

Harvard University Library's ALEPH Custom Reporting Environment

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University of Iowa

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Before ALEPH



NOTIS-based integrated library system

- *Mediated reporting:*
 - Monthly extracts of selected data store on mainframe for systems staff
 - Suite of ancient utilities to provide custom reports
- *End-user reporting:*
 - PL/I extracts on mainframe → Sybase files on a unix server
 - Most data updated twice a week, some more often, some less
 - Desktop query tool (Hummingbird's BI Query)

ALEPH Reporting Options

- GUI services menus
 - Security concerns
 - Performance concerns
 - Customization is cumbersome and often impossible without Ex Libris programming changes
- Other utilities
 - Ex Libris solutions (Z00R and Z13) would require extended system downtime and disk space to generate the data needed for reporting
 - Couldn't wait for other external developments



Needed: Custom Solution

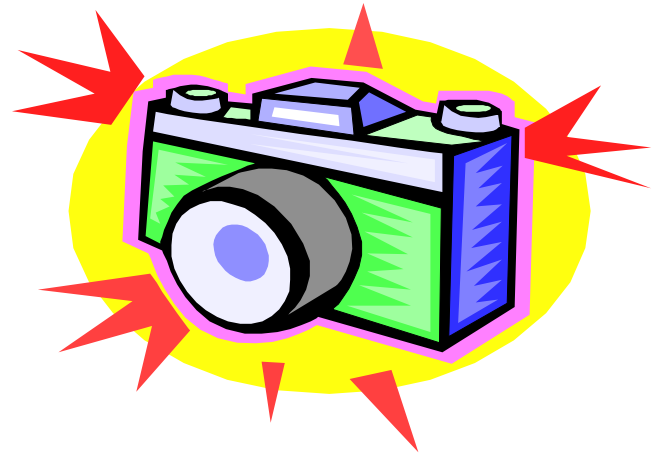
- Library staff is accustomed to ad hoc access to reporting data



- Ad hoc reporting is incorporated into workflow, database management, management reporting...

Our approach: Oracle “snapshots”

- Extracts from Aleph Oracle tables (the “Z” tables)
- Stored in separate Oracle tables
- Dedicated reporting server
- Complete daily “refresh”
- BI Query and sql*Net
- Ad hoc and canned reporting



Snapshot features

- Technology based on Oracle tools
 - Oracle snapshots
 - Database link between production and reporting servers
 - Oracle connectivity software on desktops
- Size and scope
 - 25 tables, ~500 columns, ~56 million rows
 - Production server: 425 gigabytes
 - Reporting data: 23 gigabytes

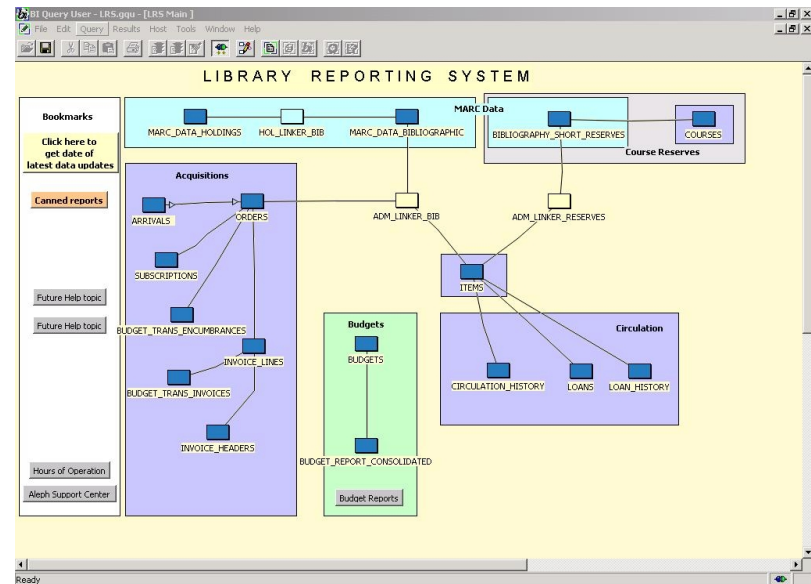
Snapshot features

- Frequency of update and load times
 - Updated overnight
 - Administrative data: 7 hours
 - MARC bibliographic: 11 hours
 - MARC holdings: 10 hours
- Naming conventions and portability
 - Assign meaningful names (“ORDERS” instead of “Z68”)
 - Convert inconsistent data types
 - Eliminate slow joins based on substrings

Library Reporting System - Snapshot overview					
Snapshot name	Source in Aleph	Row count (5/23/03)	Elapsed seconds	Elapsed time translation	Functional focus
MARC_DATA_HOLDINGS	HVD60 selected tags; custom programming	11,189,853	36,643	10 hours	MARC data
HOL_LINKER_BIB	HVD01.Z103	11,182,747	3,268	54 minutes	Navigation
MARC_DATA_BIBLIOGRAPHIC	HVD01 selected tags; custom programming	9,110,744	42,138	11 hours	MARC data
ADM_LINKER_BIB	HVD01.Z103	9,093,231	2,885	48 minutes	Navigation
ITEMS	HVD50.Z30	9,088,916	13,822	3 hours	Multiple
CIRCULATION_HISTORY	HVD50.Z35 (Events) - Event_type = selected list of circulation event types	3,696,548	3,013	50 minutes	Circulation
LOAN_HISTORY	HVD50.Z36H	1,207,315	2,083	34 minutes	Circulation
ORDERS	HVD50.Z68	325,285	813	13 minutes	Acquisitions
LOANS	HVD50.Z36	267,972	862	14 minutes	Circulation
BUDGET_TRANS_INVOICES	HVD50.Z601 - transaction type = INV	195,745	541	9 minutes	Budgets
INVOICE_LINES	HVD50.Z75	195,635	118	2 minutes	Acquisitions
BUDGET_TRANS_ENCUMBRANCES	HVD50.Z601 - transaction type = ENC	191,110	247	4 minutes	Budgets
ARRIVALS	HVD50.Z78	178,021	62	1 minute	Acquisitions
SUBSCRIPTIONS	HVD50.Z16	83,476	61	1 minute	Acquisitions
BIBLIOGRAPHY_SHORT_RESERVES	HVD30.Z13	73,195	33	33 seconds	Course reserves
ADM_LINKER_RESERVES	HVD30.Z103	38,134	8	8 seconds	Navigation
INVOICE_HEADERS	HVD50.Z77	29,975	38	38 seconds	Acquisitions
BUDGET_TRANS_ALLOC_ADDITIONAL	HVD50.Z601 - transaction type = ALC	3,492	19	19 seconds	Budgets
COURSES	HVD30.Z108	2,058	5	5 seconds	Course reserves
BUDGET_REPORT_CONSOLIDATED	HVD50.Z76 AND Z601. Includes selected data and calculations from Z601, Z76 for generating Budget Reports	1,924	6	6 seconds	Budgets
BUDGETS	HVD50.Z76	1,924	107	2 minutes	Budgets
BUDGET_TRANS_ALLOC_TRANSFERS	HVD50.Z601 - transaction type = TRN	309	11	11 seconds	Budgets
BUDGET_TRANS_ALLOC_CARRY_OVER	HVD50.Z601 - transaction type = CRO	0	312	5 minutes	Budgets
BUDGET_TRANS_ALLOC_INITIAL	HVD50.Z601 - transaction type = ILC	0	185	3 minutes	Budgets

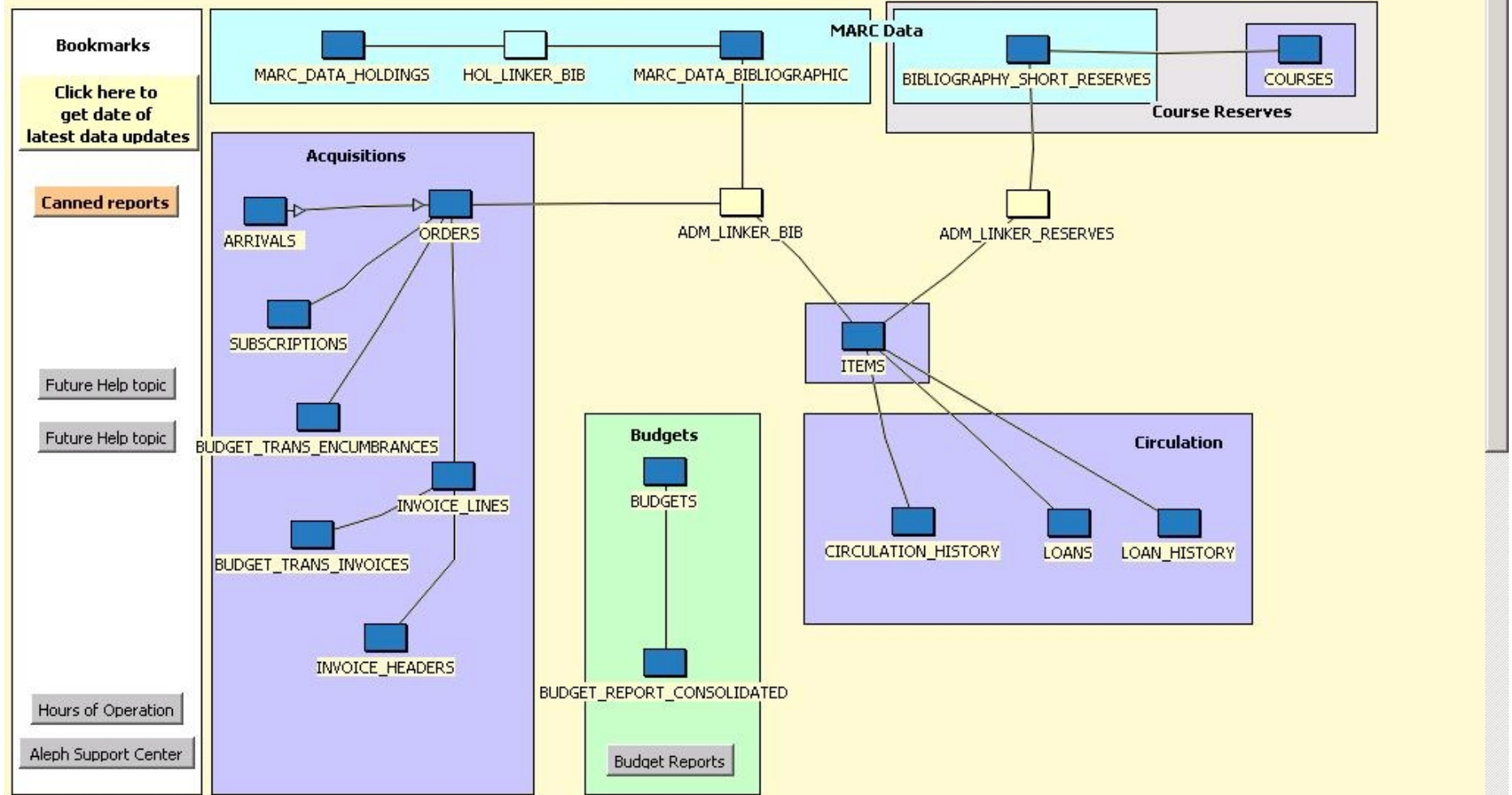
BI Query tour - general layout

- Functional areas
 - Acquisitions
 - Budgets
 - Circulation
 - MARC data
 - Course Reserves
- Bookmarks
 - Database update info
 - Canned reports
 - Help topics
 - Hours of operation
 - Support



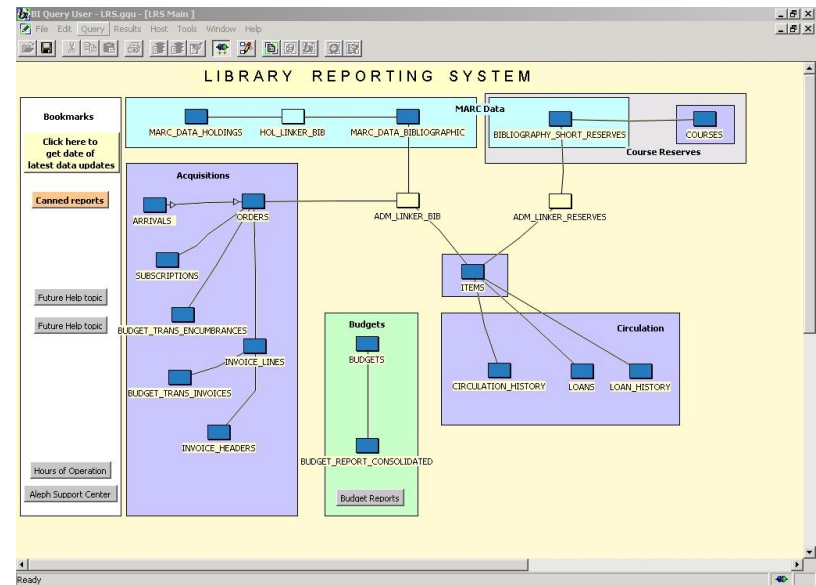


LIBRARY REPORTING SYSTEM



BI Query tour - features

- Canned reports
- Ad hoc queries
- Creating simple reports
- Saving and exporting data

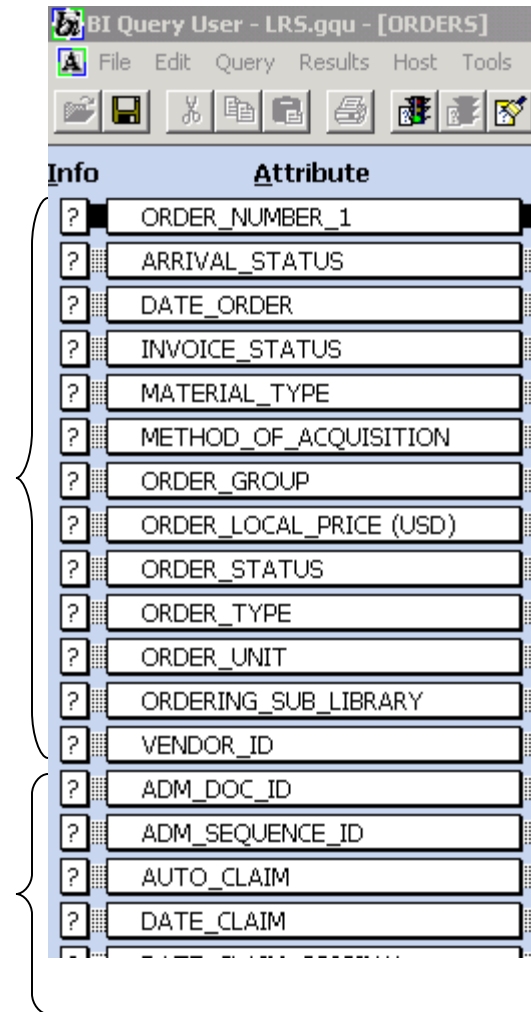
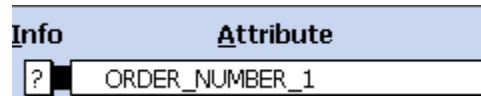


BI Query tour - attributes

- Atttribute lists
 - Frequently-used attributes first
 - Remaining attributes in alphabetic order

- Interface button

- Ex Libris documentation
- Harvard notes
- Available soon



BI Query tour - Constructing a query

The screenshot shows the BI Query User interface for the 'ORDERS' table. The main area displays a list of attributes with columns for Info, Attribute, Function, Qualify, Group, and Sort. The 'Qualify' column has checkmarks for 'ARRIVAL_STATUS', 'DATE_ORDER', 'ORDER_STATUS', and 'ORDER_UNIT'. The 'Sort' column has arrows for 'DATE_ORDER' (pointing down) and 'VENDOR_ID' (pointing up).

Info	Attribute	Function	Qualify	Group	Sort
?	◆ ORDER_NUMBER_1		<input type="checkbox"/>	<input type="checkbox"/>	
?	ARRIVAL_STATUS		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
?	◆ DATE_ORDER		<input checked="" type="checkbox"/>	<input type="checkbox"/>	⇅ 2
?	INVOICE_STATUS		<input type="checkbox"/>	<input type="checkbox"/>	
?	MATERIAL_TYPE		<input type="checkbox"/>	<input type="checkbox"/>	
?	METHOD_OF_ACQUISITION		<input type="checkbox"/>	<input type="checkbox"/>	
?	◆ ORDER_GROUP		<input type="checkbox"/>	<input type="checkbox"/>	
?	ORDER_LOCAL_PRICE (USD)		<input type="checkbox"/>	<input type="checkbox"/>	
?	ORDER_STATUS		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
?	ORDER_TYPE		<input type="checkbox"/>	<input type="checkbox"/>	
?	ORDER_UNIT		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
?	ORDERING_SUB_LIBRARY		<input type="checkbox"/>	<input type="checkbox"/>	
?	◆ VENDOR_ID		<input type="checkbox"/>	<input type="checkbox"/>	⇅ 1
?	ADM_DOC_ID		<input type="checkbox"/>	<input type="checkbox"/>	
?	ADM_SEQUENCE_ID		<input type="checkbox"/>	<input type="checkbox"/>	
?	AUTO_CLAIM		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_CLAIM		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_CLAIM_ORIGINAL		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_OPEN		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_STATUS_UPDATE		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_SUBSCRIPTION_FROM		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_SUBSCRIPTION_RENEW		<input type="checkbox"/>	<input type="checkbox"/>	
?	DATE_SUBSCRIPTION_TO		<input type="checkbox"/>	<input type="checkbox"/>	
?	DELIVERY_TYPE		<input type="checkbox"/>	<input type="checkbox"/>	

Below the table, a query builder shows the following conditions:

ARRIVAL_STATUS != C and ORDER_STATUS = SV and ORDER_UNIT = WID11 and DATE_ORDER <= 02/23/2003

BI Query tour - Navigation and joining tables

BRARY REPORTING

NGS HOL_LINKER_BIB • MARC_DATA_BIBLIOGRA

5 • ORDERS • ADM_LINKER_BIB

Info	Attribute	Function	Qualify	Group	Sort
?	BIB_DOC_ID				
?	FMT_FORMAT				
?	AUTHOR				
?	AUTHOR_CODE				
?	• TITLE_DISPLAY				

Joins are pre-defined and data is already normalized

BI Query User - LRS.ggu - [Query Results 3]

File Edit Query Results Host Tools Window Help

Query completed: 5/26/2003 5:35:37 PM

Elapsed Time: 00:38

1101	ORDER_NUM	DATE_ORDER	VENDOR_ID	ORDER_GROUP	TITLE_DISPLAY
1	8547101-1	12/06/2002	ACRL	eh	The Collaborative imperative :
2	7592230-1	09/12/2002	ALA	EH	The bibliographic record and information tec
3	8769267-2	09/05/2002	AMAZON	ab	Imagine being more afraid of freedom than s
4	8980108-1	11/01/2002	AMAZON	ab	Chaplin mutuals, vol. I
5	8998280-1	12/05/2002	AMAZON	es	'An offer you can't refuse' :
6	9014165-1	01/08/2003	AMAZON	ab	Last Meal.
7	9024029-1	01/22/2003	AMAZON	eh	Literacy in Lombard Italy, c. 568-774 /
8	8711862-2	01/30/2003	AMAZON	es	Participation :
9	8991913-1	11/21/2002	BARNES	ab	The lost films of Stan Laurel and Oliver Hard
10	1892708-1	02/03/2003	BARNES	eh	Cut, the unseen cinema /
11	8930081-1	07/10/2002	BENNETT	es	In the hot seat.
12	8930113-1	07/10/2002	BENNETT	es	Secrets of the jury room.
13	8930142-1	07/10/2002	BENNETT	es	Surviving the high tech depersonalization.
14	8930188-1	07/11/2002	BENNETT	es	Alumni yearbook 1950.
15	8930326-1	07/12/2002	BENNETT	es	Holding the line :
16	8930484-1	07/12/2002	BENNETT	eh	The insatiable desire of injured love.
17	8930488-1	07/12/2002	BENNETT	eh	Chemical palace.
18	8930370-1	07/12/2002	BENNETT	eh	Brief introduction to middle Byzantine footwe



Known issues

- Data is more complex - underlying field values sometimes appear differently than they are displayed in the GUI
- MARC data parsing is on *selected* tags only
- Diacritics and other special characters
 - Waiting for v. 16's representation of the data
 - Waiting to see what BIQ can do
 - Will provide alternative query tool if necessary
- Holdings call number sorting

Call number sorting

- Call number sorting in Holdings is now straight ASCII sort:

Current sort in Holdings	Required sort order
BP 131.3	BP 9.4.41
BP 184.2.4	BP111.13
BP 187.8	BP 131.3
BP 9.4.41	BP 184.2.4
BP111.13	BP 187.8

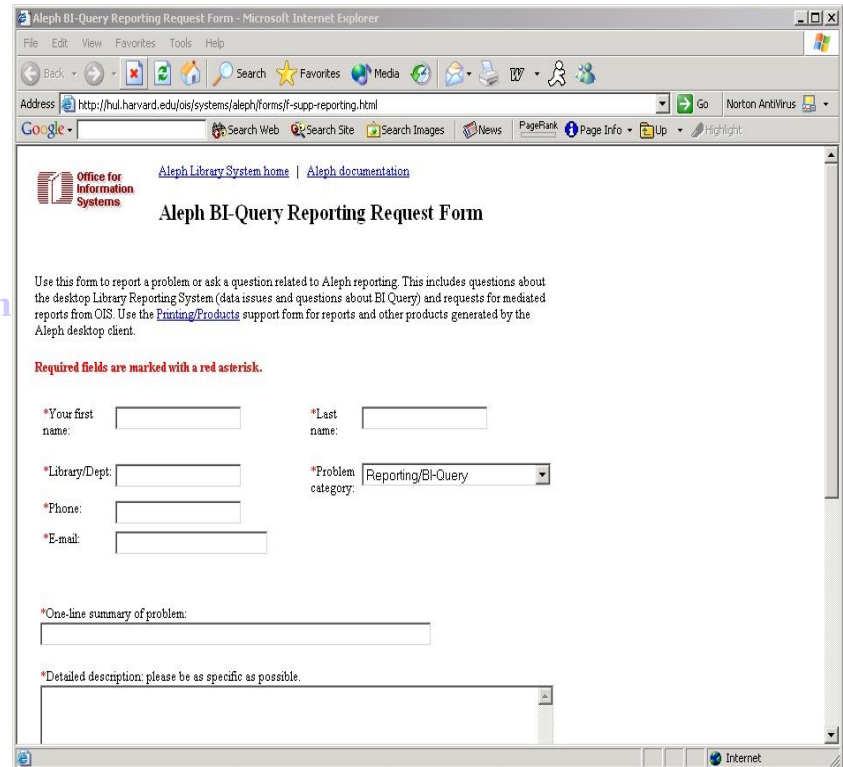
Call number sorting

- Call number sort mechanism in Items is already available:

CALL_NUMBER_KEY	CALL_NUMBER
bp 00009 00004 0041 0000 0000	\$\$2ZHCL\$\$hBP 9.4.41
bp 00111 00013 0000 0000 0000	\$\$2ZHCL\$\$hBP111.13
bp 00131 00003 0000 0000 0000	\$\$2ZHCL\$\$hBP 131.3
bp 00184 00002 0004 0000 0000	\$\$2ZHCL\$\$hBP 184.2.4
bp 00187 00008 0000 0000 0000	\$\$2ZHCL\$\$hBP 187.8

Availability and Support

- Available now
- Contact local IT support for installation: <http://hul.harvard.edu/ois/systems/aleph/forms/ff-supp-reporting.html>
- Contact Aleph Support Center for application support
- Email list for system news:
LRS-users@hulmail.harvard.edu
- Aleph Documentation center



The screenshot shows a web browser window titled "Aleph BI-Query Reporting Request Form - Microsoft Internet Explorer". The address bar shows the URL: <http://hul.harvard.edu/ois/systems/aleph/forms/ff-supp-reporting.html>. The page content includes the "Office for Information Systems" logo and navigation links for "Aleph Library System home" and "Aleph documentation". The main heading is "Aleph BI-Query Reporting Request Form". Below the heading is a paragraph of instructions: "Use this form to report a problem or ask a question related to Aleph reporting. This includes questions about the desktop Library Reporting System (data issues and questions about BI Query) and requests for mediated reports from OIS. Use the [Printing/Products](#) support form for reports and other products generated by the Aleph desktop client." A red asterisk note states: "Required fields are marked with a red asterisk." The form contains several input fields: "*Your first name:" (text box), "*Last name:" (text box), "*Library/Dept:" (text box), "*Phone:" (text box), "*E-mail:" (text box), and "*Problem category:" (dropdown menu with "Reporting/BI-Query" selected). There are also two larger text areas: "*One-line summary of problem:" and "*Detailed description: please be as specific as possible." The browser's status bar at the bottom shows "Internet".