

Enhancing your Voyager Access queries : a series of 'quick tips'

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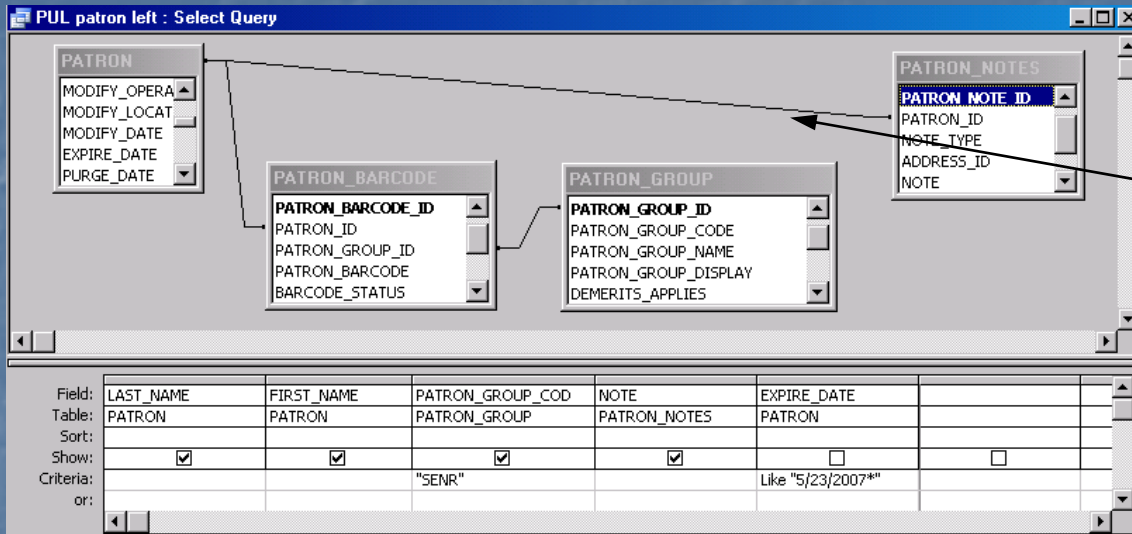
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Strategizing

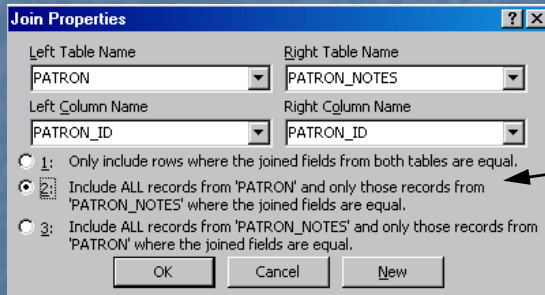
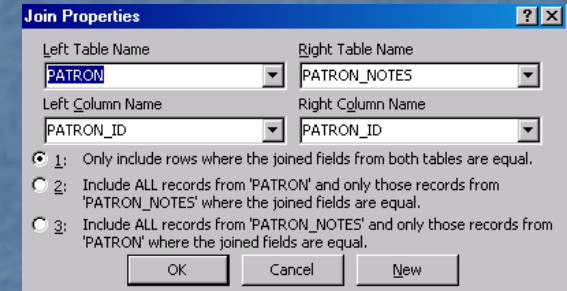
- Use ER diagrams and other resources to decide which tables are needed
- Develop a strategy, think about what your goal is
- Get an idea of what to expect in a result
- Look at examples in the clients
- Open the tables linked to Voyager and look at the contents
- Ask your question on Voyager-L

Inner and Outer Joins

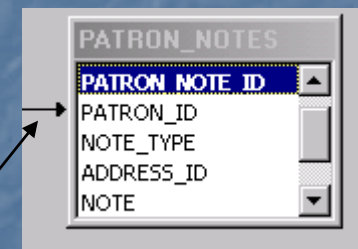


Inner Join
Is the default

Linking line has no
arrow head



Outer Join
Right click on linking line
to pull up dialogue box
Select option 2



Linking line now has arrow head

Inner and Outer join examples

Field:	PATRON_GROUP_C	BARCODE_STATUS	EXPIRE_DATE	PATRON_ID	NOTE
Table:	PATRON_GROUP	PATRON_BARCODE	PATRON	PATRON	PATRON_NOTES
Total:	Group By	Group By	Group By	Group By	Group By
Sort:					
Show:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	"SENR"	"1"	Like "5/21/2008*"		

Inner Join on Patron_Notes results in only 26 rows. Displays the records that only had data in a note field

No arrow head on join link

Outer join link results in 1,154 rows

21628	
23111	DEPT(998)
23376	
27130	
27605	Withdrawn, 2006-01-30 - djv
31628	
31716	
32061	

Why do I have duplicates in my answer?

PUL patron groups : Select Query

The diagram shows three tables: PATRON, PATRON_BARCODE, and PATRON_GROUP. PATRON has fields: PATRON_ID, NAME_TYPE, LAST_NAME, NORMAL_LAST_NAME. PATRON_BARCODE has fields: PATRON_BARCODE_ID, PATRON_ID, PATRON_GROUP_ID, PATRON_BARCODE, BARCODE_STATUS. PATRON_GROUP has fields: PATRON_GROUP_ID, PATRON_GROUP_CODE, PATRON_GROUP_NAME, PATRON_GROUP_DISPLAY. Arrows indicate relationships: PATRON to PATRON_BARCODE (PATRON_ID to PATRON_ID), and PATRON_BARCODE to PATRON_GROUP (PATRON_GROUP_ID to PATRON_GROUP_ID).

Field:	LAST_NAME	FIRST_NAME	PATRON_GROUP_C	EXPIRE_DATE	
Table:	PATRON	PATRON	PATRON_GROUP	PATRON	
Sort:	Ascending				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:			"P"	Like "10/31/2009*"	
or:					

Last name (Aarsleff) has 4 rows, all contain identical data.

Only one patron record for this person, but there are 4 P barcode segments

PUL patron groups : Select Query

	LAST_NAME	FIRST_NAME	PATRON_GROU	EXPIRE_DATE
▶	Aaen	Mary	P	10/31/2009 9:21:27 AM
	Aanonsen	Mark	P	10/31/2009 9:21:27 AM
	Aarsleff	Hans	P	10/31/2009 12:12:36 PM
	Aarsleff	Hans	P	10/31/2009 12:12:36 PM
	Aarsleff	Hans	P	10/31/2009 12:12:36 PM
	Aarsleff	Hans	P	10/31/2009 12:12:36 PM
	Abelev	Esta	P	10/31/2009 8:48:03 AM
	Abelev	Esta	P	10/31/2009 8:48:03 AM
	ABELS	RICHARD	P	10/31/2009

Record: 1 of 6119

Use Group By

Click on Sigma Σ

Total line displays, Group By is the default

Field:	LAST_NAME	FIRST_NAME	PATRON_GROUP_C	EXPIRE_DATE
Table:	PATRON	PATRON	PATRON_GROUP	PATRON
Total:	Group By	Group By	Group By	Group By
Sort:	Ascending			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:			"P"	Like "10/31/2009*"

Resulting answer is aggregated so just one row if all the data is otherwise the same

	LAST_NAME	FIRST_NAME	PATRON_GROU	EXPIRE_DATE
	Aaen	Mary	P	10/31/2009 9:21:27 AM
	Aanonsen	Mark	P	10/31/2009 9:21:27 AM
	Aarsleff	Hans	P	10/31/2009 12:12:36 PM
	Abelev	Esta	P	10/31/2009 8:48:03 AM
	ABELS	RICHARD	P	10/31/2009
	Abramczyk	Bozena	P	10/31/2009 8:48:03 AM
	Abreu	Dilip	P	10/31/2009 8:48:03 AM

Record: 5 of 3883

Working with money - CCur

Currency fields are stored and displayed as text, so 233700 not \$2,337.00

Use the CCur function, CCur([Field name]/100)

The screenshot shows a Microsoft Access query design grid for a query named "PUL pending invoices : Select Query". The design grid is in "Table View" and shows two tables, INVOICE and VENDOR, with a relationship line between INVOICE_ID and VENDOR_ID. The design grid is shown in "Table View" with the following fields and properties:

Field:	VENDOR_CODE	Amount: CCur([INVOICE_TOTAL]/100)	INVOICE_STATUS
Table:	VENDOR		INVOICE
Total:	Group By	Group By	Group By
Sort:	Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:		Not 0	"0"
or:			

VENDOR_COD	Amount
BERNAN	\$37.88
BERNAN	\$41.12
BERNAN	\$81.00
BHBL	\$141.61
BHBL	\$243.27
BHBL	\$753.41
BHBL	\$1,348.75
BHBL	\$1,451.66
BNA	\$1,234.59
BNA	\$1,390.82
BNA	\$1,161.24

Produces a formatted result

Apologies to all for the US dollar example!

Working with money – Foreign Currencies

If you pay for materials in currencies other than the Base Currency (USD in the US), you need this expression to convert the foreign currency into US dollars

Invoice: 3394 - [Approved]	
File Invoice Line Item Tools Help	
Save	Save and Close
GBP Currency	
Title	Price (Adjustments)
Queen's letter to the King.	120.00
Art of measuring, containi	900.00

Invoice: 3394 - [Approved]	
File Invoice Line Item Tools Help	
Save	Save and Close
Base Currency	
Title	Price (Adjustments)
Queen's letter to the King.	\$243.58
Art of measuring, containi	\$1,826.85

Line Price: Sum(CCur(Convert([INVOICE]![Conversion_Rate],[INVOICE_LINE_ITEM_FUNDS]![AMOUNT],[currency_code])/100))

Expression

Converts any currency into the base currency and expresses as USD

PUL detailed expend t : Table		
INVOICE_NUME	TITLE	Line Price
3394	Queen's letter to the King.	\$243.58
3394	Art of measuring, containing the description	\$1,826.85

Other functions

For Unicode release or above you will need to apply a function to any fields that may contain diacritics or special characters.

Function is `utf8to16([table name].[field name])`

Field:	<code>TITLE: utf8to16([bib_text].[Title])</code>
Table:	
Total:	Group By
Sort:	
Show:	<input checked="" type="checkbox"/>
Criteria:	
or:	

Innsbrucker Beiträge zur Sprachwissenschaft
Inolvidables veladas / Marcelo Cohen.
Integrazione linguistica in Europa : il quadro comune di riferimento
Islamische Rippengewölbe : Ursprung, Form, Verbreitung / Franc
Istoricheskiit putÉ' pravoslaviit, ai, / protoiereit Aleksandr Shmer

Date formatting: if you want a date/timestamp expressed in a certain format

10/31/2005
10/31/2003
10/31/2009 8:48:03 AM
10/31/2009 8:48:03 AM

To

10/31/2005
10/31/2003
10/31/2009
10/31/2009

Use

Expire date: Format([EXPIRE_DATE], "mm/dd/yyyy")
--

Parameter queries

Field:	INVOICE_STATUS_DATE
Table:	INVOICE
Total:	Group By
Sort:	
Show:	<input checked="" type="checkbox"/>
Criteria:	Between [Start Date:] And [End Date:]
or:	

You can make your queries prompt you for a value such as dates

Example of criteria field from a query

Enter Parameter Value

End Date:

OK Cancel




Enter Parameter Value

Start Date:

OK Cancel

Tip: Locations and funds are popular fields for parameter queries. Great option for situations where others are running standard queries.

Types of Queries useful with Voyager

- Select Query  default, not a permanent answer
- Make Table Query  creates a permanent table, but will need to be updated. I use these a lot
- Append Query  takes an answer from a query and appends it to another answer
- Union Query combines result of select queries into one result set. SQL only

Ways to avoid using the BLOB

BIB_TEXT table includes title, author, imprint information, some fixed fields and many id numbers. It does NOT include subjects, and many added entries.

BIB_ID	AUTHOR	TITLE_BRIEF	EDITION	ISBN	LANGUAGE	BIB_FORMAT	PUBLISHER
3205327	Rowling, J. K.	Harry Potter and the goblet of fire /	1st American ed.	0439139597	eng	am	Arthur A. Levine Books,

BIB_INDEX table supplies data for indexing but can be used for reporting

The screenshot shows a database query tool interface. At the top, a window titled 'BIB_INDEX' displays the table structure:

```
*
BIB_ID
INDEX_CODE
NORMAL_HEADING
DISPLAY_HEADING
```

Below this, a query criteria table is visible:

Field:	BIB_ID	DISPLAY_HEADING
Table:	BIB_INDEX	BIB_INDEX
Total:	Group By	Group By
Sort:		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	"3205327"	

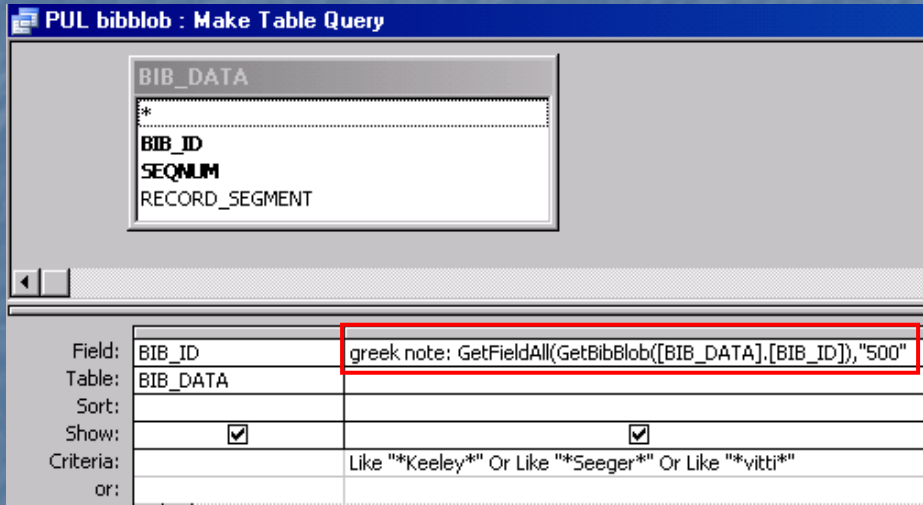
BIB_ID	DISPLAY_HEADING
3205327	eng
3205327	nyu
3205327	2000
3205327	3205327
3205327	00131084
3205327	0439139597
3205327	Magic Fiction.
3205327	Rowling, J. K.
3205327	Wizards Fiction.
3205327	PZ7 .R79835 Hal 2000
3205327	(CStRLIN)DCLC00131084-B
3205327	Harry Potter and the goblet of fire /
3205327	Potter, Harry (Fictitious character) Juvenile fiction.
3205327	Hogwarts School of Witchcraft and Wizardry (Imaginary place) Juvenile fiction.

The BLOB!

- BLOB is a function
- There are 3 kinds: Bibliographic, Authority and Holdings
- BLOB syntax can be tricky, take care
- BLOB queries can take a long time to run
- Use criteria where possible
- Break up queries for quicker response time

BibBLOB Example

You need to extract bib records containing certain words found in 500 fields



Use the GetFieldAll function.

This will extract all 500 fields that contain the criteria specified.

I could add other tables but often quicker to do this query first

Syntax: GetFieldAll(GetbibBlob([Table].[Bib_ID]),\"Tag\")

Example: GetFieldAll(GetbibBlob([BIB_DATA].[BIB_ID]),\"500\")

Result: Princeton copy is gift of Edmund Keeley.

Further BibBLOB Example

Query1 : Select Query

Field:	BIB_ID	Subject: GetField(GetBibBlob([BIB_DATA].[BIB_ID]),"610",1)	TITLE
Table:	BIB_DATA		BIB_TEXT
Sort:			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			Like "Carmel **"
or:			

Use the GetField function.

This will extract the first 610 subject field that contain the criteria specified.

Syntax: GetField(GetbibBlob([Table].[Bib_ID]),"Tag",Position)

Example: GetField(GetbibBlob([BIB_DATA].[BIB_ID]),"610",1)

Provides this answer

Query1 : Select Query

BIB_ID	Subject	TITLE
115150	San Carlos Borromeo Mission (Carmel, Calif.)	Carmel Mission : from founding t
945509	Carmelites Great Britain History.	Carmel in Britain : essays on the
1604508	Carmelites History.	Carmel vivant. Preliqf. [de] Jear
2244332	Carmelites Spain Catalonia History.	Carmel in medieval Catalonia / b
2244332	Carmelites Spain Catalonia History.	Carmel in medieval Catalonia / b

MFHDBLOB EXAMPLE

PUL mfhdblob current issues eg : Select Query

Field:	BIB_ID	TITLE	CAS: GetFieldAll(GetMFHDBlob([MFHD_MASTER].[MFHD_ID]),"866")	DISPLAY_CALL_NO
Table:	BIB_TEXT	BIB_TEXT	MFHD_MASTER	MFHD_MASTER
Total:	Group By	Group By	Group By	Group By
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	"561768"		Like "**CURRENT ISSUES **"	

Use the GetFieldAll function.

This will extract all 866 fields from the MFHD record

Syntax: GetFieldAll(GetMFHDBlob([Table].[MFHD_ID]),"Tag")

Example: GetFieldAll(GetMFHDBlob(MFHD_MASTER.[MFHD_ID]),"866")

“Current Issues”
note does not
seem to display!

PUL mfhdblob current issues eg : Select Query

	BIB_ID	TITLE	CAS	DISPLAY_CALL
▶	561768	Forbes.	Vol. 59, no. 1 (1947)-v. 177, no. 13 (June 19, 2006)	HF5001 .F74

Place cursor in
CAS column and
hit the down arrow
key, data is there

PUL mfhdblob current issues eg : Select Query

	BIB_ID	TITLE	CAS	DISPLAY_CALL
▶	561768	Forbes.	CURRENT ISSUES IN: Pliny Fisk Library (PF). Firestone	HF5001 .F74

Other examples of GetField functions

GetFieldRaw(GetAuthBLOB([AUTH_ID]), "1", 1)

Gets the first 1XX field from an Authority record

150 aBlack Death

GetFieldAll(GetBibBLOB([BIB_ID]), "6")

Gets all 6XX (subject) fields from Bibliographic record

Black Death. Medicine, Medieval. Diseases and history

GetSubField(GetFieldRaw(GetBibBLOB([BIB_ID]), "300", 1), "c", 1)

Gets the first 300 field, delimiter c from a Bibliographic record

23 cm.

Tips for efficient queries

- Some data is better extracted in multiple queries
- Use Make-table queries if your answer is large
- Be systematic in query and table naming
- Use known record id criteria to keep your results small while testing. Remove it at the end!
- **Save** and **Test**. **Save** and **Test**...

Tips for efficient queries cont.

- Double check in the clients to make sure that your answer is valid
- Link on indexed fields for speedier results
- Windows Task Manager "Not Responding" – maybe just thinking!
- Give your queries a prefix to distinguish them from the prepackaged ones
- Before installing new clients save a copy of Reports.mdb