Integrating Primo and ILS via OVP

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The Chinese University of Hong Kong

Agenda

- Background
- OVP in a nutshell
- Build your own OVP gateway
- Demo
- Summary

Background

Evaluating discovery platforms

- in 2010, HK PolyU Library started evaluating discovery service
- 3 candidates: Primo, Summon, EDS

Critical functional criteria

- strong CJK support
- unified interface for everything
- target to replace the Web OPAC

Implied requirements

- real time availability for physical volumes
- complete list of physical volumes, library holdings
- view patron circulation record
- perform hold request, renewal
- view reading history, fines record

Choosing Primo for OVP

- OVP (Opac-via-Primo) is the exact solution
- only available with Primo
- a compelling reason to adopt Primo, besides all other technical advantages

First Primo in Hong Kong

- in 2011 Nov, HK PolyU library soft launched Primo
- in 2012 Jan, official launch
- the first ever Primo-Millennium integration with OVP

Primo adoptions continue

- after HK PolyU, other HK local university libraries continued to adopt
- The Chinese University of Hong Kong (2013 Jan)
- The University of Hong Kong (in progress)
- The Hong Kong University of Science and Technology (in progress)
- 50% of HK Government funded universities

Primo-Millennium OVP roadmap

- Primo-Millennium OVP was initially implemented by Ex Libris China team for HK PolyU
- as a proof of concept, i.e. P-M OVP 1.0
- not fully implemented, e.g. library holdings not supported
- completed and enhanced by CUHK Library, i.e. P-M OVP 2.0

OVP in a nutshell

Origin of OVP

- based on the DLF ILS Discovery Interface Task Group (ILS-DI) Technical Recommendation
- “Berkeley Accord” signed in 2008 April
- version 1.1 released in 2008 Dec
- signed vendors include Talis, Ex Libris, LibLime, BiblioCommons, SirsiDynix, Polaris, VTLS, California Digital Library, OCLC, AquaBrowser

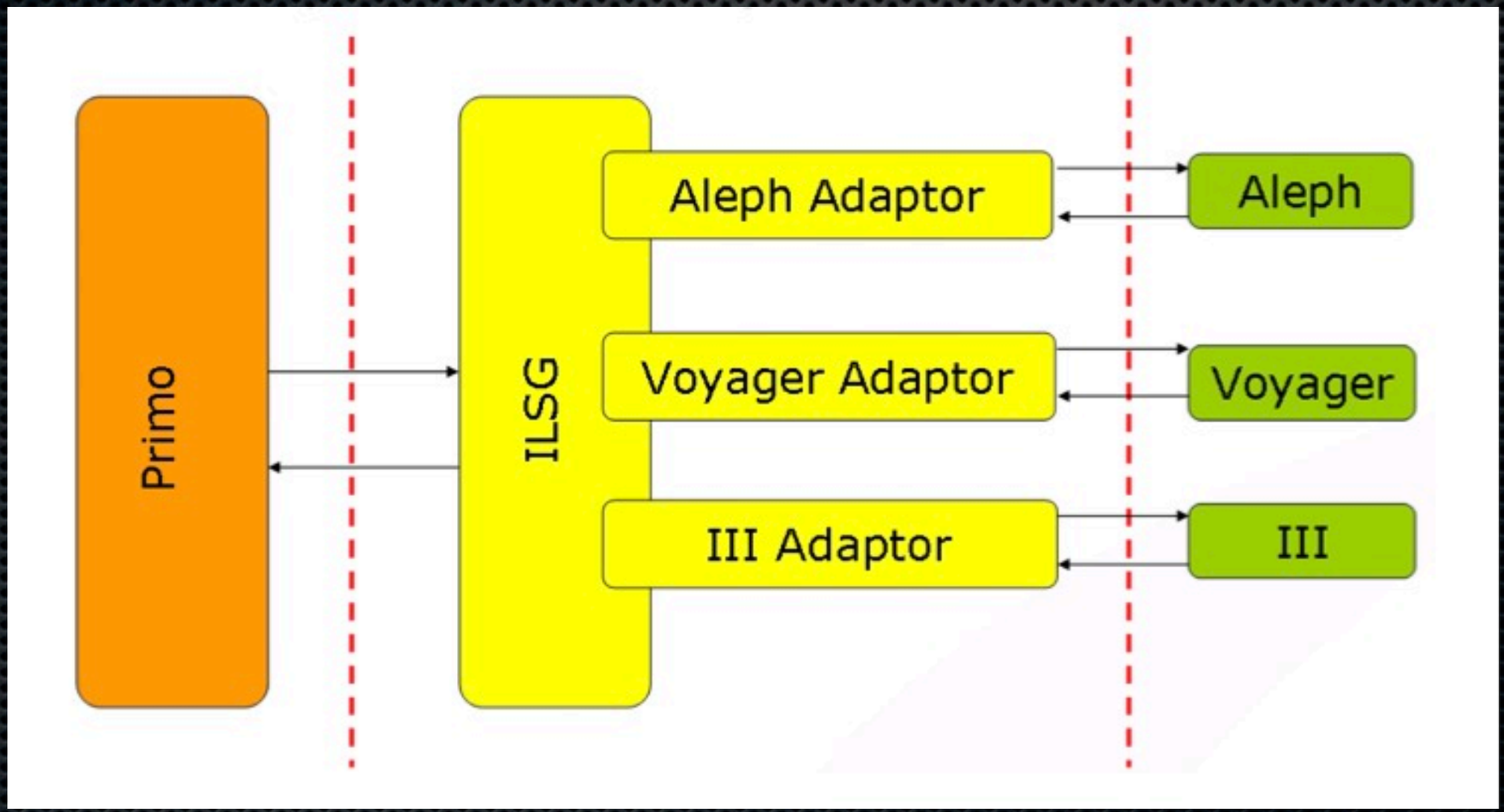
What is OVP?

- 3 basic functions
- Requests (such as hold, ILL booking … etc)
- Display of library holdings (locations)
- Display of the patron’s library account (My Account)

How OVP works?

- Primo talks with ILS via ILS gateway
- ILS gateway uses an ILS-specific adaptor
- adaptors for Alma, Aleph, Voyager, Talis
- NO adaptor for III Millennium

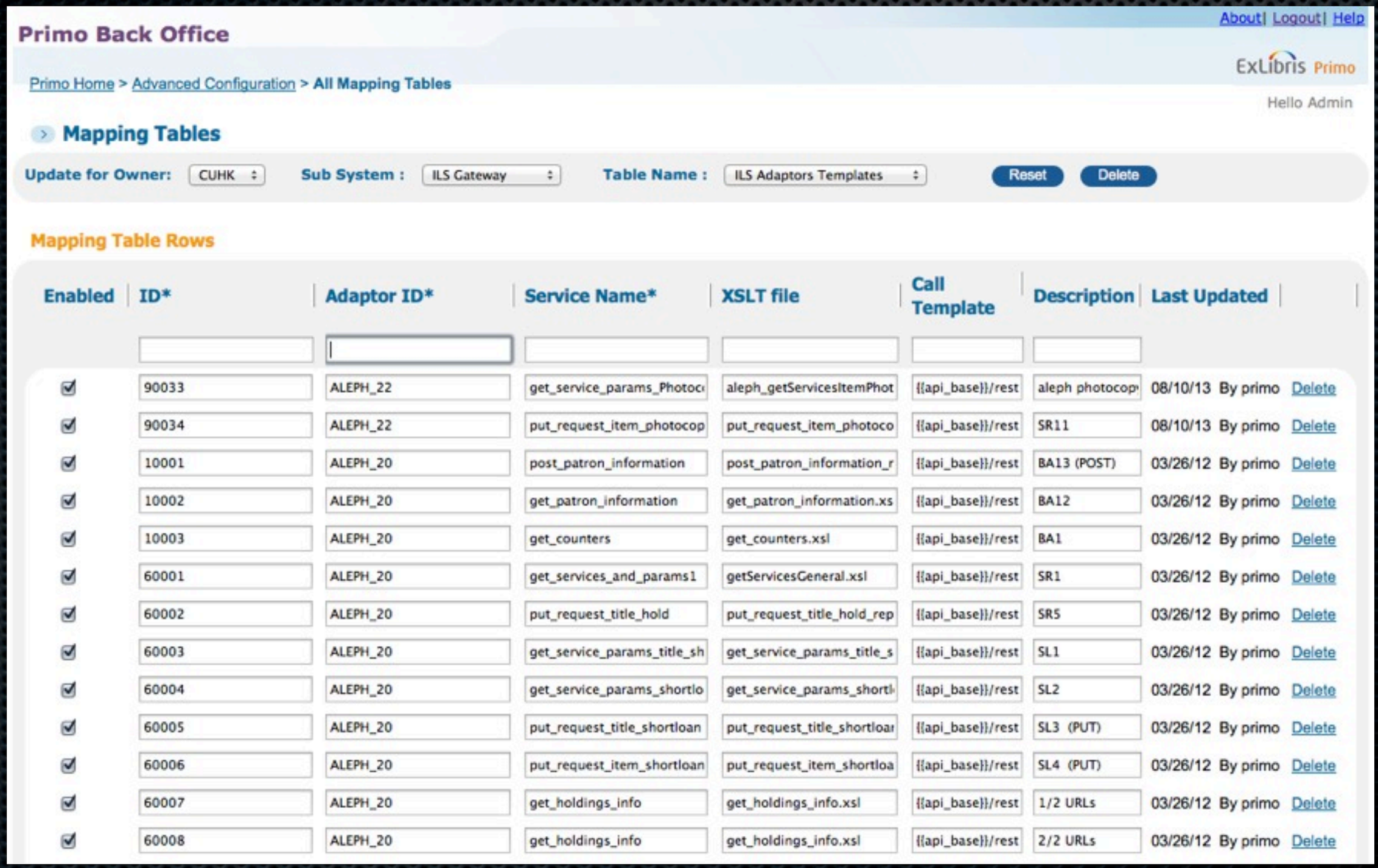
ILS gateway


Primo
ILSG
Aleph Adaptor
Aleph
Voyager Adaptor
Voyager
III Adaptor
III

ILS adaptor API

- for each ILS-specific adaptor, there is a set of API
- each API is responsible for a specific functional conversation between Primo and the ILS
- e.g. get_holdings_info, get_loans, post_loan_renewal

ILS adaptor API templates



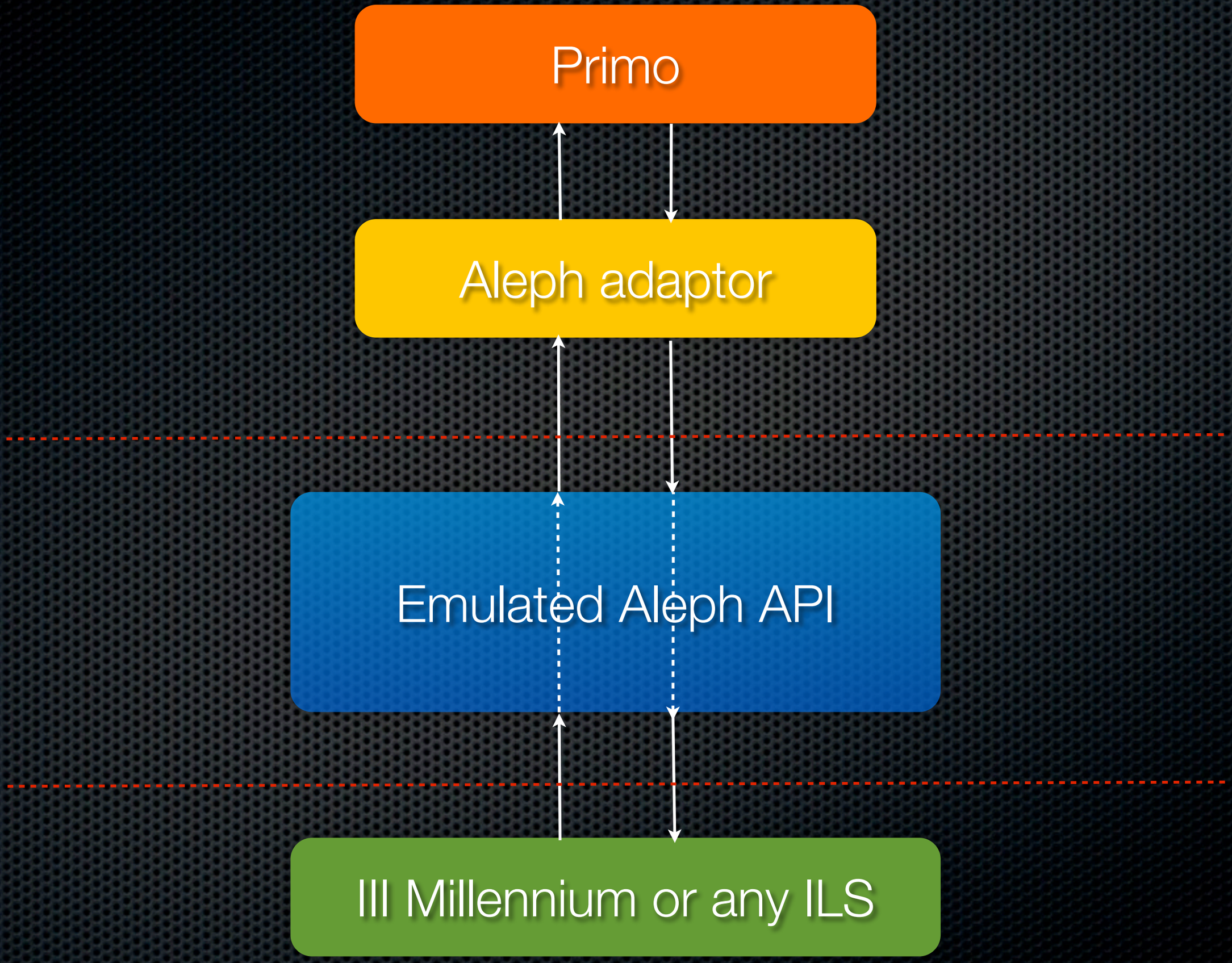
API templates examples

- get_holdings_info
- {{api_base}}/rest-dlf/record/{{record_id}}/holdings?lang={{lang}}&view=full&patron={{patron_id}}&volume={{volume}}&year={{year}}&sublibrary={{sublibrary}}&sublibs={{sublibs}}&startPos={{startPos}}&noItems={{noItems}}
- get_loans
- {{api_base}}/rest-dlf/patron/{{patron_id}}/circulationActions/loans?lang={{lang}}&view=brief&type={{type}}&institution={{institute}}&no_loans={{no_loans}}
- post_loan_renewal
- {{api_base}}/rest-dlf/patron/{{patron_id}}/circulationActions/loans/{{loan_id}}?lang={{lang}}

Build your own ILS gateway

Emulate Aleph gateway

- Millennium didn't implement the adaptor API at all
- difficult to implement from scratch
- And ... it is NOT really necessary
- make use of the Aleph adaptor API syntax
- build your web services to respond like Aleph

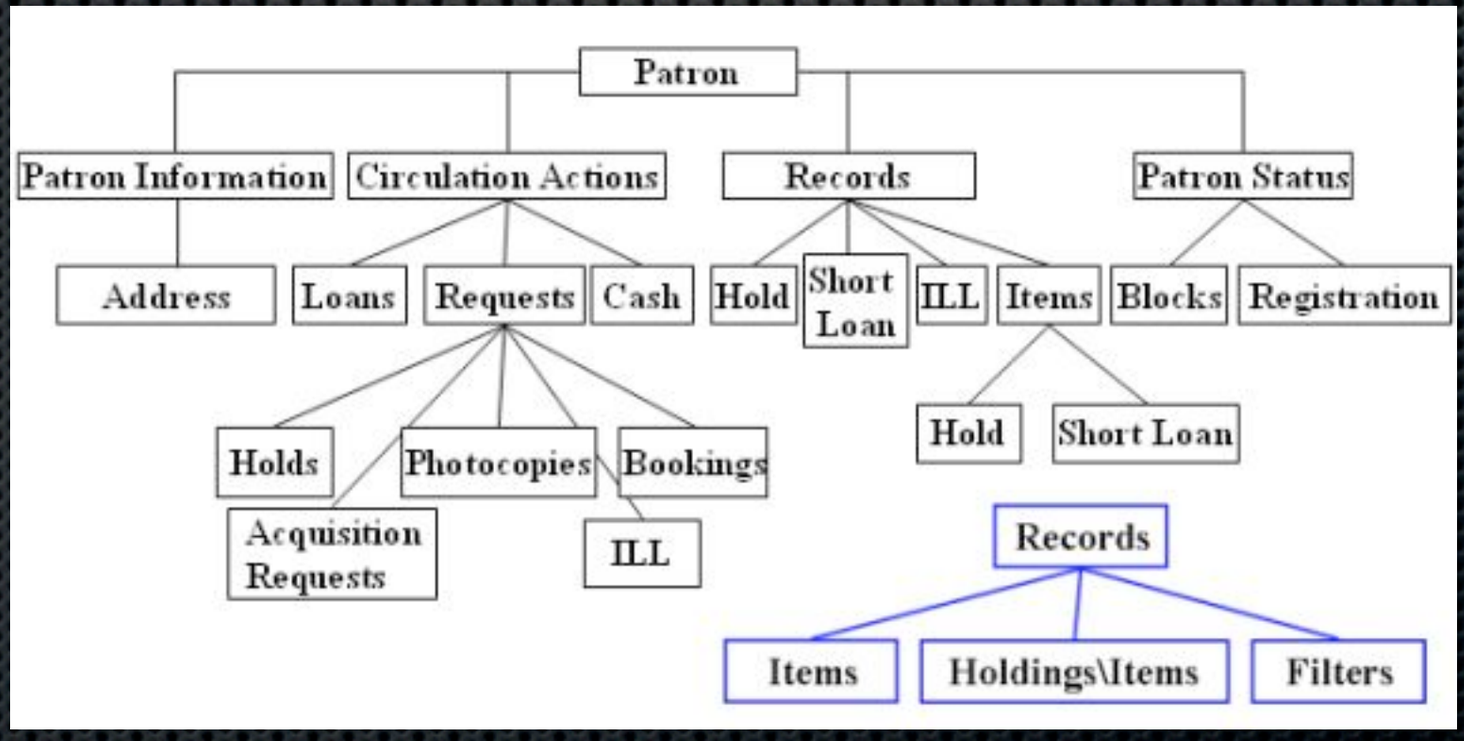

Primo
Aleph adaptor
Emulated Aleph API
III Millennium or any ILS

How to emulate?

- learn how Aleph responds to Primo
- get all the relevant responds from your Web OPAC
- by web scraping
- translate your OPAC responds into Aleph API format
- Primo feels like talking with an Aleph

How to respond like Aleph?

- 30+ APIs for communication between Primo and Aleph
- related to Patron and Bibliographic records



Patron related API

Patrons

Patrons > **Patron Information**

Patrons > Patron Information > address

Patrons > **Circulation actions**

Patrons > Circulation actions > Loans

Patrons > Circulation actions > requests

Patrons > Circulation actions > **requests** > Holds

Patrons > Circulation actions > requests > ILL

Patrons > Circulation actions > requests > Photocopies

Patrons > Circulation actions > requests > Acquisition Requests

Patrons > Circulation actions > requests > Booking

Patrons > Circulation actions > Cash

Patrons > **Records** (per patron)

Patrons > Records (per patron) > ILL (per Title)

Patrons > Records (per patron) > Holds (per Title) > Consortial Hold Groups

Patrons > Records (per patron) > Holds (per Title) > Institutional Hold Group

Patrons > Records (per patron) > Short Loan (per Title)

Patrons > Records (per patron) > Items

Patrons > Records (per patron) > Items > Hold (per Item)

Patrons > Records (per patron) > Items > Short Loan (per Item)

Patrons > Records (per patron) > Items > Photo (per Item)

Patrons > **Patron Status**

Patrons > Patron Status > Blocks

Patrons > Patron Status > Registration

BIB records related API

Services related to bibliographic records, including Holdings and Items information:

Records

Records > Items

Records > Holdings / Items

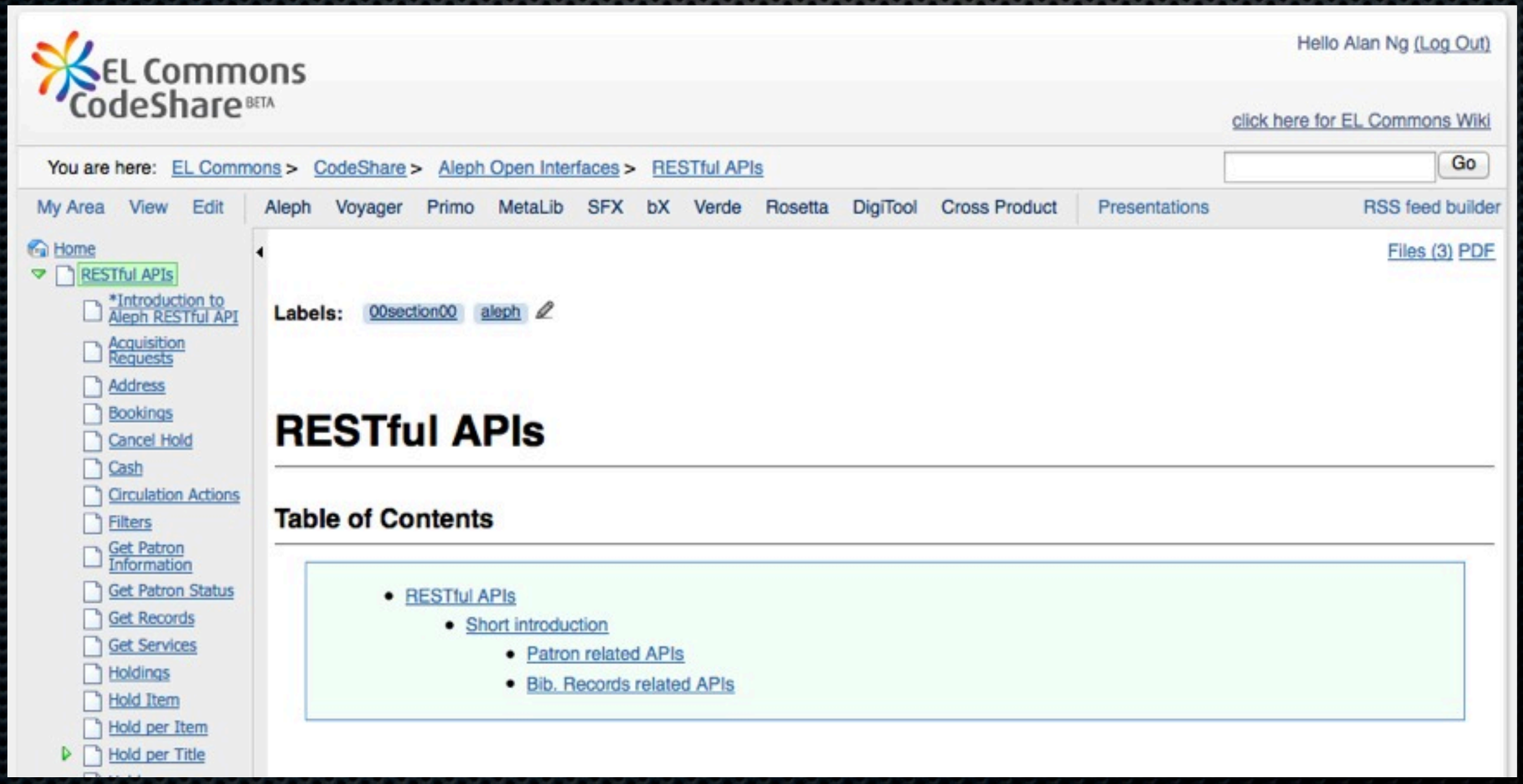
Records > Filters

Aleph API examples

- full list of items for a BIB record
- http://il-aleph07:1893/rest-dlf/record/USM01000050362/items
- holdings list for a BIB record
- http://il-aleph07:1893/rest-dlf/record/USM01000050362/holdings
- loan list for a patron
- http://il-aleph07:1893/rest-dlf/patron/00000036/circulationActions/loans
- item level hold request
- http://il-aleph07:1893/rest-dlf/patron/00000036/record/USM01000050362/items/USM50000238843000390/hold

Aleph API definitions

- EL Commons > CodeShare > Aleph Open Interfaces > RESTful APIs



Get the responds from your ILS

- knowing how to talk like Aleph, next step is to get the essential information from the ILS
- Millennium doesn’t allow you to implement any custom-made API
- Work Around: get data from the Web OPAC

Generate Aleph responses

- use Apache mod_rewrite (.htaccess) to redirect the ILS adaptor API syntax to the CGI script
- the script uses the Perl LWP::UserAgent web user agent class to talk with ILS web OPAC
- it uses web scraping to retrieve data
- it re-packages the data into Aleph API responses

BIB record display on web OPAC

The Chinese University of Hong Kong /All Locations

library.cuhk.edu.hk/record=b2958727

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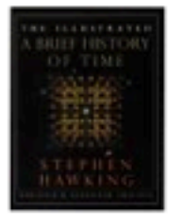
The Chinese University of Hong Kong
University Library System

Start Over | Add to My Lists | Export | MARC Display | Another Search

RECORD # b2958727 Entire Collection Search

Limit results to available items

Author	Hawking, S. W. (Stephen W.)
Title	**The illustrated a brief history of time / Stephen Hawking.**
Publisher	New York : Bantam Books, 1996.
Edition	Updated and expanded ed.



Permanent URL for this record: http://library.cuhk.edu.hk/record=b2958727~S15

[see this in Easy Search]

LOCATION	CALL NO.	STATUS
UL	QB981 .H377 1996	NOT CHCKD OUT

Subject	Cosmology.
Note	"A Labyrinth book"--T.p. verso.
	Originally published: A brief history of time. New York : Bantam Books, 1988.
	Includes index.
Other Author	Hawking, S. W. (Stephen W.). Brief history of time.
Descript	248 p. : col. ill. ; 25 cm.
ISBN	0553103741

Start Over | Add to My Lists | Export | MARC Display | Another Search

API response: Full list of items for a BIB record

primo.lib.cuhk.edu.hk/rest-dlf/record/b2958727/items

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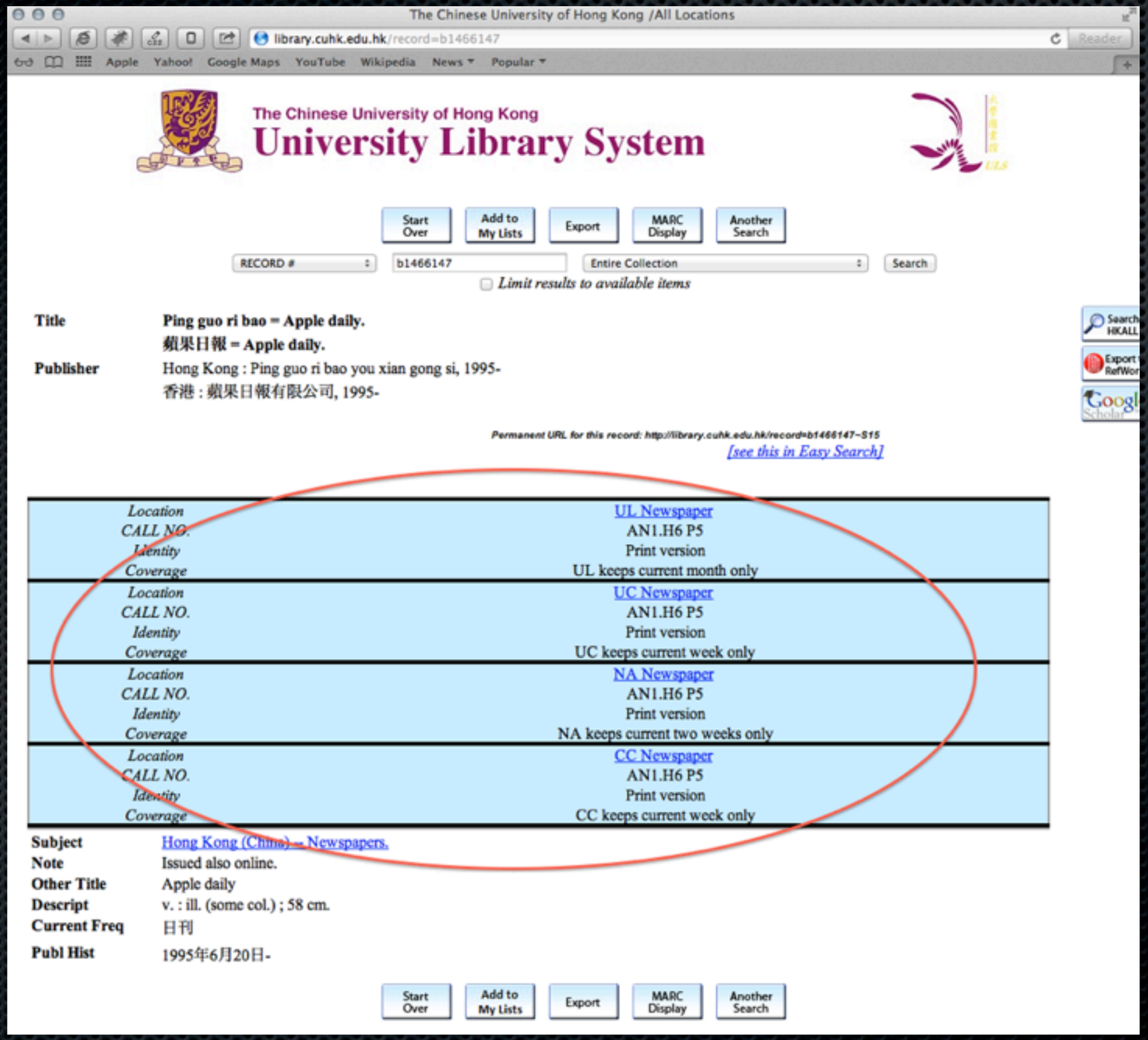
This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
▼<get-item-list>
   <reply-text>ok</reply-text>
   <reply-code>0000</reply-code>
  ▼<items>
   ▼<item href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/record/b2958727/items/">
      <z30-sub-library-code>ul</z30-sub-library-code>
      <z30-item-status-code>11</z30-item-status-code>
      <z30-collection-code>IIIX</z30-collection-code>
    ▼<z30>
      <translate-change-active-library>CUHK</translate-change-active-library>
      <z30-doc-number>b2958727</z30-doc-number>
      <z30-barcode/>
      <z30-sub-library>UL</z30-sub-library>
      <z30-collection/>
      <z30-description>Circulation</z30-description>
      <z30-call-no>QB981 .H377 1996</z30-call-no>
      <z30-call-no-key>QB981 .H377 1996</z30-call-no-key>
     </z30>
     <status>NOT CHCKD OUT</status>
     <info type="HoldRequest" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron//record/b2958727/items//hold" allowed="N"/>
    </item>
  </items>
</get-item-list>
```

Holdings display for a BIB record on web OPAC



API response: Holdings list for a BIB record

primo.lib.cuhk.edu.hk/rest-dlf/record/b1466147/holdings

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This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<get-hol-list>
  <reply-text>ok</reply-text>
  <reply-code>0000</reply-code>
 ▼<holdings>
  ▼<holding>
   ▼<datafield tag="866" ind1="3" ind2=" ">
      <subfield code="a">UL keeps current month only</subfield>
    </datafield>
   ▼<datafield tag="852" ind1="9" ind2=" ">
      <subfield code="b">ULN</subfield>
    </datafield>
  </holding>
  ▼<holding>
   ▼<datafield tag="866" ind1="3" ind2=" ">
      <subfield code="a">UC keeps current week only</subfield>
    </datafield>
   ▼<datafield tag="852" ind1="9" ind2=" ">
      <subfield code="b">UCN</subfield>
    </datafield>
  </holding>
  ▼<holding>
   ▼<datafield tag="866" ind1="3" ind2=" ">
      <subfield code="a">NA keeps current two weeks only</subfield>
    </datafield>
   ▼<datafield tag="852" ind1="9" ind2=" ">
      <subfield code="b">NAN</subfield>
    </datafield>
  </holding>
  ▼<holding>
   ▼<datafield tag="866" ind1="3" ind2=" ">
      <subfield code="a">CC keeps current week only</subfield>
    </datafield>
   ▼<datafield tag="852" ind1="9" ind2=" ">
      <subfield code="b">CCN</subfield>
    </datafield>
  </holding>
 </holdings>
</get-hol-list>
```

Full loan list for a patron on web OPAC

The Chinese University of Hong Kong
University Library System

You are logged into The Chinese University of Hong Kong /All Locations as NG Chi Kit Alan

NG Chi Kit Alan
CARD EXP DATE:07-10-2014
alanng@cuhk.edu.hk

LOG OUT

Modify your PIN

2 requests (holds). 1 ready for pickup.
Search the Catalog
Preferred Searches
My Reading History
My Lists
Add / Update Your E-mail Address
Go to / Update Your Illiad Account
My Ratings
$3.00 in unpaid fines and bills

SORT BY DATE CHECKED OUT | RENEW ALL | RENEW SELECTED ITEMS

33 ITEMS CHECKED OUT

RENEW	TITLE	Ratings	BARCODE	STATUS	CALL NUMBER
☐	880-02 Nü ji zhe shou ji / Yishu.	☆☆☆☆☆	106158989ctyu	DUE 12-09-13 Renewed 2 times	PL2867.Z75 N825 2012
☐	實在平凡的奇異遭遇 / 亦舒.	☆☆☆☆☆	319950097619459iedl	DUE 28-09-13 Renewed 2 times	PL2867.Z75 S437 2011 1
☐	櫻唇 / 亦舒	☆☆☆☆☆	310003508484239lulb	DUE 28-09-13 Renewed 2 times	PL2867.Z75 Y564 2012

API response: Loan list for a patron

primo.lib.cuhk.edu.hk/rest-dlf/patron/459823/circulationActions/loans?type=active

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This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<pat-loan-list>
   <reply-text>ok</reply-text>
   <reply-code>0000</reply-code>
  ▼<loans>
     <translate-change-active-library>CUHK</translate-change-active-library>
    ▼<institution code="CUHK">
       <inst-name>CUHK</inst-name>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i216697389ctyu">...</loan>
      ▼<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i201706789iedl">
         <z36-sub-library-code>CIR</z36-sub-library-code>
         <z36-rec-key/>
         <z36-status>Active</z36-status>
         <z36-due-date>DUE 28-09-13</z36-due-date>
         <z36-due-hour/>
         <z36-recall-date>00000000</z36-recall-date>
         <z36-recall-due-date>00000000</z36-recall-due-date>
         <z36-sub-library>PL2867.Z75 S437 2011 1</z36-sub-library>
         <z30-description/>
         <z13-author>319950097619459iedl</z13-author>
         <z13-title>實在平凡的奇異遭遇 / 亦舒.</z13-title>
         <z13-year/>
         <fine/>
       </loan>
      ▼<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i166254889lulb">
         <z36-sub-library-code>CIR</z36-sub-library-code>
         <z36-rec-key/>
         <z36-status>Active</z36-status>
         <z36-due-date>DUE 28-09-13</z36-due-date>
         <z36-due-hour/>
         <z36-recall-date>00000000</z36-recall-date>
         <z36-recall-due-date>00000000</z36-recall-due-date>
         <z36-sub-library>PL2867.Z75 Y564 2012</z36-sub-library>
         <z30-description/>
         <z13-author>310003508484239lulb</z13-author>
         <z13-title>櫻雨 / 亦舒</z13-title>
         <z13-year/>
         <fine/>
       </loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i200592589iedl">...</loan>
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      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4286664">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4153928">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4331545">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4298663">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4298674">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4331557">...</loan>
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      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3178298">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3000454">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3172202">...</loan>
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      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3174979">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3078317">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3004065">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3004086">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3154911">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4258157">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4253962">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4235272">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4030252">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3646200">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3519927">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3912078">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4314101">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i3905897">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4290785">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4290803">...</loan>
      ▶<loan renew="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-dlf/patron/502984/circulationActions/loans/i4287679">...</loan>
    </institution>
  </loans>
</pat-loan-list>
```

Hold request list for a patron on web OPAC

The Chinese University of Hong Kong
University Library System

You are logged into The Chinese University of Hong Kong /All Locations as NG Chi Kit Alan

NG Chi Kit Alan
CARD EXP DATE:07-10-2014
alannng@cuhk.edu.hk

LOG OUT

Modify your PIN
33 Items currently checked out

Search the Catalog
Preferred Searches
My Reading History
My Lists
Add / Update Your E-mail Address
Go to / Update Your Illiad Account
My Ratings
$3.00 in unpaid fines and bills

Sort by Hold Requested Date | CANCEL ALL | CANCEL SELECTED ITEMS

2 HOLDS					
CANCEL	**TITLE**	**Ratings**	**STATUS**	**PICKUP LOCATION**	**CANCEL IF NOT FILLED BY**
☐	A brief history of time / Stephen Hawking.	☆☆☆☆☆	Ready. Must pick up by 04-09-13	University Library	
☐	Stephen Hawking's A brief history of time : a reader's companion / edited by Stephen Hawking ; prepared by Gene Stone.	☆☆☆☆☆	DUE 10-09-13	University Library	

Sort by Hold Requested Date | CANCEL ALL | CANCEL SELECTED ITEMS

API response: Hold list for a patron

primo.lib.cuhk.edu.hk/rest-dlf/patron/683289/circulationActions/requests/holds

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This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
▼<pat-hold-list>
  <reply-text>ok</reply-text>
  <reply-code>0000</reply-code>
 ▼<hold-requests>
  ▼<institution code="CUHK">
    <inst-name>CUHK</inst-name>
   ▼<hold-request delete="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-
    dlf/patron/502984/circulationActions/requests/holds/canceli3767765x00">
      <z37-pickup-location>University Library</z37-pickup-location>
      <z30-sub-library></z30-sub-library>
      <status>Ready. Must pick up by 04-09-13</status>
      <z13-title>A brief history of time / Stephen Hawking.</z13-title>
      <z13-author/>
    </hold-request>
   ▼<hold-request delete="Y" href="http://pmstg.lib.cuhk.edu.hk/rest-
    dlf/patron/502984/circulationActions/requests/holds/canceli1758080x01">
      <z37-pickup-location>University Library</z37-pickup-location>
      <z30-sub-library></z30-sub-library>
      <status>DUE 10-09-13</status>
     ▼<z13-title>
        Stephen Hawking's A brief history of time : a reader's companion / edited by Stephen Hawking ; prepared by Gene Stone.
      </z13-title>
      <z13-author/>
    </hold-request>
  </institution>
 </hold-requests>
</pat-hold-list>
```

Demo

List of all physical items of a book title

Books | Articles | Books & Articles | Extended Search

a brief history of time | Entire Collection | Go | Advanced Search | Browse Search | Search HKALL

rss
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Show only
Full Text Online (181)

Refine My Results

Subject
History, Asia, Australia and Oceania (13)
Engineering (11)
Music (11)
United States (10)
Cosmology (10)
More options

Author
SpringerLink (Online service) (28)
ebrary, Inc (21)
Hawking, S (8)
ScienceDirect (Online service) (7)
Books24x7, Inc (6)
More options

Resource Type
Book (622)
E-Book (86)
DVD (2)
Computer File (1)
More options

Collection
E-Books and E-Theses (181)
Reference Materials (6)
Audio-visual Materials (2)
CUHK Theses (2)
Local TV Programmes (1)
More options

Library
University Library (452)
Chung Chi College Library (58)
Lee Quo Wei Law Library (55)
New Asia College Library (20)

Results 1 - 10 of **785** for **Entire Collection** Sorted by: Relevance 1 2 3 4 5 →

Book

A brief history of time / Stephen Hawking
S. W. Hawking (Stephen W.)
[Updated tenth anniversary commemorative ed.].. London ; New York : Bantam Press 1998
Holding: UL Good Reads QB981 .H377 1998b

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UL Good Reads QB981 .H377 1998b See status

Location	Call Number	Status	Request Options
UL Good Reads	QB981 .H377 1998b	ON HOLDSHELF	Sign in to request
UL Good Reads	QB981 .H377 1998b c.2	DUE 29-10-13	Sign in to request

Book

The illustrated a brief history of time / Stephen Hawking
S. W. Hawking (Stephen W.) S. W Hawking (Stephen W.).
Updated and expanded ed.. New York : Bantam Books 1996
Holding: UL QB981 .H377 1996

Like 0

Locations | Details | Reviews & Tags | Findit@CUHK

Send to

UL QB981 .H377 1996 See status

Location	Call Number	Status	Request Options
UL	QB981 .H377 1996	NOT CHCKD OUT	Sign in to request

List of holdings of a journal title

Books | Articles | Books & Articles | Extended Search

journal of management | Entire Collection | Go | Advanced Search | Browse Search | Search HKALL

Did you mean: journal of arts management?

rss
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Refine My Results

Subject
Management (181)
Industrial management (100)
Personnel management (74)
Business (56)
Management information systems (33)
More options

Author
Hong Kong Institute of Human Resource Management (26)
American Management Association (14)
Institute of Management Sciences (12)
Financial Training Company (10)
Association of Chartered Certified Accountants (Great Britain) (7)
More options

Collection
Periodicals (1,064)
Reference Materials (43)
Hong Kong Government Documents (40)
More options

Library
University Library (955)
Chung Chi College Library (45)
Lee Quo Wei Law Library (12)
Architecture Library (11)
Li Ping Medical Library (7)
More options

Language
English (909)
Chinese (131)
Japanese (17)
Korean (2)
German (2)
More options

Results 1 - 10 of **1,064** for **Entire Collection** | Sorted by: Relevance | 1 2 3 4 5 →

Refined by: resource type: Journal x

Journal

Journal of management
Southern Management Association.
Thousand Oaks, Calif. Sage Publications
● Holding: UL Periodical HD28.J5967

View 2 versions

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Locations | Details | Reviews & Tags | Findit@CUHK

Send to

UL Periodical — HD28.J5967 — ● See status

Summary Holdings:UL has v.5, no.1-2 (1979); v.12 (1986)-v.33 (2007);

Location	Call Number	Status	Request Options
UL Periodical	HD28.J5967 v.5, no.1-2, 1979	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28.J5967 v.12, 1986	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28.J5967 v.13, 1987	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28.J5967 v.14, 1988	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28.J5967 v.15, 1989	NOT CHCKD OUT	Sign in to request

View all items

Journal

International journal of management
Geelong, Vic. : International Journal of Management 1984-
● Holding: UL Periodical HD28 .I52

Like 0

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Send to

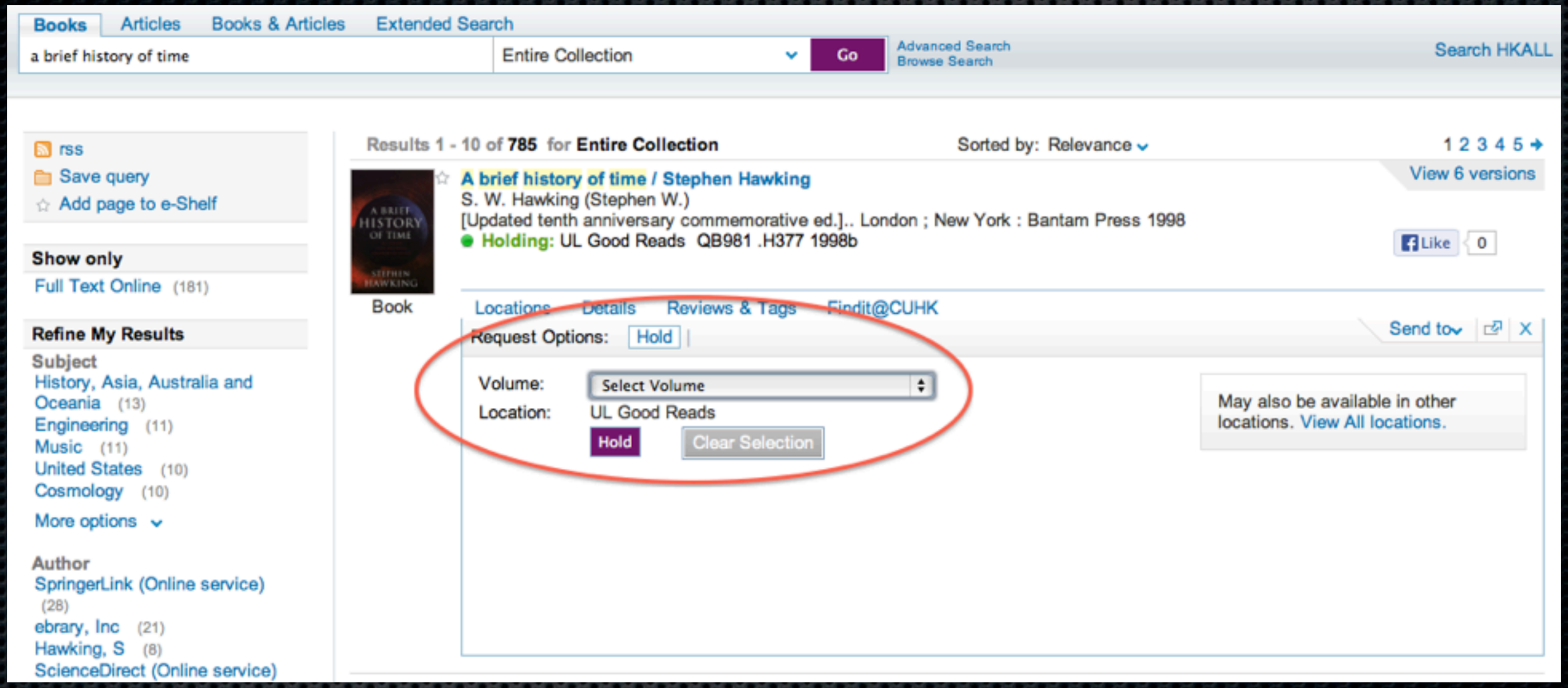
UL Periodical — HD28 .I52 — ● See status

Summary Holdings:UL has v.6 (1989)-v.24 (2007);

Location	Call Number	Status	Request Options
UL Periodical	HD28 .I52 v.6, 1989	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28 .I52 v.7, 1990	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28 .I52 v.8, 1991	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28 .I52 v.9, 1992	NOT CHCKD OUT	Sign in to request
UL Periodical	HD28 .I52 v.10, 1993	NOT CHCKD OUT	Sign in to request

View all items

Making book hold request



List of current loans

Books | Articles | Books & Articles | Extended Search

journal of management | Entire Collection | Go | Advanced Search | Browse Search | Search HKALL

e-Shelf | Queries | My Account

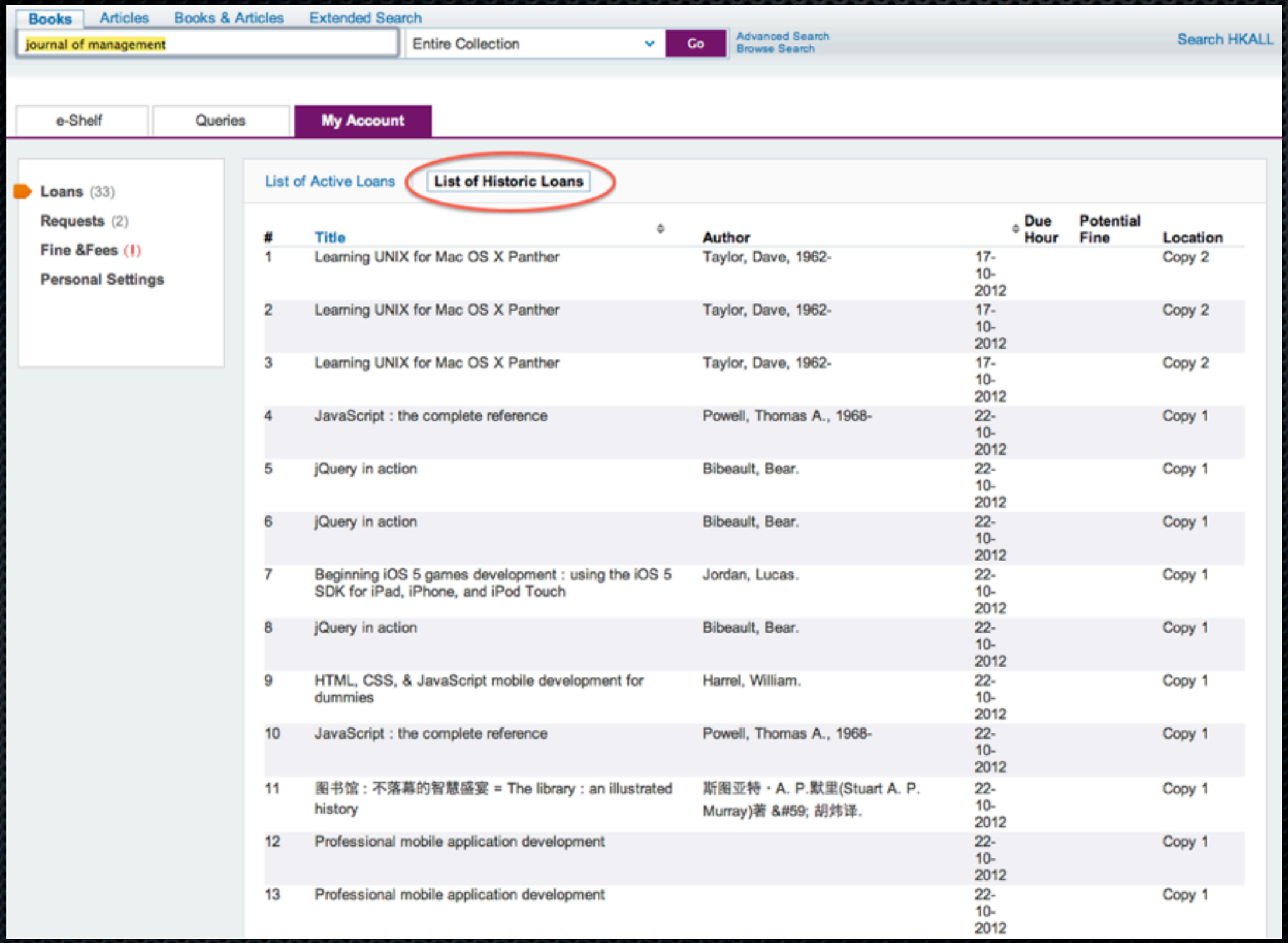
- Loans (33)
- Requests (2)
- Fine &Fees (!)
- Personal Settings

List of Active Loans | List of Historic Loans

Renew Selected

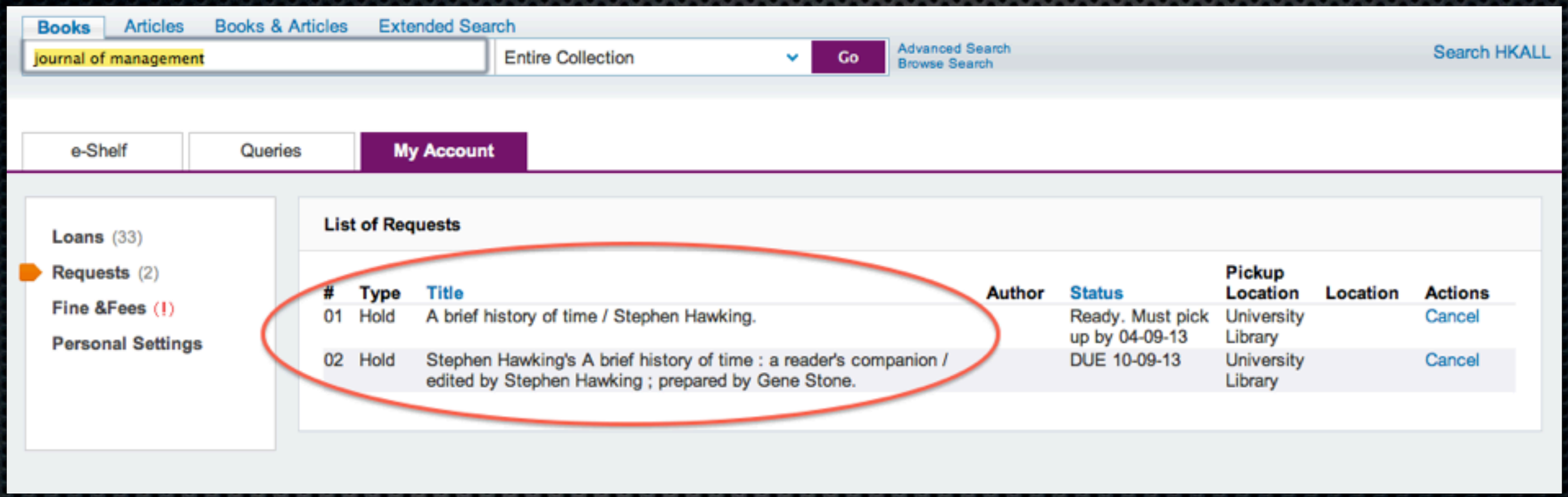
#		Title	Barcode	Due Date	Due Hour	Potential Fine	Call Number	Status
1	☐	880-02 Nü ji zhe shou ji / Yishu.	106158989ctyu	DUE 12-09-13			PL2867.Z75 N825 2012	Renewable
2	☐	實在平凡的奇異遭遇 / 亦舒.	319950097619459iedl	DUE 28-09-13			PL2867.Z75 S437 2011 1	Renewable
3	☐	櫻唇 / 亦舒	310003508484239lulb	DUE 28-09-13			PL2867.Z75 Y564 2012	Renewable
4	☐	代尋失去時光 / 亦舒.	319950096526809iedl	DUE 28-09-13			PL2867.Z75 D35 2011	Renewable
5	☐	Mobile usability / Jakob Nielsen, Raluca Budiu.	004802335	DUE 06-10-13			QA76.59 .N53 2012	Renewable
6	☐	本棚の中のニッポン : 海外の日本図書館と日本研究 = Japanese studies libraries in the world / 江上敏哲.	004795651	DUE 15-10-13			Z688.J3 E33 2012	Renewable
7	☐	HTML, CSS, & JavaScript mobile development for dummies / by William Harrel.	004730276	DUE 15-10-13			QA76.59 .H373 2011	Renewable
8	☐	Learning iPad programming : a hands-on guide to building iPad apps / Kirby Turner, Tom Harrington ; [foreword by Mark Dalrymple].	004848511	DUE 25-10-13			QA76.8.I863 T87 2013	Renewable
9	☐	CSS3 : the missing manual / David Sawyer McFarland.	004822792	DUE 30-10-13			TK5105.888 .M336 2013	Renewable
10	☐	Beginning iOS6 development : exploring the iOS SDK / David Mark ... [et al.].	004822799	DUE 30-10-13			QA76.8.I64 M36 2013	Renewable
11	☐	Learning jQuery : a hands-on guide to building rich interactive web front ends / Ralph Steyer.	004848500	DUE 01-11-13			QA76.73.J38 S84465 2013	Renewable
12	☐	飢餓遊戲 = The hunger games / 蘇珊・柯林斯著 ; 鄧嘉宛譯.	004540412	DUE 23-11-13			PS3603.O4558 H86412 2009	Renewable

List of historic loans

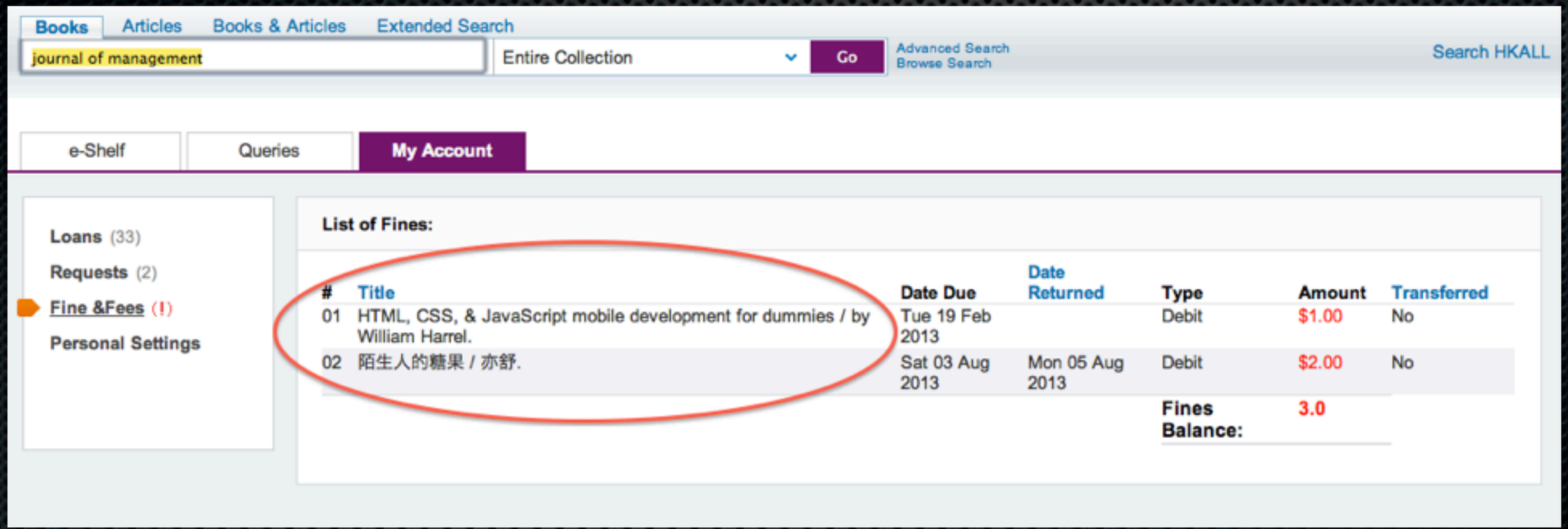


#	Title	Author	Due Hour	Potential Fine	Location
1	Learning UNIX for Mac OS X Panther	Taylor, Dave, 1962-	17-10-2012		Copy 2
2	Learning UNIX for Mac OS X Panther	Taylor, Dave, 1962-	17-10-2012		Copy 2
3	Learning UNIX for Mac OS X Panther	Taylor, Dave, 1962-	17-10-2012		Copy 2
4	JavaScript : the complete reference	Powell, Thomas A., 1968-	22-10-2012		Copy 1
5	jQuery in action	Bibeault, Bear.	22-10-2012		Copy 1
6	jQuery in action	Bibeault, Bear.	22-10-2012		Copy 1
7	Beginning iOS 5 games development : using the iOS 5 SDK for iPad, iPhone, and iPod Touch	Jordan, Lucas.	22-10-2012		Copy 1
8	jQuery in action	Bibeault, Bear.	22-10-2012		Copy 1
9	HTML, CSS, & JavaScript mobile development for dummies	Harrel, William.	22-10-2012		Copy 1
10	JavaScript : the complete reference	Powell, Thomas A., 1968-	22-10-2012		Copy 1
11	图书馆 : 不落幕的智慧盛宴 = The library : an illustrated history	斯图亚特・A. P.默里(Stuart A. P. Murray)著 ; 胡炜译.	22-10-2012		Copy 1
12	Professional mobile application development		22-10-2012		Copy 1
13	Professional mobile application development		22-10-2012		Copy 1

List of hold request



List of fines



Summary

Essential concepts

- emulate 30+ Aleph RESTful API
- CGI script to do web scraping from web OPAC
- works with any ILS with a web OPAC
- works with Primo 3.X, Primo 4.X ...

Pros and Cons

Pros	Cons
works with any web OPAC	do it on your own
native Primo support	needs to sync with OPAC
easy to maintain	can’t retire your web OPAC

References

- DLF ILS Discovery Interface Task Group (ILS-DI) Technical Recommendation -- An API for effective interoperation between integrated library systems and external discovery (http://old.diglib.org/architectures/ilsdi/DLF_ILS_Discovery_1.1.pdf)
- DLF ILS Discovery Interfaces (http://old.diglib.org/architectures/ilsdi/)
- California Digital Library news (http://www.cdlib.org/cdlinfo/2008/08/25/digital-library-federation-dlf-releases-technical-recommendation-from-ils-discovery-interface-task-group/)
- Primo Interoperability Guide, chapter 8
- Primo - Developing Gateway Adaptor
- Aleph RESTful APIs (http://www.exlibrisgroup.org/display/AlephOI/RESTful+APIs)

Q & A

Contact: alanng@cuhk.edu.hk

Thank You