

MOBIUS Catalog Design Advisory Group Meeting
10/29/99

RECORD LOADING AND STRUCTURE

All record loading to the INN-Reach Catalog is accomplished by moving records across the network from the Local Systems to the INN-Reach Catalog. The records are not loaded from tape. Once the initial load from a site is started, all additions or changes to records on the Local Systems are automatically sent by the Local System to the INN-Reach Catalog. Staff do not need to perform any extra procedures for the records to move from the Local System to the INN-Reach Catalog.

On the Local Systems, a program called "Control" processes all new records and modifications and writes most transactions to a queue for transmission to the INN-Reach Catalog (see below for a list of transactions which queue to Central). On the INN-Reach Catalog, a program constantly queries the Local Systems to see if anything is waiting in the queues. If so, the transactions transfer to the INN-Reach Catalog. The INN-Reach Catalog automatically balances incoming transactions from the different sites so that large updates from one system do not delay the processing of records from another site.

TRANSACTIONS THAT QUEUE TO CENTRAL

Changes to the following fields cause transactions to queue to Central:

Local Record Type Field Names

Bibliographic Any field

Item Any field

Order ACQTYPE, CODE3 (pub type), LOCATION,
STATUS, CODE4 (Central suppression), RDATE

Checkin INNOPAC Tag 'c' (call number), LOCATION,
INNOPAC Tag 'h' (lib has), INNOPAC Tag 'i' (identity),
SCODE2 (Central suppression)

Master Record

The INN-Reach Catalog is designed so that one Bibliographic record from one of the contributing libraries serves as the INN-Reach Catalog's "master" Bibliographic record. The library that contributes that record is considered the "owner" of the record. Holdings information from other libraries which have the same title display with the master Bibliographic record, including local Call Numbers, Shelving Locations, and Circulation Status.

The master Bibliographic record represents one of the contributed records from one of the participating libraries. As records are transmitted to the INN-Reach Catalog from the Local Sites, the Central System matches them with other records already in the database. When two or more copies of the same record are sent to the INN-Reach Catalog, the system determines which Bibliographic record to use as the master Bibliographic record.

Master Record Priority

The determination of a master record is based upon the Encoding Level (MARC Leader Byte 17) and the Library Load Priority Table as follows:

1. If the incoming Bibliographic record has a higher Encoding Level than the existing record, the incoming record replaces the existing record.

2. If the incoming record has a lower Encoding Level, the existing record is retained, and a LOCAL PAC field (945) for the incoming library record is added to the existing record.

3. If the Encoding Level is the same, or in the same Encoding Group (described below), the Central System consults the Library Load Priority Table to determine if the incoming record should replace the existing record. If the Library Load Priority Level of the incoming record is higher, the existing record is replaced (overlaid). If the Priority Level of the incoming library is lower, a LOCAL PAC field (945) is added to the master Bibliographic record for the institution. If the Priority Levels are the same, the record entered on the system first is retained as the master Bibliographic record, and a LOCAL PAC field for the later entry is added to the master Bibliographic record.

Each Local System is assigned a load priority number used only for determining which of two records with equal Encoding Levels should be loaded as the master Bibliographic record. Libraries may each have a distinct Priority Number, may all have the same Priority Number, or some libraries may be grouped under the same Priority Number.

Encoding Levels are grouped, with some Levels considered equal. For example, Encoding Levels 5 (partial level) and 7 (minimal level) have equal load value in the table below. The following Encoding Levels and Encoding Groups encompass both standard codes found in US MARC and codes defined by OCLC. The list begins with the highest level first, i.e., group 10.

Library Load Priority Encoding Levels

ENCODING GROUP	ENCODING LEVEL	MEANING
10	(blank)	Full Level
9	I	Full Level input by an OCLC library
8	1	Full Level, material not examined
7	L	Non-LC & non-NLM loaded from tape
6	K	Less than full input by an OCLC library
	J	Record deleted by LC from MARC file
	2	Less than full level
	M	Less than full level, tape loaded
5	8	CIP prepublication data
4	5	Partial level
	7	Minimal level
3	E	System-identified error in LC MARC record
	W	Warning, possible error in LC MARC record
2	U	Unknown
	Z	Not applicable

The Encoding Level is extracted from byte 17 of the MARC Leader. This data displays on Local INNOPAC records when the 008 field is expanded in the UPDATE EXISTING RECORDS function described in the INNOPAC User Manual.

Record Matching & Overlaying

The INN-Reach Catalog receives new records, modifications to existing records, and deletions of existing records. As modifications occur, the Central System locates the appropriate record (or field in an Institution record) and performs the change. For example, as an item circulates on the Local System and is checked out, the Circulation Status and Due Date are transmitted to the INN-Reach Catalog. The Item field in the Institution record is modified to reflect this activity.

The INN-Reach Catalog also automatically deletes records and splits records. An example of a split would be when a library updates a Local Bibliographic record using a different bibliographic utility record and, therefore, the bibliographic utility number no longer matches the master Bibliographic record in the INN-Reach Catalog. In this case, the system splits the master record into two distinct master records—one with the original bibliographic utility number for the institutions that continue to use that number and one for the updating library.

Strategy for Matching Records

If an existing record and an incoming record have matching bibliographic utility (MARC 001) numbers, the records are considered matched. If the bibliographic utility numbers do not match, INN-Reach compares the ISBNs. If the ISBNs match, further verification on the title is performed before considering the records matched. The ISBN match is performed only if there is no match of bibliographic utility numbers.

Matching a New Record to the INN-Reach Catalog

1. When a new Bibliographic record is added to a Local System, the record is transmitted to the INN-Reach Catalog. The bibliographic utility number of the incoming record is compared with those in the INN-Reach Catalog. If a match is found, the records are considered matched. See step 3 below.

2. If no bibliographic utility match is found, the ISBN of the incoming record is compared with the INN-Reach Catalog records. If a match is found, the following verifications take place:

a. The bibliographic utility numbers are checked again.

- If the records have different bibliographic utility numbers, then it is not considered a match of records.
- If one record has a bibliographic utility number and the other does not, it is considered a match of records.
- If neither record has a bibliographic utility number, it is considered a match of records.

b. For any match of records, the titles are then verified. If the first three significant words of the title match, the records are considered a match. The initial article of the title will be skipped in this verification (based on 245 field, second indicator).

c. If no match is found, the incoming record will be added to the INN-Reach Catalog as a new Bibliographic record, and the contributing library will be noted as the owner of the record.

3. If a match is made, the system determines which record will serve as the master Bibliographic record based on Encoding Level and Library Load Priority. See the discussion of Master Record Priority.

Changing an Existing INN-Reach Catalog Record

When a Bibliographic record is changed on the Local System, the changed record is transmitted to the Central Catalog. This record is compared with its earlier version on the Central Catalog using the following procedures:

1. If the contributing library is the owner of the record and no other library's holdings are attached to the master record, the existing record is replaced with the incoming record. If either the bibliographic utility number or ISBN has changed in the record, then matching (as outlined above in Matching a New Record) is performed to see if the record matches any others in the system.

2. If the contributing library is not the owner of the master record, but the Encoding Level of the incoming record is now greater than the existing master record, the incoming record overlays the existing record and becomes the new master record. The contributing library becomes the new owner.
3. If the contributing library is the owner of the master record and other library's holdings are attached or if the contributing library is not the owner of the record, the master record splits if either of the following conditions apply:

- The bibliographic utility number of the incoming record is different than that of the existing master record
- The incoming record has no bibliographic utility number and the ISBN is different than that in the existing record

If a split occurs, and the incoming record is not from the site that holds the master record, the incoming record becomes a new master record, owned by the contributing site, and is subject to matching with the database as specified above.

If a split occurs, and the incoming record is from the site that holds the master record, the Central System attaches the existing holdings to a new master record selected from among the other contributing sites, and both master records are subject to matching with the database as specified above.

Whether a split occurs or not, if either the bibliographic utility number or ISBN has changed, then matching as specified in Matching a New Record is performed to see if the incoming record matches any others in the system.

Notes

- ISBN matching is performed on only the first 10 significant digits of the ISBN. Hyphens are stripped prior to matching. If multiple ISBNs occur in the incoming record, then each ISBN in turn is used for matching until a match is found or until all possibilities are exhausted.
- If multiple ISBN matches occur, the system performs match testing on each subsequent ISBN match until a successful match is made or until all possibilities are exhausted. It is possible to have multiple records with matching ISBN numbers but with different titles and/or bibliographic utility numbers.
- Only one bibliographic utility number is allowed in an incoming record.

Deleting an INN-Reach Catalog Record

Each time a contributing library deletes a local record, a transaction is sent to the INN-Reach Catalog where the corresponding Bibliographic or Institution record is updated or deleted.

1. If the contributing library deletes an Item, Order, or Checkin record, the Item, Order, or Checkin field is deleted from the site's corresponding Institution record on the INN-Reach Catalog. If no Item, Order, or Checkin field remains, the Institution record is removed.
2. If the contributing library does not own the master record and deletes a Bibliographic record, the Central System deletes the site's LOCAL PAC field from the master Bibliographic record.
3. If the contributing library owns the master record and deletes its local Bibliographic record, the Central System deletes the master Bibliographic record. However, if there are records attached to the master record, the Central System also retrieves a new master record from another contributing library.

Record Structure

The INN-Reach Catalog primarily consists of master Bibliographic records to which are linked Institution records containing the specific holdings of the participating libraries. The INN-Reach Catalog may also contain Authority records.

Bibliographic Records

The Bibliographic records are MARC-tagged standard Bibliographic records. Since a Bibliographic record is contributed by one site but shared by all, it contains fields common to all libraries. As the records load into the INN-Reach Catalog, only the fields that are part of a standard Bibliographic record are retained in the INN-Reach Catalog. All local fields, such as 590 local notes, are retained only in the Local Systems.

INNOPAC automatically codes the Bibliographic record to indicate which Local System contributed the record. The system also automatically constructs and maintains one field (MARC tag 945 in the Bibliographic record) for each Institution record that is linked to this master Bibliographic record.

You searched for the TITLE: africa insight
B100194680 BIBLIOGRAPHIC Information
LANG: eng LOCATION: mu3ug BIB LEVEL: s BCODE3: N
SKIP: 0 CAT DATE: 04-23-90 MAT TYPE: s COUNTRY: sa
001 6746011
008 800924c19809999sa qr p 0uuua0eng dnasI
040 SUC|cSUC|dm.c.|dMIA
245 00 Africa insight
260 01 Pretoria,|bAfrica Institute of South Africa
300 v.|bill.|c30 cm
362 0 v. 10- 1980-
651 0 Africa|xEconomic conditions|y1945-|xPeriodicals
651 0 Africa|xSocial conditions|xPeriodicals
710 20 Africa Institute of South Africa
780 00 |tSouth African journal of African affairs|w(OCOLC)1035624
945 mu3ug|bb1142885|ci10000719|o1|sN
945 to1ug|bb1184049|ci18677781|sN

R > Browse Nearby Entries	I > Show similar ITEMS
N > NEW Search	P > PRINT
A > ANOTHER Search by TITLE	T > Regular Display
S > Record SUMMARY	E > Mark item for EXPORT

Choose one (R,N,A,S,I,P,T,E)
Sample Master Bibliographic Record

The LOCAL PAC field contains the following subfields:

\$a 5-character institution site code
\$b Bibliographic record number on Local System
\$c Institution record number on Central Catalog
\$o Master record holder - contains a "1" if this institution is the "owner" of this Bibliographic record on the Central Catalog
\$s Suppression code
G means display as owned by system not by site
N means do not suppress (Local record BCODE3 is not l or n)
Y means suppress (Local record BCODE3 is l or n)

If a LOCAL PAC field contains a 'Y', the holdings of that library will not be displayed in the INN-Reach Catalog. If all of the LOCAL PAC fields have 'Y' in their \$s subfields, the BCODE3 for the master Bibliographic record is changed to 'Y', and the entire record will be suppressed from public display.

Institution Records

Linked to the master Bibliographic record are Institution records for each institution which has the corresponding Bibliographic record and associated Item, Checkin, or Order records on its Local System. INNOPAC automatically creates the Institution record and all necessary fields as records are transmitted across the network from the Local Systems. The Institution record is a type of INNOPAC record unique to INN-Reach Catalogs, and it stores information about all the Local attached records. Institution records contain the following fields:

- Location field - indicates the Local System code
- Record field - indicates the Local Site's Bibliographic record number
- Item fields - one for each attached Item record on the Local System
- Checkin fields - one for each attached Checkin or Serial Holding record on the Local System
- Order fields - one for each attached Order record on the Local System

You searched for the TITLE: almanac of business and ind
B100308600 BIBLIOGRAPHIC Information
TITLE Almanac of business and industrial financial ratios / by Leo Troy
IMPRINT Englewood Cliffs, N.J. : Prentice-Hall,

I100043884 INSTITUTION Information

.....
LOCATION: ci3ug
947 c152267|ccrefs|eHF5681.R25 T68x|f1976-1992, 1996-|g1996 |hannual|sN
948 o335349|bp|ccrefs|f1 copy ordered on 07-25-96|p4|sN
949 i3429019|b0|ccrefs|eHF5681.R25 T68x|v1996|w1|fo|sN
998 b2002260

M > MORE INSTITUTION Record A > ANOTHER Search by TITLE
R > RETURN to Browsing S > Record SUMMARY
F > FORWARD browse I > Show similar ITEMS
N > NEW Search + > ADDITIONAL options
Choose one (M,R,F,N,A,S,I,P,U,T,E,+)
Sample Institution Record

Data stored in the Item, Order, Checkin, and Record subfields are:

Item Field - i field (MARC tag 949)

\$a Item Record number on Local System
\$b Item type from Local System
\$c 5-character location code from Local System
\$e Call Number - The Call Number is taken from the Item record on the Local System. If no Call Number exists in the Item record, then the system uses the Call Number in the local Bibliographic record.
\$n Notes. Contains the contents of the note field (i.e., "x" field) in the Item record on the Local System
\$v Volume number
\$w Copy number
\$f Circulation Status code, including due date and holds if appropriate
byte 1 - one character local Item STATUS code
bytes 2-3 - two bytes indicating # of holds
bytes 4-9 - six bytes in network date format (yyymmdd) show due date
(Bytes 2-9 only occur when a due date or holds exist.)
\$s Suppression code

N means do not suppress (local record ICODE2 is not 1 or n)

Y means suppress (local record ICODE2 is 1 or n)

Example: i3429019|b0|ccrefs|eHF5681.R25 T68x|v1996|w1|fo|sN

Order Field - o field (MARC tag 948)

\$a Order Record number on Local System

\$b Acquisitions Type Code (ACQTYPE) on Local System

\$c 5-character location code on Local System (one for each location)

\$f Order status, containing one of two OPAC displayable phrases:

"x copies ordered on mm-dd-yy"

"x copies in process"

\$p CODE3 of order record

\$s Suppression Code

N means do not suppress (local record CODE4 is not 1 or n)

Y means suppress (local record CODE4 is 1 or n)

Example: o335349|bp|ccrefs|f1 copy ordered on 07-25-96|p4|sN

NOTE

The OPAC message "x copies ordered on mm-dd-yy" is stored in the INN-Reach Central order field unless there is a received date in the RDATE field of the local Order record. If there is a received date in the RDATE field of the local Order record, the message "x copies in process" is stored instead.

The "z" cancelled status in a local Order record does not affect what is stored on INN-Reach Central. Cancelled Order records will display as "ordered" or "in process" based on the RDATE unless they are suppressed from display on INN-Reach Central.

Checkin Field - c field (MARC tag 947)

\$a Checkin record number on Local System

\$c 5-character shelving location code from Local System (one for each location)

\$e Call Number - Extracted from the local Checkin record. If no call number exists in the local Checkin record, the system extracts the call number from the local Bibliographic record.

\$f Summary holdings statement from local Checkin record

\$g Last issue received --***not updated, used, nor displayed

\$h Identity field from local Checkin record

\$s Suppression code

N means do not suppress (local record SCODE2 is not 1 or n)

Y or any other value means suppress (local record SCODE2 is 1 or n)

Example: c152267|ccrefs|eHF5681.R25 T68x|f1976-1992, 1996-|g1996|hannual|sN

Record Field - r field (MARC tag 998)

Bibliographic record number on Local System (identical to subfield \$b in the 945 field in the master Bibliographic record)

Example: b2002260

STANDARD VALUES IN LOCAL BCODE3, ICODE2, CODE4, SCODE2 FIELDS

Code Meaning

- Contribute to Central; display in both Local and Central OPAC (subfield \$s in Central Bib LOCAL PAC, or Item, Order, Checkin fields set to 'N')

1 Contribute to Central; display in Local OPAC; do not display in Central OPAC

- (subfield \$s in Central Bib LOCAL PAC, or Item, Order, Checkin fields set to 'Y')
- n Contribute to Central; do not display in Local OPAC; do not display in Central OPAC
(subfield \$s in Central Bib LOCAL PAC, or Item, Order, Checkin fields set to 'Y')
 - z Do NOT contribute to Central; display in the Local OPAC
 - s Do NOT contribute to Central; do not display in Local OPAC
 - g Contribute to Central. Display at Central, but do not show Local Site's holdings.
Display record with a general <SYSTEM> owns message: <SYSTEM> Resource
 - o Contribute to Central. Display at Central, but do not show Local Site's holdings.
Display record with a general <SYSTEM> owns message: <SYSTEM> Resource.
Do not display on Local OPAC.

Items Linked to Multiple Bibliographic Records

On the Local INNOPAC, a single Item record may be linked to multiple Bibliographic records. When these records are transferred to the Central Catalog, each of the Central Catalog's copies of these Bibliographic records is linked to an additional Institution record which has an IFIELD (MARC tag 949) that contains the record number of the common Item record in the Local Catalog. For example, the following Local INNOPAC title's Item record (record number I1006628) is linked to three Bibliographic records:

B10056671 BIBLIOGRAPHIC Information
 CALL # TP155 .C54 no.280-282
 TITLE Enhanced oil recovery / Amit Chakma, M. Rafiq Islam, and Franco
 Berruti, editors
 IMPRINT New York, N.Y. : American Institute of Chemical Engineers, 1991
 IMPRINT 9102
 I10066287 ITEM Information
 COPY #: 1 PATRON#: 0 ODU DATE: - - LOANRULE: 0
 ICODE1: 0 LPATRON: 1134456 IUSE3: 0 STATUS: -
 ICODE2: - LCHKIN: 03-03-97 RECAL DATE: - - INTL USE : 2
 I TYPE: 1 INVDA: - - TOT CHKOUT: 4 COPY USE: 0
 PRICE: \$0.00 # RENEWALS: 0 TOT RENEW: 1 IMESSAGE:
 OUT DATE: - - # OVERDUE: 0 LOCATION: uen OPACMSG:
 DUE DATE: - -
 BARCODE 404-112056445
 ALSO LINKED TO BIB RECORD .b1005666x .b10087606

At the Central Catalog, each of the corresponding Bibliographic records are linked to an Institution record which contains an IFIELD that refers to the common local Item record (record number I1006628). Two of these records are shown below:

B101253229 BIBLIOGRAPHIC Information
 TITLE Enhanced oil recovery / Amit Chakma, M. Rafiq Islam, and Franco
 Berruti, editors
 IMPRINT New York, N.Y. : American Institute of Chemical Engineers, 1991
 IMPRINT 9102
 I250755002 INSTITUTION Information
 LOCATION: ci3ug
 I FIELD i1006628 1 uen TP155 .C54 no.280-282 1 - N
 R FIELD b1005667
 First Central Catalog Bibliographic and Item record

B101253242 BIBLIOGRAPHIC Information
TITLE Advances in fluidized systems / Alan W. Weimer, editor
IMPRINT New York, N.Y. : American Institute of Chemical Engineers, 1991
IMPRINT 9102
I278087164 INSTITUTION Information
LOCATION: ci3ug
I FIELD i1006628 1 uen TP155 .C54 no.280-282 1 - N
R FIELD b1005666
Second Central Catalog Bibliographic and Item record

Each of the other Central Catalog Bibliographic records linked to the common local Item record will contain an identical I FIELD.

All updates or change of status to the Local Catalog's Item record will be automatically transmitted to all copies of the item on the Central Catalog.

