# Getting started with 9xx/EDI in Unicorn

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February 20th, 2007

# Why 9xx/EDI?

- To eliminate repetitive re-keying of born digital data
- To streamline acquisitions workflow
- To improve turn-around time for monograph ordering

# Outline

- Part 1: Workflow Implications
- Part 2: Implementation
- Part 3: 9xx/EDI Step by Step
- Part 4: Obstacles & Challenges
- Part 5: Conclusions

# Part 1: Workflow Implications

# Current Workflow: Collections Librarians

- Paper slips from multiple vendors

- Slips sorted manually

- Slips routed to faculty through campus mail for input.

- Selectors make final purchasing decisions, write fund numbers on paper slips, and send to acquisitions staff.

# Current Workflow: Ordering

- Manual catalog search for duplicates

- Manual OCLC search for cataloguing copy

- PO's are manually created in Unicorn

- Manual search of Blackwell's Collection Manager /YBP GOBI/ or Coutts to finally place orders

# Current Workflow: Invoicing

- Item in hand checked against cataloguing copy.

- Orderline is marked as received.

- Invoice manually created in Unicorn based on paper invoice.

- Unicorn invoices are marked as paid.

- Paper invoices are sent to administration office fro manual entry into Banner.

# Current Workflow: Inefficiencies

- Born-digital data sent to us through snail mail.

- Born-digital data shuttled around through inter-campus mail.

- Results in a huge amount of redundant re-keying of born-digital data.

# New Workflow: 9xx/EDI

- Selectors receive electronic notification slips.

- Slips presorted according to desired criteria.

- Slips distributed to multiple faculty reps through email.

- Collections librarians make selection directly in Collection Manager.

# New Workflow: 9xx/EDI

- Acquisitions staff batch import CM records into Unicorn using 9xx reports.

- Skeletal bib records, order, and orderline records are automatically created.

- Order records are batch exported to Blackwell's via EDI.

# New Workflow: 9xx/EDI

- Electronic invoice notification arrives through email.

- Electronic invoices are downloaded and batch imported into Unicorn using EDI/X12 reports.

- Invoice lines are automatically loaded & matched to order lines.

# New Workflow: 9xx/EDI

- If desired, full MARC records can be delivered and imported to overlay skeletal records.

- TOC's and other enrichment services.

- Using Perl and API the invoices can be exported and reformatted for automatic load into Banner.

# Workflow Comparison: Keystrokes

| Current Workflow | 9xx/EDI Workflow |
|---|---|
| Dupes searched in Unicorn | Dupes identified as bibs loaded |
| OCLC is searched for copy | Skeletal records provided, full MARC copy available |
| Orders keyed into Unicorn | Orders loaded automatically |
| Orders searched and placed in vendor system | Orders are placed with vendor automatically |
| Invoices are keyed | Invoices loaded automatically |
| Invoice is keyed into Banner | Invoices can be automatically extracted for Banner feed |

# 9xx/EDI Pilot Project: Scope

- Single vendor : Blackwell's North America

- Monograph orders only

- Small group of volunteer selectors and acquisitions staff

# EDI Pilot Project: Objectives

- To streamline acquisitions workflow.

- To eliminate re-keying and redundancy.

- To improve order turn-around time.

- To identify EDI challenges in our environment.

* Need to ensure that the EDI pilot would not impact on the regular paper-based ordering and invoicing process.
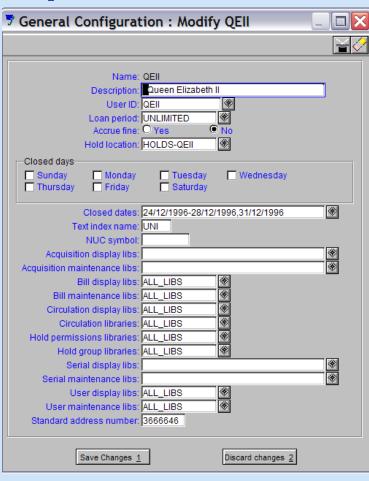
# Part 2: Implementation

# Implementation: Collection Manager

- Blackwell's Collection Manager Export profile.

- Creation of separate EDI account with Blackwell's

- Configure CM account permissions

- Configure subject profiles for selectors
  - can stipulate grouping, sorting, frequency of slips
  - Selectors are not limited to ordering titles received via slip notification.

# Implementation: Unicorn Modules

- Order EDI and the 9XX loader modules (installed and configured by SirsiDynix).

  - Access to the appropriate reports
  - Perl scripts and mapping tables
  - Directory structure for file processing
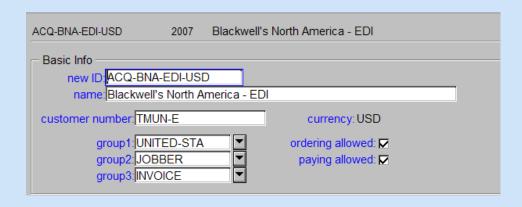
# Implementation: Library Policy



- Library Standard Address Number (SAN) must be added to the acquisition library (QEII) in the library policy record.

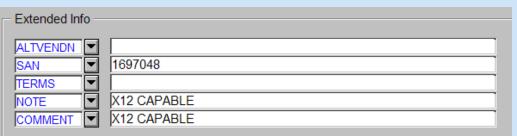# Implementation: Vendor Records

- Create duplicate vendor records for each vendor and currency.
  - ACQ-BNA-EDI-USD
  - ACQ-BNA-EDI-GBP

- Be sure to include the library SAN and the vendor SAN in each record.
  - Blackwell's US SAN = **1697048**
  - Blackwell's UK SAN = **0012351**

# Implementation: Vendor Records

| ACQ-BNA-EDI-USD | 2007 | Blackwell's North America - EDI |
| --- | --- | --- |

Basic Info

new ID: ACQ-BNA-EDI-USD
name: Blackwell's North America - EDI

customer number: TMUN-E                    currency: USD

group1: UNITED-STA           ordering allowed: ☑
group2: JOBBER               paying allowed: ☑
group3: INVOICE

- Separate Vendor record for EDI

- Be sure to include your customer number in the basic information section.

# Implementation: Vendor Records

Extended Info

| | |
|---|---|
| ALTVENDN ▼ | |
| SAN ▼ | 1697048 |
| TERMS ▼ | |
| NOTE ▼ | X12 CAPABLE |
| COMMENT ▼ | X12 CAPABLE |

- The vendor SAN must be included in the extended information section

  Blackwell's US SAN = **1697048**
  Blackwell's UK SAN = **0012351**

- X12 CAPABLE must be included in COMMENT field.

**EDI ADDRESS--**

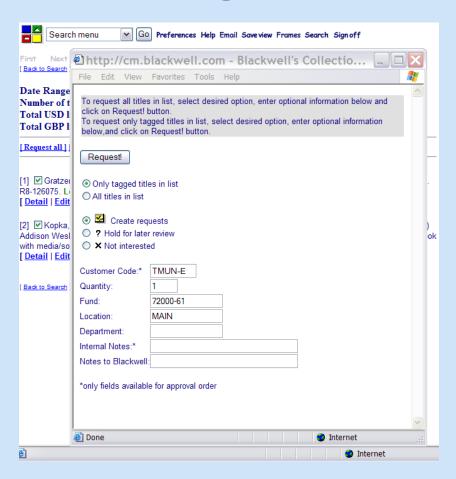| Field | Value |
|---|---|
| DOWNDIR | |
| DOWNFILE | UNIQUE |
| UPDIR | |
| UPFILE | UNIQUE |
| RCPT_MTH | FTP |
| SENDER_ID | 1697048 |
| REC_TRAN | 810:bookinv.rmap |
| REC_TRAN | 850:bookorder.map |
| XFER_USE | dyv960 |
| XFER_PAS | |
| RCPT_SCR | ftpreceiveblackwell |
| FTP_PASS | NO |
| TRANSTYP | BOOK |
| X12_ISA01 | 00 |
| X12_ISA02 | |
| X12_ISA03 | 00 |
| X12_ISA04 | |
| X12_ISA05 | ZZ |
| X12_ISA06 | 3666646 |
| X12_ISA07 | ZZ |
| X12_ISA08 | 1697048 |
| X12_ISA11 | U |
| X12_ISA12 | 00306 |
| X12_ISA14 | 1 |
| X12_ISA15 | P |
| X12_ISA16 | 076 |
| X12_GS02 | 3666646 |
| X12_GS03 | 1697048 |
| X12_GS07 | X |
| X12_GS08 | 003060 |
| X12_DESEP | 052 |
| X12_SEGTR | 176 |
| XFER_ADD | bbsftp.blackwell.com |
| XFER_SCR | ftpsendblackwell |
| XFER_MOD | ASCII |

- EDI address information will be supplied by vendor

- EDI reports use the EDI address fields to process x12 order and invoice records
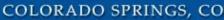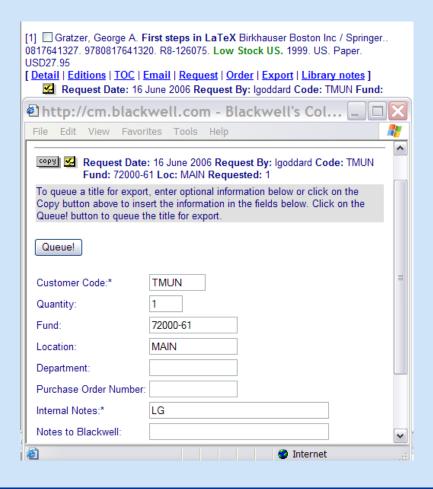
# Part 3: 9xx/EDI Step by Step

# Exporting 9xx records from vendor



- Selection made directly in vendor interface.

- Electronic selection slips are enriched with TOCs, reviews, author bios.

# Exporting 9xx records from vendor
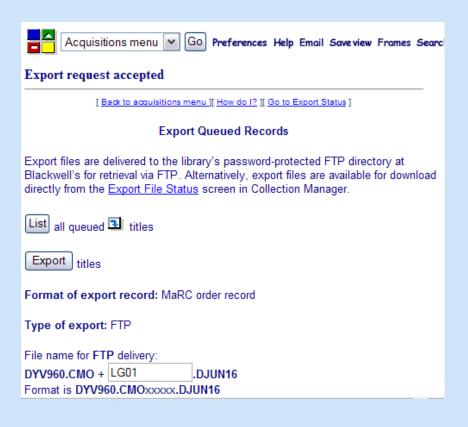


- Selector indicates fund # and holding code for each selected title.

- Titles are marked as "requested" in vendor system.

# Exporting 9xx records from vendor

[1] ☐ Gratzer, George A. **First steps in LaTeX** Birkhauser Boston Inc / Springer.. 0817641327. 9780817641320. R8-126075. **Low Stock US.** 1999. US. Paper. USD27.95
[ Detail | Editions | TOC | Email | Request | Order | Export | Library notes ]
    ☑ Request Date: 16 June 2006 Request By: lgoddard Code: TMUN Fund:

http://cm.blackwell.com - Blackwell's Col...

File   Edit   View   Favorites   Tools   Help

copy ☑ Request Date: 16 June 2006 Request By: lgoddard Code: TMUN Fund: 72000-61 Loc: MAIN Requested: 1

To queue a title for export, enter optional information below or click on the Copy button above to insert the information in the fields below. Click on the Queue! button to queue the title for export.

Queue!

Customer Code:*          TMUN
Quantity:                1
Fund:                    72000-61
Location:                MAIN
Department:
Purchase Order Number:
Internal Notes:*         LG
Notes to Blackwell:

Internet

- Acquisitions staff select all records marked as "requested" by a given selector.

- Records are sent to the export queue.

# Exporting 9xx records from vendor

Acquisitions menu ▾ Go Preferences Help Email Save view Frames Search

**Export request accepted**

[ Back to acquisitions menu ][ How do I? ][ Go to Export Status ]

**Export Queued Records**

Export files are delivered to the library's password-protected FTP directory at Blackwell's for retrieval via FTP. Alternatively, export files are available for download directly from the Export File Status screen in Collection Manager.

List all queued ⬇ titles

Export titles

**Format of export record:** MaRC order record

**Type of export:** FTP

File name for **FTP** delivery:
**DYV960.CMO +** LG01 **.DJUN16**
Format is **DYV960.CMOxxxxx.DJUN16**

- All queued records are batched into a single file for export.

- Staff include their own initials in file name for easy identification later.

- USD & GBP requests must be batched separately.

# Exporting 9xx records from vendor



- Staff can view a list of all files available for download.

- Each file contains a batch of request records.

# Exporting 9xx records from vendor



- Clicking on the name of a file initiates a download.

- Files are downloaded to local acquisitions workstation.

# Exporting 9xx records from vendor

- Downloaded files contain skeletal MARC records with order info in 9xx fields.

size=425 last=11 # tags=11
abs=1 num=000 start=88 len=9 amz 0n
abs=2 num=008 start=97 len=42 060421s2006 0
0 eng d
abs=3 num=010 start=139 len=15 2005036606
abs=4 num=020 start=154 len=19 1594549052|c79.00
abs=5 num=040 start=173 len=14 OrLoB|cOrLoB
abs=6 num=100 start=187 len=17 Killion, Ulric.
abs=7 num=245 start=204 len=94 12A modern Chinese journey to the
West :|beconomic globalization and dualism /|cUlric Killion.
abs=8 num=260 start=298 len=27 |bNova Science Pubs|c2006
abs=9 num=300 start=325 len=8 252 p.
**abs=10 num=960 start=333 len=46 |m1|o1|q06-15-06|s79.00|tMain|u72000-65|zUSD**
**abs=11 num=961 start=379 len=34 |fcdoody|hC2#VL595994 |iVL595994**

Order information is included in tags 960 & 961.

# 9xx Order Format

- Fund ID, Holding Code, Funded Quantity  (segments info) must appear as separate subfields within same tag.

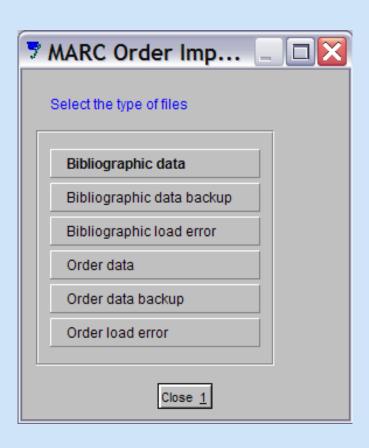  **.960.  |m1|o1|q06-15-06|s79.00|tMain|u72000-65|zUSD**

- Tag can be repeated to allow for ordering multiple copies from varying funds and/or for different holding codes.

- Unit Price and Currency are optional.

# 9xx/EDI Ordering: Unicorn Reports

1) Marc Order Import Utility Wizard

2) Load Bibs with Order Info (biborderload)

3) Load Flat Order Records (orderload)

4) Book X12 Orders (bookx12order)

5) EDI File Transmission

Step by step look at 9xx/EDI ordering in Unicorn…

# MARC Order Import Utility wizard
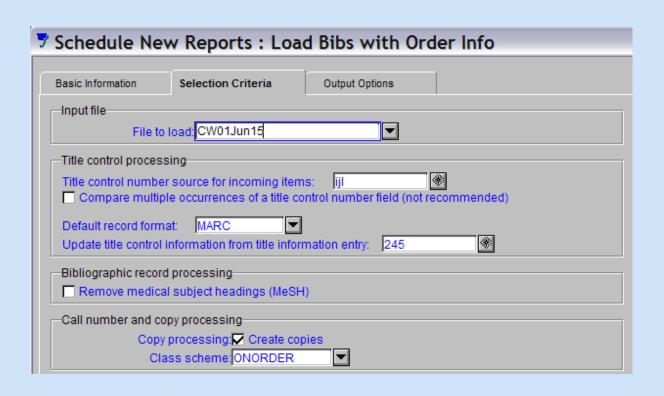


- Imports vendors' MARC records to server

- Order information included in 9xx fields

# MARC Order Import Utility wizard

**MARC Order Import Utility : Import ...**

Import File

Source: C:
\EDI\BW_9xx_downloads\CMOTEST.DJUN1
4.mrc

Destination: CW01Jun15

OK 1          Cancel 2

- Source = location of vendor record on C:

- Destination = name of file to be created on server

# Load Bibs with Order Info (Biborderload)

**Schedule New Reports : Load Bibs with Order Info**

| Basic Information | **Selection Criteria** | Output Options |

Input file
File to load: CW01Jun15

Title control processing
Title control number source for incoming items: ijl
☐ Compare multiple occurrences of a title control number field (not recommended)

Default record format: MARC
Update title control information from title information entry: 245

Bibliographic record processing
☐ Remove medical subject headings (MeSH)

Call number and copy processing
Copy processing: ☑ Create copies
Class scheme: ONORDER

- Loads skeletal MARC records

- Extracts flat order records from 9xx fields

# Load Bibs with Order Info (Biborderload)

- Bibliographic records will be matched according to report criteria: TCN source (e.g. ijl)

- Call number will always be created.

- Can use only AUTO class scheme (e.g. ONORDER)

- If desired, item can be created based on SIRSI holdings entry 999.

# Load Bibs with Order Info (Biborderload)

Duplicate Titles in Single File:

- Input file is checked for duplicate titles.

- Only one record will be loaded for a given title.

- Duplicate Title messages will appear in report output.

# Load Bibs with Order Info (Biborderload)

Matched Records:

- No "Title control number matching rule" to control whether duplicate bibliographic records are loaded.

- Matched records will be merged & existing 9xx fields overwritten.

# Load Bibs with Order Info (Biborderload)

MUN Work-around for Matched Titles:

- Bib records which were matched are noted by staff based on report output.

- Order lines for unintentional duplicates are manually removed after orders are loaded.

# Load Bibs with Order Info (Biborderload)

• 999 entry added to each bib record from 9xx fields

```
LOADED BIB RECORDS
Produced Thursday, 15 June, 2006 at 12:19 PM
000: : |aamz 0n
008: : |a060404s2006 0 0 eng d
010: : |a2005934182
020: : |a0761833552|c42.00
040: : |aOrLoB|cOrLoB
100: : |aScruggs-Leftwich, Yvonne.
245: 10 : |aConsensus and compromise :|bcr          the first
National Urban
Policy under President Carter
260: : |bUniv Press of America|c2006
300: : |a269 p.
999: : |hMAIN
```

Holding code
from 960 |t

Gadget: Segments...

Segments tag number: 960

Fund ID subfield: u
Quantity funded subfield: o
Holding code subfield: t

OK 1     Cancel 2

# Load Bibs with Order Info (Biborderload)



- Order records are extracted from 9xx fields of the skeletal MARC record, and flat order records are created.

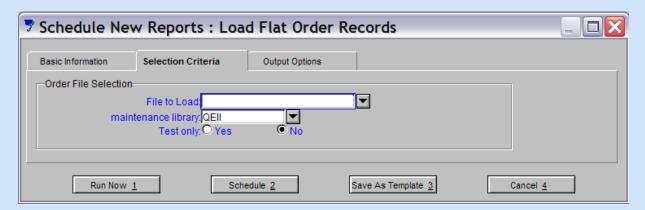# Load Bibs with Order Info (Biborderload)

- Report tests order load & identifies order records that are not going to load correctly.

- One orderline per bib record or one order per bib record.

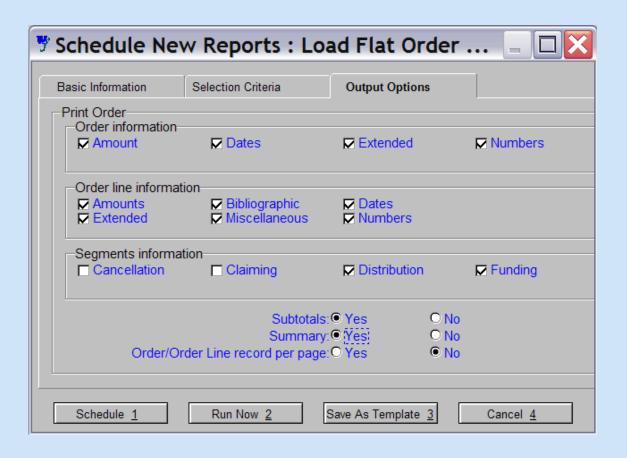- PO can be auto-generated by Unicorn, or loaded from 9xx fields from vendor.

# Load Bibs with Order Info (Biborderload)

- Extracted order records are placed in the Marcordimp/Orders directory with a unique file name.

```
*** DOCUMENT BOUNDARY ***
FORM=LDORDER
.VEND_ID.  |aACQ-BNA-EDI-USD
.ORDR_LIBR.  |aQEII
.FISCAL_CYCLE.  |a2007
.ORDR_ID.  |aPO-37457
.ORDR_TYPE.  |aFIRM
.ORDR_DATE_READY.  |a20060615
.ORDR_DATE_MAILED.  |a20060615
.LINE_ITEM_BEGIN.
.LINE_ITEM_ID.  |a1944190-1001
.LINE_TITLEID.  |a0761833552
.LINE_VEND_CURR.  |aUSD
.LINE_UNIT_PRICE.  |a42.00
```

```
.LINE_COPIES.  |a1
.LINE_DATE_MAILED.  |a20060615
.LINE_XINFO_BEGIN.
.COMMENT.  |aLG
.LINE_XINFO_END.
.LINE_ITEM_END.
.FUND_SEGMENT_BEGIN.
.LINE_FUND_ID.  |a72000-26
.LINE_FUND_COPIES.  |a1
.FUND_SEGMENT_END.
.DIST_SEGMENT_BEGIN.
.HOLDING_CODE.  |aMAIN
.DIST_SEGMENT_END.
```

# Load Flat Order Records (orderload)
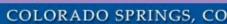


- Loads orders & orderlines created by biborderload report.

# Load Flat Order Records (orderload)



Output options allow acq staff to indicate which fields should be included in order & orderline records.

# Load Flat Order Records (orderload)

- Funds & vendors are automatically encumbered when orders are loaded

- Encumbered amount includes orders placed from a particular fiscal cycle that have not yet been invoiced, paid, canceled, or removed.

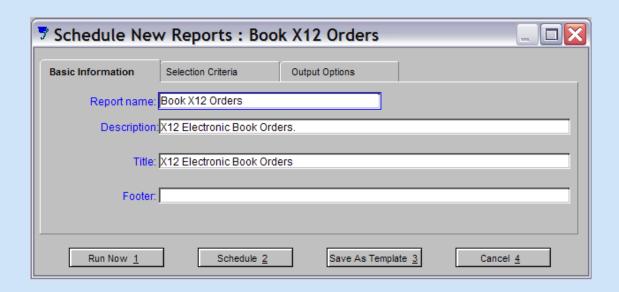# Load Flat Order Records (orderload)

Overencumbered/Spent Funds

- If Block Over Encumbrance is not selected, the order, orderline, and all fundings and distributions load.

- If Block Over Encumbrance is selected, the order and orderline load, but the funding and associated distributions do not.

- "Test Only" option available in Load Flat Order Records.

# Load Flat Order Records (orderload)

## Modify Order:Displaying PO-37457

| Order ID/Line | Vendor ID | FISCAL |
|---|---|---|
| PO-37457/ALL | ACQ-BNA-EDI-USD | 2007 |

| Total Line Items | Library | Total Copies Ordered |
|---|---|---|
| 5 | QEII | 5 |

**Order** | **Orderlines**

| Line | Title |
|---|---|
| 1 | Consensus and compromise : creating the first national urban policy under President Carter / Yvonne |
| 2 | In the shadow of Wounded Knee : the untold final chapter of the Indian Wars / Roger L. Di Silvestro. |
| 3 | Japan's security strategy in the post-9/11 world : embracing a new realpolitik / Daniel M. Kliman ; fore |
| 4 | The Jewish divide over Israel : accusers and defenders / Edward Alexander, Paul Bogdanor, editors. |
| 5 | Sophie Scholl and the White Rose / Annette Dumbach, Jud Newborn. |

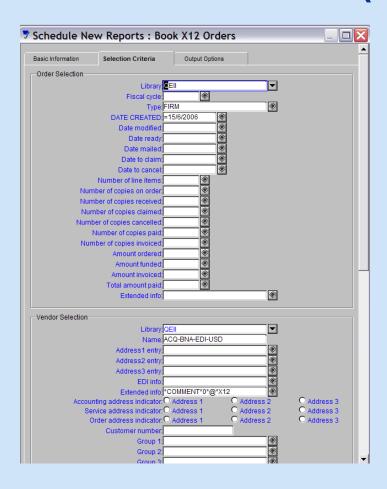Modify Orderline 1    Add Orderline 2    New Search 3    Close 4

# Book X12 Orders (BOOKX12ORDER)



• Prepares the Unicorn PO in an X12 formatted file for the vendor.

# Book X12 Orders (BOOKX12ORDER)



- Selects orders based on date created, vendor, and the string "X12 capable" in the vendor COMMENT field.

# Book X12 Orders (BOOKX12ORDER)

- REC_TRANS   850:bookorder.map

- /Unicorn/Edi/Data/bookorder.map

- Encodes Sirsi PO elements into x12 standard formatting.

# Book X12 Orders (BOOKX12ORDER)

- /Unicorn/Edi/Outgoing/15425/1002.x12
- PO & orderline information is included to enable invoice matching.

ISA*00*      *00*      *ZZ*3666646      *ZZ*1697048      *060615*172
7*U*00306*000001002*1*P*>~GS*PO*3666646*1697048*060615*1727*1002*X*003060
~ST*850*100200001~BEG*00*NE***2007-PO-37457*** 060615~REF *IT*3666646~N1*BS*
Queen Elizabeth II Library*91*3666646~N4*St. John's, NL**A1B 3Y1

~**PO1*1*1***EA*46.16*PE*IB*0761833552~PID*F*08*ZZ*A1*Scruggs-Leftwich,
Yvonne.~PID*F*08*ZZ*T1*Consensus and compromise : creating the first National Urban
Policy under Presid~PID*F*08 *ZZ*T2*ent Carter~REF*CR*1

~**PO1*2*1***EA*27.48*PE*IB*0802714617~PID*F*08*ZZ*A1*DiSilvestro, Rog
er L.~PID*F*08*ZZ*T1*In the shadow of Wounded Knee : the untold final chapter of the
Indian Wars / Ro~PID*F*08*ZZ*…

# Book X12 Orders (BOOKX12ORDER)

X12 records are written to /Unicorn/Edi/Outgoing/*vendorkey*

/s/sirsi/Unicorn/Edi/Outgoing/15425

= all orders for Blackwell's (USD)

/s/sirsi/Unicorn/Edi/Outgoing/15426

= All orders for Blackwell's (GBP)

# Book X12 Orders (BOOKX12ORDER)

Adds record of x12 file creation to /Unicorn/Edi/Data/translist:

1051|15425|7|O|200607201200|000000000000|N|

1051 = x12 file name 1051.x12

15425 = /s/sirsi/Unicorn/Edi/Outgoing/15425 (Blackwell's USD)

O = Outgoing

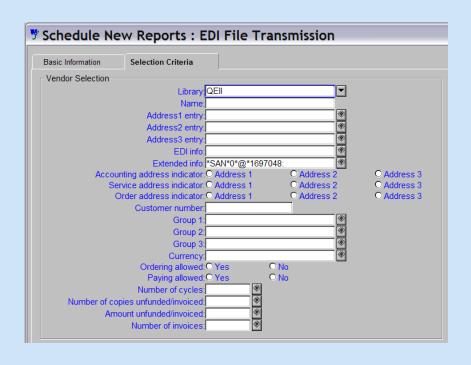200607201200 = date x12 file created

000000000000 = date file sent (never)

# EDI File Transmission



- Sends X12 order records to vendor's ftp server.

- Selects all records for vendor with SAN 1697048 (Blackwell's USD).

# EDI File Transmission

- Selects vendor key for vendor with SAN 1697048 (Blackwell's USD) = 15425

- Reads translist for all files from 15425, of type order (O), with a date sent of 000000000000

    1051|15425|7|O|200701031334|000000000000|N|

- Locates appropriate X12 order files for upload:
  /Unicorn/Edi/Outgoing/1051.x12

# EDI File Transmission

- Uses receive script from vendor EDI address XFER_SCR field (/Unicorn/Edi/Scripts/ftpsendblackwell.pl)

- Script creates connection with vendor FTP server based on variables in EDI address

  .XFER_ADDR. = vendor ftp server address

  .XFER_USER. = ftp username

  .XFER_PASS. = ftp password

  .XFER_MODE. = ASCII or BIN

  .FTP_PASS. = use passive ftp?

# EDI File Transmission

- Updates EDI translist entry with date file was sent .

  1051|15425|7|O|200701031334|200701031334|N|

# Vendor Acks Receipt of Orders

TO: TMUN-E - MEMORIAL UNIVERSITY OF NEWFOUNDLAND - ACQUISITIONS

We have received and are processing the following order(s) for you.

| QTY | ISBN | ISBN13 | TITLE | CUST | PO# |
|-----|------|--------|-------|------|-----|
| 1 | | 9780819567741 | Glamour addiction : inside the | | 2007-PO-39329 |
| 1 | | 9780742542679 | Science of God : truth in the | | 2007-PO-39329 |
| 1 | | 9780802094247 | A history of Canadian legal th | | 2007-PO-39329 |
| 1 | | 9780802039026 | International law and indigeno | | 2007-PO-39329 |
| 1 | | 9781933146294 | Reading America : text as a cu | | 2007-PO-39329 |
| 1 | | 9780802094568 | Hunting the 1918 Flu : One Sci | | 2007-PO-39329 |
| 1 | | 9780807830369 | The American Civil Liberties U | | 2007-PO-39329 |
| 1 | | 9780226238043 | Sloan rules : Alfred P. Sloan | | 2007-PO-39330 |
| 1 | | 9780415348058 | Managing modernity : politics | | 2007-PO-39330 |
| 1 | | 9780335212576 | Understanding drugs, alcohol a | | 2007-PO-39330 |
| 1 | | 9780415333856 | Restructuring the Chinese city | | 2007-PO-39330 |

# EDI Invoicing: Unicorn Reprts

1) EDI File Retrieval Via FTP (ediretrieveftp)

2) EDI File Receiving (edireceive)

3) Book X12 Invoices (BOOKX12INVOICE )

Step by step look at EDI invoicing in Unicorn…

# Vendor notification: EDI invoices

From: techserv@blackwell.com
Sent: Tuesday, September 05, 2006 3:20 PM
To: Goddard, Lisa
Subject: XIO File Is Ready

Your data is now available to be retrieved via ftp from bnaftp.blackwell.com.
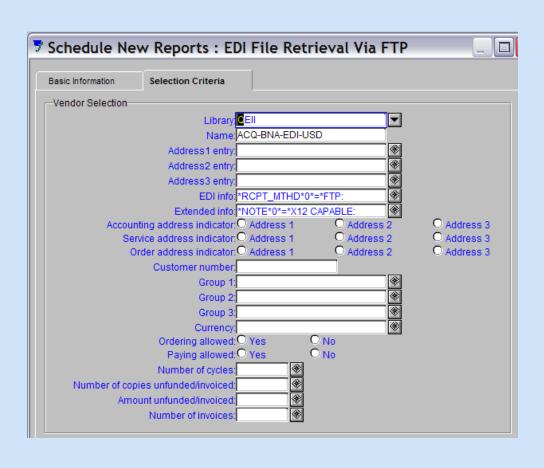Details for the file follow:

EDI X12 Invoices

Segment count:            33
byte count:          2,640
File name:    DYV960.XIO01.TMUN-E.D03SEP06

Remember to exclude the UserID (i.e., the first six characters of the file
name) when using the file name with the GET command.

# EDI FILE RETRIEVAL Via FTP (ediretrieveftp)



- Selects vendors according to report criteria

- Connects to vendor server and downloads X12 invoice files

# EDI FILE RETRIEVAL Via FTP (ediretrieveftp)

- Uses receive script from vendor EDI address RCPT_SCR field (/Unicorn/Edi/Scripts/ftpreceiveblackwell.pl)

- Script creates connection with vendor FTP server based on variables in EDI address

# EDI FILE RETRIEVAL Via FTP (ediretrieveftp)

Checking for EDI files at ACQ-BNA-EDI-USD.
…
Connecting to host bbsftp.blackwell.com
Receiving file(s) into the INBOX...
File XIO01.TMUN-E.D03SEP06:
  Downloaded to ftp_PfYhya.x12.
  Deleted from remote server.
1 file(s) retrieved.
File XIO01.TMUN-E.D10SEP06:
  Downloaded to ftp_RZabEa.x12.
  Deleted from remote server.
2 file(s) retrieved.

# EDI FILE RETRIEVAL Via FTP (ediretrieveftp)

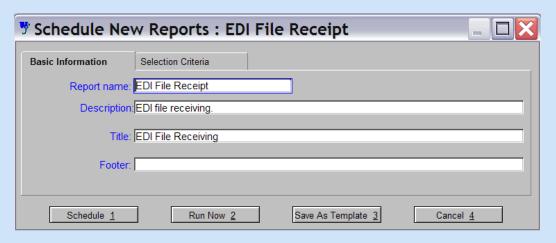Vendor X12 files are written to /Unicorn/Edi/Incoming

ISA*00*        *00*        *ZZ*1697048        *ZZ*3666646
*061210*203

0*U*00306*000000031*0*P*~^GS*IN*1697048*3666646*061210*203
0*20*X*003060ST*810*0 00000026^BIG*061204*10765360^N1*BY
**91*TMUN-E^N1*SE**ZZ*1697048^ITD*01*3****070118*45^ IT1*
1*1*EA*79**IB*141292555X*EN*9781412925556*VN*23144431*PO*
2007-PO-38853^PID*F**ZZ*A1*Coman, Mihai.^PID*F**ZZ*T1*Media
anthropology^PID*F**ZZ*B4*HBK^REF*CR*1^IT1*2*1*EA*50.44**IB*
1558609016*EN*9781558609013*VN*25727008*PO*2007-PO-38
856^PID*F

# EDI File Receiving (edireceive)



- Reformats X12 invoice for load into Unicorn.

- Must include vendor fiscal cycle in selection criteria

# EDI File Receiving (edireceive)

- REC_TRANS field (810:bookinv.rmap)

- /Unicorn/Edi/Data/bookinv.rmap

- Decodes X12 invoice file into flat file formatted for load into Unicorn.

# EDI File Receiving (edireceive)

- Formatted invoice is written to /Unicorn/Edi/Receive/

.INVOICE_DATE. 061204
**.INVOICE_ID. 10765360**
.INVLINE_COPIES. 1
.UNIT_PRICE. 79.00
**.ORDERLN_NUM. 1**
.ISBN. 141292555X
.ISBN. 9781412925556
.ORDER_FC_ID. **2007-PO-38853**
.INVLINE_COPIES. 1
.UNIT_PRICE. 50.44
**.ORDERLN_NUM. 2**
.ISBN. 1558609016
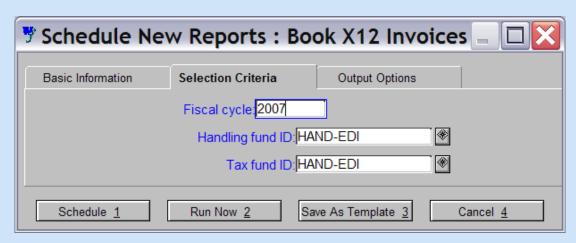.ISBN. 9781558609013
**.ORDER_FC_ID. 2007-PO-38856**

Invoice contains PO information for matching invoice lines against order lines

# Book X12 Invoices (BOOKX12INVOICE )

- Updates translist, one line per invoice received

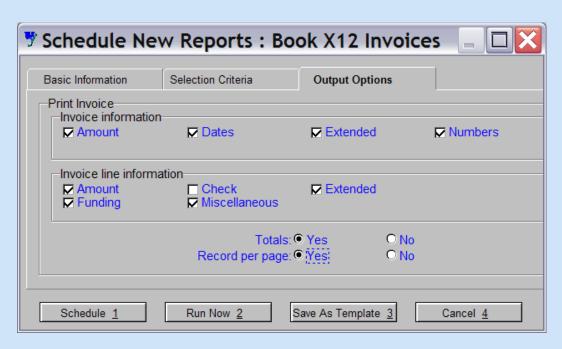  1046|15425|10|I|200611291338|000000000000|N|

# Book X12 Invoices (BOOKX12INVOICE )

**Schedule New Reports : Book X12 Invoices**

| Basic Information | **Selection Criteria** | Output Options |
|---|---|---|

Fiscal cycle: 2007

Handling fund ID: HAND-EDI

Tax fund ID: HAND-EDI

Schedule _1_  Run Now _2_  Save As Template _3_  Cancel _4_

- Loads X12 invoices
- Must include fund ID to which shipping/handling and tax lines will be written

# Book X12 Invoices (BOOKX12INVOICE )



- Output options determine what information is included in invoice & invoice lines

# Book X12 Invoices (BOOKX12INVOICE )

- Checks translist for any invoices (fourth field = I) with a date loaded of 000000000000 (never)

  1046|15425|10|I|200611291338|000000000000|N|

# Book X12 Invoices (BOOKX12INVOICE )

- Loads invoices and invoice lines.

- Updates translist entry with date loaded.

- Output details all invoices created, and the orderlines with which they are associated.

# Book X12 Invoices (BOOKX12INVOICE )



Invoice is now ready for processing in Unicorn.

# Data Feed: Unicorn to Banner

- Sel script to select all invoice records from ACQ-BNA-EDI-USD.

- Invoice selection according to invoice date.

- Invoices output to flat ASCII file.

# Data Feed: Unicorn to Banner

```
Invoice ID:10765361              Vendor ID:ACQ-BNA-EDI-USD
currency:USD
     invoiced:$61.81          total paid:$0.00
     (invoiced:$71.36          total paid:$0.00          )
dates--
   DATE CREATED:19/12/2006  date modified:19/12/2006  date
invoiced:4/12/2006
--------------------------------------------------------------------------
 1)      Order Line
.block
                          exchange:.8660
     invoiced:$21.10            total paid:$0.00
     (invoiced:$24.36            total paid:$0.00          )
 Fund:72000-99          copies:1      amt:$24.36
```

# Data Feed: Unicorn to Banner

Perl script to parse pertinent data elements out of invoice:

| Vendor ID | Vendor Inv. # |
|---|---|
| Invoice Date | Vendor Name |
| Seq # | Tax Type |
| Payment Due | Inv .Total Before Taxes |
| Currency | Fund |

# Data Feed: Unicorn to Banner

Perl script combines these fields with other data elements necessary for Banner feed.

- Document Code (Assigned by Financial Services)

- Record Type Indicator (Constant)

- Invoice Type (Constant)

- Organization Number (Constant)

- Program Code (Constant)

- PO Liquidation Indicator (Constant)

# Data Feed: Unicorn to Banner

- Outputs delimited file with all necessary elements.

- Each line represents a single invoice.

  I71370011,1,INNI,Blackwells,0001697048,10272006,
  000000006181,100001,41730,72000,3100,10765361,11272006,N,
  HH

  Document Code, Record Type Indicator, Invoice Type, Commodity
  Description, Vendor ID, Invoice Date, Transaction Amount, Fund
  Code, Org. Code, Account Code, Program Code, Vendor Invoice
  Number, Due Date, PO Liquidation Indicator, Tax Group

# Data Feed: Unicorn to Banner

- Banner AP Header added to each feed file:

  UNICFEED,0,UNIP01,10282006,000000006181,Unicorn Feed BNA,06

  System Identification, Record Type Indicator, Batch Identifier, Batch Date, Batch Amount, Batch Description, Bank Code

- Feed FTP'd to Banner Server at Financial Services.

# Part 4: Identified Obstacles & Challenges

# Implementation Challenges

- Acquisitions Workflow

  – Cannot easily recreate paper-based workflow in electronic environment
  – Substantially changes work processes of acquisitions staff

# Implementation Challenges

- Systems support

  – Implementation requires substantial planning and coordination by Systems division

- Training needs

  – For selectors to place requests in vendor interfaces
  – For acquisitions staff to learn new processes

# Implementation Challenges

- De-duping of orders

  - No easy way to test for duplicate bibliographic record before loading orders.
  - Ideally the vendor interface would provide an ISBN search link to catalogue.

# Implementation Challenges

- Multiple vendors

  - MUN currently divides monograph orders among three major vendors: Blackwell's, YBP, Coutts
  - Acq staff usually select vendor to meet quotas
  - 9xx orders are made from the vendor native interface by selector
  - Slip de-duping between vendors

# Part 5: Conclusions

## Conclusions

- Potential for streamlining business processes.

- Need to revisit processes and policies which were developed in paper-based environment.

- Need to consider cost/benefit of purchasing full MARC records & TOC enrichment from vendor.

- Implementation requires significant investment of time and interdepartmental co-operation.