Staff User's Guide – Authorities

Version 22

ExLibris The bridge to knowledge

CONFIDENTIAL INFORMATION

The information herein is the property of Ex Libris Ltd. or its affiliates and any misuse or abuse will result in economic loss. DO NOT COPY UNLESS YOU HAVE BEEN GIVEN SPECIFIC WRITTEN AUTHORIZATION FROM EX LIBRIS LTD.

This document is provided for limited and restricted purposes in accordance with a binding contract with Ex Libris Ltd. or an affiliate. The information herein includes trade secrets and is confidential.

DISCLAIMER

The information in this document will be subject to periodic change and updating. Please confirm that you have the most current documentation. There are no warranties of any kind, express or implied, provided in this documentation, other than those expressly agreed upon in the applicable Ex Libris contract. This information is provided AS IS. Unless otherwise agreed, Ex Libris shall not be liable for any damages for use of this document, including, without limitation, consequential, punitive, indirect or direct damages.

Any references in this document to third-party material (including third-party Web sites) are provided for convenience only and do not in any manner serve as an endorsement of that third-party material or those Web sites. The third-party materials are not part of the materials for this Ex Libris product and Ex Libris has no liability for such materials.

TRADEMARKS

"Ex Libris," the Ex Libris bridge , Primo, Aleph, Alephino, Voyager, SFX, MetaLib, Verde, DigiTool, Preservation, URM, Voyager, ENCompass, Endeavor eZConnect, WebVoyage, Citation Server, LinkFinder and LinkFinder Plus, and other marks are trademarks or registered trademarks of Ex Libris Ltd. or its affiliates.

The absence of a name or logo in this list does not constitute a waiver of any and all intellectual property rights that Ex Libris Ltd. or its affiliates have established in any of its products, features, or service names or logos.

Trademarks of various third-party products, which may include the following, are referenced in this documentation. Ex Libris does not claim any rights in these trademarks. Use of these marks does not imply endorsement by Ex Libris of these third-party products, or endorsement by these third parties of Ex Libris products.

Oracle is a registered trademark of Oracle Corporation.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd.

Microsoft, the Microsoft logo, MS, MS-DOS, Microsoft PowerPoint, Visual Basic, Visual C++, Win32,

Microsoft Windows, the Windows logo, Microsoft Notepad, Microsoft Windows Explorer, Microsoft Internet Explorer, and Windows NT are registered trademarks and ActiveX is a trademark of the Microsoft Corporation in the United States and/or other countries.

Unicode and the Unicode logo are registered trademarks of Unicode, Inc.

Google is a registered trademark of Google, Inc.

Copyright Ex Libris Limited, 2017. All rights reserved.

Document released: May 10, 2017

Web address: http://www.exlibrisgroup.com

Table of Contents

1 AUTHORITIES OVERVIEW 6

2 THE AUTHORITY DATABASE 7

2.1 The Authority Record 7

2.2 Authority Database Indexes 8
2.2.1 The "GEN" Index 9

2.3 Authority Database Links 9
2.3.1 Authority Database Indexes 12
2.3.2 Authority Database Links Using tab07 14
2.3.3 Authority Record Display 16

3 AUTHORITY CONTROL 16

3.1 Uses of the Authority Database 17
3.1.1 Search and Copy in Cataloging 17
3.1.2 Update of Bibliographic Records 17
3.1.3 Enrichment of the Bibliographic Headings Files 19
3.1.4 Enrichment of Bibliographic Word Files 20

3.2 The Authority Control Process 21
3.2.1 The BIB-AUT Link - ue_08 21
3.2.2 Authority Recheck for Selected Headings 21
3.2.3 Finding a Match 23
3.2.4 Update Bibliographic Records 24
3.2.5 Update the Authority Database (ue-11) 26
3.2.6 Changing the Preferred Term: the COR Field 27

3.3 Subdivisions 27

3.4 Ambiguous Headings 28
3.4.1 Ambiguous Headings within a Single Authority Database 28
3.4.2 Ambiguous Headings from Different Authority Databases 30

3.5 Conflicting Authority Headings and the Category Mechanism 30
3.5.1 Conflicting Headings 30
3.5.2 The Category Mechanism 31
3.5.3 COR Fields 32
3.5.4 Category Mechanism Setup 32

3.6 Authority Control Setup 34
3.6.1 BIB-AUT Links 34
3.6.2 Enrichment of Word Files 38
3.6.3 Display of Cross-references in the Web OPAC 39
3.6.4 Update of Bibliographic Records 39
3.6.5 Update of Authority Records 40
3.6.6 MeSH as Additional Authority Database 40
3.6.7 Addition of End Punctuation to Authority Controlled Headings 41
3.6.8 Subject Subdivisions 42
3.6.9 Multiple Authority Libraries 46

3.7 Synchronization of 1XX and 5XX in Authority Records 46
3.8 Background Processes in Authority Control 48
3.9 Authority Control Reports 48
3.9.1 List Headings Having Multiple Document Records (p_auth_04) 48
3.9.2 List Unauthorized Headings (p_auth_03) 48
3.9.3 Print Catalog Records with "SEEF" (Non-preferred) Headings (p_print_05) 49

4 THE AUTHORITY DATABASE AS SEARCH AID 49

4.1 Display of Authority Record from Bibliographic Headings 49
4.2 Jumping From the Authority Database to the Bibliographic Database 50
4.3 Untraced References 51
4.4 The Authority Database as Search Aid - Setup 52
4.4.1 Displaying the Authority Record from the Bibliographic Heading 52
4.4.2 Navigating from the Display of the Authority Record 53
4.4.3 Untraced References - Configuration 54
4.5 Enrichment and Display of 4xx and 5xx Fields from aut 55

5 MULTILINGUAL AUTHORITY DATABASE 56

5.1 Multilingual Authority Records 56
5.2 Multilingual Authority Indexes and Record Display 57
5.3 Bibliographic Database Records and Update of Bibliographic Records 58
5.4 The bib-aut Link and the Multilingual Authority Database 58
5.4.1 Enrichment of Headings and Word Files 58
5.4.2 Enrichment of Bibliographic Display 59
5.4.3 Display of Authority Record from Bibliographic Headings 59
5.5 Multilingual Authority Setup 60
5.5.1 AUT Library 60
5.5.2 Bibliographic Database 61

6 BATCH LOADING OF RECORDS TO THE AUTHORITY DATABASE 63

6.1 Overview 63
6.2 Algorithm 65
6.3 Report 65
6.3.1 Rejected Records 65
6.3.2 Deleted Records 66
6.4 Updated Records 66
6.4.1 New Records 67
6.4.2 No Problems Found 67

6.4.3 Report Format 67

6.5 Running the Report 68

6.6 Setup 68
6.6.1 Setup for "Reject Library" 68
6.6.2 tab_fix 69
6.6.3 LCC Direct Index 69

7 BATCH JOBS FOR AUTHORITY ENRICHMENT AND CORRECTION OF BIBLIOGRAPHIC LIBRARIES 69

1 Authorities Overview

Authority records are a means of achieving consistency of headings, particularly those relating to author, subject and series titles. Authority records can also serve as an aid to searching the bibliographic database.

In ALEPH, authority records are cataloged and stored in a separate database - the authority database. An installation can have one or more AUThority databases linked to its bibliographic database/s. Generally, a separate authority database is recommended for different authorities. For example, MeSH and LC authorities should each have their own database. This is recommended because different authorities may share terms.

ALEPH supports MARC 21, UNIMARC and MAB authority formats. In fact, since the system is table-driven, most types of authorities can be used. This manual focuses on the MARC 21 authority format. In principle, the functionality and setup is the same for all authority formats.

The next six chapters each focus on different aspects of the use of the authority database in ALEPH. These chapters build upon each other, adding additional facets:

- 2 The Authority Database. This chapter describes the authority database with sections on the authority record and the authority database indexes, and on how links (for example, related, narrower and broader terms) are created between authority records.

- 3 Authority Control. This section describes the link between the bibliographic and the authority databases, including update of bibliographic records and enrichment of the bibliographic headings and word files.

- 4 Authority Database as Search Aid. This chapter describes how the authority database can be used as an aid in searching the bibliographic database. It includes the following topics:

    - Display of/navigation from linked authority records from a bibliographic heading.

    - 'Jumping' from the authority database to the bibliographic database.

- 5 Multilingual Authorities. This section describes how the authority database is set up as a multilingual authority database.

- 6 Batch Loading of Records to the Authority Database. This section describes how the Load Authority Records (manage-31) service accepts an input file of authority records and uses them to update the authority database.

- 7 Batch Jobs for Authority Enrichment and Correction of Bibliographic Libraries . This section describes how the p_manage_102 and the p_manage_103 services can be used to accomplish faster enrichment and correction of the bibliographic database based on the authority records of the authority database.

2 The Authority Database

This chapter includes the following sections:

- The Authority Record
- Authority Database Indexes
- Authority Database Links
- Authority Database Setup

2.1 The Authority Record

The authority record is cataloged using the MARC 21 Authority Format with some additional ALEPH proprietary fields. The following table depicts the most important fields:

Field	Description
Leader (LDR)(Record Label in UNIMARC)	A fixed field that comprises the first 24 character positions (00-23) of each record and provides information for the processing of the record.
008	The appropriate codes are important: • Pos.14 - Are the headings appropriate for use as main/added entries? • Pos.15 - Are the headings appropriate for use as subject entries? • Pos.16 - Are the headings appropriate for use as series entries? o a = yes o b = no The system uses these codes to determine whether or not an authority record should be used if the code is set in the `tab_aut` table (see Authority Control Setup on page 34). The system uses a and c for headings update. This functionality is relevant only for MARC 21 libraries.

Field	Description
1XX (2XX in UNIMARC)	The preferred term ("established heading"). A record should have only one 1XX field (except for multilingual authority records).
4XX	Non-preferred terms. Note that 1XX and 4XX terms must be unique within the authority database. Ambiguous headings (the same 4XX field in different authority records) are problematic. For more details, see Ambiguous Headings on page 28.
5XX	Related term. The type of relationship is defined in subfield w (or subfield 5 in UNIMARC). Additional information on the creation of links between authority records based on the 5XX fields can be found in Authority Database Links on page 9.
UPD	UPD is a special ALEPH field that determines whether or not the authority record can be used to automatically update bibliographic records. The content of the field: • Y=automatically update the bibliographic record • N=do not update the bibliographic record If the authority record has no UPD field the default is UPD=Y
COR	COR is a special ALEPH field that is automatically added to an authority record when the preferred term is changed. If the original preferred term is not kept in the authority record, the link to the bibliographic records (that contain the original preferred term) is lost. See Changing the Preferred Term: the COR Field on page 27 for more details.

Authority records can either be cataloged manually or imported from external sources using standard loader procedures (online and batch).

2.2 Authority Database Indexes

The authority database can be searched like any other ALEPH database. A variety of indexes (headings, words and direct indexes) can be created. Authority database headings indexes are also used by catalogers when searching the authority database from the Cataloging module. If necessary, additional indexes can be defined especially for this purpose.

An authority database for MARC 21 or UNIMARC subjects and names typically has the following headings files:

MARC 21

Personal names	created from 100, 400
Corporate names	created from 110, 410
Meeting names	created from 111, 411

Uniform titles	created from 130, 430
Topical terms	created from 150, 450
Geographic names	created from 151, 451
Genre terms	created from 155, 455

UNIMARC

Personal names	created from 200, 400
Corporate body names	created from 210, 410
Territorial or geographic names	created from 215, 415
Family names	created from 220, 420
Uniform titles	created from 230, 430
Name/Titles	created from 240, 440
Name/Collective uniform titles	created from 245, 445
Topical subjects	created from 250, 450

If you want the indexes to include related terms (5XX field), separate indexes without these fields should be created for searching and copying from the authority database in the cataloging module. This is because ALEPH requires that only one authority record be linked to a heading in order to display information concerning the authority term (for example, preferred/non-preferred) and in order to automatically insert the preferred term if a non-preferred term is selected.

2.2.1 The "GEN" Index

In addition to the indexes created for searching the authority database, the system requires a "general" headings index (GEN), for creating the links between the bibliographic and authority databases. This index should include preferred (1XX) and non-preferred terms (4XX and COR). Related terms (5XX) fields should not be included, as each term must link back to a single authority record.

2.3 Authority Database Links

You can create links between related authority records. In MARC 21 and UNIMARC, the 5XX field is used for creating links and the type of relationship is defined in subfield w (subfield 5 in UNIMARC) of the field. In ALEPH the type of relationship can be defined in a special table and additional types, apart from those available in the MARC standard, can be added (refer to Authority Database Links Using tab07 on page 14)

The links between records can be used to navigate the authority database; they can also be used to navigate the bibliographic database (see The Authority Database as Search Aid on page 49).

If the `tab07` table is used (refer to Authority Database Links Using tab07 on page 14), then the relationships between terms do not have to be entered in both authority records (that is, both sides of the relationship). It is sufficient to enter the related term in one of the records and, based on this, the system creates both sides of the link. Authority records in which the relationship has been entered in both records can also be used. In this case, the tab07 table is not needed. Note that the `tab07` table is required only for multilingual authority libraries.

The links between authority records based on the `tab07` table are created by the *Links Between Records* (p-manage-12) service. The links are also created as records are added and updated in the authority database. Note, however, that for the link to be created, the authority record to which the related term points must already be in the database. This means that the database must either be built following the hierarchy of the relationships, or that all terms (1XX fields in MARC 21, 2XX for UNIMARC) must be entered before related terms are entered. If the `tab07` table is used, it is recommended to rebuild the authority database links periodically by running this service.

Note

When a term is changed, the system will not automatically update the authority records in which the term is a related term. If a term appears in many authority records it may be useful to use Global Changes (p-manage-21) to change a term in multiple records.

Examples:
The three following authority records have related terms. Note that related terms, (550 with no subfield w or subfield 5 for UNIMARC) are entered in this example in both records; while broader terms (550 subfield w-g (subfield 5g for UNIMARC)) are entered in the case of a broader-narrower type relationship in only one record. This is typical of Library of Congress authority records:

Leader	LDR			^^^^^nz^^^^^^^^^^n^^4500
Control No.	001			000002769
Date and Time	005			20010717152603.0
Fixed Data	008			010717nabaccnnaaan||||||||||^b^|nc|||||d
LC Control No.	010		a	sh 85000529^
Catalog. Source	040		a	DLC
			c	DLC
			d	DLC
LC Class. No.	053		a	S592.57
			b	S592.575
Topical Term	150	0	a	Acid soils
See Trac. Topic	450	0	a	Acidic soils
SA Trac. Topic	550	0	a	Soils
			w	g
SA Trac. Topic	550	0	a	Soil acidity
Update	UPD		a	Y

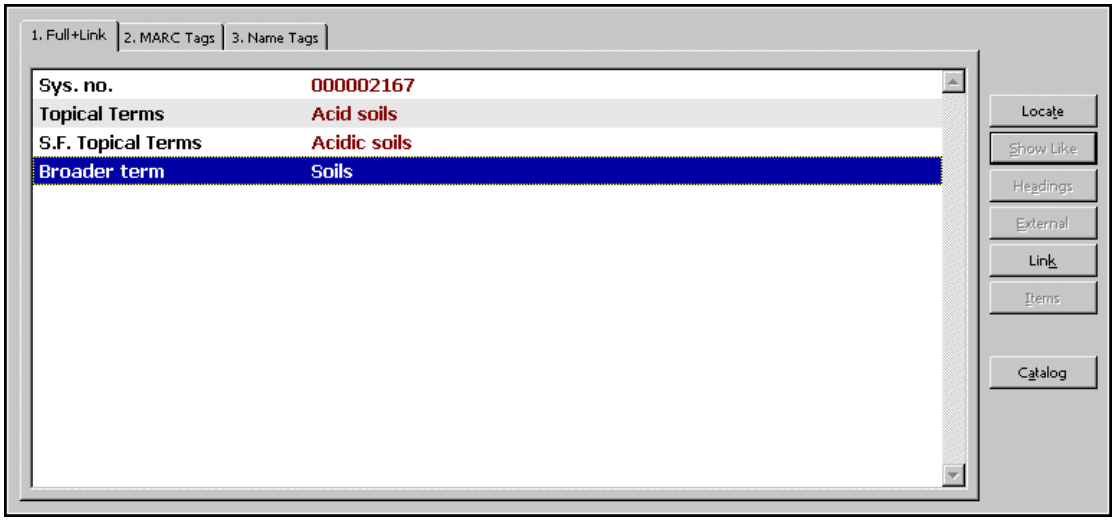
Example 2:

Leader	LDR			^^^^^nz^^^^^^^^^^n^^4500
Control No.	001			000002770
Date and Time	005			20010717152856.0
Fixed Data	008			010717nabaccnnaaan|||||||||^b^|nc|||||d
Topical Term	150	0	a	Soils

Example 3:

Leader	LDR			^^^^^nz^^^^^^^^^^n^^4500
Control No.	001			000002771
Date and Time	005			20010717153141.0
Fixed Data	008			010717nabaccnnaaan|||||||||^b^|nc|||||d
Topical Term	150	0	a	Soil acidity
SAF.Trac.Topic	550	0	a	Acid soild

In the Search function, the links are displayed as follows:



When the link button is clicked, the system displays the linked authority record.

A similar display is available in the Web OPAC of the authority database.

When cataloging a 5XX field, you can check whether or not the 5XX field (*See also* from tracing field) cataloged in the authority record has a corresponding entry in the "GEN" index. If there is no matching heading in the "GEN" index, an error message is displayed. If the 5XX field has a corresponding entry, the program also checks if this entry derives from a 1XX Heading field or from a *See from* tracing field (4XX). If the matching heading derives from a *See from* (4XX), then an error message is displayed (the program is called check_doc_aut_5xx, see the Cataloging module System Librarian chapter - Check Routines for Check Record for setup of the check routines). Authority Database Setup

2.3.1 Authority Database Indexes

Note:
The following section is primarily of interest to System Librarian's.

The authority database indexes are defined in `tab00.lng`, `tab11_acc`, `tab11_word` and `tab11_ind`.

The `tab00.lng` table defines the various indexes (headings, words and direct indexes). The following are samples for all types of available indexes:

```
Words:

H WRD   W-001      00       18       Words
H WPE   W-002      00       20       W-person
H WCO   W-003      00       21       W-corp
H WME   W-004      00       22       W-meet
H WUT   W-005      00       23       W-uni.ti
H WPL   W-006      00       24       W-place
H WPU   W-007      00       25       W-publ.
H WSU   W-008      00       26       W-subj.

Headings:

H PER   ACC     11 00       00       Personal names
H TOP   ACC     11 00       00       LCSH
H COR   ACC     11 00       00       Corporate names
H MET   ACC     11 00       00       Meeting names
H TIT   ACC     11 00       00       Uniform titles
H GEO   ACC     11 00       00       Geographic names
H SBD   ACC     11 00       00       Subdivisions
H LCN   ACC     11 00       00       Class numbers
H GEN   ACC     11 00       00       General
H Z0101 ACC     12 00       00       General (Brief rec.)
H GXX   ACC     11 00       00       General (Secondary)

Direct indexes:

H LCC   IND     21 00       00       LCCN
H CNO   IND     21 00       00       Control Number
```

The `tab11_word` table defines which fields are sent to the word indexes. Following is an example for MARC 21 format:

```
100##                   adq                 01     WRD  WPE  WNA
110##                   abcd                01     WRD  WCO  WNA
111##                   acde                01     WRD  WME  WNA
130##                                       01     WRD  WTI  WNA
150##                                       01     WRD  WST  WSU
151##                                       01     WRD  WSU  WSG

155##                                       01     WRD  WGE  WSU
```

Following is an example for UNIMARC format:

```
200##                   afg                 01     WRD  WPE
200##                   afg                 01     WNA
210##                   abeg                03     WRD  WCO
210##                   abef                03     WNA
```

```
220##                    af                    01     WRD  WFA
```

The tab11_acc table defines which fields are sent to the headings indexes. Following is an example for MARC 21 format:

```
100##                    PER   -wi
110##                    COR   -wi
111##                    MET   -wi
130##                    TIT   -wi                  2
150##                    TOP   -6
151##                    GEO   -wi
400##                    PER   -wi
410##                    COR   -wi
411##                    MET   -wi
430##                    TIT   -wi
450##                    TOP   -wi56
451##                    GEO   -wi

100##                    GEN   -6
110##                    GEN   -6
111##                    GEN   -6
130##                    GEN   -6                   2
150##                    GEN   -6
151##                    GEN   -6
400##                    GEN   -wi56
410##                    GEN   -wi56
411##                    GEN   -wi56
430##                    GEN   -wi56
450##                    GEN   -wi56
451##                    GEN   -wi56
COR##                    GEN   -wi056
5####                    GXX   -wi056
```

Following is an example for UNIMARC format:

```
200##                    PER   -0235678
200##                    SUB   -0234678
210##                    COR   -0234678
210##                    SUB   -0234678
400##                    PER   -0235678
410##                    COR   -0235678
200##                    GEN
210##                    GEN
400##                    GEN   -0235678
410##                    GEN   -0235678
```

Notes for tab11_acc:

1. If the headings files are also used for search/copy in the Cataloging module, do not send 5XX fields, as terms should link back to one authority record.

2. Send all 1XX, 4XX and COR fields to the GEN headings index. Do not send 5XX fields to the GEN headings index, as terms must link back to one authority record.

3. For the implementation of the check_doc_aut_5xx program that checks whether or not the 5XX field (*See also* from tracing field) cataloged in the authority record has a corresponding entry in the "GEN" index, note that the 5XX fields should be sent to the "GXX" headings index (as shown in the above sample). The check_doc_aut_5xx compares the entries in this index with the entries in the "GEN" index.

4. For the generation of brief records (Z0101) from the authority library, send all the 1xx and 4xx fields to the Z0101 headings index.

The tab11_ind table defines which fields are sent to the direct indexes. Following is an example for MARC 21 format:

```
010##                   LCC   a
035##                   CNO
```

Following is an example for UNIMARC format:

```
680##                   LCC
675##                   UDC
676##                   DDC
```

2.3.2 Authority Database Links Using tab07

Note:
The following section is primarily of interest to System Librarian's.

This section contains the setup needed for the creation of authority links when the `tab07` table is used.

tab_z103
In order to create links between authority records the following line must be present in `tab_z103` in the authority library:

```
update_z103_aut
```

tab07
This table defines links between authority headings for the creation of Z103 link records.

Note

The building of the Z103 links between authority records is required only for multilingual authority libraries. When cataloging in a multilingual authority library it suffices to add 5XX references in one language only. Using this table, the system builds Z103 links, to "add" the 5XX in all its language manifestations. The additional 5XX fields are not actually present in the authority record, but when the record is displayed, they are included (through the Z103 links).

In addition, libraries can opt to use the tab07 and the Z103 links in order to build reciprocal 5XX references. According to the table setup, if you have a 5XX in one record, the Z103 can create the reciprocal reference in the other record. In this way, if you enter "broader term" references, the "narrower term" references will be automatically generated. For example, LCSH authority records include 550 fields for broader terms only ($$wg). If the library wants to show references in the opposite direction (to narrower terms), this can be done using this table.

If the Categories mechanism is used in the authority library, the 5XX fields should be defined also in `tab_acc_category`.
For more details about the Category mechanism and setup, see The Category Mechanism and Category Mechanism Setup.

Structure of the table:

Col. 1 Field code
Col. 2 Subfield to strip or include in finding a match
Col. 3 Headings list used for searching for the heading.

Note

The headings file should include all 1XX fields but no 5XX fields - that is, the terms in the headings file must point back to a single authority record. For this reason, the 'GEN' headings file is generally used.

Col. 4 Subfield which contains link type
Col. 5 Link type code
Col. 6 Type of ALEPH link to build. This code is used to distinguish between the types of links in the formatting tables.
Col. 7 Reciprocal link. If the related terms are entered in only one record, a reciprocal link should be defined.

Example of tab07 (MARC 21)

```
510##            GEN   w a          ET  LT
510##            GEN   w b          LT  ET
511##            GEN   w a          ET  LT
511##            GEN   w b          LT  ET
550##            GEN   w g          BT  NT
550##            GEN   w h          NT  BT
550##            GEN                RT
```

Note

In the sample authority records above, related terms are entered in both records. For this reason 'RT' type relations are defined for only one side. However, since only broader terms are entered, 550 records with subfield w-g have a reciprocal relationship defined.

Example of tab07 in UNIMARC Format:

```
500## abcdfgxyz  GEN   5 g          BT  NT
500## abcdfgxyz  GEN   5 h          NT  BT
500## abcdfgxyz  GEN   5 b          LT  ET
```

```
500## abcdfgxyz  GEN   5 a          ET  LT
500## abcdfgxyz  GEN   5 z          RT
500## abcdfgxyz  GEN   5 e          PS
500## abcdfgxyz  GEN   5 f          RN
```

2.3.3 Authority Record Display

Note:
The following section is primarily of interest to System Librarian's.

Authority records can be displayed using the same tables as bibliographic records. This section illustrates special aspects of authority record display in the "FULL" display of the record.

edit_doc_999
The following is an example of `edit_doc_999` for an authority record (MARC 21):

```
## SYS                 D LSys. no.            Y       E
## 1####               D LHeading             Y Z     E
## 260##               D LSub. CSR            Y       E
## 360##               D LSub.  CSAR          Y       E
## 4####               D LSeen from           Y       E
!## 5#### w g          D LB.term              Y Z     E
!## 5#### w h          D LN.term              Y Z     E
## 5#### w -           D LSee also            Y Z     E
## 663##               D LName Complex SA Ref Y       E
## 664##               D LName Complex SeeRef Y       E
## 665##               D LHistory Reference   Y       E
## 666##               D LExplantory Ref.     Y       E
## 64### a f           D LSeries-f            Y       E
## 64### a t           D LSeries-t            Y       E
## 64### a s           D LSeries-s            Y       E
## UPD##               D LUpdate Flag         Y       E
## BT                  D LBroader term        Y Q     E
## NT                  D LNarrower term       Y Q     E
## RT                  D LRelated term        Y Q     E
## ET                  D LEarlier term        Y Q     E
## LT                  D LLater term          Y Q     E
```

In addition to the regular field codes, enter authority record links, using the codes defined in columns 6 and 7 of tab07. In column 10 of edit_doc_999, enter "Q" as the type of link.

Note

The 5XX fields are commented out. If both the links (for example, BT, NT, etc.) and 5XX fields are displayed, the terms are duplicated.

3 Authority Control

This chapter presents the following topics:

- Uses of the Authority Database

- The Authority Control Process
- Subdivisions
- Ambiguous Headings
- Authority Control Setup
- Background Processes in Authority Control
- Authority Control Reports

3.1 Uses of the Authority Database

The authority database is used in the following ways:

1. Bibliographic record cataloging. The authority database can be consulted during cataloging. Headings can be selected and copied into the bibliographic record.

2. Bibliographic record update. Optionally, the system can automatically update bibliographic records so that non-preferred terms (or "unestablished headings") are replaced by the preferred term (or "established heading").

3. Searching the bibliographic database. The authority database can be used to enrich the access points (headings and words) to bibliographic records. This means that end users can search using non-preferred terms. To read about additional aspects of using the authority database to search the bibliographic database, see The Authority Database as Search Aid on page 49.

3.1.1 Search and Copy in Cataloging

You can search the local database, "Search field headings of current library" (F3), or search additional databases, "Search field headings of other library" (Ctrl+F3), from the cataloging draft form. In the latter case, the database searched is generally an authority database. Refer to Authority Database Indexes on page 8.

These options are explained in section 5.2 in the Cataloging chapter of the user guide.

3.1.2 Update of Bibliographic Records

If the UPD field in the authority record is "Y", the system automatically updates the bibliographic record from a non-preferred term to a preferred term.

In the following example, if the UPD field in the authority record for American Bible Society is set to 'Y' and the bibliographic record contains the following field:

```
710      $$aA.B.S.
```

the system replaces this field with the preferred term when the record is sent to the server:

```
710 $$aAmerican Bible Society
```

When the system updates the bibliographic record, it replaces the non-preferred terms with the complete preferred term from the authority record, retaining any additional subdivisions (see Subdivisions on page 27) that are present in the original field. A special table adds end-punctuation (see Addition of End Punctuation to Authority Controlled Headings on page 41).

When a bibliographic record field is updated, in addition to updating the content of the field the system will also correct the field tag and indicators if they are different than those of the authority record. For example, if the authority record has 451 as a see-reference to a 110 field, and the heading in the bibliographic library originates from a 651 field, the system will correct the contents of the field, and also will correct the bibliographic tag to 610 (including the indicators).

For example:

Authority record:

Corporate Name	110	2	a	Connecticut College.
			b	Arboretum
See Trac Geo N	451		a	Connecticut College Arboretum

Original bibliographic record:

Subject-Geo Trm	651	0	a	Connecticut College Arboretum

Corrected bibliographic record:

Subject-Corp N.	610	20	a	Connecticut College.
			b	Arboretum

The correction is performed differently in the following cases:

When the updated bibliographic tag is a 6XX field, the second indicator of the bibliographic record will be preserved. The second indicator in the bibliographic record indicates the Thesaurus, and is not used in the authority record. The second and third positions of the tag and the first indicator will be corrected.

When updating bibliographic 650 or 655 fields, the indicators are retained.

When the bibliographic tag 130, 630 or 730 is updated from an authority 130, the second indicator of the authority tag (number of non-filing characters) is moved to the first indicator of the bibliographic tag. The second indicator of the bibliographic tags is left blank, except for the following cases:

For the 630 field the second indicator (Thesaurus) is retained.

For the 730 field, if the second indicator is 2 indicates that the entry is an analytic entry), then it is retained.

When the updated bibliographic tag is 610 is updated from a 151/410 combination, the 610 tag will not be updated.

When updating a bibliographic 24X, 255, or 440 field, the tag and indicators of the fields will not be updated.

When the updated bibliographic tag is 043,072,080 both the tag and the indicators are retained.

When a local field is updated, in other words it contains a 9, such as in 9XX or 69X, the tag and the indicators are retained. If the tag is a regular tag but at least one of the indicators is alphabetic, the tag will be updated, if necessary, but the indicators will be left unchanged.

3.1.3 Enrichment of the Bibliographic Headings Files

Here is a MARC 21 authority record for the American Bible Society.

Leader	LDR			^^^^^nz^^a^^^^^^^^n^^^^^^^
Control No.	001			000002170
Date and Time	005			20030109121202.0
Fixed Data	008			020813na|acannaabn|||||||||||a^ana||||||
LC Control No.	010		a	n 80057270
Catalog. Source	040		a	DLC
Corporate Name	110	2	a	American Bible Society
See Trac.Cor.N	410	2	a	Beikoku Seisho Kaisha
See Trac.Cor.N	410	2	a	Jam` iyat al-Tawr ah al-Am irik an iyah
See Trac.Cor.N	410	2	a	Ta Mei-kuo sheng ching hui
See Trac.Cor.N	410	2	a	ABS
See Trac.Cor.N	410	2	a	A.B.S.
See Trac.Cor.N	410	2	a	Beikoku Seisho Ky okai
See Trac.Cor.N	410	2	a	Hevrat Amerikah shel Sifre kodesh
See Trac.Cor.N	410	2	a	Sociedad Bíblica Americana
See Trac.Cor.N	410	2	a	Amerikan Kitabimukaddes ¸Sirketi
See Trac.Cor.N	410	2	a	Phrakhritsathamsam akhom `Am erikan
See Trac.Cor.N	410	2	a	Phrakhritsatathamsam akhom `Am erikan
See Trac.Cor.N	410	2	a	Phrakhritsatham Sam akhom `Am erikan
See Trac.Cor.N	410	2	a	Amerikanik e Vivlik e Hetaireia
Sourc.Dat.Found	670		a	Its Instituted, 1816.
Sourc.Dat.Found	670		a	Dios habla hoy, c1983

Once the system uses this record to enrich the bibliographic headings files, the user can find all non-preferred terms in the bibliographic headings even though they are not in the records themselves.

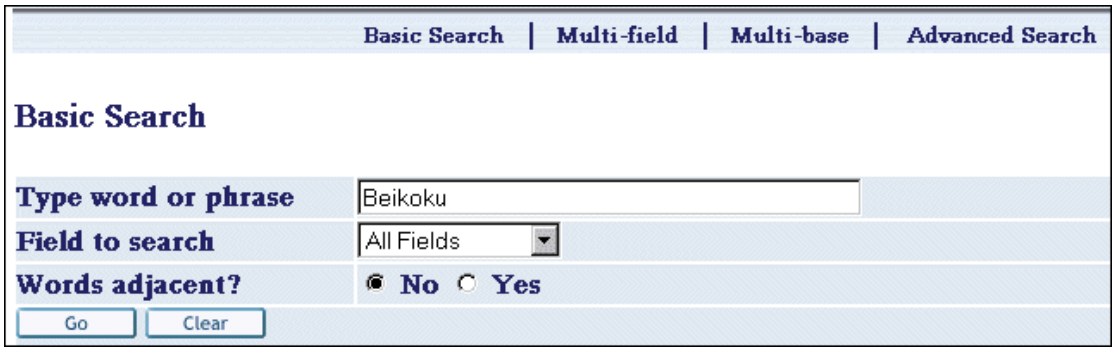
For example, if you browse the headings list for *Beikoku Seisho Kaisha*, the system displays the following:

The user can access the records with the preferred term by clicking the cross-reference.

3.1.4 Enrichment of Bibliographic Word Files

Optionally, the system can create words from non-preferred terms. This option is based on a special expand program (see Enrichment of Word Files on page 38).

This option enables the user to perform a keyword search with non-preferred terms. For example, here is a keyword search for *beikoku*:



This search locates records with the corporate author: *American Bible Society*:

Full View of Record

Choose format: Standard format Catalog card Citation Name tags MARC tags

Record 000001 out of 1

System no.	000032022
Title	Bible. O.T. Hebrew. 1928..
Title	Torah Nevi'im u-Khetuvim 'im targum Anglit = The holy Bible, Hebrew text and English version / mugah 'al yede Y. M. Rubin.
Imprint	New York : Star Hebrew Book Company, 1928.
Description	4 v. : ill. ; 25 cm.
Title Subject	Bible. O.T. -- Commentaries.
Added entry	Rubin, I.
Added entry	American Bible Society.
Added entry	Bible. O.T. English. 1928.

3.2 The Authority Control Process

This section describes how the authority control process works.

3.2.1 The BIB-AUT Link - ue_08

The link between the bibliographic database and the authority database is created via the bibliographic headings file.

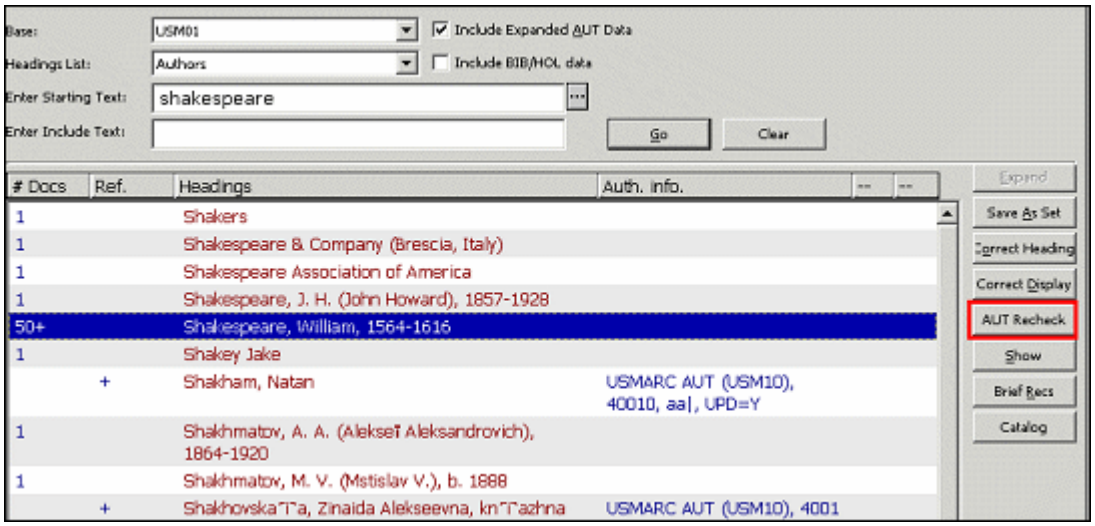
When a new heading is created in the bibliographic database the system searches for a matching heading in the general headings file (GEN) of the authority database. If a match is found, the system uses the authority record (found via the authority database's headings file) to enrich the bibliographic database's heading file by adding to it the preferred term and all non-preferred terms.

A special process called ue_08 performs this function. This process must be working in the background in the bibliographic library. After a heading has been checked by ue_08 it is marked as either being linked to an authority record or, if no matching authority record has been found, as having been processed by ue_08.

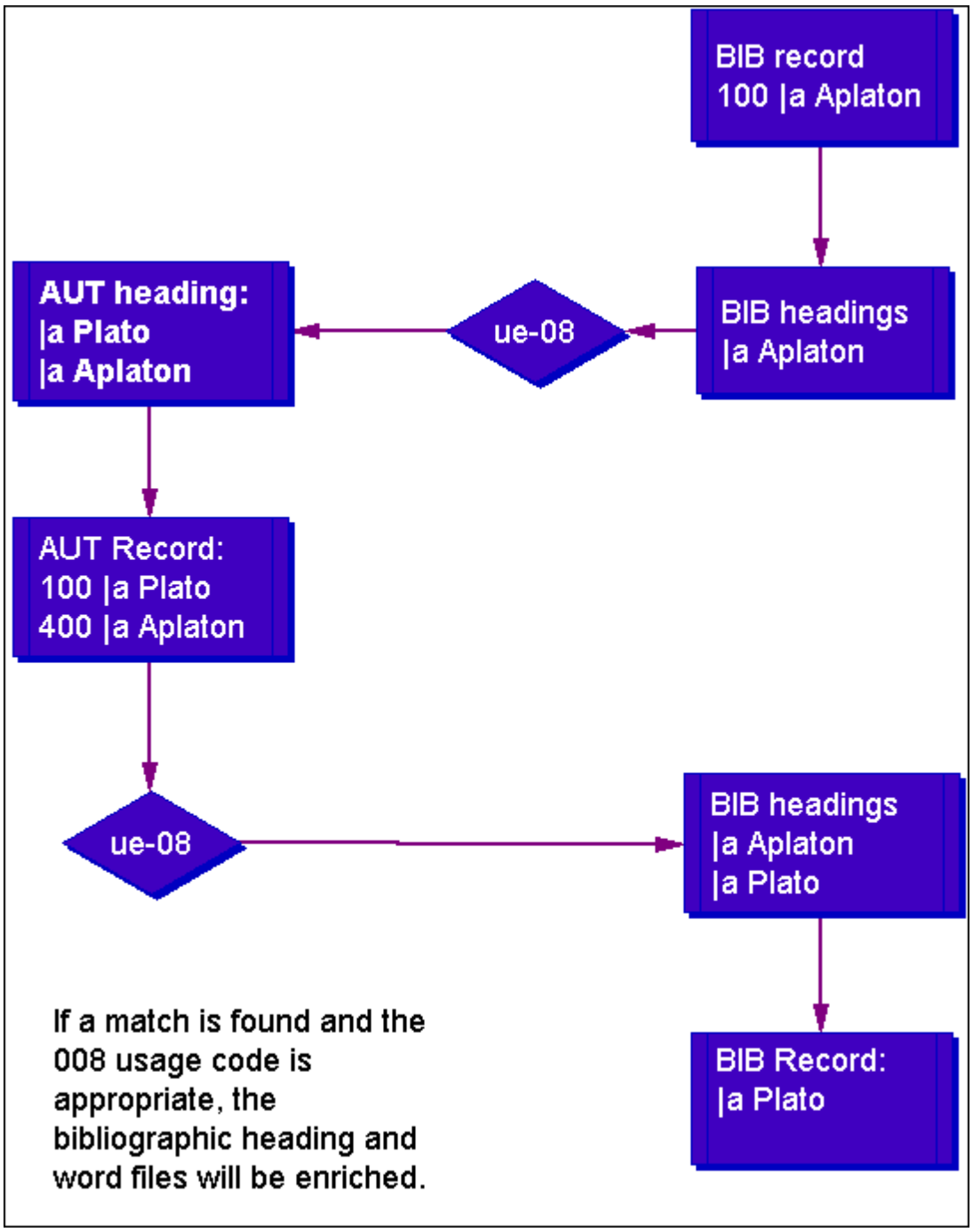
3.2.2 Authority Recheck for Selected Headings

You can set selected headings that have already been checked and marked as linked to an authority record to NEW. You can also set headings as having been processed by ue_08 if no matching authority record has been found. This triggers the ue_08 process to handle these headings again.

To perform this action, choose a heading in the Browse List of headings of the GUI Search function and click **AUT Recheck**:



The selected headings are set to NEW and the Auth.info which is displayed next to a heading that is linked to authority record is removed. In the event that the heading has any reference headings, they are also set to NEW:



3.2.3 Finding a Match

The match between the bibliographic heading and the authority heading is based on the normalized form and the filing form of the headings. These must be identical in both libraries. This means that the normalization and the filing forms of the headings index in the bibliographic database must be created in the same way as the normalization and filing forms of the general (GEN) headings index in the authority database.

Note

The system strips end subfield punctuation when headings are created so this punctuation is not considered in the match. The following punctuation is stripped:

Sign	name
:	colon
,	comma
.	period
=	equal sign
;	semi colon
/	slash

For example, the field:

```
100     $$aGrey Owl,  $$d1888-1938.
```

creates the heading:

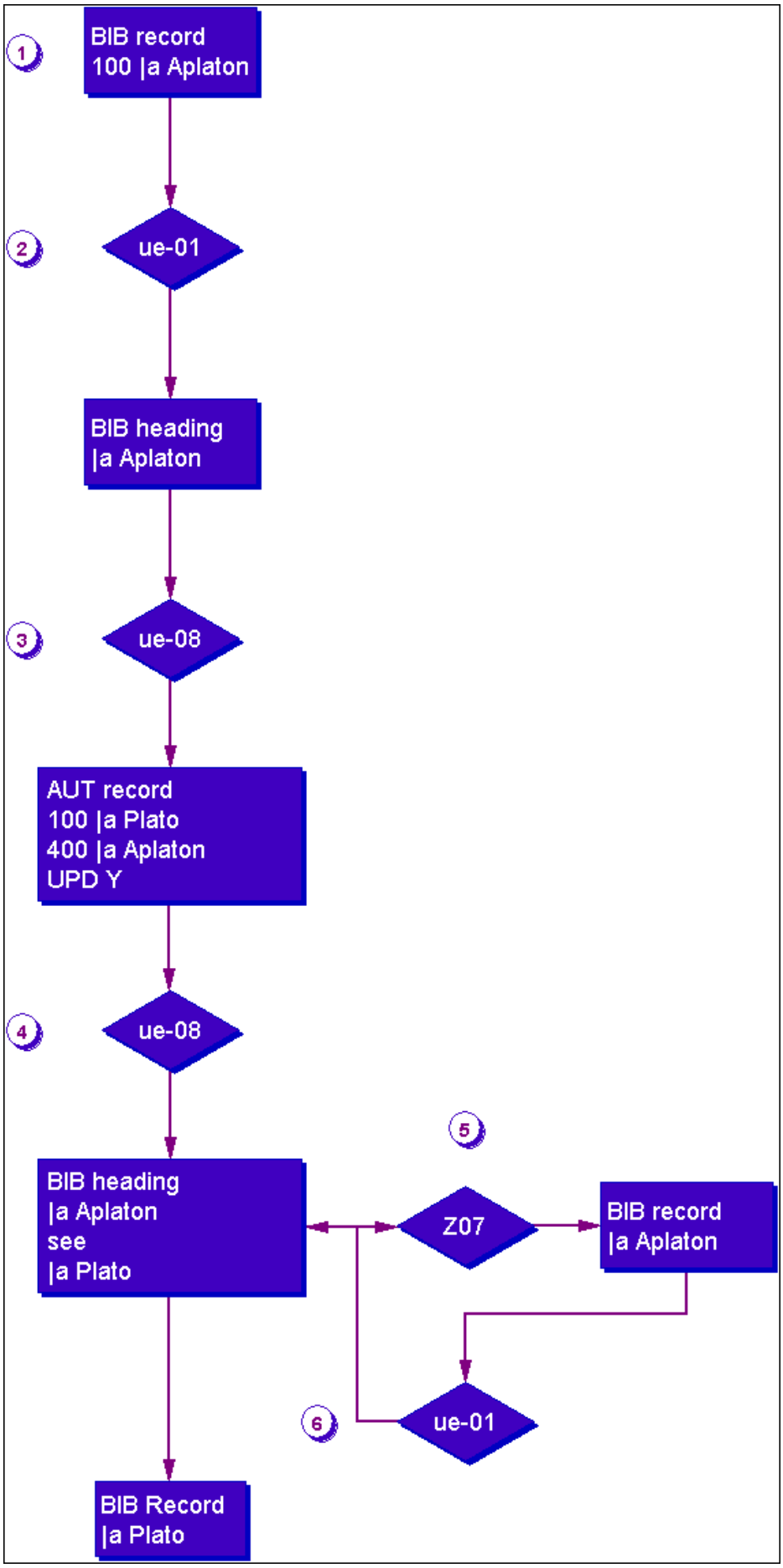
```
$$aGrey Owl $$d1888-1938
```

A special table is used to insert missing subfield punctuation into the updated bibliographic heading (refer to Addition of End Punctuation to Authority Controlled Headings on page 41).

3.2.4 Update Bibliographic Records

The ue_08 procedure does not update bibliographic records. The procedure identifies records that are candidates for update (it creates Z07 records) and sends a message to the indexing procedure (ue_01) that these records should be re-indexed. The ue_01 process calls up the UE_01 section of the tab_fix table of the bibliographic library. The fix_doc_ref_1 program is the fix program that updates the bibliographic records - this program needs to be defined under the UE_01 section for the correction of the records. In addition, the ue_01 process also indexes non-preferred terms in the word files.

As part of the enrichment process (done by ue_08), the headings in the bibliographic database are marked as being either preferred or non-preferred terms. Based on the UPD field in the authority record, they are also identified as terms that can or cannot be used to update the bibliographic record. In other words, the update of the bibliographic record is carried out from the bibliographic headings file and not directly from the authority record.


1
BIB record
100 |a Aplaton
2
ue-01
BIB heading
|a Aplaton
3
ue-08
AUT record
100 |a Plato
400 |a Aplaton
UPD Y
4
ue-08
5
BIB heading
|a Aplaton
see
|a Plato
Z07
BIB record
|a Aplaton
6
ue-01
BIB Record
|a Plato

1. A bibliographic record is indexed (by ue-01).

2. If no corresponding bibliographic heading exists, a new bibliographic heading is created, in which event, steps 3-6 occur.

3. The bibliographic heading is checked against the authority database (by ue-08).

4. The bibliographic heading is linked to the authority database record (ue-08) and cross-references are created in the bibliographic headings.

5. Bibliographic records linked to the bibliographic heading are registered for re-indexing (Z07).

6. Bibliographic records are re-indexed (ue-01) and corrected when required (fix_doc_ref_1).

The option not to write Z07s can be used after loading bibliographic and authority records that have undergone authority processing; in this case, the bibliographic records presumably would not contain non-preferred headings and writing Z07s is superfluous. This option can also be set to 'N', if the library has used the p_manage_102 service to enrich the bibliographic headings list from the authority database records (see Batch Jobs for Authority Enrichment and Correction of Bibliographic Libraries on page 69. In addition, the option can be set to 'N' in sites where all the records in the authority database have the UPD flag set to 'N'.

3.2.5 Update the Authority Database (ue-11)

The ue_08 procedure only works on new headings added to the bibliographic database. However, the authority database may also undergo changes. These include the addition of new records and updates to existing records (deletion, addition of new non-preferred terms, change of preferred term). These changes will probably affect the bibliographic database. The ue_11 process sends and receives messages (Z105) between databases. In the authority mechanism, it is used to reflect changes made to the authority record in the bibliographic database. When authority records are updated the system sends a message to the library defined in the authority library's tab_z105. A special process called ue_11, that must be working in the background in the z105_library (USR00), sends the message.

The ue_11 process must be working in the background in the library defined for the z105_library variable in the aleph_start file. If the variable is set as follows:

```
setenv    z105_library       USR00
```

then ue_11 must be run in the USR00 library.

3.2.6 Changing the Preferred Term: the COR Field

The authority library's tab_fix table must have the following line:

```
INS fix_doc_preferred
```

in order to trigger the automatic creation of a COR field with the original term when the preferred term of the authority record is changed. This is necessary so that the link with bibliographic records (that have the original preferred term) is retained. The COR field is treated by the system as another non-preferred term (see Update of Authority Records on page 40).

3.3 Subdivisions

Subdivisions are used to add specificity or depth to a particular subject heading term. There are several types of subdivisions. The following are the standard subdivisions for MARC 21 subject headings:

- $v - Form subdivision
- $x - General subdivision
- $y - Chronological subdivision
- $z - Geographic subdivision

You can set up the system to strip these subdivisions (subfields $$v, $x, $y and $z) from the bibliographic heading in order to find the more general term in cases where there is no match between the original subject heading from the bibliographic library and the headings in the authority library.

If a match is found, the preferred and non-preferred forms of this "general" heading are added to the bibliographic headings list. These headings are not linked to any bibliographic records. In the case of logical bases, the system analyzes whether or not the heading should be included in the base.

In addition, if the bibliographic heading contained the non-preferred form of the heading and if the conditions for bibliographic updated exist (UPD field is 'Y' and fix_doc_ref_1 has been defined in the `tab_fix` table), then the bibliographic record is updated as in the following example:

Authority record:

```
150  $$aFighting dogs
450  $$aPit dogs
```

Bibliographic record:

```
65010  $$aPit dogs $$zItaly
```

The bibliographic record is updated as follows:

```
65010  $$aFighting dogs $$zItaly
```

The bibliographic headings list is, in addition, enriched with the following entries:

- Fighting dogs
- Pit dogs (see fighting dogs)

For more information about fix_foc_ref_1, refer to the *System Librarian's Guide - Cataloging*.

To see the setup needed for the stripping of the subdivisions refer to Stripping Subdivisions and Subject List Enhancement on page 42.

3.4 Ambiguous Headings

3.4.1 Ambiguous Headings within a Single Authority Database

Ambiguous headings must be unique. You do this by adding an identifier to the text of the heading to make it unique. In ALEPH versions previous to 16, we suggested that this be done by adding a subfield 9 with the preferred term (subfield 9 is a local MARC tag and can be stripped upon export). Using the example above, this would be done as follows:

```
110     $$a African Literature Association
410     $$a ALA $$9 (African Literature Association)

110     $$a American Library Association
410     $$a ALA $$9 (American Library Association)

110     $$a Automobile Legal Association
410     $$a ALA $$9 (Automobile Legal Association)
```

From version 16 there is an automatic process available, called `fix_doc_aut_duplicate`, which performs the following:

- When a 4xx field is found to be a duplicate of the 4xx or 1xx field of another record, the 1xx field is appended to the 4xx field, using $$7; that is, the 4xx field is changed as follows:

4xx [original subfields and text] $$7 [text of 1xx (subfields are stripped].

The fix_doc_aut_duplicate routine is based on checking the 4xx field against the ACC (Z01 headings) lists named GEN and DUP; therefore these lists must be present in the authority library.s tab00 and tab01 tables. The 4#### field must be sent to the DUP list, with the 7 subfield stripped.

The 7 or 9 subfield can be displayed or suppressed in the headings index. This is controlled by the formatting tables ('H' or 'C' type line in edit_field).

Changing the authority record headings in this way does, of course, affect the automatic update of bibliographic records. For example, if a bibliographic record has the following field:

```
710     $$a ALA
```

ALEPH will not find a matching authority record heading (because all records will have 7 or 9 subfield). In such cases, the record has to be updated manually by selecting the appropriate term. The library can locate such cases by running the List Unauthorized Headings (p_auth_03) service. This report lists headings that have not been authorized, meaning there is no match in the designated authority library.

Note that for both methodologies, the headings with the additional subfield are scattered in unpredictable ways trough the browse list. In order to control the filing of these headings, you can use the add_prefix_hash routine. This procedure adds a hash (#) sign immediately after the subfield code specified in the parameters column. The hash sign brings to the top of the list those headings with the added subfield in the correct sort order, while other headings will be sorted immediately after. Following is an example of the sorting that will be performed:

```
$$aALA $$7African Literature Association
$$aALA $$7American Library Association
$$aALA $$7Stiftelsen Anpassning till liv och arbete
$$aALA Auto & Travel Club.
```

In order to sort the headings derived from the fix_doc_aut_duplicate program correctly, the following setup should be defined in tab_filing:

```
!1 2        3                                    4
!!-!-!!!!!!!!!!!!!!!!!!!-
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
01 N add_prefix_hash      7
```

This filing routine, add_prefix_hash, adds a hash (#) sign to the subfield specified in the parameters column of the tab_filing table. The hash (#) sign is added immediately after the subfield code. For example:

$$a [original heading]$$7#[text of added by fix_doc_aut_duplicate].

Note that the addition of the hash sign is only for filing purposes, and that both the record and the display of the heading are not altered.

Also note that the add_prefix_hash routine needs to be defined in the tab_filing table before running del_subfield_code (this is a routine that deletes the subfields' code).

Without this setup, the heading will not be sorted correctly:

```
410 2  $$aALA $$7African Literature Association
410 2  $$aALA $$7American Library Association
110 2  $$aALA Auto & Travel Club.
410 2  $$aALA $$7Stiftelsen Anpassning till liv och arbete
```

add_prefix_hash corrects the sorting to:

```
410 2  $$aALA $$7African Literature Association
410 2  $$aALA $$7American Library Association
410 2  $$aALA $$7Stiftelsen Anpassning till liv och arbete
```

```
110 2  $$aALA Auto & Travel Club
```

3.4.2 Ambiguous Headings from Different Authority Databases

The bibliographic database can be linked to more than one authority database. These authority databases may use the same terms, in which case they are ambiguous headings. This is a problem only if the library wants to have a headings file that combines headings from more than one authority database - for example, a combined Library of Congress and MeSH subjects index.

The solution, once again, is to make the headings unique.

This has been implemented for MeSH where MeSH is an additional authority database and may share terms with the main authority database. A special fix procedure adds subfield 2 (the "Source of heading or term") to all MeSH headings in the authority and bibliographic databases (see MeSH as Additional Authority Database on page 40).

```
        $$2MeSH
```

Example:

```
MeSH Authority record:

150     $$aOncology $$2MeSH
450     $$aCancer $$2MeSH

LC Authority record

150     $$aCancer
450     $$aOncology


Bibliographic record:

        65012   $$aOncology $$2MeSH
```

The LC-MeSH combined subject headings index in the bibliographic database looks like this:

```
        Cancer
        Cancer (MeSH)
                See Oncology
```

3.5 Conflicting Authority Headings and the Category Mechanism

3.5.1 Conflicting Headings

In the Bibliographic and Authority libraries a new heading is created when the content of the field being indexed does not match a heading that already exists in the headings index (title, authors, subjects, and so on). In the Authority Control process (described in section 3.2 The Authority Control Process on page 21) the system matches a new heading created in the Bibliographic record against headings in the “GEN” index in the Authority library. The match is based on the normalized text of the headings.

This means that two headings with identical normalized text will match even if they derive from tags (fields) of a different nature. For example:

A bibliographic record may have the topical term “Chess” in the 650 tag. The heading “Chess”, created from this tag in the subject headings index, will match the AUT library’s GEN index heading “Chess”, which was derived from a personal name ‘see from’ tag in the following authority record:

Personal Name	100	1	a	Chess, Henry L.
See/Trac/Per/N	400	1	a	Chess

If the UPD of the authority record “Chess” is “Y”, the subject “Chess” in 650 will be replaced by “Chess, Henry L.”

ALEPH has a mechanism to prevent matching across different types of headings. This mechanism takes into account the nature or “category” of the tag from which the heading is derived, both when the headings are created in the BIB library, and when they are matched from BIB to AUT in the authority control process.

The “Category Mechanism” is not mandatory, but it is recommended, especially if your records adhere to MARC 21 cataloging standards. This mechanism was introduced in version 18; its implementation is optional.

3.5.2 The Category Mechanism

The Category Mechanism is based on adding the last two numbers of the tag to the headings record (Z01). This ensures that two headings with identical text will be considered as two separate entries in the headings list, and will not be matched in the authority control process with identical text that derived from a field of a different category.

The Z01-CATEGORY field in the headings supports the category mechanism. The field includes three positions. The two first positions contain the second and third positions of the tag from which the heading was derived. The third position of the field is not functionally implemented but it might be used in the future in order to enable an additional level of categorization. For libraries which do not use the category mechanism, the content of Z01-CATEGORY will be ‘ZZZ’.

Following is an example of two authority records that will link correctly to the BIB headings, when the second and third tag positions are taken into account.

Personal Name	100	1	a	Chess, Henry L.
See/Trac/Per/N	400	1	a	Chess

The headings created from the 100 and 400 tags will have the category ‘00’. The AUT GEN headings will only match bibliographic headings that are created from the 100, 600, 700 and 800 tags.

And:

Topical Term	150		a	Chess
SAF/Trac/Topic	550		w	g
			a	Board games
SAF/Trac/Topic	550		w	g
			a	Mathematical recreations

The heading derived from the 150 field will have the category ’50’. The AUT’s GEN heading will only match with bibliographic headings created from the 650 tag.

Based on the above example, a bibliographic heading derived from the ‘650 0$aChess’ field will not match the authority heading derived from the authority ‘400 $aChess’ field.

Note that last two numbers of MARC 21 tags in the BIB and AUT records do not always match even if they are the same category. For example 240 and 440 in the bibliographic record should match with 130/430 in the authority record. This means that while the categories mechanism will prevent mismatches, not all possible matches will be enabled. This problem can be minimized by the setup of the categories mechanism. Refer to the section “Categories Mechanism Set-up” for more details.

3.5.3 COR Fields

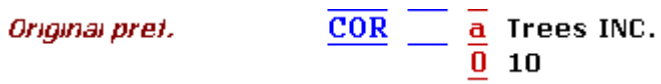
When a heading field in the authority library is updated, the system generates a “COR” field. This field contains the original term. This is necessary so that the bibliographic record field will be updated by the authority control process. The bibliographic records that have the original preferred term are corrected because the COR field is treated by the system as a non-preferred term.

Headings derived from COR fields will also contain category specification, which will be added by the system in subfield 0 based on the tag from which the COR field derived.

This is required in order to preserve the link with the bibliographic record that contains what is now a non-preferred term. This is especially important if there is a change in the second and third positions of the tag.

The category of the heading, including those headings derived from the COR field, is displayed under the ‘Aut. Info.’ column of the Browse list. This is especially important for the COR field where the category is not implicit in the tag.

For example:



Above is an example of a COR field created for the 100 tag. The category is in subfield $$0. For libraries which do not use the category mechanism, the content of subfield $$0 will be ‘ZZZ’.

3.5.4 Category Mechanism Setup

Note:
The following section is primarily of interest to System Librarian’s.

The table, tab_acc_category, determines whether or not the ‘Categories’ mechanism is used for a particular field tag. It resides in the $data_tab of both the bibliographic and the authority libraries. The table contains two columns: The first column is a five-character column that contains the tag. The second column is a one-character column that determines whether the category is used or not. If the table is not present in the

system, then the categories mechanism will not be used. If a field is not included in the table, then the headings derived from the field will be built without category.

These are the available values for the second column:

0 (or blank): The system will not use the Categories mechanism. All headings created from this field will have the Z01-CATEGORY set to 'ZZZ', and the BIB-AUT match will continue working as it did previous to version 18.

1: The system will take into account the second and third positions of the tags for a heading's uniqueness and matching algorithms. Note that if this option is selected, when upgrading from a version previous to version 18, it is necessary to rebuild the headings index in both bibliographic and authority libraries.

2: For future use. This option will enable possible addition of a second level of categorization in the future.

For sites with standard authority control the following setup is recommended:

For the Authority Library:

```
100## 1
110## 1
111## 1

148## 1
130## 0

150## 1

151## 1
155## 1
400## 1
410## 1
411## 1
430## 0

450## 1

451## 1

455## 1

500## 1

510## 1

511## 1

530## 0

550## 1

551## 1
```

For the Bibliographic Library

```
100## 1
110## 1
111## 1
130## 0

240## 0

245## 0
```

```
246## 0
247## 0
440## 0
600## 1
610## 1
611## 1
630## 0
648## 1
650## 1
651## 1
655## 1
700## 1
710## 1
711## 1
730## 0
740## 0
800## 1
810## 1
811## 1
830## 0
```

Explanation of the setup:
As noted above, there is a problem with using the tag to indicate the category of the field. In MARC 21, the tags of the bibliographic and authority fields from the same category are not always the same. This is true for titles – in authority records they are entered in the 130/430 tags; in the bibliographic record controlled titles are added in the 130, 240, 440, 730, and 830 tags. If the category based on the tag is added to these fields, titles from 240 and 440 will not match with titles from the authority 130 field. In order to enable a match on these tags, the tab_acc_category table above has all title fields set to 0. This means that the category will not be added and identical titles from the 240 tag in the BIB and 130 in the AUT will match. Since other types of headings are set to use the categories mechanism, mismatches should not occur.

The setup above enables matches between varying title tags. However, it does not provide a solution for possible geographic names, where a 151 authority field can match the bibliographic 110 and 710 fields ("51" will not match "10").

3.6 Authority Control Setup

Note:
The following sections are primarily of interest to System Librarian's.

3.6.1 BIB-AUT Links

The following tables control the authority-bibliographic links:

`tab00.lng` and `tab11_acc`

These tables define the bibliographic headings files:

tab00.lng:

```
H AUT   ACC     01 00       00       Authors
H SUB   ACC     11 00       00       Non Specified Subjects
H SUL   ACC     11 00       00       LC Subjects
H SUM   ACC     11 00       00       MeSH Subjects
```

tab11_acc:

```
100##                   AUT   -e468
110##                   AUT   -e468
650#0                   SUL   -68
650#2                   SUM   -68
650##                   SUB   -68
```

Note: Do not use hash signs (##) for field codes. Use them only for indicators.

Tab_aut

This table defines which headings indexes in the bibliographic library should be subject to authority control. This table also designates - per headings index - which authority database should be checked for a match.

Structure of the table:

- Col. 1 - Headings list code in bibliographic library
- Col. 2 - Usage code from tag 008 of the authority library:
    - 1 - pos. 14 (Main heading)
    - 2 - pos. 15 (Subject)
    - 3 - pos. 16 (Series);
- Col. 3 - Code of 1st authority library
- Col. 4 - Code of 2nd authority library
- Col. 5 - Code of 3rd authority library
- Col. 6 - Code of 4th authority library

Following is a sample of the table:

```
AUT   1 USM10
SUB   2 USM10 USM12
```

```
SBD   2 USM10
SLC   2 USM10
```

In the above sample, the bibliographic database SUB headings index is linked to two authority databases; USM10, Library of Congress and USM12, MeSH.

Note the following:

- If the second column is used and the library is a MARC 21 library, the system checks the appropriate codes in the 008 field of the authority database.
- When a match is not found in the library defined in col. 3, then the library in col. 4 is checked, and so on.
- Since SUB is a combined LC and MeSH subjects heading index, it is linked to both USM10 (LC) and USM12 (MeSH)

tab20

This table defines which fields from the authority record are used to enrich the bibliographic database's headings.

Structure of the table:

Line One

- Col. 1 - Line number
    - 1= heading
- Col. 2 - Source heading code in the bibliographic library. This is the heading file for which ue_08 tries to find a match in the authority database.
- Col. 3 - Target heading code in the bibliographic library. This is the headings file ue_08 enriches.
- Col. 4 - Authority record field text to match to bibliographic heading.
- Col. 5 - Subfield filter (used mainly for MARC 21 multilingual authorities).
- Col. 6 - Subfield text -- col. 5 and 6 together filter the Authority record field, depending on particular subfield + content.

- Col. 7 - Subfields to take or strip from the authority record field as the basis for the creation of the bibliographic heading.

- Col. 8 - Indicator (first or second) to use for stripping initial non-filing text in MARC 21.

(Note: Indexes assigned in Col. 2 and Col. 3 of tab20 should match the indexes used by the library in `tab00.lng`, `tab01.lng`, and `tab11_acc`).

Line Two

- Col. 1 - Line number
    - 2=cross reference
- Col. 4 - Authority record field for building Reference.

- Col. 7 - Subfields to take or strip for match.

- Col. 9 - Type of reference (always SEEF).

Following is a sample of the table:

```
1  2      3     4   5  6        7        8   9
!-!!!!!-!!!!!-!!!!!-!-!!!!-!!!!!!!!!!!!!-!-!!!!!
1 AUT   AUT   100##         -8             0
2              COR##                        0 SEEF
1 AUT   AUT   100##         -8             0
2              400##         -8             0 SEEF
1 SUM   SUM   150##                        0
2              450##         -8             0 SEEF
1 SUM   SUM   150##                        0
2              COR##         -8             0 SEEF
1 SUM   SUB   150##                        0
2              450##         -8             0 SEEF
1 SUM   SUB   150##                        0
2              COR##         -8             0 SEEF
```

Note:

- The COR field should be treated as a non-preferred term - each authority field should be repeated for the 4XX and COR fields.

- In the above example, MeSH subject headings are sent to two headings files - SUM and SUB. The source for the match is the specific headings file but both the specific (SUM) and the common (SUB) headings files are enriched.

- In the above example, MARC 21 1XX fields should be replaced with 2XX fields for UNIMARC.

3.6.2 Enrichment of Word Files

tab_expand

The bibliographic indexing is enriched when the bibliographic record is indexed. Enrichment of the word files is optional and is based on defining the following expand program:

```
WORD        expand_doc_bib_accref
```

This expand program adds all non-preferred terms to the bibliographic record (virtually). When the record is re-indexed after ue_08 has created the BIB-AUT link, non-preferred terms are added to the word files. The non-preferred terms are "added" to the bibliographic record using the same tag as the preferred term.

The way the expand file works can be demonstrated by adding it to the U39-DOC section in tab_expand and then displaying a bibliographic record with a heading that is linked to an authority record:

```
U39-DOC     expand_doc_bib_accref
```

If the bibliographic record with "American Bible Society" is displayed, the expanded non-preferred terms can be seen:

```
300   L $$aliii, 1434 p.$$bmaps.$$c25 cm.
500   L $$a"Verzeichnis der Masoretischen Termini": 4 p. inserted.
546   L $$aPrefaces and introductions in German, English, and Latin.
500   L $$aVocalized text.
7001  L $$aKittel, Rudolf,$$d1853-1929
7001  L $$aBaumgartner, Walter,$$d1887-
7001  L $$aKahle, Paul,$$d1875-1964
7102  L $$aAmerican Bible Society (field in record)
```

Expanded fields:

```
7102  L $$aBeikoku Seisho Kaisha
7102  L $$aJam??aiyat al-Tawr?aah al-Am?airik?aan?aiyah
7102  L $$aTa Mei-kuo sheng ching hui
```

```
7102  L $$aABS
7102  L $$aA.B.S
7102  L $$aSociedad B?aiblica Americana
7102  L $$aBeikoku Seisho Ky?aokai
7102  L $$a?oHevrat Ameri?okah shel Sifre ?okodesh
7102  L $$aAmerikan KitabÂ¸ mukaddes Ã·Sirketi
7102  L $$aPhrakhritsathamsam?aakhom ?Am?aerikan
7102  L $$aPhrakhritsatathamsam?aakhom ?Am?aerikan
7102  L $$aPhrakhritsatham Sam?aakhom ?Am?aerikan
```

The `expand_doc_bib_aut_700` expand program for MAB customers expands fields 800 (classification) and 803 (description) from the classification authority base (for example, nnn13) in order to enrich the bibliographic record.

3.6.3 Display of Cross-references in the Web OPAC

The text for the authority library name is taken from line 93nn in the table `www_f_heading` in the `$aleph_root/error_lng` directory, where nn is the number of the authority library. For example, the text "LC Authority Record" is taken from line 9310 when the LC authority library is in USM10 (UNI10 for UNIMARC) and the text "MeSH Authority Record" is taken from line 9312 when the MeSH authority library is in USM12:

```
9310 L [LC Authority Record]
9312 L [MeSH Authority Record]
```

For an example of this usage, see Enrichment of the Bibliographic Headings Files on page 19.

3.6.4 Update of Bibliographic Records

tab01

Column 7 in `tab01` defines which headings file is used to update the bibliographic record, in order to trigger a correction in a bibliographic record field where there is a heading which is a non-preferred term. Example:

```
D 100      00 0000   AUT   100   LPersonal Name ME
D 650 0    00 0000   SUL   650   LSubject-Topical-LC
D 650 1    00 0000   SUB   650   Lsubject-Topical
D 650 2    00 0000   SUM   650   LSubject-MeSH
D 65000    00 0000   SUL   650   LSubject-Topical-LC
D 65001    00 0000   SUB   650   Lsubject-Topical
D 65002    00 0000   SUM   650   LSubject-MeSH
D 65010    00 0000   SUL   650   LSubject-Topical-LC
D 65011    00 0000   SUB   650   Lsubject-Topical
D 65012    00 0000   SUM   650   LSubject-MeSH
D 65020    00 0000   SUL   650   LSubject-Topical-LC
D 65021    00 0000   SUB   650   Lsubject-Topical
D 65022    00 0000   SUM   650   LSubject-MeSH
```

Note:

- In order to update a field from a specific headings file, use indicators in this table. Note that a hash sign cannot be used, and this means that all variations must be entered. This enables you to update LC subjects from the LC subjects (650#0) and MeSH subjects from the MeSH headings (650#2).

- In addition to this table, the authority record must have UPD=Y (lack of a UPD field is the same as UPD=Y).

3.6.5 Update of Authority Records

tab_z105

This table defines to which bibliographic database/s the authority database will send a message when an authority record is added or updated. The table must be defined in the authority database.

Example:

```
UPDATE-DOC 4 USM01 CEN01
```

In this example, the authority database is sending an update message to the USM01 and CEN01 bibliographic databases. The update message is a Z105 record.

The UE_11 procedure must be working in the background in the library defined for the z105_library variable in the aleph_start file. If the variable is set as follows:

```
setenv  z105_library  USR00
```

Then the ue_11 needs to be run in the USR00 library.

The 'COR' Field - tab_fix

In order for the system to automatically create a COR field when the preferred term is changed the following line must be defined in `tab_fix`:

```
INS   fix_doc_preferred
```

Note that if you load authority records, the fix should also be defined for the loader program. For example:

```
OCLC   fix_doc_preferred
```

3.6.6 MeSH as Additional Authority Database

If the library wants to have a combined headings list controlled from MeSH and an additional authority database (for example, LC), the following must be defined so that the source is added to MeSH authority and bibliographic headings:

`tab_fix` in the authority library:

```
INS   fix_doc_aut_mesh
```

```
OCLC  fix_doc_aut_mesh
```

tab_fix in the bibliographic library:

```
INS   fix_doc_sub
OCLC  fix_doc_sub
```

The fix_doc_aut_mesh adds subfield $$2[MeSH] to fields 1xx, 4xx, 5xx and COR of authority records from the MeSH authority database.

The fix_doc_sub program adds subfield $$2[MeSH] to fields 6xx of the bibliographic records. The subfield is only added when the second indicator of the field is 2 (Medical Subject Headings).

3.6.7 Addition of End Punctuation to Authority Controlled Headings

The tab_subfield_punctuation in the tab directory of the bibliographic library is used to define subfield punctuation for fields. Punctuation for fields is necessary when the system automatically updates the bibliographic record from a linked authority record. When the bibliographic record is updated from the authority database, the system always uses the preferred term (1XX) from the authority record. Originally, the bibliographic record may have more data than the authority record. This data should be retained. In MARC, authority records do not have end punctuation, whereas bibliographic records do. The tab_subfield_punctuation table is used to add end punctuation to the updated field. The table also can be used to add punctuation between the end of the preferred term from the authority record and the additional subfields retained from the bibliographic record (for example, between subfield $a - personal name - and subfield $t - title of MARC 21 600 field).

The following is a sample of the tab_subfield_punctuation table:

```
! 2     3 4 5          6
!-!!!!!-!-!-!!!!!!!!!!-!!!!!!!!!!
A 1#### a   .      .
A 1#### d   .          -.
A 100## a 4 ,
A 100## d 4 ,
A 110## b   .          .
```

Key to tab_subfield_punctuation:

- **Column 1 - Program code**
  Always use "A".
- **Column 2 - Tag and indicators**
  Contains the field tag with indicators for which subfield punctuation is being defined. Use the hash (#) as a placeholder for undefined indicators.
- **Column 3 - Subfield Code**
  Enter the subfield to which the end punctuation is going to be added.
- **Column 4 - Following subfield Code**

Enter the subfield that follows after the end punctuation added to the subfield defined in the previous column.

- **Column 5 - Punctuation to Add**
  Enter the punctuation signs that should be added to the subfield.
- **Column 6 - If Punctuation**
  This column is used to determine whether or not the punctuation defined in column 5 is added to the field. If the field already ends with the punctuation defined in column 6, punctuation from column 5 is not added.

3.6.8 Subject Subdivisions

The bibliographic database often has subject headings that exist only with subdivisions, whereas the authority database does not have records for subjects with every possible subdivision. The authority record of the heading without subdivisions might include cross-reference and note information that is important, and the library might want to include these headings in the bibliographic library's headings list. We will call this type of heading, which is not linked to document records, and which exists only because there is an occurrence of the same heading with a subdivision, a *general heading*.

You can set up the system to strip subdivisions (subfields $$v, $x, $y and $z) from the bibliographic heading in order to find the more general term.

This section explains how to set up your system so that general headings will be included in the headings list, and will be displayed when relevant to the logical base being searched.

Stripping Subdivisions and Subject List Enhancement

Headings enhancement in a standard ALEPH installation is achieved by matching a heading with an authority record. Using this one-on-one exact lookup, a heading that has subdivisions will never find a match in the non-subdivided authority records. ALEPH setup and processes include an option for enrichment of the bibliographic library's headings that will include these headings. The result of this process is the creation of a heading record in the bibliographic database, using the general heading found in the authority database. The heading includes a link to the authority record, and cross-references are created (when relevant).

Although the mechanisms are built into the system, they depend on the configuration of `tab11_acc`, `tab00.lng`, `tab_xyz` and `tab20` in the bibliographic library.

The main principle involved in the setup is that the library must set up special Z01 headings lists, which includes, in addition to the heading in its full form, headings that are stripped of subdivisions. We call this an *XYZ* index. Libraries that have more than one authority database (for example, LC and MeSH) will have to set up two separate lists, defining the code of each list.

In the following examples, we assume that there are separate databases (Authority Libraries) for LC and MeSH, but some of examples only show LC as the example.

tab11_acc

tab11_acc is used to assign record fields to headings indexes. In order to facilitate finding a match in the authority database, we want to strip subdivisions from the heading. Following is a sample setup to achieve this:

```
! 1    2    3     4        5            6 ...
!!!!!-!!!!!-!-!!!!!!!!!!-!!!!!-!!!!!!!!!!!...
650#0                    SULX  -vxyz23468       - retains a
650#0                    SULX  -xyz23468        - retains a... +v
650#0                    SULX  -yz23468     - retains a... +v+x
650#0                    SULX  -z23468      - retains a... +v+x+y
650#0                    SULX  -vxz23468       - retains a... +y
650#0                    SULX  -vz23468     - retains a... +x+y
650#0                    SULX  -v23468      - retains a... +x+y+z
650#0                    SULX  -x23468      - retains a... +v+y+z
650#0                    SULX  -y23468      - retains a... +v+x+z
650#0                    SULX  -vyz23468       - retains a... +x
650#0                    SULX  -xvy23468       - retains a... +z
650#0                    SULX  -xv23468     - retains a... +y+z
650#0                    SULX  -xy23468     - retains a... +v+z
650#0                    SULX  -vy23468     - retains a... +x+z
650#0                    SULX  -xz23468     - retains a... +v+y
```

Note:

You cannot define recursive stripping, so if the field has multiple occurrences of a subfield, when the subfield is stripped, all occurrences are stripped. For example:

$$a Working class $$x Research $$x Handbooks

cannot be stripped to

$$a Working class $$x Research

tab00.lng

tab00.lng defines the headings lists and filing procedures that are used when building the filing key of the heading:

```
!   2     3   4 5  6  7 8   9   10            11
!-!!!!!-!!!!!-!-!!-!!-!-!---!!-!!!!!-!!!!!!!!!!!!!!!!!!!
H SULX  ACC     11 00       00       LC Subjects -vxyz
H SUMX  ACC     11 00       00       Medical Subjects .vxyz
```

tab_aut

tab_aut defines the authority database that is used for the enrichment and control of a headings list:

```
! 1   2   3     4     5     6
!!!!!-!-!!!!!-!!!!!-!!!!!-!!!!!
SULX  2 USM10
SUMX  2 USM12
```

tab_xyz

tab_xyz defines the "XYZ" list that is parallel to a subject list. In the following example, SULX is parallel to the SUL (LC) subject headings, and SUMX is parallel to the SUM (MeSH) headings.

```
!  1     2
!!!!! !!!!!
```

```
SUL    SULX
SUM    SUMX
```

tab20

tab20 defines the rules by which a headings index is enriched from an Authority record, creating headings for cross-references and for general headings:

The XYZ index must be defined in the tab20 table feeding back to the headings index as in the following sample lines:

```
!   2     3     4   5     6                7           8  9
!-!!!!!-!!!!!-!!!!!-!-!!!!!!!!!-!!!!!!!!!!!!!!!!!!!-!-!!!!!
1 SULX  SUL   150##                                    0

2             450## w !!!n       -wi5                 0 SEEF

1 SULX  SUL   150##                                    0
2             450## w !!!       -wi5                 0 SEEF

1 SULX  SUL   150##                                    0
2             450## w -          -wi5                 0 SEEF

1 SULX  SUL   151##                                    0
2             451## w !!!n       -wi5                 0 SEEF
```

.../...

The *XYZ* headings list is intended for internal purposes, but functions in the same manner as all headings lists, and can be used for browse searches. The BIB records are actually indexed there.

To sum up, through this setup, the following is accomplished:

The system matches the *general* authority heading from the XYZ index against the authority database. Using the `tab20` table, this heading (and its cross-references) is added to the Subjects Index List (SUL).

Filtering Headings List for Logical Bases

The inclusion of *general headings* in the bibliographic library's headings list raises a problem that is related to logical bases. The Browse list that is displayed when searching on a logical base includes only *relevant* headings (that is, headings which have links to documents that are included in the logical base). General headings and their cross-references never have related documents and theoretically would never be displayed. Therefore, there is additional functionality in the system for including or excluding these headings when Browse is performed in a logical base.

The logical bases include *general* headings via the following mechanisms:

Logical bases that use Z0102 are automatically filtered because of the Z0102 mechanism.

For logical bases that do not use Z0102, if the bibliographic heading has an authority link, but does not have attached records, and if the heading does not have *vxyz* subfields, the system searches for the same heading on the XYZ headings index. Because the XYZ heading has related documents, the system can determine if the XYZ heading would be included in the logical base. If so, then the parallel heading in the regular subject headings list is displayed in the base. Otherwise, it is not displayed.

Note concerning *general* headings that have *vxyz* subfields
In tab11_acc, you can define various permutations to create headings with *vxyz* in the

XYZ list. Some of these headings will find a match in the authority library and will be written in the BIB library's Browse list, through enrichment and tab20.

The logical base mechanism checks a *general* heading (that does not have linked BIB records) in the "XYZ" index only if the heading does not have *vxyz* subfields. Therefore, *general* headings with subdivisions will not be displayed in a logical base.

3.6.9 Multiple Authority Libraries

If you want to set up multiple authorities, you must designate a preferred authority library. You set this in `tab_aut` in the tab directory of the bibliographic library. Here is an example:

```
! 1   2   3     4     5     6
!!!!!-!-!!!!!-!!!!!-!!!!!-!!!!!
SUB   2 USM10 USM12
```

The above setting denotes that the USM10 Authority record is preferred over the USM12 record.

To define the actual preference, use the BLK relation type in the `library_relation` table in the `/alephe/tab`:

```
!1    2     3     4     5     6
!!!-!!!!!-!!!!!-!!!!!-!!!!!-!!!!!>

BLK USM10 USM12
```

The above setting de-activates the non-preferred AUT record for future use.

3.7 Synchronization of 1XX and 5XX in Authority Records

The fix routine, fix_doc_aut_5xx, is set in the authority library. This fix ensures that when you update the 1XX field (Preferred term) in the AUT record, the 5XX fields (See-Also terms) in related AUT records are also updated. This occurs only for headings with subfield $$9A (Kanji+Katakana).

AUT records might contain several 5XX fields; however, Aleph updates only the relevant fields.

The subfields listed in column 3 of tab_fix are not updated by the fix. It is recommended that you list the subfields that define the relationship of the 5XX to the heading (for example, subfields i, w, 4, and 6) in column 3.

The following is an example in ./usm10/tab/tab_fix:

```
! 1                 2                                 3
!!!!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!>
UE_01 fix_doc_aut_5xx                    46wi
```

Links between AUT records are recorded in Oracle table Z103 according to the relations defined in tab07. The fix routine finds the linked AUT records and the relevant 5XX fields (the terms that caused the original relation between the AUT records) using the Z103 table. To determine the relevant 5XX fields, a hard-coded text comparison is used. The comparison determines if the text of the original value of the 5XX fields (contained in a COR field) contain exactly the same text as the 1XX fields and have $$9A (Kanji + Katakana reading) in the linked record. If they do, the fix routine updates the 1XX fields with the change to the 5XX field. The comparison takes into account the full authority heading (subfields $$a, $$A, $$b, etc) and subfield $$9A.

Notes:
- sub-field names are case sensitive.
- The subfields listed in tab_fix column 3 of fix_doc_aut_5xx routine and COR$$0 are not used for the comparison.
- The subfields listed in tab_fix column 3 of fix_doc_aut_5xx routine are not used when updating 5XX as a result of 1XX update.

The following is a summary of the fix routine action:

1. In the AUT record, 1XX is modified and a COR field is created containing the original 1XX content. (Note that depending on your setup, the COR field can be manually created by copying 1XX and subfield $$9A or automatically, by setting fix_doc_preferred in tab_fix.)
2. Using Z103 links, the system detects the related AUT records and uses a text comparison to determine which 5XX lines are identical and should be replaced.
3. The 5XX fields in the AUT records whose contents are identical to the COR value of the updated AUT record are replaced by the string contained in 1XX.

For example:

```
AUT record 000000001:
001 000000001
100 $$aABC$$9A

AUT record 000000002:
001 000000002
100 $$aEFG$$9A
500 $$aABC$$9A$$wr
```

In the above records, ABC and EFG represent the Kanji+Katakana heading.

Field 100 of AUT record 000000001 is changed by the user from ABC to XYZ. The COR field is assigned with the previous term – ABC:

```
AUT record 000000001:
001 000000001
100 $$aXYZ$$9A
COR $$aABC$$9A
```

fix_doc_aut_5xx then automatically updates the relevant field 500 of AUT record 000000002 to XYZ:

```
001 000000002
100 $$aEFG$$9A
500 $$aXYZ$$9A$$wr
```

Note:
Subfield 500$$w (which is listed in column3 of tab_fix) remains unchanged. It is not used for comparing the COR field of record 00000001 with field 500 of record 000000002 or for updating field 500.

3.8 Background Processes in Authority Control

There are several background processes that must be run:

In the z105_library (USR00) - ue_11

In the authority library - ue_01

In the bibliographic library - ue_01 and ue_08, and ue_08 must work in C mode, and with Y for Write Z07s for related bibliographic records.

3.9 Authority Control Reports

Your BIB library can set up alternate AUT libraries for the authority control of a single browse list. The BLK line in the `library_relation` table in `/alephe/tab` is used by the system to define the preferred authority library. When a link in a BIB heading is changed from the non-preferred AUT library to the preferred AUT library, positions 14-16 of the non-preferred AUT record's 008 field are changed to "bbb", effectively deactivating the record for future use.

To see the setup needed for multiple authority libraries, refer to Multiple Authority Libraries on page 46.

3.9.1 List Headings Having Multiple Document Records (p_auth_04)

This is a report of headings that are linked to more than one authority record. The report is designed to "uncover" ambiguous headings. The report is only meaningful when run on the authority library.

3.9.2 List Unauthorized Headings (p_auth_03)

This report lists bibliographic headings that have not been authorized - meaning there is no match in the designated authority library. To be meaningful, the report should only be run on headings that have authority control (that is, they are defined in tab_aut). The report is run in the bibliographic library and can be run with date and headings index code parameters to limit output.

3.9.3 Print Catalog Records with "SEEF" (Non-preferred) Headings (p_print_05)

This report checks the bibliographic library for records that use the non-preferred rather than the preferred form of a heading. This happens only if the Authority record has UPD=N, in which case the bibliographic record is not updated, and the non-preferred heading remains in the record.

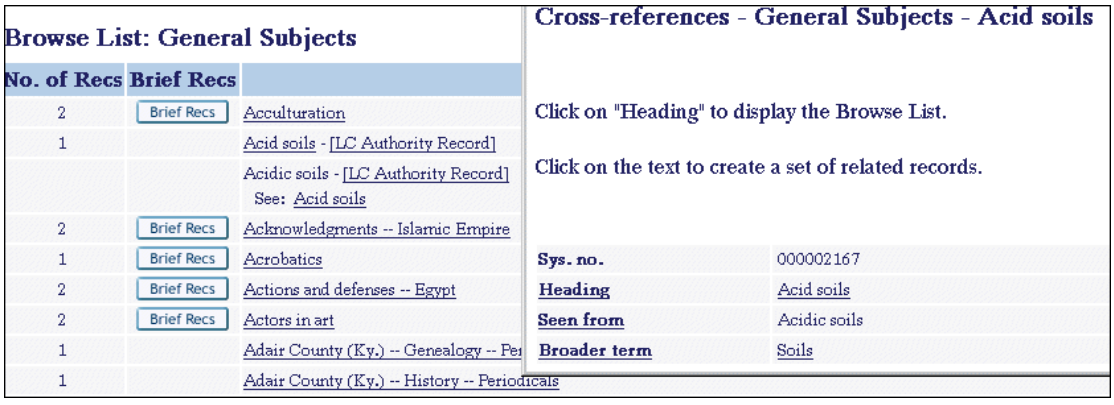
4 The Authority Database as Search Aid

This section describes how the authority database may be used as a tool in searching the bibliographic database beyond the enrichment of the headings and word files. It contains the following subjects:

- Display of Authority Record from Bibliographic Headings
- Jumping from the Authority Database to the Bibliographic Database
- Untraced References
- The Authority Database as Search Aid - Setup
- Enrichment and Display of 4XX and 5XX Fields from AUT

4.1 Display of Authority Record from Bibliographic Headings

The user can display the authority record linked to a bibliographic heading by clicking the text "LC Authority Record". The system will then display the authority record:



From the authority record, the user can move around the bibliographic database. Clicking the caption of the field (such as *Heading*, *See also*) displays the list of headings. Clicking the field (if it is underlined) creates a set of records in the Bibliographic database that use the term. ALEPH uses the term as the basis for a FIND type search in the bibliographic headings file. In the example above, the non-preferred term *Acidic soils* is not underlined because it is not used by any bibliographic records.

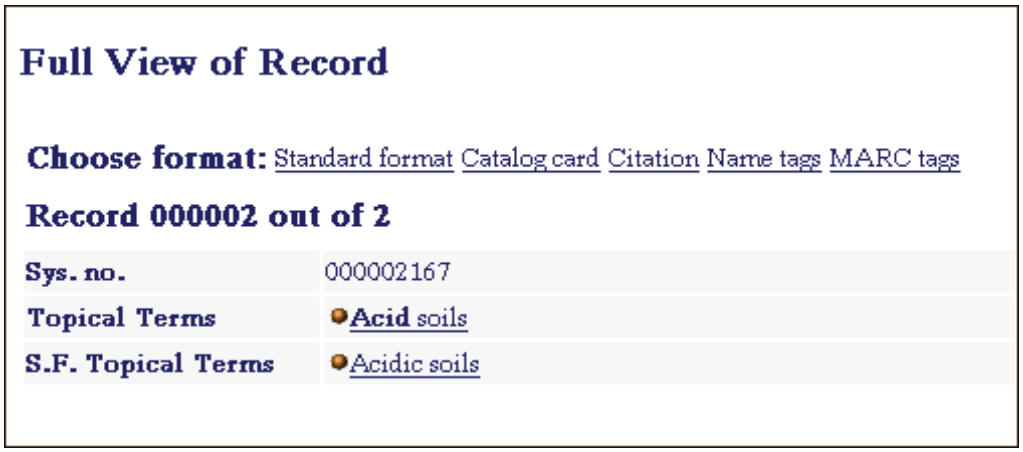
The library can modify the display of the authority record in a table that can be

defined for each authority database linked to the bibliographic database. It is possible to suppress the display of non-preferred and/or related terms in the authority record that are not used by any bibliographic records (for example, suppress related terms that have no linked records in the bibliographic database). This is the reason why, in the example above, S*ee also soil acidity* does not appear - it is not actually used by any bibliographic record.

4.2 Jumping From the Authority Database to the Bibliographic Database

The user can search the authority database and then "jump" to the bibliographic database by creating a set of bibliographic records that use a specified term.

This function is available from the FULL display of the authority record in the Web OPAC. Once a user has located an authority term that interests him, he can click the "Heading" (1XX field) to create a set of bibliographic records that utilizes the term:



When the user clicks *Acid soils*, the following window is displayed:

You can select the bibliographic headings file to be searched for the term. In this example, when the Local Subjects index is invoked, ALEPH creates a set of records in the bibliographic database that uses the term "Acid soils" as a subject.

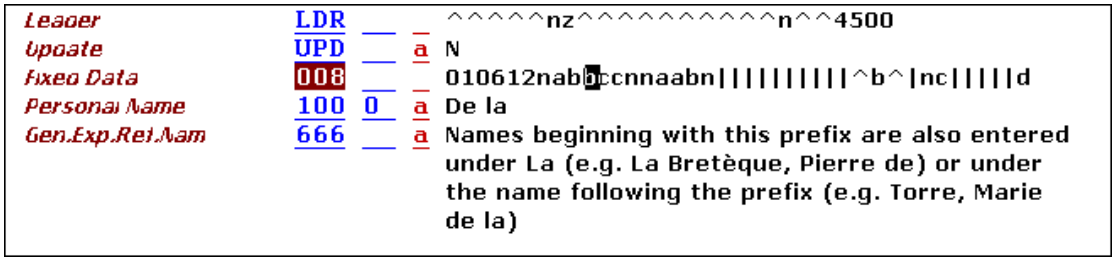
4.3 Untraced References

Untraced References from the authority library can be added to the headings list of the bibliographic library. Untraced references are headings that are not authorized for use as headings in the bibliographic library and are not used by other headings as "see from" entries. They can be used to provide a reference note to the user (that is, to guide the user to established headings). In MARC 21 format, code b in position 09 of the 008 field indicates that the 100 - 151 field contains an unestablished heading that is not traced. In UNIMARC format, the LDR field must contain value z at position 6 and the 100 field must contain value x in position 8.

Bibliographic headings that originate from untraced references are not updated/added by the UE_08 process used for standard authority control (the enrichment cannot be based on a match since the untraced reference is not approved for use as a heading in the bibliographic library). This type of record is copied to the bibliographic headings list by the "Update Untraced References" (p-manage-105) service. This service is available from the Build Indexes to the Catalog option of the Services menu of the Cataloging module (available when the user connects to an authority library). The service creates entries in the bibliographic headings list for those authority records in which position 09 of the 008 MARC 21 field is set to "b" or position 6 of the LDR UNIMARC field is set to "z" and position 8 of the 100 UNIMARC field is set to "x". This job must be run each time an untraced reference is added or updated in the authority database (it is suggested to run it on a weekly basis). The service deletes all existing untraced types of headings and rebuilds them including new additions and updates. The enrichment is based on the definitions of standard authority tables (`tab_aut` and `tab20`). In the OPAC and in the Search function, the untraced references are displayed with regular headings (without documents attached). In the following example, *De la* is an untraced reference.

Note

Position 09 of the 008 field in the authority record for the untraced reference is set to "b".

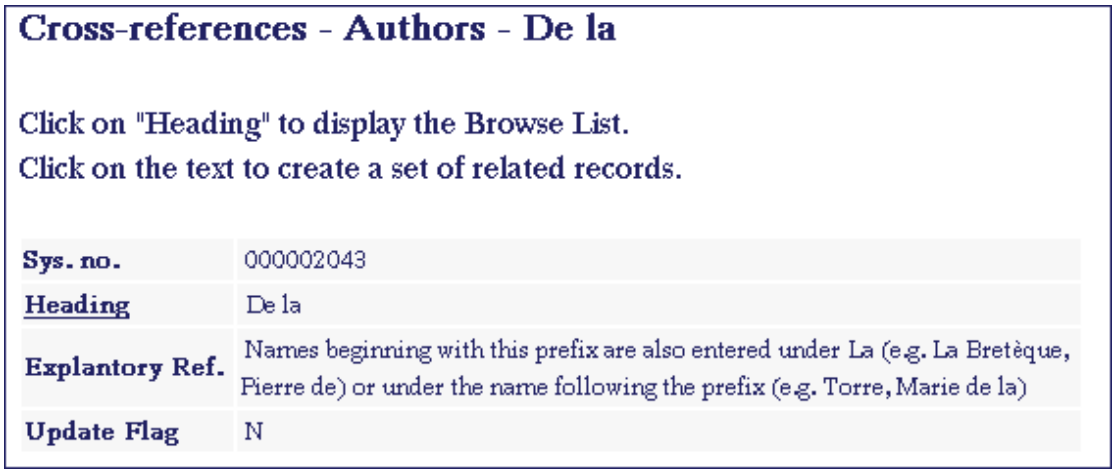


The reference is added to the browse list of the bibliographic library:

Browse List: Authors

No. of Recs	Brief Recs	
3	Brief Recs	De Jong, Gordon F.
		De la - [LC Authority Record]
2	Brief Recs	De Zoete and Gorton, London
2	Brief Recs	Dean, Harry 1864-

Similar to standard headings associated with authority records, this record is displayed in a separate window when clicking the authority link:



Cross-references - Authors - De la

Click on "Heading" to display the Browse List.
Click on the text to create a set of related records.

Sys. no.	000002043
Heading	De la
Explantory Ref.	Names beginning with this prefix are also entered under La (e.g. La Bretèque, Pierre de) or under the name following the prefix (e.g. Torre, Marie de la)
Update Flag	N

4.4 The Authority Database as Search Aid - Setup

4.4.1 Displaying the Authority Record from the Bibliographic Heading

edit_doc_999_aut_AUTLIBRARY.lng

Every authority database to which the bibliographic database is linked should have an "edit_doc_999_aut_AUTLIBRARY.lng" table defined for the display of the FULL authority record when it is expanded from the bibliographic heading. For example, if the bibliographic database USM01 is linked to two authority databases, USM10 and USM11, the following tables should be defined in the tab directory of USM01:

- edit_doc_999_aut_usm10.lng
- edit_doc_999_aut_usm11.lng

Example (for MARC21):

```
!1   2   3      4     5 6 7         8          9 0 11  2  13   4
!!-!!!!!-!-!!!!!!!!!!-!-!-!!!!!!!!!!!!!!!!!!!!-!-!-!!!-!-!!!!!-!
## SYS                  D LSys. no.            Y       E
## 1####                D LHeading             Y Z     E
## 260##                D LSub. CSR            Y       E
```

```
## 360##                D LSub.  CSAR          Y       E
## 4####                D LSeen from           Y       E
## 5#### w g            D LBroader term        Y X     E
## 5#### w h            D LNarrower term       Y X     E
## 5#### w -            D LSee also            Y X     E
## 663##                D LName Complex SA Ref Y       E
## 664##                D LName Complex SeeRef Y       E
## 665##                D LHistory Reference   Y       E
## 666##                D LExplantory Ref.     Y       E
## 64### a f            D LSeries-f            Y       E
## 64### a t            D LSeries-t            Y       E
## 64### a s            D LSeries-s            Y       E
## 7####                D LLink                Y       E
```

Note:

- The table has the same characteristics as the "edit_doc_999" table. One special feature is a special type of link in column 10 - "X". "X" informs the system to suppress the display of the term if it is not in use in the bibliographic database.

- Note that unlike edit_doc_999 of the authority database, the table does not include the linking fields. It includes the 5XX fields. A special expand procedure will add the relevant 5XX fields based on the authority record links (necessary if the related term is entered in only one side) - see the following section.

tab_expand

expand_doc_aut_aut is an expand program that adds all related terms to the authority record. This is necessary when "related" 5XX or RT fields are not entered in both records but only in one of the records, and when the library has built reciprocal relations using tab07. The expand program is based on the links that are created between authority records (see Authority Database Links Using tab07 on page 14).

The following line should be defined in tab_expand of the authority library so that when the authority record is displayed from the bibliographic database, all related terms appear including those that do not represent a link from another record. Enter "Y" in column 3:

```
!   1                   2                           3
!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!>
WEB-ACCREF expand_doc_aut_aut             Y
```

Note that this expand file is hard-coded for the Search function and does not need to be added in the table.

4.4.2 Navigating from the Display of the Authority Record

tab11_aut (in the bibliographic library)

As described in Display of Authority Record from Bibliographic Headings on page 49, when the authority record is displayed, the user can navigate through the

bibliographic database using the authority record fields. This navigation is based on the bibliographic headings files.

The tab11_aut table is used to define the headings files that the system uses to create hypertext links to FIND and BROWSE from the authority record. This allows the user to move around the bibliographic database using the authority record fields.

The following is a sample of the `tab11_aut` table:

```
100##               AUT
100##               SUB
110##               AUT
110##               SUB
111##               AUT
111##               SUB
130##               TIT
130##               SRS
130##               SUB
150##               SUB
150##               SUL
150##               MLT
151##               SUB
```

Key to the tab11_aut table:

- Column 1 - Field Tag

  Contains the field from the authority record. Note that if an authority term is linked to more than one headings file (personal names, 100, can be used for both authors and subjects), several lines can be created for the field. The system runs the search from the current headings file. # can be used for the third to fifth positions to indicate truncation of numeric additions to the field code (for example, 100# for 1000, 1001, 1003).

- Column 2 to 3 - Not in use

- Column 4 - Index Code Bibliographic headings file in which Browse/Find is activated.

- Column 5 - Subfield(s)

  Subfields to include/strip from the authority record field for Search. The system looks for the exact text of the field in the headings file. Blank indicates entire field. Use minus sign (-) followed by subfields to define subfields to be stripped or list the subfields to be indexed;

4.4.3 Untraced References - Configuration

For the enrichment of the bibliographic headings list with untraced references from the authority database, position 09 of the 008 MARC 21 field must be sent to the UTR word index in the authority library. The index code must be present in the tab00.lng table of the library's tab directory:

```
H UTR   W-017      00       00       Untraced Refs.
```

Position 09 of the field must be sent to this index in the tab11_word table of the library's tab directory:

```
008                         F09-01                01      UTR
```

For UNIMARC, position 6 of the LDR must field be sent to the UTR word index in the authority library and position 8 of the 100 field must be sent to the UTR2 index in the authority library. The index codes must be present in the tab00.lng table of the library's tab directory:

```
H UTR    W-010      00     0000       Untraced references
H UTR2   W-011      00     0000       Untraced references2
```

The relevant positions of the LDR and 100 fields must be sent to this index in the `tab11_word` table of the library's tab directory:

```
LDR                         F06-01                01      UTR
100##                       F11-01                01      UTR2
```

Since untraced references are not expanded through the UE_08 process, new entries in the authority database are imported into the bibliographic headings list by running the "Update Untraced References" (p-manage-105) service. This service is available from the Build Indexes to the Catalog option of the Services menu of the Cataloging module (available when the user connects to an authority library).

4.5 Enrichment and Display of 4xx and 5xx Fields from aut

In MARC 21, subfield $w, 4th position (that is, $wxxx4) - of both 4XX and 5XX - contains a code that enables the generation or suppression of a cross-reference from 4XX or 5XX fields. If the fourth position of subfield $w contains a blank or contains an 'n' (or the subfield does not exist), then the cross-reference is generated and the fields are shown in all relevant places: browse list, expanded authority record, under the heading in the brief record, and so on. If the fourth position of subfield $w contains something different, then the cross-reference is suppressed.

To support this, you use the filter columns in the `edit_doc_999_aut_xxx10.lng` table for the display and in the `tab20` table for the enrichment definitions. The following is an example of the lines for the `edit_doc_999_aut_xxx10.lng` table:

```
## 4#### w !!!n          D LSeen from           Y       E
## 4#### w !!! *         D LSeen from           Y       E
## 4#### w -             D LSeen from           Y       E
## 5#### w g!!n          D LBroader term        Y X     E
## 5#### w g!! *         D LBroader term        Y X     E
## 5#### w h!!n          D LNarrower term       Y X     E
## 5#### w h!! *         D LNarrower term       Y X     E
## 5#### w h             D LNarrower term       Y X     E
## 5#### w g             D LBroader term        Y X     E
## 5#### w -             D LSee also            Y       E
```

The following is a sample of the lines that should appear in the tab20 table for the enrichment definitions:

```
1 AUT   AUT   100##              -wi                 0
2             400## w !!!n       -wi5                0 SEEF
1 AUT   AUT   100##              -wi                 0
2             400## w !!!        -wi5                0 SEEF
1 AUT   AUT   100##              -wi                 0
2             400## w -          -wi5                0 SEEF
```

5 Multilingual Authority Database

This chapter includes the following sections:

- Multilingual Authority Records
- Multilingual Authority Indexes and Record Display
- Bibliographic Database Records and Update of Bibliographic Records
- The BIB-AUT Link and the Multilingual Authority Database
- Multilingual Authority Setup

Note

At the time of writing, the Multilingual Authority Database only works with MARC 21 format. In addition, note that Multilingual databases can only work as local databases and cannot be set as remote databases.

An ALEPH 500 authority database can work with multilingual authority records. Maintaining a MARC 21 multilingual authority database offers users several advantages:

- Enrichment of bibliographic access points (headings and words). A user can search for records using terms from different languages.

- Language-specific user interface can include language specificity for indexes and the display of records. This means, for example, that in the French interface, a user searches only French indexes and in the records, the system displays the French term even though the record itself was cataloged with the English term.

A multilingual authority database can be maintained for a variety of authorities. The examples below are thesaurus records.

5.1 Multilingual Authority Records

A multilingual authority record in ALEPH is identical to a regular authority record with the following exceptions:

In a multilingual authority record the preferred term is duplicated for each language. Non-preferred terms are entered as necessary for each language.

The language code for all preferred, non-preferred and related terms is entered in subfield $$9.

As in regular authority records, you may enter related terms in only one of the related authority records and in addition, in only one language. Based on the links created between the authority records, the system is able to display the term in a specified language.

Example of a multilingual record:

Leader	LDR			00000cz^^^2200181n^^4500
Topical Term	150		a	προσβαση στην καταρτιση
			9	gre
Topical Term	150		a	acesso à formação
			9	por
Topical Term	150		a	accesso alla formazione
			9	ita
Topical Term	150		a	acceso a la formación
			9	spa
Topical Term	150		a	Ausbildungszugang
			9	ger
Topical Term	150		a	accès à la formation
			9	fre
Topical Term	150		a	access to training
			9	eng
See Trac Topic	450		a	admission to training
			9	eng
See Trac Topic	450		a	ammissione alla formazione
			9	ita
See Trac Topic	450		a	admisión a la formación
			9	spa
See Trac Topic	450		a	admission aux cours

5.2 Multilingual Authority Indexes and Record Display

In a multilingual authority database, the library may be interested in creating separate indexes per language. This can be done by filtering the indexing by the language code in subfield 9 (see AUT Library on page 60).

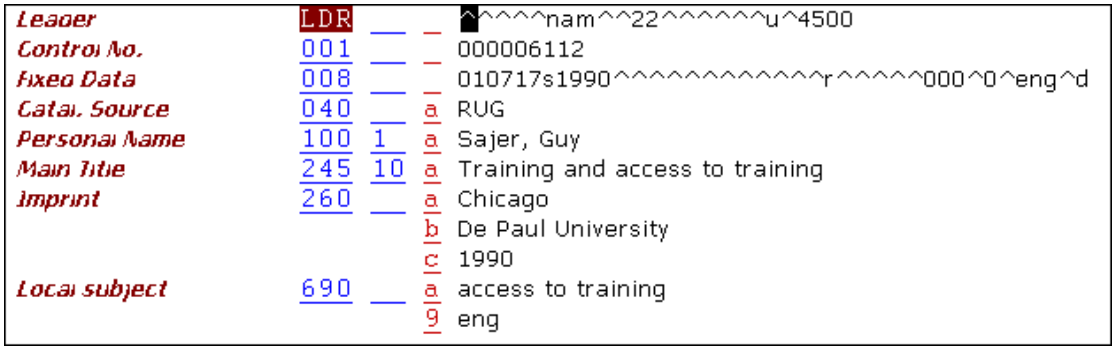
If you have created a separate index for each language and for the Search Other Database option in the Cataloging module, the library can define a language-specific index for Search. Note that this definition is not sensitive to interface language. In other words, a French cataloger using the French interface cannot use the French headings while an English cataloger is using the English headings.

The authority record display can also be filtered by the language code. For example, this is the display of the authority record from the example described above, with its links, with only French:

5.3 Bibliographic Database Records and Update of Bibliographic Records

Records in the bibliographic database that are linked to a multilingual authority database should be cataloged with the term in only one of the languages used by the authority database. The language code must be entered in subfield 9.

Example:



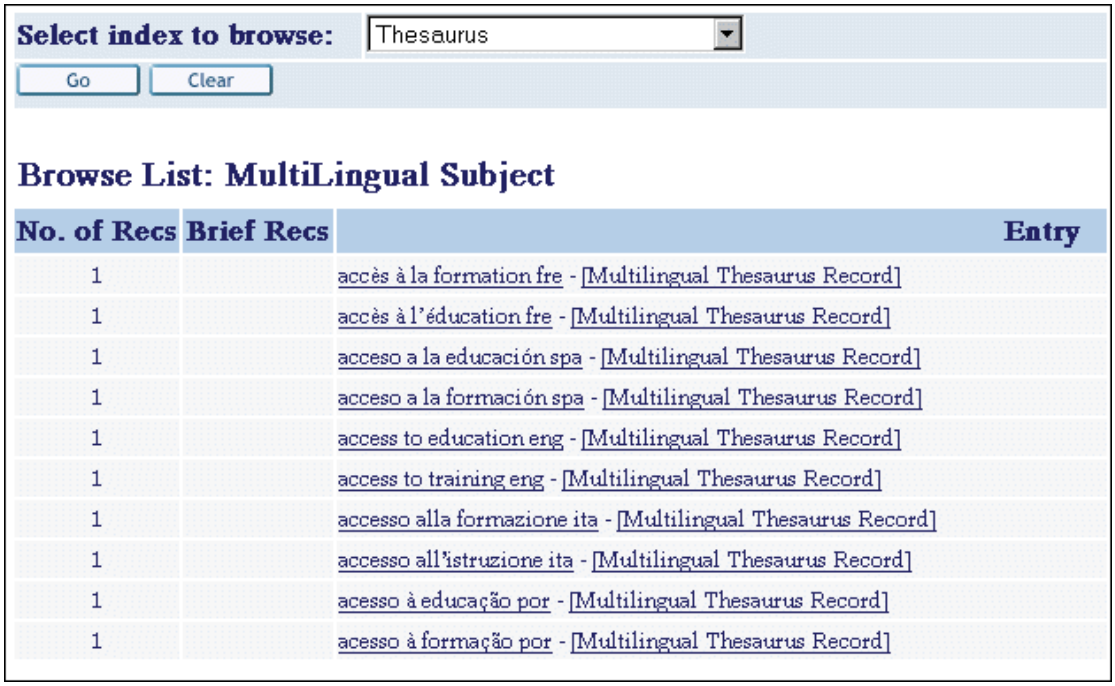
If a non-preferred term is used, the system updates the bibliographic record using the preferred term of the same language.

5.4 The bib-aut Link and the Multilingual Authority Database

The links between the bibliographic database and a multilingual authority database work as described above with some additional features.

5.4.1 Enrichment of Headings and Word Files

In addition to enriching the bibliographic headings and word files with non-preferred terms, the system adds all language versions.



In the example above, the headings file includes all languages. You can define separate headings and word files for each language (see Bibliographic Database on page 61).

5.4.2 Enrichment of Bibliographic Display

Based on the enrichment of the bibliographic headings file, you can expand to the bibliographic record all language versions for the term that is used in the bibliographic record. In the display tables, it is possible to filter the display by the language code in subfield 9. As shown in the example in Multilingual Authority Indexes and Record Display on page 57, you can, for example, display the French term in the French interface and the English term in the English interface.

5.4.3 Display of Authority Record from Bibliographic Headings

When the authority record is displayed from the bibliographic headings, the system displays related terms in all languages. Once again, this display can be filtered using the language code in subfield 9 so that each language interface displays terms in the interface language.

Sys. no.	000001637
English Heading	access to training -- eng
French Heading	accès à la formation -- fre
German Heading	Ausbildungszugang -- ger
Greek Heading	προσβαση στην καταρτιση -- gre
Portuguese Heading	acesso à formação -- por
Italian Heading	accesso alla formazione -- ita
Spanish Heading	acceso a la formación -- spa
English SF Hdg.	admission to training -- eng
French SF Hdg.	admission aux cours -- fre
German SF Hdg.	Kurszulassung -- ger
Portuguese SF Hdg.	admissão aos cursos -- por
Italian SF Hdg.	ammissione alla formazione -- ita
Spanish SF Hdg.	admisión a la formación -- spa
See also	access to education -- eng
See also	accès à l'éducation -- fre
See also	acceso a la educación -- spa
See also	accesso all'istruzione -- ita

5.5 Multilingual Authority Setup

Note:
The following sections are primarily of interest to System Librarian's.

The tables below have already been mentioned in Authority Control Setup on page 34 and Untraced References on page 51. The following sections point out the special aspects of multilingual authority setup.

5.5.1 AUT Library

tab100

The variable AUT-TYPE should be set to "M" - that is, multilingual. This is necessary so that the system enriches the bibliographic headings files with all language versions.

Indexes

The library may want to define indexes per language (especially if each language has its own user interface).

An example of a definition in `tab00.lng`:

```
H DES   ACC     11 00       00       Descriptors
H DESE  ACC     11 00       00       Descriptor ENG
```

```
H DESF  ACC     11 00       00       Descriptor FRE
```

And in `tab11_acc`:

```
150##                    DES
150##       9 eng        DESE
150##       9 fre        DESF
```

Authority Record Display (edit_doc_999)

The following is an example of the table as defined for the French interface:

```
!!-!!!!!-!-!!!!!!!!!!-!-!-!!!!!!!!!!!!!!!!!!!-!-!-!!!-!-!!!!!-!
## SYS                  D LSys. no.             Y       E
## 1#### 9 fre          D LHeading              Y Z     E
## 260##                D LSub. CSR             Y       E
## 360##                D LSub.  CSAR           Y       E
## 45### 9 fre          D LSeen from            Y       E
## 5#### 9 fre          D Lrelated term         Y Z     E
## 663##                D LName CSAR            Y       E
## 664##                D LName CSR             Y       E
## 665##                D LHist. Ref.           Y       E
## 666##                D LExpl.Ref.            Y       E
## 64### a f            D LSeries-f             Y       E
## 64### a t            D LSeries-t             Y       E
## 64### a s            D LSeries-s             Y       E
## 7####                D LLink                 Y       E
## UPD##                D LUpdate Flag          Y       E
## BT    9 fre          D LB.term               Y L     E
## NT    9 fre          D LN.term               Y L     E

## RT    9 fre          D LR.term               Y L     E
```

Notes:

- All fields are filtered by the language code in subfields.

- There is a limitation in that the display can be filtered by only one subfield. This means that the 5XX fields cannot be filtered both by language and by subfield w, which indicates the type of relationship.

tab_expand

The following expand file must be present in the `tab_expand` of the authority database, so that when the authority record is displayed from the bibliographic headings file, the system adds related terms in all languages (as noted above it is sufficient to enter related terms in only one language).

```
WEB-ACCREF expand_doc_aut_aut
```

5.5.2 Bibliographic Database

Indexes

The library may want to have indexes per language (especially if each language has

its own user interface). A common headings file for all languages must be defined.

An example of a definition in `tab00.lng`:

```
H DES   ACC     11 00       00       Descriptors
H DESE  ACC     11 00       00       Main Descriptor ENG
H DESF  ACC     11 00       00       Add. Descriptor FRE
```

And in `tab11_acc`:

```
650##                    DES
650##       9 eng        DESE
650##       9 fre        DESF
```

tab20/tab_aut

If separate indexes are defined for each language, these indexes must be defined in tab20 so that they are enriched from the authority record:

```
1 DES   DES     150##                                   0
2               450                                     0 SEEF

1 DES   DES     150##                                   0
2               COR                                     0 SEEF

1 DES   DESE    150## 9 eng                             0
2               450                                     0 SEEF

1 DES   DESE    150## 9 eng                             0
2               COR                                     0 SEEF

1 DES   DESF    150## 9 fre                             0
2               450                                     0 SEEF

1 DES   DESF    150## 9 fre                             0
2               450                                     0 SEEF
```

Note that the source code is always the common headings file to which all languages are sent. Only this code must be present in `tab_aut`:

```
DES   USM11
```

tab_expand

The following line is necessary so that ALEPH links the bibliographic record to headings in all the languages:

```
ACC         expand_doc_bib_multi_lng
```

The following lines are necessary to display, in each language interface, the term in the language of the interface.

```
WEB-FULL    expand_doc_bib_multi_lng
GUI-DOC     expand_doc_bib_multi_lng
```

This means that all languages are expanded to the bibliographic record. The display is limited to the specific language in `edit_doc_999` of each language. For example, `edit_doc_999.eng`:

```
65014 9 eng          C LMain Descriptor     Y Z eng E
```

tab01
This table is used to indicate which headings file should be used to update the bibliographic record if a non-preferred term has been used. The headings file should be the common language headings file to which all languages are sent. The system updates the bibliographic record using the preferred term of the language code indicated in subfield 9 of the field.

```
D 650    00 0000   DES   650   Ldescriptor
```

edit_doc_999_aut_XXXXX
edit_doc_999_aut_XXXXX (where XXXXX is replaced by the authority library code for example, USM10) is used to define the display of the authority record when accessed from the bibliographic headings. The authority record fields can be filtered using the language code in subfield 9.

```
!1   2   3      4     5 6 7         8          9 0 11  2  13   4
!!-!!!!!-!-!!!!!!!!!!-!-!-!!!!!!!!!!!!!!!!!!!-!-!-!!!-!-!!!!!-!
## SYS                  D LSys. no.            Y       E
## 1#### 9 eng          D LHeading             Y       E
## 4#### 9 eng          D LSeen from           Y       E
## 5#### 9 eng          D LRelated term        Y       E
```
Notes:

- All fields are filtered by the language code in subfields
- There is a limitation in that the display can be filtered by one subfield only. This means that the 5XX field cannot be filtered both by language and by subfield w, which indicates the type of relationship.

6 Batch Loading of Records to the Authority Database

This chapter includes the following sections:

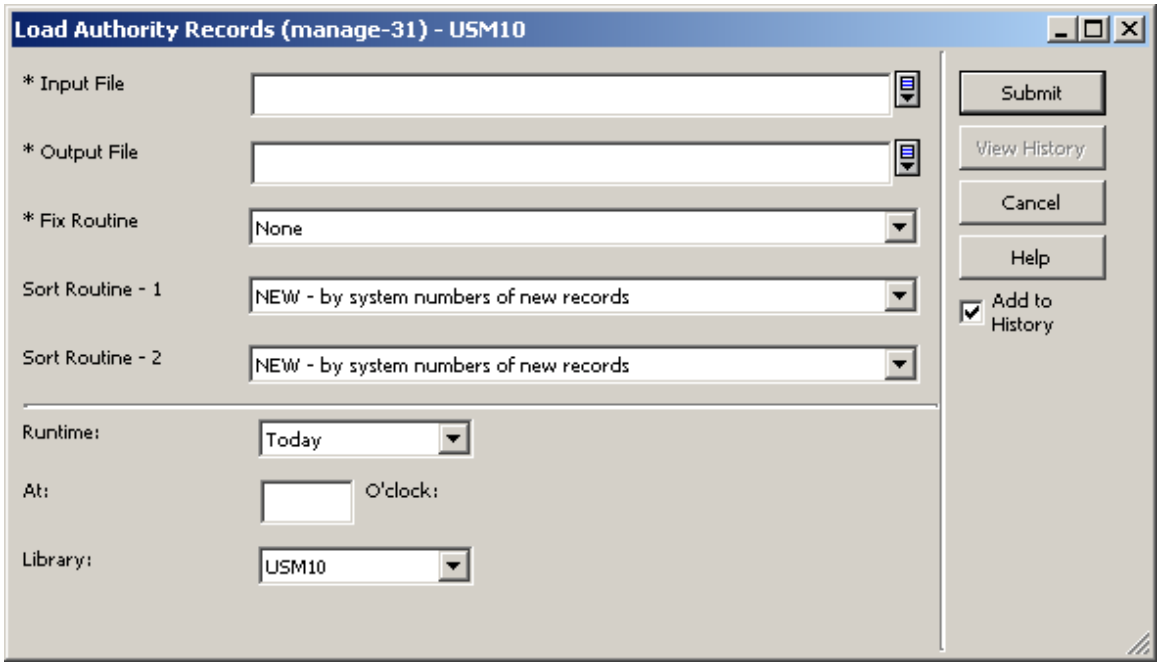
- Overview
- Algorithm
- Report
- Running the Report
- Setup

6.1 Overview

The Load Authority Records service (manage-31) accepts an input file of LC authority records in ALEPH sequential format and uses them to update the authority database. "Update" can include the following: deletion of an existing record, update of an existing record or the addition of a new record. Records that were modified or

created locally are not updated unless they contain a 010 tag with $$aTEMP.

At present, the Load Authority Records (manage-31) service is accessed from the Services Menu of the Cataloging module under the Load Catalog Records submenu. Note that the service is only displayed when connected to an authority library:



This service performs the following functions:

Adds new records to the database.

Replaces existing records (update): Records are replaced for update purposes. If the record was modified locally, it will not be replaced by the service.

Deletes records from the authority database.

Reports deleted records. The system gives a report of records that have been deleted.

Reports when replacing records: The system checks for changes in these 008 fixed field positions:

- 008/06 (Geographic) any change
- 008/32 (Unique) changes from "b" to "a"

This report can be placed in the "rejected records" report as a separate section.

Checks for duplicates. After every update (new record or updated record), the system must check for duplicate terms - every 1xx and 4xx term must be unique. Non-

unique terms are reported and records with duplicate terms are "blocked" by changing the usage codes of 008 pos. 14,15,16 to uppercase ("a" to "A"; "b" to "B"; and "c" to "C"). A blocked authority record is not linked to the bibliographic database.

Rejects and reports - In certain cases, records are rejected and placed in a special "rejected" database.

6.2 Algorithm

The Load Authority Records (manage-31) service has the following algorithm:

1. Compare the records in the input file and the records in the database based on the 010 field - Library of Congress control number - $$a

2. If a match is found, pos. 5 of the leader is checked:

   d - delete the matched record from the database
   c - check if 040 $$d = XxXXX (Note: there may be multiple $$d's - any $$d XxXXX is considered). If it does, then reject the record and report - if not, replace the current record.

   n - treat like c

3. If no match is found using the 010, the system goes on to check for a match based on the preferred term - that is, the 1xx field of the record.

4. If a match is not found, the system checks pos. 5 of the leader:

   n - add to the database as new record
   d - reject and report
   c - treat like n
   If a match is found and the record in the database has 010 $$aTEMP (that is, it is a temporarily created local AUT record), pos. 5 of the leader is checked:

   d - reject record and report
   c - replace current record
   n - replace current record

5. If a match is found and there is no 010 $$aTEMP, reject the record and report.

6.3 Report

The system reports the following situations. Each case is identified by a separate code.

6.3.1 Rejected Records

05 - The record was rejected; a match was found on the 010 field but $$d=XxXXX; LDR (05) = "n".

07 - The record was rejected; a match was found on the 010 field but $$d=XxXXX; LDR (05) = "c".

06 - The record was rejected; no match was found but its LDR (05) = "d".

04 - The record was rejected; a match was found on the preferred heading but 010 is not $$aTEMP (that is, this is a local record).

03 - The record was rejected. A match was found on the preferred term (010 = $$aTEMP); but system LDR (05) = "d".

6.3.2 Deleted Records

13 - The record has been deleted from the database. A match was found on the 010 field and the LDR (pos. 05) was "d". The report includes field 682.

6.4 Updated Records

16 - The record updated an existing record; there was a change in the 008 field.

22 - The record updated an existing record but the system found a duplicate heading; there was a change in the 008 field.

25 - The record updated an existing record but a duplicate heading was found.

24 - The record updated an existing record based on a preferred term (010 = $$aTEMP); but the system found a duplicate heading; LDR (05) = "c".

20 - The record updated an existing record based on a preferred term (010 = $$aTEMP); but the system found a duplicate heading; LDR (05) = "n".

18 - The record updated an existing record based on a preferred term (010 = $$aTEMP); there was a change in 008; LDR (05) = "c".

11 - The record updated an existing record based on a preferred term (010 = $$ATEMP); there was a change in 008; LDR (05) = "n".

26 - The record updated an existing record based on a preferred term (010 = $$ATEMP); but the system found a duplicate heading; there was a change in 008; LDR (05) = "c".

27 - The record updated an existing record based on a preferred term (010 = $$ATEMP); but the system found a duplicate heading; there was a change in 008; LDR (05) = "n".

6.4.1 New Records

21 - A new record was added but a duplicate heading was found; LDR (05) = "n".

23 - A new record was added but a duplicate heading was found; LDR (05) = "c".

6.4.2 No Problems Found

15 - The record updated an existing record.

08 - A new record was added; LDR (05) = "c".

14 - A new record was added; LDR (05) = "n".

17 - The record updated an existing record based on a preferred term (010 = $$aTEMP); LDR (05) = "c".
19 - The record updated an existing record based on a preferred term (010 = $$aTEMP); LDR (05) = "n".

6.4.3 Report Format

The report includes the system numbers of new and updated records in the authority database, together with those of rejected records that have been loaded to the "reject" database. The first system number is for an existing record that was updated or for which a match was found) and the second is for new or rejected records.

Examples:

```
000080237:000000182:                :04:010 not = TEMP
```

In this case, a match has been found on system no. 80237 based on the preferred term, but since 010 was not "TEMP", the record has been rejected. The record has been loaded to the reject database as system number 182.

```
000079159:000000000:sh 98001899     :15:Record Corrected
```

In this case, an existing record has been updated. The system also prints the contents of the 010 field on which the match was made.

The report can be sorted as follows:

- NEW - sort by the system number of new records created in the AUT database.
- MATCH - sort by the system number of records that have been updated in the AUT database.
- TYPE - sort by the type of update.

Up to two sorts are possible when the service is run; each sort creates its own report. For example:

```
csh -f p_manage_31 XXX10,test2,test2out,,,,,MATCH,TYPE
```

creates two reports (test2out and test2out-2); one sorted by the matching record, and the other sorted by the type of update.

6.5 Running the Report

Use the following command to run the report:

```
>> ap
>> csh -f p_manage_31  AUT library,input file,output
file,,,,,sorttype,sorttype
```

Notes

There must be five commas between the output file name and the sort types. The code of the library should be in uppercase.

For example:

```
>> ap
>> csh -f p_manage_31  XXX10,inaut,outaut,,,,,NEW,TYPE
```

The input file must be in ALEPH sequential format and must be in the scratch directory of the authority library in which the procedure is run. The output file is created in the scratch directory.

6.6 Setup

Note:
The following sections are primarily of interest to System Librarian's.

6.6.1 Setup for "Reject Library"

An ALEPH library for rejected records should be created. The library must be defined as the reject library in a special type of relationship in `library_relations` - "ERR".

For example:

```
ERR XXX10 XXX19
ERR XXX12 XXX19
```

In this example, XXX19 is the reject library for two authority libraries - XXX10 and XXX12.

6.6.2 tab_fix

Several fix programs work with the authority update program. These programs should be defined under the P-31 routine of the tab_fix table.

At present, the following fix programs should be defined in the tab_fix table of the authority library:

fix_doc_preferred - this fix program adds a "COR" field if the preferred term has been changed.

fix_doc_aut_mesh - this fix program is for a MeSH authority library only. $$2[MeSH] is added to the terms.

For example:

```
P-31  fix_doc_preferred
P-31  fix_doc_aut_mesh
```

6.6.3 LCC Direct Index

The system matches the 010 field using the LCC direct index. The following line must be defined in tab11_ind:

```
010#                    LCC    a
```

7 Batch Jobs for Authority Enrichment and Correction of Bibliographic Libraries

The p_manage_102 and p_manage_103 services are batch processes that can be used to replace the background running of the ue_08 process (see The Authority Control Process on page 21). You use these processes to accomplish faster enrichment and correction of the bibliographic database based in the authority records of the authority database during the initial upload of the databases or when large quantities of authority records are imported into the system.

The processes:

1. **p_manage_102:** This process is used to pre-enrich the bibliographic browse headings index based on the authority database. The job should be run from the bibliographic library.

   Parameters: bibliographic library, authority library, delete flag, from document number, to document number, filtering program, number of processes.

   The filtering program parameter is used for filtering out specific authority records from building bibliographic headings, based on data in the AUT record.

   Two programs are currently available for this parameter:

- 1xxt - Ignores the authority record if the 1XX field has subfield $$t.
- 4xx - Ignores the authority record if the record does not have at least one 4XX field.

If the parameter is left blank, then bibliographic headings are built out of all the authority records in the authorities database.

The p_manage_102 job should be run for all the authority libraries that are used for enrichment and correction of the bibliographic library.

Note that for the first authority library, the service should be run with the delete flag set to Y, or otherwise the existing headings will be kept.

After running p_manage_102, the regular browse headings index should be built (p_manage_02) without deleting existing indexes.

Since all headings from the authority database were marked with the authority library during the p_manage_102 process, new headings, which originated from the regular indexing of the bibliographic records - p_manage_02 - do not have a matching record in the authority database and should be set to -CHK-. For this reason, the Update Headings Index batch process should run with the "Insert -CHK- in New Headings" parameter set to Y (yes), in order that the Z01-AUT-LIBRARY field of the headings should be -CHK-.

2. **p_manage_103:** Since p_manage_02 does not trigger Z07 records, this process should be used for triggering a Z07 record to enable re-indexing of the records which are linked to non-preferred headings.

   Parameters: bibliographic library, from document number, to document number, number of processes.