133
Part Two
Next-Gen ILS
(新一代图书馆集成管理系统)
Cloud-based (云端运算)

- ILS software hosted remotely (远程安装) at vendor’s data center (数据中心)
- Server virtualization (服务器虚拟化)
- No more headache of locally hosted system (本地安装)

Locally hosted

Move ILS to cloud
Software as a service (软体即服务)

- ILS vendor provides the “service”
- Subscription based
- Software update processes simplified

Library Service Platform
(图书馆服务平台)
Multi-tenant (多租户)

- Single ILS software instance
- Used by multiple number of libraries
- Each library can have its own settings and data
- Allow sharing of content
Unified management of resource types
(所有资源类型 - 集成管理)

✓ Unified workflow and management of printed materials and electronic resources

✓ No more silos (筒仓) of Acquisitions, Serials and ERM modules
Next-Gen Information Discovery

✓ One-stop searching (一站式检索)
✓ Seamless discovery of information and access to the discovered objects
  ✓ Full-text of journal articles, conference papers, ebooks, patents, news, etc.
  ✓ Streaming videos, websites, etc.
  ✓ Items in Library Catalog
✓ The goal is to use/read/access the discovered objects, not their metadata (目标是阅读全文)
  ✓ Replacing e-journal A-Z list (电子期刊导航), database A-Z list (数据库导航), finding aid (检索工具)?
✓ Open architecture (开放) to
  ✓ Direct users to external content (导出)
  ✓ Bring in external content (enrichments) (纳入)
  ✓ Incorporate Web 2.0 - social media features
Next-Gen Access Service

✓ Traditional access service (馆藏使用服务)
  ✓ Circulation, interlibrary loan, document delivery (文献传递)
  ✓ Run on different modules
✓ Next-Gen access service emphases on Fulfillment (满足读者阅读需求的服务)
  ✓ Access to physical items held in library
    ✓ Circulation (流通)
✓ Access to information objects available online
  ✓ Online reading (在线阅读)
✓ Request of physical items held in consortial libraries
  ✓ User initiated borrowing (读者启动的跨馆借阅)
    ✓ i.e. no mediation by library staff (不经人手)
✓ Request of documents not available online
  ✓ Deliver to desktop (送到读者的电脑)
Next-Gen Access Service [cont.]

✓ Seamless access (访问) and request (预约) via Information Discovery Platform
✓ Cross-institutional authentication
✓ Integration of discovery platform and fulfillment platform
Build-in KnowledgeBase (内置知识库)

- Knowledge of E-journal packages
  - Profiles
  - Coverages

- Knowledge to link to full-text of articles and e-books

- Authority control metadata
  - Names
  - Subjects
  - Places
Seamless linking to third party systems

- Enrichments
  - Cover images
  - Reviews
  - Table of contents
  - Online attentions
  - Linked data

- Finance system
- Student/staff records
- Book vendors, aggregators
- Bibliographic utilities
- Authority databases
  - OCLC’s VIAF
  - LC Linked Data Service

- Learning Management System
  - To ILS
    - Reading lists
    - Course materials objects
    - Put on reserve
  - From ILS
    - Discover information objects relevant to courses
Facilitate sharing and collaboration (便利分享合作)

✓ Sick of loading e-journal and e-book packages to local catalog? (书目数据加载)
  ✓ Duplication of effort
  ✓ Load bibliographic metadata to a “shared” database
    ✓ Individual libraries just add holdings to these records

✓ Collaborated Cataloging
  ✓ Sharing metadata (书目分享)
    ✓ Old concept, but seamless integration to workflow

✓ Collaborated Collection Development
  ✓ Benchmarking, collection analysis (馆藏分析)
  ✓ Consortial purchases
Decision support tools (支援决策)

✓ Not just report generation (报告生成)
  ✓ Static reports
  ✓ Have to export tables and run analysis externally

✓ Embedded data analysis tools to support decision making (数据分析工具)
  ✓ Real time access to data
  ✓ Cross table/database tabulation (制表)
  ✓ Drag and drop in design
  ✓ Filter and extract options
Open Architecture (开放架构)

- Traditional ILS
  - Data is in black box – not accessible
  - Limited APIs to access data, usually requires purchase
  - Impossible to develop external programs to extend functionalities

- Open architecture means
  - Non-proprietary databases and search engines
    - Oracle, MySQL, PostgreSQL, Solr, etc.
    - Systems staff know how to query them
  - Rich set of open APIs to access the data
    - Allow both viewing and updating
  - Full support of third party programming
    - Developer forums
    - Community repositories of source codes
Migrating from MARC to linked data

✓ MARC environment hinders semantic data linking (语义数据关联)
  ✓ Not work well with FRBRization – to relate a record to work (作品), expression (内容表达), manifestation (载体表现) and item (单件)
    ✓ Needed for information discovery platform
    ✓ e.g. a user interests in “Gone with the wind”, may want to read all formats, not just the book, or not just English book
  ✓ Not work well with RDA – a resource description and access standard, to replace AACR2

✓ ILS vendors reluctant to move their system environment away from MARC
  ✓ MARC is still a mainstream standard for bibliographic metadata description (描述), schema (格式) and transfer (转送)
Migrating from MARC to linked data [cont.]

✓ BIBFRAME
  ✓ Library of Congress’ effort to replace MARC
  ✓ Model to describe and link bibliographic data
  ✓ Still under development
  ✓ Data model: Creative Work – Instance – Authority – Annotation
Will Next-Gen ILS have native support of linked data?

- i.e. bibliographic metadata as linked data?
- Adoption of BIBFRAME?
- Very unlikely in Next-Gen, may be in next Next-Gen
Challenges

✓ Are there ILSs that meet the Next-Generation expectation?
✓ Privacy issues (私隐)
✓ System availability (系統不断运行)
  ✓ Vendor: multiple data centers (数据中心)
  ✓ Institution: multiple Internet routes (路径), bandwidth (带宽)
✓ Implementing changes (应变管理)
  ✓ Workflow (工作流程), data migration (数据迁移)
✓ Forming consortium (联盟)
  ✓ Sharing (分享) or merging (合并)?
Re-Cap: Next-Gen ILS

✓ Cloud-based, SaaS, multi-tenant
✓ Unified workflow and management of print and electronic materials
✓ Goal of information discovery platform is to discover and access information objects seamlessly
✓ Next-Gen access service emphases on fulfillment
✓ Build-in KnowledgeBase
✓ Seamless linking to third-party systems
✓ Facilitating sharing and collaboration
✓ Decision support tools, not just report generation
✓ Open architecture for data querying and updating
✓ Migration from MARC to linked data environment
Thank You!