Conversion Specifications

for MeSH to

USMARC Authority Format

National Library of Medicine
Medical Subject Headings Section
8600 Rockville Pike
Bethesda, MD 20894

Revised July 1, 1998
valid through USMARC Format for Authority Data, Update No. 2, July 1997.

Contents

Introduction

All MeSH main heading (RECTYPE = D) and subheading (RECTYPE = Q) records that are valid for the current MeSH year are converted from MeSH204 (NLM's internal MeSH vocabulary file). In addition, records for valid main heading/topical subheading combinations are created. Combination records are not created for main heading/subheading combinations with form, geographic, or language subheadings. Records for supplementary chemical terms (RECTYPE = C) are not converted. All subheading records appear in the data first, in the order they were entered into our internal file and then appears each main heading (in internal file order) followed by all its combination records.

The USMARC fill character (ASCII hex 7C) is represented in this document by |. When it is important to have an explicit symbol for a blank, # is used. The MeSH204 subelement separator and the USMARC subfield delimiter are indicated by ǂ. In each field specification below, the name of a MeSH204 or USMARC field or subfield is generally given only the first time its mnemonic is used. The specifications for indicators of a variable field precede the specifications for the content of the field as that is the order of data in the record; however, the field should be created only as directed in the content specifications. Some MeSH204 field and value names and refer to main headings and subheadings by their alternate names, descriptor and qualifier, respectively.

For general technical specifications, see USMARC Specifications for Record Structure, Character Sets, Tapes.

Summary of Recent Changes:

With the 1997 MeSH vocabulary, the 155 field was implemented for form/genre subject headings. These had previously been included in field 150.

The following changes began with the 1998 MeSH vocabulary: The 185 field was implemented for form subdivision headings. These had previously been included in field 180. All nodal descriptors were eliminated. These were generally replaced by subject headings in field 150 except for those replaced by geographic headings in field 181.

With the 1999 MeSH vocabulary, cross-references were introduced for form/genre subject headings. These are represented in field 455 and 555.

For assistance or additional information, please contact Jacque-Lynne Schulman, MeSH Section, 301-496-1495 (voice), 301-402-2002 (FAX) or email: schulman@nlm.nih.gov

■ Leader

Byte(s)	Name	Type of processing
00-04	Logical record length	system supplied
05	Record status	special; see below
06	Type of record	system supplied: z (Authority data)
07-09	Undefined	system supplied: ###
10	Indicator count	system supplied: 2
11	Subfield code count	system supplied: 2
12-16	Base address of data	system supplied
17	Encoding level	system supplied: n (Complete authority record)
18-19	Undefined	system supplied: ##
20-23	Entry map	system supplied: 4500

A base data set is created following all the other specifications delineated in this document, with all Leader/05 (Record status) values set at "n" (New). An update data set is processed for records added or changed from the previous year. Each record in the new data which has an exact duplicate in the old data is deleted. Each record in the new data which has a different version in the old data has its Record status changed to "c" (Corrected or revised). Each record which only appears in the old data is added to the new data with its Record status set to "d" (Deleted (other)).

Examples

00185nz###2200073n##4500
(a new combination record)

00634cz###2200121n##4500
(a changed subheading record)

01319dz###2200217n##4500
(a deleted main heading record)

Deviations from USMARC

NLM does not currently store the necessary information to use Leader/05 (Record status) values "s" (Deleted; heading split into two or more headings) or "x" (Deleted; heading replaced by another heading). Records for which these values are applicable are assigned value "d" (Deleted (other)). Values "s" and "x" are labeled as Mandatory if Applicable in the USMARC format.

■ Directory

The directory is constructed as described in the USMARC Format for Authority Data and the USMARC Specifications for Record Structure, Character Sets, Tapes.

■ 001 Control number

Main heading and subheading records

Store the UI (Unique identifier).

Combination main heading/subheading records

Store the UI of the main heading followed by the UI of the subheading.

Examples

001 D007696
(main heading)

001 Q000177
(subheading)

001 D013601Q000473
(combination heading)

Note: Each UI begins with "D" (for main headings) or "Q" (for subheadings) followed by six numerals. Therefore 001s on main heading and subheading records are seven bytes long, and 001s on combination records are 14 bytes long.

■ 003 Control number identifier

All records

Store "DNLM".

Example

003 DNLM

Conversion history

1989-1994: This field was not used.

■ 005 Date and time of latest transaction

All records

Store the date of the pull for conversion in the form YYYYMMDD, followed by "000000.0".

Example

005 19940112000000.0

Conversion history

1989-1993: This field was not used.

■ 008 Fixed-length data elements

Byte(s)	Name	Type of processing
00-05	Date entered on file	conversion
06	Direct/indirect geographic subdivision	system supplied: # (Not subdivided geographically)
07	Romanization scheme	system supplied: n (Not applicable)
08	Undefined	system supplied: #
09	Kind of record	conversion
10	Descriptive cataloging rules	system supplied: n (Not applicable)
11	Subject Heading system/thesaurus	system supplied: c (Medical Subject Headings)
12	Type of series	system supplied: n (Not applicable)
13	Numbered/unnumbered series	system supplied: n (Not applicable)
14	Heading use--main or added entry	system supplied: b (Heading is not appropriate for use as main or added entry)
15	Heading use--subject added entry	system supplied: a (Heading is appropriate for use as subject added entry)
16	Heading use--series added entry	system supplied: b (Heading is not appropriate for use as series added entry)
17	Type of subject subdivision	conversion
18-27	Undefined	system supplied: ##########
28	Type of government agency	conversion
29	Reference evaluation	conversion
30	Undefined	system supplied: #
31	Record update in progress	system supplied: a (Record can be used)
32	Undifferentiated personal name	system supplied: n (Not applicable)
33	Level of establishment	system supplied: a (Fully established heading)
34-37	Undefined	system supplied: ####
38	Modified record	system supplied: # (Not modified)
39	Cataloging source	system supplied: b (National Library of Medicine)

For the bytes whose Type of processing is listed as conversion, see the following pages.

Examples

008 741004#n#dncnnbabb##########|#ana#####b
(form subheading)

008 731227#n#ancnnbabn##########n#ana#####b
(combination heading)

Deviations from USMARC

008/06 (Direct/indirect geographic subdivision) is currently being set to "#" (Not subdivided geographically) for all records. Although many main headings and subheadings may be subdivided geographically, this information is not stored in a manner that is convertible. This byte is labeled as Optional in the USMARC format.

008/15 (Heading use--subject added entry) is currently being set to "a" (Heading is appropriate for use as subject added entry). There are a few headings for which this is not true in the application of MeSH in cataloging (but is true in indexing). These are headings for corporate bodies (e.g., United States Department of Agriculture) for which catalogers use the AACR2 form of the heading and check tags (e.g., Human). This byte is labeled as Mandatory in the USMARC format.

008/33 (Level of establishment) is currently being set to "a" (Fully established heading) in all records. According to the USMARC documentation, this value is only appropriate for established heading records; "n" (Not applicable) is the appropriate code for subdivision and node label records. This byte is labeled as Mandatory in the USMARC format.

Conversion history

1989-1993: 008/38: This was set to "|".

■ 008/00-05 Date entered on file

Main heading records

Store the first of the following fields that is present: DA (Date of entry), DY (Date minor established), DX (Date major established). If none of these fields is present, store "731227".

Subheading records

Store the first of the following fields that is present: DA (Date of entry), DQ (Date qualifier established). If neither of these fields is present, store "731227".

Combination main heading/subheading records

Store the same data as that in the record for the main heading portion of the combination heading.

■ 008/09 Kind of record

Main heading records

If DC (Descriptor class) = 5 (Non MeSH), store "e" (Node label record). Otherwise, store "a" (Established heading record).

Descriptor class = 5 (Non MeSH) is not used after 1997.

Subheading records

Store "d" (Subdivision record).

Combination main heading/subheading records

Store "a" (Established heading record).

■ 008/17 Type of subject subdivision

Main heading and combination main heading/subheading records

Store "n" (Not applicable).

Subheading records

value of QT (Qualifier type)	store
1 (Topical)	a (Topical)
2 (Form)	v (Form)
4 (Geographic)	d (Geographic)
5 (Language)	e (Language)

■ 008/28 Type of government agency

Main heading records

Store "|" (No information provided).

Subheading and combination main heading/subheading records

Store "#" (Not a government agency).

Conversion history

1989-1993 Subheading and combination main heading/subheading records A "|" (No information provided) was stored here. This was changed because none of these records are for government agencies.

■ 008/29 Reference evaluation

Main heading and subheading records

Store "|" (No information provided).

Combination main heading/subheading records

Store "n" (Not applicable).

Deviations from USMARC

This byte is labeled as Mandatory in the USMARC format. (The fill character is not permitted in mandatory 008 bytes.)

Conversion history

1989-1992: All records--Store "n". This was changed for main heading and subheading records because many of them do have 4XX and/or 5XX fields.

■ 040 Cataloging source

Indicators

Set both indicators to "#" (Undefined).

All records

Store "DNLM" in subfields $a (Original cataloging agency) and $c (Transcribing agency). Store "DNLM" in $d (Modifying agency) if Leader/05 (Record status) has been set to "c" (Corrected or revised) (see discussion of Leader/05 in the Leader section).

Examples

040 ## $aDNLM$cDNLM
(new or deleted heading)

040 ## $aDNLM$cDNLM$dDNLM
(changed record)

■ 072 Subject category code

Indicators

Set the first indicator to "#" (Undefined). Set the second indicator to "#" (No information provided).

Main heading records

Create an 072 for each MN (MeSH tree number). Store in subfield $a (Subject category code) the first set of characters up to and including the first period, minus any leading zero that appears in the numeric portion of the string. Store in a separate occurrence of subfield $x (Subject category code subdivision) each successive set of characters (beginning after a period and ending with a period or the end of the MN), minus any leading zeroes.

Examples

```
072    #     $aC5.$x116.$x900.$x800.$x500
150    ##    $aKyphosis

072    ##    $aI1.$x880.$x604.$x605
072    ##    $aN3.$x706.$x615.$x402
150    ##    $aLegislation, Drug
```

Conversion history

1989-1992: Indicators--Set the second indicator to "7" (Code source specified in subfield $2).
Main heading records--[above plus] Store "MeSH" in subfield $2 (Code source). Second indicator value "#" (defined as "the source of the subject category code is the same as the subject heading system/ thesaurus identified in 008/11 (Subject heading system)") is appropriate to our records, and subfield $2 is not needed.

■ 073 Subdivision usage

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create an 073 if the QT (Qualifier type) is "1" (Topical) and one or more TNs (Tree node allowed) are present. Store in a separate subfield $a (Subdivision usage) each TN, minus any leading zeroes in each string of numeric characters. Store "MeSH" in subfield $z (Source).

Examples

```
073    ##    $aG1$aG2$aI2$aN2$zMeSH
180    ##    $xorganization & administration

073    ##    $aC1$aC2$aC3$aC4$aC5$aC6$aC7$aC8$aC9$aC10$aC11$aC12
             $aC13$aC14$aC15$aC16$aC17$aC18$aC19$aC20$aC21$aC22
             $aC23$aF3$zMeSH
180    ##    $xcomplications
```

Deviations from USMARC

TNs are generated anew at the end of each MeSH year. If a subheading is valid with 70% or more main headings in a particular tree, that tree number is stored in a TN on the record for the subheading. Cataloging-only subheadings (the six "in [life stage]" subheadings, and all the form, geographic, and language subheadings) are validated for use with main headings in a different manner from other subheadings in MeSH204 and are not recorded in a TN. Therefore, the 073 is only a guide to the usage of the subheading. The existence of a combination main heading/subheading record is the accurate method of determining from the MeSH/MARC file whether a main heading/topical subheading is valid.

■ 150 Heading—topical term

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 150 if the DC (Descriptor class) = “1". Store in subfield $a the entire MH.

Examples

150 ## $aHealth Facility Planning

008/09 a (Established heading record)
150 ## $aNursing

Combination main heading/subheading records

Create a 150 if DC = “1" or DC=”3". Store the main heading in subfield $a. Store the subheading in subfield $x.

Example

150 ## $aLeukemia Viruses, Murine$xenzymology

Note: Each significant word in a main heading is capitalized.

Deviations from USMARC

Corporate bodies are converted to 150s rather than 110s as there is no indication in the MeSH204 record that the heading is for a corporate body.

150 ## $aPan American Health Organization

Conversion history

1989-1992: Indicators--The second indicator was computed to count initial numbers and hyphen as nonfiling indicators. 1993-1994: Indicators--The second indicator was set to "0". 1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 151 Heading—geographic name

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 151 if the DC (Descriptor class) = "4" (Geographic). Store the MH (MeSH heading) in subfield $a (Topical term or geographic name as entry element).

Examples

151 ## $aCommonwealth of Independent States

008/09 a (Established heading record)
151 ## $aDjibouti

Combination main heading/subheading records

Create a 151 if the main heading's DC = "4". Store the main heading in subfield $a. Store the subheading in subfield $x (General subdivision).

151 ## $aNew York City$xepidemiology

Note: Each significant word in a geographic main heading is capitalized.

Conversion history

1989-1992: Indicators--The second indicator was computed to count initial numbers and hyphen as nonfiling indicators. 1993-1994: Indicators--The second indicator was set to "0". 1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 155 Heading—genre/form term

A genre or form term used as a heading in an established heading record.

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 155 if the DC (Descriptor class) = "2" (Publication Type). Store the MH (MeSH heading) in subfield $a (Genre/form term).

Examples

155 ## $aBibliography [Publication Type]

008/09 a (Established heading record)
155 ## $aBibliography [Publication Type]

155 ## $aCongresses [Publication Type]

Conversion history

Until 1997 vocabulary year, genre/form terms were entered in field 150.

■ 180 Heading—general subdivision

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create a 180 if the QT (Qualifier type) ≠ "4" (Geographic) or ≠ "2" (Form). Store in a subfield $x (General subdivision) the string in SH (Subheading) up to but not including "#-#". Store any portion after a "#-#" in a separate occurrence of subfield $x.

Examples

```
180    ##    $xFrench

180    ##    $xin middle age

180    ##    $xtherapy


008/09       d (Subdivision record)
180    ##    $xnursing
```

Note: Each significant word in a language subheading is capitalized. Topical subheadings are not specially capitalized.

Conversion history

1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 181 Heading—geographic subdivision

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create a 181 if the QT (Qualifier type) = "4" (Geographic). Store SH (Subheading) in subfield $z (Geographic subdivision).

Example

```
008/09          d (Subdivision record)
151      ##     $zDjibouti
```

Note: Each significant word in a geographic subheading is capitalized.

Conversion history

1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 185 Heading—form subdivision

A form or genre term used as a heading in a subdivision record.

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create a 185 if the QT (Qualifier type) = "2" (Form). Store in a subfield $v (Form subdivision) the string in SH (Subheading) up to but not including "#-#". Store any portion after a "#-#" in a separate occurrence of subfield $v.

Example

185 ##$vabstracts

185 ##$vaudiocassettes

Conversion history

1989-1994: Subheadings were stored in X5X fields rather than X8X fields. A form term used as a heading in a subdivision record.

■ 360 Complex see also reference—subject

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 360 if CX (Consider also cross reference) is present. Store "consider also terms at" in subfield $I (Explanatory text). Store in a separate occurrence of subfield $a (Heading referred to) each set of characters after "consider also terms at" (other than "and") bounded by spaces or the end of the CX, minus any commas.

Examples

```
150    ##    $aPituitary Gland
360    ##    $iconsider also terms at$aHYPOPHYS-


MH           Nervous System
CX           consider also terms at NERVE and NEUR-

       converts to

150    ##    $aNervous System
360    ##    $iconsider also terms at$aNERVE$aNEUR-
```

Note: Each heading/portion referred to appears in all capitals, and, if a prefix, ends with a hyphen.

Deviations from USMARC

The definition of subfield $a restricts its use to established headings. We store here established headings as well as beginning portions of established headings. The definition also states that "adjacent headings referred to may be contained in a single subfield $a." This is how the examples in the USMARC documentation are constructed. We store each heading in a separate occurrence of subfield $a to allow users of our data more flexibility in the display of this field.

Conversion history

1989-1992: Main heading records--This field was not used.

■ 450 See from tracing—topical term

Indicators

Set both indicators to "#" (Undefined).

Main heading records

1. Create a 450 if the DC (Descriptor class) = "1" for each EN (Entry term (non-print)), EP (Entry term (print)), and PT (Entry term (permuted)). If converting an EN or a PT, store in subfield $w (Control subfield) "nnna" (Reference not displayed). Store in subfield $a (Topical term or geographic name as entry element) the string in the PT or the first subelement of EN or EP.

2. Create a 450 if the DC (Descriptor class) = "1", for each instance where the MH (MeSH heading) appears in the MH subelement of an EC (Entry combination) that does not contain a SHOUT subelement. Store in subfield =a (Topical term or geographic name as entry element) the MH of that other record. Store the unabbreviated form of the subheading in the SHIN subelement of the EC in that other record in subfield =x (General subdivision).

Combination main heading/subheading records

Create a 450 if the DC (Descriptor class) = "1", for each instance where the main heading portion of the combination heading appears on a MeSH204 record in the MH subelement of an EC (Entry combination) and the subheading portion appears in the SHOUT subelement of the same EC. Store in subfield =a (Topical term or geographic name as entry element) the MH of that other record. Store the unabbreviated form of the subheading in the SHIN subelement of the EC in that other record in subfield =x (General subdivision).

Examples

MH	HIV Antibodies
EP	$Lymphadenopathy-Associated Antibodies$
EN	$Lymphadenopathy Associated Antibodies$
PT	Antibodies, Lymphadenopathy-Associated
PT	Antibodies, Lymphadenopathy Associated

convert to

150	##	$aHIV Antibodies
450	##	$aLymphadenopathy-Associated Antibodies
450	##	$wnnna$aLymphadenopathy Associated Antibodies
450	##	$wnnna$aAntibodies, Lymphadenopathy-Associated
450	##	$wnnna$aAntibodies, Lymphadenopathy Associated

```
MH          Heart
EC          CY$Myocardium$CY

        converts to

150   ##    $aHeart
        and
150   ##    $aMyocardium$xcytology
450   ##    $aHeart$xcytology
```

Note: Each significant word in a main heading cross reference is capitalized.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the DC or QT of the heading to which it refers, rather than the type of the cross reference itself. Corporate body cross references are converted to 450s rather than 410s as there is no indication in the MeSH204 record that the reference is for a corporate body.

```
MH          United States Indian Health Service
EP          $Indian Health Service (U.S.)$...

        converts to

150   ##    $aUnited States Indian Health Service
450   ##    $aIndian Health Service (U.S.)
```

Conversion history

1989-1992: Indicators--The second indicator was computed to count initial numbers and hyphen as nonfiling indicators. Main heading records--Subfield $w was not converted. 1993-1994: Indicators--The second indicator was set to "0". 1989-1994: Subheadings were stored in X5X fields rather than X8X fields. Cross references from ECs were not created. Cross references for 155 values were entered in field 450 from 1991-1998.

■ 451 See from tracing—geographic name

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 451 if the DC (Descriptor class) = "4" (Geographic) for each EN (Entry term (non-print)), EP (Entry term (print)), and PT (Entry term (permuted)). If converting an EP or a PT, store in subfield $w (Control subfield) "nnna" (Reference not displayed). Store in subfield $a (Topical term or geographic name as entry element) the first subelement of EN or EP, or the entire PT.

Examples

MH Indonesia
EP Irian Jaya

converts to

151 ## $aIndonesia
451 ## $aIrian Jaya

MH Africa, Western
EN $Western Africa$

converts to

008/09 a (Established heading record)
151 ## $aAfrica, Western
451 ## $wnnna$aWestern Africa

Note: Each significant word in a geographic main heading cross reference is capitalized.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the DC of the heading to which it refers, rather than the type of the cross reference itself.

Conversion history

1989-1992: Indicators--The second indicator was computed to count initial numbers and hyphen as nonfiling indicators. Main heading records--Subfield $w was not converted.

1993-1994: Indicators--The second indicator was set to "0". 1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 455 See from tracing—genre/form term

Indicators

Set both indicators to "#" (Undefined).

Main heading records

1. Create a 455 if the DC (Descriptor class) = "2" (Genre/form term) for each EN (Entry term (non-print)) and EP (Entry term (print)). If converting an EN, store in subfield $w (Control subfield) "nnna" (Reference not displayed). Store in subfield $a (Topical term or geographic name as entry element) the string in the first subelement of EN or EP.

Example

MH		Abbreviations [Publication Type]
EP		Acronyms (Publication Type)
EN		Abbreviations (PT)
EN		Acronyms (PT)

converts to

155	##	$aAbbreviations [Publication Type]
455	##	aAcronyms (Publication Type)
455	##	$wnnna$aAbbreviations (PT)
455	##	$wnnna$aAcronyms (PT)

Note: Each significant word in a main heading cross reference is capitalized.

Conversion history

This field came into use with the 1999 MeSH vocabulary year. Cross references for 155 values were entered in field 450 for 1998 MeSH.

■ 480 See from tracing—general subdivision

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create a 480 if the QT (Qualifier type) ≠ "4" (Geographic) or “2" (Topical) for each QX (Qualifier cross reference) and QA (Qualifier abbreviation). Store in subfield $x (General subdivision) the first subelement of QX or the entire QA.

Examples

SH		urine
QA		UR
	converts to	
180	##	$xurine
480	##	$xUR

Note: Each significant word in a language subheading cross reference is capitalized. Topical subheading cross references are not specially capitalized. Qualifier abbreviations are composed of two capital letters.

Conversion history

1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 481 See from tracing—geographic subdivision

Indicators

Set both indicators to "#" (Undefined).

Subheading records

Create a 481 if the QT (Qualifier type) = "4" (Geographic) for each QX (Qualifier cross reference). Store in subfield $z (Geographic subdivision) the first subelement of QX.

Example

SH		Africa, Western
QX		Western Africa

converts to

008/09		d (Subheading record)
181	##	$zAfrica, Western
481	##	$zWestern Africa

Note: Each significant word in a geographic subheading cross reference is capitalized.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the QT of the heading to which it refers, rather than the type of the cross reference itself.

Conversion history

1989-1994: Subheadings were stored in X5X fields rather than X8X fields.

■ 550 See also from tracing—topical term

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 550 if the DC (Descriptor class) ≠ "4" (Geographic), for each instance where the MH (MeSH heading) appears as an FX (Forward cross reference) on another MeSH204 record. Store in subfield $a (Topical term or geographic name as entry element) the MH of that other record.

Example

MH		Horseshoe Crabs
FX		Limulus Test
	and	
MH		Limulus Test
	convert to	
150	##	$aHorseshoe Crabs
	and	
150	##	$aLimulus Test
550	##	$aHorseshoe Crabs

Note: Each significant word in a main heading cross reference is capitalized.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the DC of the heading to which it refers, rather than the type of the cross reference itself.

Conversion history

1989-1992: Main heading records--This field stored the referred-to heading on the record for the referred-from heading rather than the reverse. Reciprocal references, therefore, were correct.
Indicators--The second indicator was computed to count initial numbers and hyphen as nonfiling indicators. 1993-1994: Indicators--The second indicator was set to "0".

■ 551 See also from tracing—geographic name

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 551 if the DC (Descriptor class) = "4" (Geographic), for each instance where the MH (MeSH heading) appears as an FX (Forward cross reference) on another MeSH204 record. Store the MH of that other record in subfield $a (Geographic name).

Note: MeSH currently has no see also references among its geographic terms, so there will be no conversion to this field at this time.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the DC of the heading to which it refers, rather than the type of the cross reference itself.

■ 555 See also from tracing—genre/form term

Indicators

Set both indicators to "#" (Undefined).

Main heading records

Create a 555 if the DC (Descriptor class) = "2" , for each instance where the MH (MeSH heading) appears as an FX (Forward cross reference) on another MeSH204 record. Store in subfield $a (Topical term or geographic name as entry element) the MH of that other record.

Example

MH		Terminology [Publication Type]
FX		Dictionary [Publication Type]
	and	
MH		Dictionary [Publication Type]
	convert to	
155	##	$aTerminology [Publication Type]
	and	
155	##	$aDictionary [Publication Type]
555	##	$aTerminology [Publication Type]

Note: Each significant word in a main heading cross reference is capitalized.

Deviations from USMARC

The particular USMARC field that a cross reference is converted to is based on the DC of the heading to which it refers, rather than the type of the cross reference itself.

Conversion history

Use of this field began in the 1999 MeSH vocabulary.

■ 667 Nonpublic general note

Indicators

Set both indicators to "#" (Undefined).

Main heading and subheading records

Create a 667 if AN (Annotation) is present. Store the AN in subfield $a (Nonpublic general note).

Examples

150	##	$aBibliography, National
667	##	$acataloging term: no qualif; DF: BIBLIOG NATIONAL or BIBLIOGR NATIONAL CATALOG: /geog /form
150	##	$aGenomic Library
667	##	$aa form of gene library containing complete DNA seq; no qualif
180	##	$xpharmacology
667	##	$asubhead only; with exogenous chemicals only; includes "effect", "mechanism of action", "mode of action"; not for pharmacokinetics (= /pharmacokinetics); see also /adverse effects, /poisoning & /toxicity; see MeSH scope note in Introduction; indexing policy: Manual 19.8.53; DF: /pharmacol or /PD

Note: Main headings and their data form input abbreviations (DFs) generally appear in all capitals in the text.

Conversion history

1989-1992: Main heading and subheading records--This field was not used. The AN was stored in 680 (Subject scope note, until 1991; now Public general note) subfield $I (Explanatory text), with an ending period added if there wasn't one.

■ 680 Public general note

Indicators

Set both indicators to "#" (Undefined).

Main heading and subheading records

Create a 680 if MS (MeSH scope note) is present. Store the MS in subfield $I (Explanatory text).

Examples

150	##	$aMice, Jimpy
680	##	$iMyelin-deficient mutants which are from the inbred Tabby-Jimpy strain.
180	##	$ximmunology
680	##	$iUsed for immunologic studies of tissues, organs, microorganisms, fungi, viruses, and animals. It includes immunologic aspects of diseases but not immunologic procedures used for diagnostic, preventive, or therapeutic purposes, for which "diagnosis", "prevention & control", or "therapy" are used. The concept is also used for chemicals as antigens or haptens.
008/09		d (Subdivision record)
181	##	$zDenmark
680	##	$iIncludes the Faeroe Islands.

Deviations from USMARC

Because they are not distinctively identified as such in MeSH204, neither headings nor subheadings appearing in the text of the scope note are stored in subfield $a (Heading or subdivision term). They are stored in the single occurrence of subfield $I.

Conversion history

1989-1992: Main heading and subheading records--The AN was stored in subfield $I. (Until 1991, this field was named Subject scope note.) 1993: A period was added at the end of the field if one was not present.

■ 688 Application history note

Indicators

Set both indicators to "#" (Undefined).

Main heading and subheading records

Create a 688 if HN (History note) is present. Store the HN in subfield $a (Application history note).

Examples

688	##	$a89
688	##	$a67(64)
150	##	$aReceptors, Antigen, T-Cell, alpha-beta
688	##	$a92; T-CELL RECEPTORS ALPHA-CHAIN was ANTIGEN T CELL RECEPTOR, ALPHA CHAIN (NM) 1986-91; T-CELL RECEPTORS BETA-CHAIN was ANTIGEN T CELL RECEPTOR, BETA CHAIN (NM) 1986-91
180	##	$xsupply & distribution
688	##	$a68; used with Category D, E, L & N 1968-74; D, E, F4, H-J, L & N2-4 1975-87; D, E, F4, H-J, L & N 1988; D, E, F4, G1-3 & H-J 1989; D, E7, J & N2 1990 forward; M 1994

Note: Main headings generally appear in all capitals.

Conversion history

1989-1992: Main heading and subheading records--This field was not used. It was not defined until 1991.

Appendix A - Full record examples

These examples are shown in form similar to those in Appendix D in the USMARC Format for Authority Data. The directory is not shown; instead each tag number is displayed with its associated field.

Main heading record

Leader		00585nz###2200205n##4500
001		D001508
003		DNLM
005		19940307000000.0
008		810226#n#ancnnbabn##########||#ana#####b
040	##	$aDNLM$cDNLM
072	##	$aN3.$x349.$x650.$x250.$x80
150	##	$aBed Conversion
450	##	$aBeds, Swing
450	##	$aSwing Beds
450	##	$wnnna$aBed Conversions
450	##	$wnnna$aBed, Swing
450	##	$wnnna$aConversion, Bed
450	##	$wnnna$aConversions, Bed
450	##	$wnnna$aSwing Bed
667	##	$aonly likely qualif are /econ /statist
680	##	$iThe reallocation of beds from one type of care service to another, as in converting acute care beds to long term care beds.
688	##	$a91(82); was see under HEALTH FACILITY PLANNING 1982-90.

Topical subheading record

Leader		01116nz###2200133n##4500
001		Q000191
003		DNLM
005		19940307000000.0
008		770516#n#dncnnbaba##########|#ana#####b
040	##	$aDNLM$cDNLM
073	##	$aC1$aC2$aC3$aC4$aC5$aC6$aC7$aC8$aC9$aC10$aC11$aC12 $aC13$aC14$aC15$aC16$aC17$aC18$aC19$aC20$aC21$aC22$aC23 $aD1$aD2$aD3$aD4$aD5$aD6$aD7$aD08$aD9$aD10$aD11$aD12 $aD13$aD14$aD15$aD16$aD17$aD18$aD19$aD20$aD21$aD22$aD23 $aD24$aD25$aD26$aE1$aE2$aE3$aE4$aE6$aE7$aF3$aG1$aG2$aI2 $aI3$aJ1$J2aN2$aN3$aN4
180	##	$xeconomics
450	##	$aEC
667	##	$asubhead only; includes "finances", "financing", "funding", "costs", "fees", "salaries", "financial management", etc.; see MeSH scope note in Introduction; indexing policy: Manual 19.8.26; DF: /econ or /EC
680	##	$iUsed for the economic aspects of any subject, as well as for all aspects of financial management. It includes the raising or providing of funds.
688	##	$a78; used with Category C, E, F3 & N2-4 1978-79; C, E, F3-4, G1-3, I2, J, L & N2-4 1980-87; C, E, F3-4, G1-3, I2, J, L, N2-4 & SMOKING 1988; C, E, F3-4, G1-3, I2, J, L, N2-4 & SMOKING+ 1989; C, E, F3-4, G1-2, I2-3, J & N2-4 1990-91; C, D, E, F3-4, G1-2 I2-3, J & N2-4 1992 forward.

Combination main heading/subheading record

Leader		00175nz###2200073n##4500
001		D001508Q000191
003		DNLM
005		19940307000000.0
008		810226#n#ancnnbabn###########|#ana#####b
040	##	$aDNLM$cDNLM
150	##	$aBed Conversion$xeconomics

Form subheading record

Leader		01116nz###2200133n##4500
001		Q000091
003		DNLM
005		19890629000000.0
008		741004#n#dncnnbaba###########|#ana#####b
040	##	$aDNLM$cDNLM
185	##	$vbiography
667	##	$a catalogers' form subhead only; for collected or individual biographies of named groups (Cat M) or in specialty fields; see Appendix A for double-form subheads; see also /biobibliography, /directories & /personal narratives; DF: BIOG
680	##	$iUnder names of classes of persons (or the respective field if no comprehensive heading for classes of persons is available) for collected or individual biography: Nurses - biography; Homeopathy - biography. sa biobibliography; directories; personal narratives.

Geographic subheading record

Leader		00151nz###2200073n##4500
001		Q000397
003		DNLM
005		19940307000000.0
008		741004#n#dncnnbabd###########|#ana#####b
040	##	$aDNLM$cDNLM
181	##	$zMongolia

Appendix B - Index by MeSH204 and ELHILL field

MeSH204/ELHILL field	USMARC field
AN	667
BX	450, 451, 455, 550, 555
CX	360
DA	008/00-05
DC	008/09
DQ	008/00-05
DX	008/00-05
DY	008/00-05
EC	450
EN	450, 451, 455
EP	450, 451, 455
FX	550, 551, 555
HN	688
MH	150, 151, 155
MN	072
MS	680
PT	450, 451
QA	480
QT	008/17
QX	480, 481
SH	180, 181, 185
TN	073
UI	001

The following are used in the conversion process for the specified fields, but their contents are not converted:

MeSH204/ELHILL field	USMARC field
DC	150, 151, 155, 450, 451, 455, 550, 551, 555
MH	155, 550, 551, 555
QT	073, 180, 181, 185, 480, 481