



Library Collaboration at Dizzying Heights: Innovation and Impact
JULAC 50th Anniversary Conference
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Hong Kong
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The Birth of the JULAC Shared Integrated Library System Process and Prospect

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Little bit of the library automation history

JULAC library automation scene in 1980s

MARC Network

- Since 1978, with a PDP 11/70 minicomputer hosted at HKU Computer Center
- UKMARC and USMARC tapes
- HKU, CUHK, HK Polytechnic, HK Baptist College

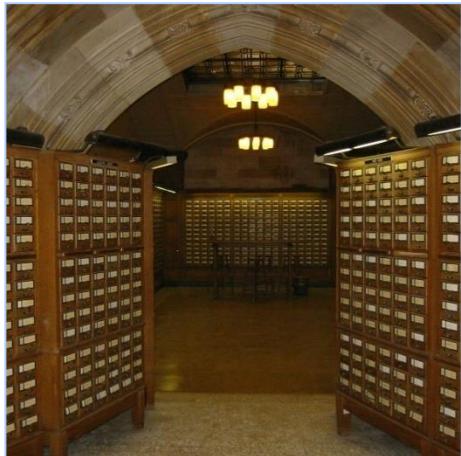
Automation in late 1980s

- Library automation in JULAC Libraries began in 1978
- **HKU** – SATCAT, computer-printed catalog card, circulation; CJK book ordering; acquired ATLAS/DRA in 1989
 - **CUHK** – Cataloging, serials control, circulation, CJK catalog cards/books printing; acquired DOBIS in 1989
 - **HK Baptist College** – Acquired URICA in 1985
 - **HK Polytechnic** – developing an on-line catalog

INNOPAC implementation in JULAC Libraries

Library	Year	Previous System
Hong Kong University of Science and Technology	1991	None
Lingnan University	1993	In-house
Chinese University of Hong Kong	1995	DOBIS
Hong Kong Baptist University	1995	URICA
Education University of Hong Kong	1995	None
University of Hong Kong	1996	DRA
City University of Hong Kong	1997	In-house
Hong Kong Polytechnic University	1997	DRA
HKALL (Hong Kong Academic Library Link) Inn-Reach	2003-2005	None

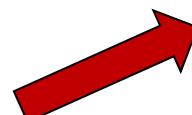
Evolution of library catalogs



Card Catalog



OPAC Terminal



Library Catalog
The Hong Kong University of Science and Technology Library

Home Quick Links Collections Services & Information Guides to Resources

AUTHOR sagan carl Entire Collection System Sorted Search

Record 22 of 25 Prev Next

Author Sagan, Carl, 1934-
Title Pale blue dot : a vision of the human future in space / Carl Sagan
Imprint New York : Random House, c1994
Edition 1st ed
Description xviii, 429 p. : ill. (some col.), maps ; 25 cm

Rating ★★★★☆ LOCATION CALL NUMBER STATUS

BOOK COLLECTION QB500.262.S24 1994 AVAILABLE

Note Includes bibliographical references (p. [406]-411) and index.
Subject Outer space -- Exploration -- Popular works
ISBN 0679438416
Call # QB500.262.S24 1994

Permanent URL for this record: <http://ustlib.ust.hk/record-b133945>

CARL SAGAN
PALE BLUE DOT
A Vision of the Human Future in Space

Web OPAC



Enter search terms below:

Search

Next-Generation Library Catalog

Information Discovery Platform

HKUST PowerSearch

Guest e-Shelf My Account Sign in

Home Tags Citation Linker Help

Library Catalog + Primo Central Search Advanced Search Browse Search

ILS products adopted in JULAC Libraries in 2014

360 Counter	Sierra	WebPAC
Summon		
ERM module	SFX	INN-Reach
Primo Central	Millennium	EZproxy
360 Core	360 Link	Primo
	EDS	

Why changing?

Dissatisfaction with the existing automation environment

- Long standing CJK issues not fixed
- Electronic resources management workflow not integrated with the system
- No more active development on Millennium; No more development on INN-Reach (HKALL)
- Difficult to share resources and conduct deep collaboration in 8 decentralized systems
- Maintenance price kept increasing but support was not satisfactory
- In need of new features offered by the Next Generation ILS

Next-Generation of ILS

Cloud-based, Software as a Service, Multi-tenant



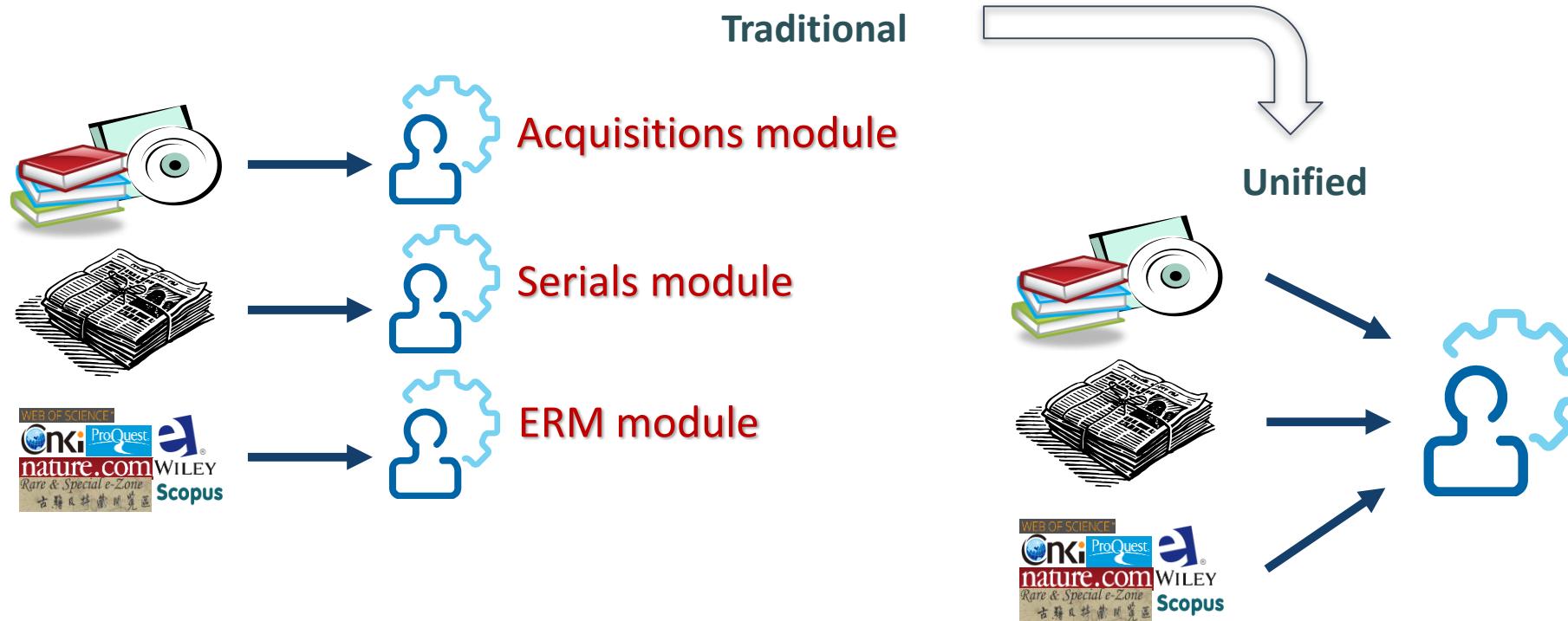
Traditional



Next-Generation

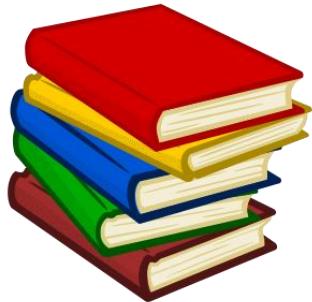
Next-Generation of ILS [cont.]

Unified management of resources



Next-Generation of ILS [cont.]

Integration of fulfillment with information discovery platform



- ✓ One stop searching
- ✓ Seamless access and request (fulfillment) to information objects
 - Circulation of items held in library
 - User initiated borrowing
 - Online (offline) reading
 - Delivery to desktop
- ✓ Direct users to external content
- ✓ Bring in external content – enrichments
- ✓ Incorporate social media features

Next-Generation of ILS [cont.]

Build-in knowledge base



- ✓ Knowledge of electronic resource packages – profiles and coverages
- ✓ Knowledge to link to full-text of articles and e-books
- ✓ Authority control metadata – names, subjects, places

Next-Generation of ILS [cont.]

Seamless linking to third party systems



Link / Harvest

✓ Finance system	✓ Enrichments – cover images, reviews, table of contents, online attentions, linked data
✓ Student/staff records	
✓ Book vendors, aggregators	
✓ Bibliographic utilities	
✓ Authority databases <ul style="list-style-type: none">▪ OCLC's VIAF▪ LC Linked Data Service	✓ Learning Management System <ul style="list-style-type: none">▪ Reading lists▪ Course materials objects▪ Put on reserve▪ Discover information objects relevant to courses

Next-Generation of ILS [cont.]

Facilitate sharing and collaboration



- ✓ Collaborated cataloging – sharing metadata
- ✓ Collaborated collection development
 - Benchmarking, collection analysis
 - Consortial purchases

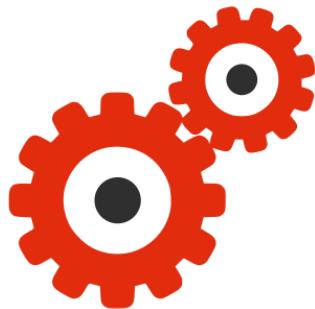
Build-in data analysis tools to support decision making



- ✓ Real time access to data
- ✓ Cross table/database tabulation
- ✓ Drag and drop design
- ✓ Real time access to data

Next-Generation of ILS [cont.]

Open architecture



- ✓ Non-proprietary databases and search engines – system staff know how to query them
- ✓ Rich set of open APIs to access the data
- ✓ Full support of third party programming – developer forums, community repositories of source codes

Incubation (2010 – June 2014)

How JULAC Shared ILS Project got started?

Exploration of options during 2010 to early 2014

- JULAC Systems Committee explored alternatives of HKALL (INN-Reach)
- One JULAC library migrated to Sierra in 2013
- One JULAC library began planning to change its ILS

JULAC Directors' vision – Deep Collaboration

- JULAC strategic plan 2013-2016 (formulated in June 2013)
 - Goal 1: “Build collection and deliver innovative services collaboratively”
 - To explore and implement a shared ILS system
 - Difficult to conduct deep collaboration:
 - Systems were decentralized (eight locally hosted instances of ILS and multiple systems in handling electronic resources) therefore limited thorough sharing of resources
 - INN-Reach was mainly for resource sharing on physical items; not designed for handling electronic resources

How JULAC Shared ILS Project got started? [cont.]

Consultancy

- JULAC appointed a library technology consultant, Mr. Marshall Breeding, to share his expertise on next generation library automation in libraries
- Consultancy visit in **February 2014**
- Submitted report and recommendations in **May 2014**

JULAC's Decision – **June 2014**

- JULAC Directors endorsed and accepted the consultant's report for a shared integrated library system at their **June 2014 Meeting**, **on a shared automation system rather than an individual ILS deployment that fits more closely with JULAC's stated strategy of deep collaboration**
- This Meeting marked the beginning of the Shared ILS Implementation Project

Procurement Process

(June 2014 - May 2016)

Forming groups for the procurement

- JULAC Committees were tasked to investigate and review the existing workflow and gather/design new processes applicable to a shared environment (**June – August 2014**)
- Formed **Shared ILS Working Group**
 - To draft the RFP, call for Tender and coordinate the product evaluation
 - Chaired by Rachel Cheng, the University Librarian of Lingnan University; one representative from each institution; JULAC Manager as the Secretary
 - Met 13 times (**October 2014 – January 2016**)
- Formed **RFP Group** to work on the RFP
 - Members: Owen Tam (Chair), Clement Lau, Louisa Lam and K.T. Lam
- Formed **Evaluation Sub-Groups** based on system functionality to carry out product evaluation
 - 5 Evaluation Sub-Groups:
 - Collections and Resource Management
 - Cataloging and Metadata
 - Access & Delivery and Resource Sharing
 - Discovery and User Experience
 - System Architecture and Technology
 - One representative from each institution for each sub-group

Procurement processes

A. RFP writing

- Drafted by the RFP Group (**Dec 2014 – July 2015**)
- Consolidate comments from JULAC Committees and member libraries
- With references from Orbis Cascade Alliance's RFP document
- Prerequisite requirements
 - **Single instance, multi-tenant**
 - **Support CJK:** (i) Thorough support for Chinese, Japanese, Korean, English and other Roman and non-Roman scripts; (ii) Support searching Chinese terms in all TSVCC forms
 - **Allow sharing** records as much as possible while also **allow autonomy** for each institution to determine what records and settings to share
 - Provide an **unmediated user initiated consortial circulation service** similar to that currently used by JULAC Libraries

B. Budgeting

- Call for preliminary quotations to know the overall ballpark figures (**Nov 2014**)
- Individual libraries conducted their own preliminary budgeting and solicit their own funding

C. Tendering

- HKU took the role as JULAC's tendering organization (HKU Libraries and HKU Finance and Enterprises Office)
- Individual libraries were responsible for their internal/institutional tendering procedures
- Memorandum of Understanding was signed (**June 2015**) by all member libraries so that all libraries would honor the final result of the JULAC tendering

Procurement processes [cont.]

- Two-envelope tendering process, with weighting and scores calculations
- Open tender issued in a local newspaper and 4 websites in **early July 2015** – SCMP, HKU FEO, Library Technology Guides, ICOLC and JULAC
- Tender closed on **31 August 2015**
- Received 4 tender submissions

D. ILS Seminar

- Staff forum organized by the ILS Working Group
- Held on **6 August 2015**
- To start serious discussion on workflow issues, e.g. cataloging standards and practices; system migration; record deduplication and merging

E. Product evaluation

- **Preparation** - Evaluation Sub-Groups:
 - Drafted evaluation criteria and scoring formula for their functional categories
 - Prepared demo scripts for vendors' product demonstrations
- **Pre-demo interviews of vendors**
 - To determine whether their proposals met the prerequisite requirements
 - Attendees: Working Group members
 - Held on **11 and 18 September 2015**
 - One tender proposal failed to comply with the prerequisite requirements and was disqualified

Procurement processes [cont.]

- Product demonstrations for tender evaluation
 - Three products
 - Two days per product
 - Held **from 10 to 25 November 2015**
 - Attendees: library staff nominated by individual member libraries
- Evaluation
 - Technical scoring conducted by the Evaluation Sub-Groups and Shared ILS Working Group
 - Technical evaluation report submitted to HKU FEO (JULAC's tendering organization) in **mid December 2015**
 - Overall tender evaluation report endorsed by JULAC Directors at their Special Meeting on Shared ILS in **mid January 2016**; and then submitted to HKU Tenders Board

- Negotiation

- Contract negotiation and clarification with the selected vendor (**January – April 2016**)
- **Tender officially awarded:** **end of April 2016**
- **Contract signed**
 - By individual institutions (**June 2016**)



Implementation

June 2016 – July 2017

Forming teams for the implementation

- Formed **JULAC Steering Committee**
 - Members: JULAC Directors and JULAC Implementation Manager
- Formed **JULAC Implementation Team**
 - Co-chaired by Louise Jones, University Librarian of CUHK and Peter Sidorko, University Librarian of HKU
 - JULAC Implementation Manager as Secretary
 - One representative from each institution; plus the chairs of Functional Working Groups
 - So far met 24 times; first meeting **7 June 2016**
- Formed seven **Functional Working Groups (FWG)**
 - One representative from each institution for each FWG
 - **User Management and Fulfilment** (Chair: Venia Mak, HKUST)
 - **Acquisitions** (Chair: Cindy Lui, PolyU)
 - **Metadata Management** (Chair: Connie Lam, HKU)
 - **Resource Management** (Chair: M.K. Wong, HKUST)
 - **Primo Discover and User Experience** (Chair: Antonia Yiu, HKU)
 - **Systems and Development** (Chair: K.M. Ku, HKU)
 - **CJK** (Chair: K.T. Lam, HKUST)

Forming teams for the implementation [cont.]

- Hired three **JULAC Shared ILS staff**
 - **Implementation Manager:** Bonnie Ko (**Sept 2016 - Sept 2017**)
 - **Change Manager:** Alan So (**Nov 2016-**)
 - **Executive Officer:** Chan Chin Ling (**Nov 2016 - Jan 2017**) ; Gladys Chan (**Feb 2017-**)
 - Hosted by HKUST Library
- Institutional implementation teams
 - Each institution established their own core team and functional groups to work on all aspects of the implementation: data provision, configuration decisions, workflows, testing, staff training, system integration
- Ex Libris implementation teams
 - Ex Libris also formed their own teams to support various aspects of the implementations: Alma configuration, data migration, training, consulting, system integration support, cloud services
 - **Implementation Manager:** Melanie Fitter

Forming communication channels

A. Within JULAC

- JULAC Wiki website
 - Documentation for the implementation project
- JULAC email mailing lists
 - For communication between members within teams and groups
- Team and group meetings
- Whatsapp groups
 - Some Functional Working Groups created Whatsapp group for ah hoc messaging

B. With Ex Libris

- Ex Libris Basecamps
 - Website to communicate between JULAC and Ex Libris
- Two Basecamps
 - for overall documentation
 - for CJK development
- Ex Libris SalesForce website
 - Report problems, messaging on opened cases, and track status
- Onsite workshops and training
 - Face to face discussion on various issues
- Ex Libris WebEx (remote) sessions
 - Discuss issues, explain workflow, define software development, announce new features

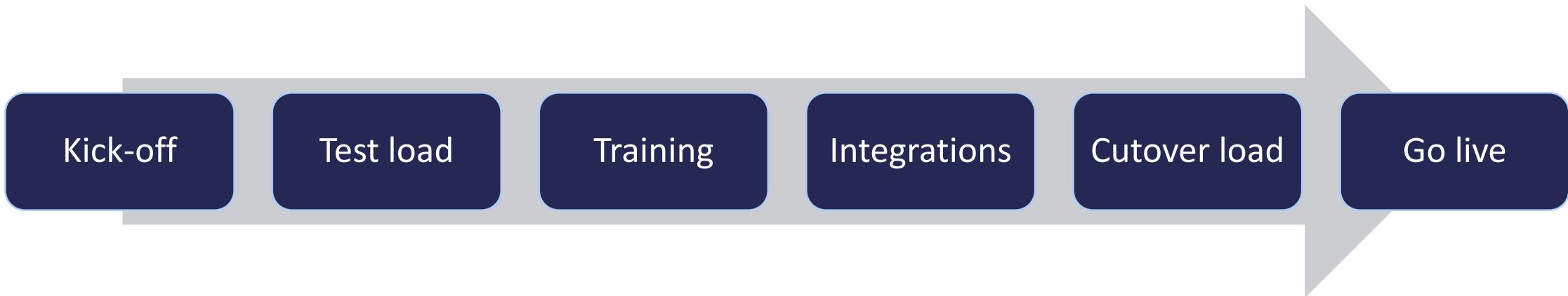
Forming communication channels [cont.]

- Weekly project calls
 - Between JULAC and Ex Libris
 - Phone calls among Ex Libris Implementation Manager, JULAC Implementation Team Co-Chairs and JULAC Implementation Manager
- Ex Libris Knowledge Center website
 - Product documentation
 - Training tutorials and videos

C. Within each institution

- Intranet website
- Email communication
- Team and group meetings
- WhatsApp groups

Implementation processes



A. Kick-off

- 7 June 2016
 - First JULAC Implementation Team Meeting
 - Ex Libris press release about the project
 - Ex Libris Pre-planning Kick-off Meeting
- 19 July 2016
 - Official Project Kick-off Meeting

B. Test load

- Institutions provided Ex Libris inputs/parameters on migration, configuration and system integration
- Submitted data files for Network Zone (NZ) and Institution Zone (IZ)
- Originally expected one round of test load, but ended up with three rounds:
 - 1st round: Aug-Oct 2016; 2nd round: Jan-Feb 2016; 3rd round: with live data May-Jun 2017

Implementation processes [cont.]

C. Training

- Onsite functional workshops
 - 1st round: 8-10 November 2016
 - 2nd round: 12-14 December 2016
 - 3rd round: 17-20 January 2017
 - 4th round: 11-13 April 2017
 - 5th round (post go-live): 24 July to 4 August 2017
- Onsite Primo training and workshops
 - Back Office training: 6-8 March 2017
 - Front-end configuration training: 28-31 March 2017
 - Primo workshop (post go-live): 22-24 August 2017
- Onsite problem solving
 - Primo login/logout issues: 3-6 April 2017

- WebEx remote sessions

- ~35 sessions were conducted in between kick-start and go-live
- In average each session took one to two hours
- Selected topics discussed:
migration form, configuration form, authentication, primo, hkall primo, fulfillment network, integration, fiscal year closing, cjk issues, cjk development, alma analytics, primo publishing, workorder workflow, julac card walk-in, resource sharing for ill, resource sharing for hkall, circulation notices, authority control, erm, erm post migration cleanup, primo, hkcan login/logout issues, alma new ui, hkall primo authentication, 9th primo publishing, primo search results discrepancy

Implementation processes [cont.]

- Alma Administration Certification Examination
 - At least two staff from each institution
 - Must obtain this certification before Ex Libris release Alma configuration rights to the institution
 - Conducted **April and May 2017**
- Staff training
 - Watched tutorial videos
 - Read product documentation
 - Hands-on learning on the provision environment and sandbox
 - Workshops and training for staff
- New workflow planning
 - Alma is very different from the previous ILS

D. Integration with 3rd party systems

- Over 40 items in Ex Libris' integration form
 - Institutions determined items that need integration and set priority
 - Sample items for HKUST
 - Load bib records; OCLC Connexion; Publish to Google Scholar, etc.; RSS for Primo; Z39.50 server; augment incoming OpenURLs; EZproxy; generate spine label; APIs for bib, users and Analytics; upload SIS users; LDAP; SAML 2.0
- Local applications integrated with ILS
 - Migrate those locally developed applications that were previously integrated with Millennium to Alma/Primo

Implementation processes [cont.]

- Sample HKUST applications that required Alma integration

Patron data:

- Load patron records
- Generate patron good list for gate control system
- Create Library LDAP accounts
- JULAC card application and printing
- User authorization for: IC items borrowing system, library event registration system, HyRead ebook

Bib/item data:

- Database List, E-Journals List, Popular Books, New Arrivals; BIBFRAME; label printing

Utilities:

- Collection highlights content management; PowerSearch short permanent link, service page and search box; MillData Archive; Alma API Gateway

E. Cutover (late May – 17 July 2017)

- Submit data files for NZ (**26 May 2017**)
- Technical freeze on Millennium (**9 June**)
- Submit data files for IZ (**13 June**)
- Deliver Alma live data on Implementation Environment for testing (**28 June**)
- Copy Alma live data to Production Environment (**30 June**)
- Alma data acceptance (**6 July**)
- Primo publishing started (**4 July**)
- Deliver Primo data (**12 July**)
- Start fulfillment cutover (re-extract fulfillment data, turn on offline circulation) (**12 July**)
- Deliver fulfillment cutover data (**13 July**)
- **Go-live with Alma and Primo (17 July 2017)**

Major challenges

Flipping MARC Tag 880 parallel fields

LC MARC:

LEADER 00000cam 2200000Ia 4500
001 23330745
008 890713s1975 hk 000 Obchi
010 76838960
040 DLC|cEYM|dOCL
045 w9x7
049 HNKA
050 4 PL2781.N2|bZ7 1975
245 00 |16880-02|aLin Yutang lun /|cYide bian
260 |16880-02|a[Shanghai :|bSh. n.] ;|aHong Kong :|bWan you tu
shu gong si, |c[1975?]
300 14, 309 p. ;|c19 cm
500 |16880-04|aOriginally published: Lin Yutang si xiang yu
sheng huo. Hong Kong : Xin wen hua chu ban gong si, 1954
600 10 |16880-06|aLin, Yutang, |d1895-1976
700 0 |16880-01|aYide
700 12 |16880-07|aLin, Yutang, |d1895-1976. |tWorks. |kSelections.
|f1975?
740 0 |16880-05|aLin Yutang si xiang yu sheng huo
880 00 |16245-02/\$1|a林語堂論 /|c一得編
880 00 |16260-03/\$1|a[香港 :|bSh. n.] ;|aHong Kong :|b萬有圖書公司,
|c[1975?]
880 |16500-04/\$1|aOriginally published: 林語堂思想與生活. Hong
Kong : 新文化出版社, 1954
880 0 |16700-01/\$1|a一得
880 0 |16740-05/\$1|a林語堂思想與生活
880 10 |16600-06/\$1|a林語堂, |d1895-1976
880 12 |16700-07/\$1|a林語堂, |d1895-1976. |tWorks. |kSelections.
|f1975?

In JULAC Alma, the pair is flipped:

245 0 0 \$\$6 880-02/\$1 \$\$a 林語堂論 / \$\$c 一得編
0 0 \$\$6 245-02 \$\$a Lin Yutang lun / \$\$c Yide bian.

- JULAC Systems Committee in collaboration Bibliographic Services Committee, Metadata FWG and System FWG made this drastic recommendation, i.e. flipping content of 880 parallel fields
- This was proved to be a significant implementation decision that helped reducing number of CJK issues

Merging bibliographic records

- Challenges
 - Sharing bibliographic records in Alma Network Zone
 - Required merging bib records from eight Millennium databases
 - De-duplication must be addressed
- Metadata and System FWGs addressed this issue collaboratively by
 - Defining what collections to be merged to NZ
 - Physical books, AV materials, serials and selected e-resources packages
 - Designing the deduplication key
 - Based on matches on key fields, i.e. title, publishers, year, etc.
 - Developing program to generate the key into the bib records
 - Developed by Dr. K.M. Ku of HKU
 - Determining the load sequences by institution
 - Factors involved: size, with/without 880s, quality of the records

User account authentication

- Challenges
 - Ex Libris required JULAC to use **external identity sources** for user authentication
 - Individual libraries did not have such a single identity source that could cover all users (staff, students, alumni, library registered users, self-finance program users, etc.)
 - Universities were developing SAML 2.0 based authentication solution but were not ready yet
 - HKALL Primo requires a cross-institution authentication solution
- SAML 2.0 authentication
 - Individual libraries worked with their institutions' ITS (Information Technology Service) to integrate SAML 2.0 based IdP to Primo (and Alma), which would cover all users
 - Successfully implemented within tight implementation time frame
- HKALL Primo authentication
 - In 2016, JUCC (Joint Universities Computer Center) was in the process of implementing Hong Kong Access Federation (HKAF) for cross-organization single sign-on authentication
 - System FWG explored with Ex Libris to implement HKAF for HKALL Primo; failed – Primo did not have the capability to communicate with HKAF's discovery service
 - Ex Libris had to adopt its PDS technology to implement cross-institutional authentication

HKALL - User initiated borrowing

- Challenges
 - Workflow of handling HKALL on Alma/Primo is very different from that on INN-Reach
 - Alma has two options to implement HKALL request and borrowing: Fulfillment Network versus Resource Sharing
 - User Management and Fulfillment FWG found that Fulfillment Network was not able to support the following core functionalities:
 - Request balancing, automated re-route, fine management by home library and differentiate borrowing privileges of different user groups
 - Ex Libris therefore recommended JULAC to adopt Resource Sharing
 - Resource Sharing was designed around the concept of Inter-Library Loan and therefore not optimized for “unmediated” requests and borrowing
 - Discussion with Ex Libris is needed to improve on the situation

JULAC Card holder walk-in borrowing

- Challenges
 - New workflow planning:
 - Discussed whether it would be feasible to stop issuing JULAC Cards, and instead used users' university ID card for accessing member libraries
 - Discussed whether onsite registration would still be needed (previous workflow required JULAC Card holders to register via a home grown JULAC Card Registration system) for the first time they visited a host library
 - Fulfilment Network could not restrict retrieval of walk-in user records only by JULAC Barcode
- Users Management and Fulfillment FWG decided to continue to use JULAC Card for walk-in access and borrowing purposes. JULAC Card holders also needed to have onsite registration at host libraries for the first time they visited them
- Ex Libris is in the process of enhancing Alma so that libraries can decide which user identifier(s) can be used to retrieve records via Fulfillment Network

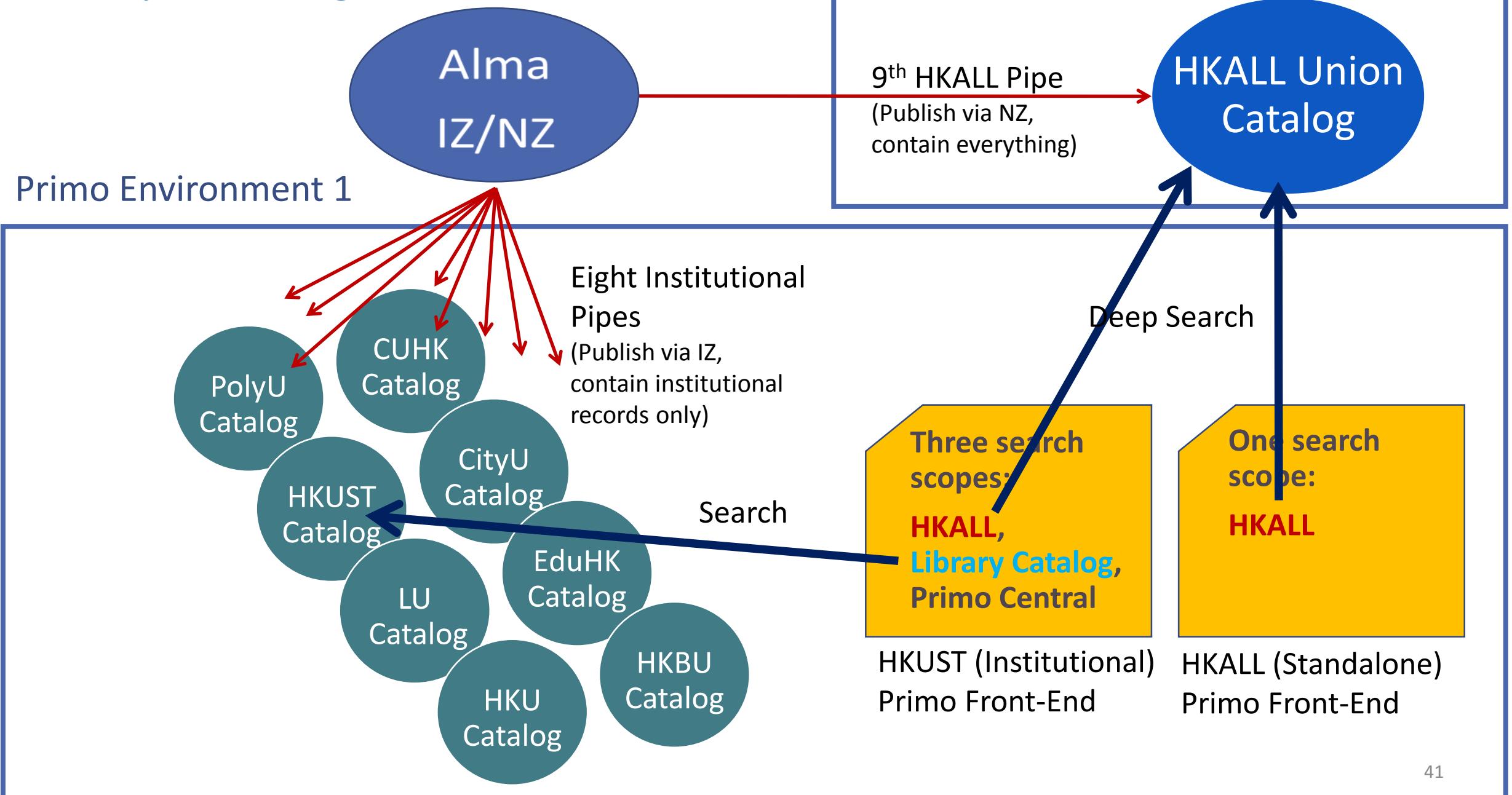
Data migration issues

- Challenges:
 - Involved data from two different systems; impossible to have totally one-to-one data mapping; resulting in loss of data or inappropriate placement of data
 - Tight migration time frame; insufficient time for thorough data migration planning and testing
 - Huge data involved in publishing bib to Primo
- Ended up having three rounds of test load instead of just one
- Ex Libris adopted a better data loading tools in the second round of test load
- Ex Libris changed the Primo publishing methods a few times; finally settled on a two-environment model
- Individual institutions conducted post-migration data cleanup projects; would take a long while to clean
 - Examples at HKUST: duplicated SFX bib data; consolidate “bound with items”, i.e. items linking to multiple bib

Primo environments

- Challenges:
 - Nine Primo front-ends; eight for institutional Primo, and one for HKALL
 - HKALL union catalog can be embedded in institutional Primo or run as standalone
 - JULAC required autonomy in publishing data and presenting data in HKALL and institutional Primo
 - Huge data involved in publishing and normalizing processes
 - Causing failure and slowness of the system
- After a few rounds of attempts, Ex Libris settled this issue by implement a second Primo environment to hold HKALL Primo data

Primo publishing environments



CJK issues

- Challenges:
 - Handling of linked pairs (880 parallel fields) in Metadata Editor, import, export, display and search
 - Tokenization, indexing, searching and ranking of CJK string
 - Searching with Chinese terms in TSVCC (Traditional, Simplified, Variant Chinese Characters) forms
 - Searching with CJK punctuations
 - Auto-romanization on a whole record, to transliterate Chinese characters in all MARC tags to Pinyin in one shot
- CJK FWG discussed these issues with Ex Libris and they commissioned software development to fix most of these issues

HKCAN and multilingual authority control

- Challenges:
 - Migrating HKCAN database to Alma
 - The two fields in a linked pair (880 pair) should be allowed to link to different authority records
 - Alma does not support authority control of bib headings in IZ with vocabulary sources in NZ, thus making it impossible to build HKCAN in NZ for authority control
 - Alma does not support HKCAN's 7XX field (based on MARC 21 Authority Model B) which holds the preferred names of non-Latin scripts
- Ex Libris has commissioned software development to
 - Put HKCAN on CZ for multilingual authority control
 - Create HKCAN-MASTER on NZ for record maintenance
 - Support multilingual authority control with multiple 1XX in authority records
 - HKCAN maintained names in authority record would have subfield 9 to contain the script code.
HKCAN will support: \$9hani, \$9kore and \$9jpan
- HKUST has developed HKCAN merging program
 - To merge HKUST's CJK authority records with HKCAN
 - To refresh HKCAN records with the latest content from LCNAF

Looking forward...

Prospects and opportunities

Cataloging

- Share practices, share records, share cataloging effort
- HKCAN on Alma CZ drives its adoption by others
- Learning and implementing BIBFRAME

Collection development

- Share collection development effort
- Enhance Consortial workflow

Knowledge management

- Share workflow
- Share experience
- Cross-institutional training

Process re-engineering

- Streamline workflow and processes

HKALL Primo

- hkall.julac.org
- As a central website for cross-institutional fulfillment – not only have access to physical items, but also access to electronic resources, across eight JULAC Libraries
- Cross-institutional single sign-on to access electronic resources
- Showcasing JULAC collections: theses, institutional repository, digital collections

Alma/Primo APIs and web services

- Share source codes
- Joint development of applications

Thank you!