



MARS 2.0

AUTHORITY CONTROL PLANNING GUIDE







NOTES

BIBLIOGRAPHIC VALIDATION OVERVIEW

MARS 2.0 makes changes in over 100 different MARC fields within your bibliographic record. Our *Bibliographic Record Validation* service updates many elements in MARC bibliographic records to conform with current MARC 21 standards, providing increased consistency within your bibliographic files.

The level of MARC update is entirely configurable by you and your staff. By default, we perform all of the updates to your MARC bib records. Or, if you prefer, we can only perform the updates you specify. In the end, the update process is tailored to your expectations of what you'd like to see happen within your bibliographic records.

STANDARD MARC 21 VALIDATION

As soon as we receive your files, they are prepared for processing. The MARS 2.0 programs check **all** files of MARC records submitted to ensure they conform to the basic structural requirements of the MARC 21 communications format. Our validation programs ensure that all records meet the following criteria:

- Leader is present and correctly structured
- Directory is present and correctly structured
- No record exceeds 99,999 characters. Including bib records larger than 99,999 byte maximum size prevents successful processing of the input files. Records cannot be segmented (broken apart into multiple *physical* records) to reach the maximum size limit. These records will be output as potentially corrupt for the library to review
- No field exceeds 9,999 characters (MARC 21 directory limitation)
- If a record exceeds the character or field size it is not processed. If there is a large number of rejected records our programmers will contact the library project manager to determine a course of action
- All records contain the following standard MARC delimiters:
 - Record terminators (ASCII 1D16)
 - Field terminators (ASCII 1E16)
 - Subfield delimiters (ASCII 1F16)
- All records contain valid characters (either in MARC8 or UTF-8)
- Any null characters (hex 00) are changed to spaces when records are loaded
- MARS 2.0 will also delete empty fields or subfields as records are loaded

Note: MARS 2.0 programs can process MARC 21 records that lack 001, 008 or other fields.

PROFILE STEP 2.1

1 - MARC Update Service Levels (check one)

- Full (leave rest of Step 2 blank)
- Custom (please indicate custom choices in Steps 2.2 - 2.10)
- No MARC Update (leave rest of Step 2 blank)

MARC UPDATE SERVICE LEVELS

Choose the level of MARS 2.0 Bibliographic Record Validation you want by selecting one of the following options:

- **Full Update Processing**—This option provides a single package of the most popular options selected by most libraries:
 - 2-2: Validate structure of 010, 020, 022, 034 fields
 - 2-3: Leader & fixed fields
 - 2-4: Tag updates & field deletes
 - 2-5: Subfield code updates & deletes
 - 2-6: Indicator updates
 - 2-7: Special MARC 21 field conversions & additions
 - 2-8: Initial article & filing indicator validation
 - 2-9: GMD standardization
- **Custom Update Processing**—This option allows you to select specific processing options that meet your local requirements. This choice also includes the same 8 options listed above (2:2 – 2:9). You may have specific conditions in your database that require custom modifications to update processing. Your MARS 2.0 project manager will help you explore any desired modifications.
- **No Update Processing**—You may choose this option if you do not want updated bibliographic records returned. However, a number of update processing options affect subsequent authority control processing (e.g., 705/715 field conversion, X11 Conference name heading conversion, and initial article and filing indicator validation).

Please indicate on Step 2.1 the appropriate bibliographic MARC update service level which fits your library's needs.



Historical Note

LC changed the structure of the **LCCN** beginning on **Jan. 1, 2001** in order to accommodate a **four-digit year**.

The length of the control number remains **12 characters** as it was prior to the change. However, in the **old LCCN structure (A)**, suffixes were occasionally used. Under the **new LCCN structure (B)**, the location of elements is slightly altered to accommodate a four-digit year.

Under **both structures**, the prefix, year and serial number are the basic elements required to make a LCCN unique.

.....

NOTES

PROFILE STEP 2.2**2 - Validate Structure of 010, 020, 022, 034 Fields (check one)**

- Yes
 With these modifications: _____
 No

NUMERIC FIELD VALIDATION

MARC fields that are incorrectly formatted often cause user searches to fail and prevent items in the collection from being included in the system indexes. MARS 2.0 software can validate the structure of numeric data in the following fields:

- 010: Library of Congress Control Number (LCCN)
- 020: International Standard Book Number (ISBN)
- 022: International Standard Serial Number (ISSN)
- 034: Coded Cartographic Mathematic Data (CCMD)

Please indicate on Step 2.2 what kind of validation you would like performed on your 010, 020, 022 or 034 fields. Choosing “Yes, With these modifications” means that you would like the MARS 2.0 software to perform a modified validation (e.g., validate fields 020 and 022, but not fields 010 or 034).

PRE-2001 LCCN

LCCN Structure A (2000 and earlier) numbers are formatted according to the following 6 divisions (separated by hyphens):

1	2	3	4	5	6
nb#	71	005810	#	/AC	/r86

1. 3-character **prefix** with **lowercase letters** and/or **blanks**
2. 2 digits, usually the last 2 digits of the **year**
3. 6-digit **serial number**, with zeroes padded to the left to make 6 digits
4. Blank **space**
5. Optional variable length **suffix** and/or alphabetic identifier
6. Optional **revision date**



NOTES

STRUCTURE A CORRECTIONS

If the LCCN in the 010 \$a is identified as a Structure A LCCN and does **not** have a valid structure, MARS 2.0 programs make the following format corrections (all changes are subsequently checked for validity):

- If the first character of the LCCN is a number (no prefix is present), the programs insert 3 blanks (###) before the number:

Original: 95-156543 **Corrected to:** ###95156543#

- If the first character of the LCCN is an alphabetic character and the second character is a number, MARS 2.0 programs insert 2 blanks (##) between the alphabetic character and the number to make a valid 3-character prefix:

Original: n95-156543 **Corrected to:** n##95156543#

- If the first 2 characters of the LCCN are alphabetic and the third character is a number, MARS 2.0 programs insert 1 blank (#) between the alphabetic characters and the number to make a valid 3-character prefix:

Original: nb95-156543 **Corrected to:** nb#95156543#

- If a hyphen appears in the 010 subfield \$a, MARS 2.0 programs count the number of digits before the hyphen. If one digit is before the hyphen, a 0 (zero) is inserted before the first digit in the LCCN (following the prefix). If 2 digits are before the hyphen, no zeroes are inserted at the beginning of the LCCN:

Original: nb#9-156543 **Corrected to:** nb#09156543#

Original: nb#95-156543 **Corrected to:** nb#95156543#

- MARS 2.0 programs also count the number of digits following the hyphen. If there are fewer than 6 digits, zeroes are added following the first 2 digits (##-) of the LCCN to make 6 digits (for a total of 8 digits). The hyphen is deleted from the LCCN:

Original: nb#95-6543 **Corrected to:** nb#95006543#

Original: nb#95-56543 **Corrected to:** nb#95056543#

- If the LCCN contains a suffix, the suffix is removed in accordance with the revised LC standard for Structure A LCCNs:

Original: nb#95-516543//r86 **Corrected to:** nb#95156543#

- If the LCCN does not end with a blank, MARS 2.0 programs insert a blank following the last digit:

Original: nb#95-516543 **Corrected to:** nb#95156543#

- If the 010 field data has been modified, the 010 field length is recalculated and the 010 directory entry is updated. The record length is recalculated and updated in the record leader.
- If MARS 2.0 programs cannot correct the format of the LCCN in the 010 subfield \$a (e.g., there are 4 characters in the prefix or there are 9 digits), the 010 subfield \$a code is changed to \$z and a report can be generated. See report R50 on page 5:25 for more information about this report.
- The following invalid LCCN prefixes are corrected to the valid format (# = blank):

#a#	→	a##
##a	→	a##
#bc	→	bc#
#	→	###
`##	→	###

NOTES



Historical Note

The structure of the ISBN has changed over the past thirty years.

Prior to 1977, the 020 field was not repeatable and multiple ISBNs and related information were placed in repeated subfields.

Older bibliographic records may still have multiple ISBNs in a single 020 field rather than in multiple 020 fields.

The Library of Congress began accommodating ISBN-13 on October 1, 2004.

Between 2005 and 2008, publishers were encouraged to supply both an ISBN-10 and an ISBN-13 for the same manifestation, based on guidelines issued by the International ISBN Agency (IIA).

January 1, 2007 marked the final date for fully adopting ISBN-13.

STRUCTURE B CORRECTIONS

If the LCCN in the 010 subfield \$a is identified as a Structure B LCCN and does **not** have a valid structure, MARS 2.0 programs attempt to correct it by making these conversions (all changes are subsequently checked for validity):

- If the first character of the LCCN is a number (no prefix is present), the programs insert 2 blanks before the number:

Original: 2005-256543 **Corrected to:** ##2005256543

- If the first character of the LCCN is an alphabetic character and the second character is a number, MARS 2.0 programs insert 1 blank (#) between the alphabetic character and the number to make a valid 2-character prefix:

Original: n2005-256543 **Corrected to:** n#2005256543

Original: nb2005-256543 **Corrected to:** nb2005256543

- If a hyphen or blank space appears in the 010 subfield #a, MARS 2.0 programs count the number of digits following the hyphen. If there are fewer than 6 digits, zeroes are added following the first 4 digits (####-) of the LCCN to make 6 digits (for a total of 10 digits). The hyphen is deleted from the LCCN:

Original: nb2005-6543 **Corrected to:** nb2005006543

- If the 010 field data has been modified, the 010 field length is recalculated and the 010 directory entry is updated. The record length is recalculated and updated in the record leader.
- If MARS 2.0 programs cannot correct the format of the LCCN in the 010 subfield \$a (e.g., there are 4 characters in the prefix or there are 9 digits), the 010 subfield \$a code is changed to \$z and a report can be generated. See report R50 in Step 5 for more information about this report.
- The following invalid LCCN prefixes are corrected to the valid format (# = blank):

#a	→	a#
#bc	→	bc
#	→	##

020 FIELD

Some automated systems do not index an ISBN if the format is invalid. An ISBN in field 020 subfield \$a should be 10 digits or 13 digits. If the ISBN in 020 subfield \$a does not have the valid structure, MARS 2.0 programs attempt to correct the ISBN structure by performing the following conversions:

- If there are 9 digits in the ISBN, a **0** (zero) is inserted before the first digit in the ISBN:

Original: 873671008 Corrected to: 0873671008

- All hyphens are deleted:

Original: 1-873671-008 Corrected to: 1873671008

- A lowercase **x** is converted to uppercase:

Original: 187367100x Corrected to: 187367100X

- If ISBN is 13 digits, MARS 2.0 programs will verify that the first 3 digits are 978.
- As an optional service, MARS 2.0 programs will correct the order of the ISBN (i.e. pairs of 13/10 and 13/10)
- As an optional service, MARS 2.0 programs will convert ISBN-10 to ISBN-13 (includes check-sum value for both 10 and 13 length ISBNs):

Original: 1873671008 Corrected to: 9781873671000

- If MARS 2.0 programs cannot correct the format of the ISBN in the 020 subfield \$a (e.g., there are 11 digits), the 020 subfield \$a code is changed to \$z and a report is generated. See report R50 in Step 5 for more information about this report.

ORDERING 020 FIELDS

LC will accept both an ISBN-13 and an ISBN-10 for the same manifestation. These numbers are shown by publishers according to guidelines issued by the IIA, which call for grouping the pairs of ISBNs by manifestation. In printed products the ISBN-13 appears first, and each number is preceded by a print constant as in the following example:

ISBN-13: 978-1-873671-00-0

ISBN-10: 1-873671-008

NOTES



NOTES

REPEATING 020 SUBFIELDS

MARS 2.0 Update processing validates an 020 field for correct subfield repeatability. If the 020 field contains multiple subfields \$a, each subfield \$a is placed in a separate 020 field:

020 \$a11111111\$a22222222

Corrected to:

020 \$a11111111

020 \$a22222222

BINDING INFORMATION IN 020 FIELDS

Prior to 1978, binding information was placed in a subfield \$b. Older bibliographic records may have binding information in a subfield \$b rather than as a parenthetical qualifier in the subfield \$a.

If the 020 field contains a subfield \$b and an 020 subfield \$a exists:

- Subfield \$b delimiter and subfield code are deleted
- 020 subfield \$b data is enclosed in parentheses
- A blank is inserted at the end of the immediately preceding 020 subfield \$a data
- 020 subfield \$b data, enclosed in parentheses, is moved after the blank at the end of the 020 subfield \$a data
- Original: 020 \$a1873671008\$bpbk.
Corrected to: 020 \$a1873671008 (pbk.)

NO SUBFIELD \$a IN 020 FIELD

If the 020 field contains a subfield \$b and no 020 subfield \$a exists, the subfield \$b code will be changed to \$c:

020 \$bpbk.

Corrected to:

020 \$cpbk.

MULTIPLE SUBFIELDS \$c IN 020 FIELD

If the 020 field contains multiple subfields \$c, each subfield \$c is placed in a separate 020 field:

020 \$c4.95 (lib. bdg.)\$c3.60 (pbk.)

Corrected to:

020 \$c4.95 (lib. bdg.)

020 \$c3.60 (pbk.)

MULTIPLE SUBFIELDS \$a AND \$c IN 020 FIELD

MARS 2.0 programs correctly handle 020 fields with multiple subfields \$a and \$c:

020 \$a11111111\$c4.95\$a22222222\$c3.60\$c8.97\$bpbk.

Corrected to:

020 \$a11111111\$c4.95

020 \$a22222222\$c3.60

020 \$c8.97 (pbk.)



Historical Note

First indicator value 2 became obsolete when field 034 was made repeatable in 1982.

Older bibliographic records may still have first indicator value 2.





NOTES

022 FIELD

MARS 2.0 Update processing can validate the format of the ISSN in field 022 subfield \$a. Some automated systems do not index an ISSN if the format is invalid. A valid ISSN in field 022 subfield \$a has the following structure: 4 digits, hyphen, 4 digits (or digits and an X):

1234-1234

1234-123X

If the ISSN in field 022 subfield \$a does not have the valid structure, MARS 2.0 programs attempt to correct it by making these conversions:

- If the ISSN has no hyphen, adds a hyphen between the fourth and fifth digits:
Original: 12345678 Corrected to: 1234-5678
- Converts a lowercase x to uppercase:
Original: 1234-567x Corrected to: 1234-567X
- If MARS 2.0 programs cannot correct the format of the ISSN in the 022 subfield \$a (e.g., there are 9 digits), the 022 subfield \$a code is changed to \$y and a report is generated. See report R50 in Step 5 for more information about this report.

034 FIELD

MARS 2.0 Update processing can validate field 034 CMD (Coded Mathematical Data) for correct format. If the 034 field first indicator has value **2** and the 034 field contains multiple subfields \$a, MARS 2.0 Update processing:

- Places each subfield \$a in a separate 034 field
- Changes each 034 field first indicator to value 1

034 2_\$aa\$b100000\$aa\$b120000

Corrected to:

034 1_\$aa\$b100000

034 1_\$aa\$b120000



NOTES

MARS 2.0 LEADER & FIXED FIELD UPDATES TABLE

In the following table, byte position is counted with the first byte being "00" (zero) to be consistent with MARC 21 Bibliographic Format documentation. The table uses the following symbols:

= blank space
| = fill character

Format codes are as follows:

BK = Books
CF = Computer files/Electronic resources
MP = Maps
MU = Music
CR = Continuing resources (serials, etc.)
VM = Visual materials
MX = Mixed materials
(includes obsolete Archival
and Manuscripts control)

RECORD FORMAT TABLE

Type	LDR 06 Value	LDR 07 Value
BK	t or a	a or c or d or m
CF	m	
MP	e or f	
MU	c or d or i or j	
CR	a	b or i or j
VM	g or k or o or r	
MP	p	

Note: 'x' denotes record types affected

LEADER

Byte	From	To	BK	CF	MP	MU	CR	VM	MX
06	h b n	a	x	x	x	x	x	x	x
18	p	i	x	x	x	x	x	x	x
18	r	i	x	x	x	x	x	x	x



NOTES

008 FIELD, POS. 25–26

Byte	From	To	BK	CF	MP	MU	CR	VM	MX
25	any	#		x				x	x
25	h	f	x						
25	j	i				x			
25	n	#				x			
25	y	#	x				x		
25	x	t	x						
25	3	k	x				x		
25	4	q	x				x		
26	any	#			x			x	x
26	h	f	x						
26	j	i				x			
26	n	#				x			
26	y	#	x				x		
26	x	t	x						
26	3	k	x				x		
26	4	q	x				x		

008 FIELD, POS. 27–34

Byte	From	To	BK	CF	MP	MU	CR	VM	MX
27	any	#		x	x			x	x
27	h	f	x						
27	j	i				x			
27	n	#				x			
27	y	#	x				x		
27	x	t	x						
27	3	k	x				x		
27	4	q	x				x		
28	any	#							x
28	n	o	x				x	x	
28	j	i				x			
28	n	#				x			
29	any	#		x					x
29	j	i				x			
29	n	#				x			
30	any	#		x	x		x	x	x
31	any	#		x			x	x	x
32	any	#	x	x	x	x	x	x	x
33	any	#		x					x
33	a b c d f g h m q	z			x				
33	E	V						x	
33	#	0	x						
34	any	#		x		x			x
34	a b c d f g h m q	z			x				
34	d m t						x		
34	#	n						x	

PROFILE STEP 2.4

4 - Tag Updates & Field Deletes (check one)
<input type="radio"/> Yes <input type="checkbox"/> With these modifications: _____ <input type="radio"/> No

TAG UPDATES & FIELD DELETES

Indicate if you would like the Tag Updates & Field Deletes processing performed. For additional field deletions, or to modify selected changes, please fill out the online profile part “With these modifications” including any changes desired.

Changes to the MARC 21 communications format have made many fields obsolete. If one field has been replaced by another, the change is shown in the Tag Updates table in this section. If the field has been made obsolete without being replaced, the field is simply deleted from the bib record. Fields that are deleted as part of the MARS 2.0 Update processing are listed in the Field Deletes table in this section.

TAG UPDATES TABLE

Tags and subfields converted by the MARS 2.0 Update Service.

(‘x’ represents any 2nd indicator value, ‘#’ represents a blank 2nd indicator value):

From	To
023	024 [8#]
211 [0x]	246 [2#]
211 [1x]	246 [3#]
212 [0x]	246 [2#]
212 [1x]	246 [3#]
212 [2x]	246 [3#]
212 [3x]	246 [3#]
214 [0x]	246 [2#]
214 [1x]	246 [3#]
265\$a	037\$b
308a & b	300a
308c,d & f	300b
308\$e	300\$c

From	To
315	310
350\$a \$b	037\$c (CF,CR)
350\$a	020\$c (BK,VM,MU)
503	500
507	255 (MP)
512	500
523	500
527	500
537	500
543	583
570	500
755	655
840	830

FIELD DELETES TABLE

MARS 2.0 processing removes the following fields:

0XX	2XX	3XX	5XX	6XX	8XX
009	241	302	517	652	851
011		303	582	680	
087		304		681	
091		359		683	

NOTES



NOTES

PROFILE STEP 2.5

5 - Subfield Code Updates & Deletes (check one)
<input type="radio"/> Yes <input type="checkbox"/> With these modifications: _____ <input type="radio"/> No

SUBFIELD CODE UPDATES & DELETES

Indicate if you would like the MARS 2.0 Update processing to provide standard Subfield Code Updates and Deletes. Alternatively, specify requirements on the profile form, or mark special requirements on copies of these tables and return them with your profiles. Custom requirements include the retention of any or all Relator Terms in subfield \$e of fields 100 and 700.

SUBFIELD CODE UPDATES TABLE

MARS 2.0 Update service converts these subfield codes:

Tags	From	To
024	\$b	\$d
050	\$d	\$a
111	\$b	\$n
242, 245, 246, 247	\$d	\$n
242, 245, 246, 247	\$e	\$p
411, 611, 711, 811	\$b	\$n

SUBFIELD DELETES TABLE

MARS 2.0 Update service deletes these subfields:

Tags	Subfield
052	\$c
100, 110, 111, 130, 240	\$h
100, 110, 111, 130, 240, 247	\$w
400, 410, 411	\$w
500	\$l, \$x, \$z
600, 610, 611, 630	\$h
600, 610, 611, 630, 650, 651	\$w
700, 710, 711, 730	\$h
700, 710, 711, 730	\$w
760, 762, 765, 767, 770, 772, 773, 774 775, 776, 777, 780, 785, 786, 787	\$q
800, 810, 811, 830	\$w
830	\$h
850	\$b
850	\$d
850	\$e

RELATOR SUBFIELD \$e DELETIONS

Current cataloging practice restricts the use of Relator Term \$e subfields in 100 Main Entry and 700 Added Entry-Personal Name fields. A common exception is the continued use of the relator term “ill.” for illustrators. Since there are many variants of “ill.” our MARS 2.0 software will look for these as well.

RELATOR TERMS TABLE

MARS 2.0 Update processing deletes the subfield \$e and its data in fields 100 and 700 if it contains one of these Relator Terms. If not found in this list, the information remains unchanged:

arr.	ed.	joint ed.
author	editor & translator	joint editor
comp. & arr.	editor and translator	joint tr.
comp. & tr.	editor	jt. auth.
comp. and arr.	joint auth.	jt. author
comp. and tr.	joint author	jt. ed.
comp.	joint authors	tr. & ed.
compiler	joint comp.	tr. and ed.
ed. & arr.	joint compiler	tr.
ed. & tr.	joint ed. & tr.	trans.
ed. and arr.	joint ed. and tr.	translator
ed. and tr.		

TERMS TABLE FOR “ill.” CHANGES

MARS 2.0 Update processing also changes the following variations to **ill.** in subfield \$e in fields 100 and 700:

comp. & illus.	ed. and illus.	jt. illus
comp. & ill.	ed. and ill.	jt. ill.
comp. and illus.	ill	tr. & illus.
comp. and ill.	illus	tr. & ill.
ed. & illus.	illustrator	tr. and illus
ed. & ill.	joint illus	tr. and ill.

NOTES



NOTES

PROFILE STEP 2.6

6 - Indicator Updates (check one)

- Yes
 - With these modifications: _____
- No

INDICATOR UPDATES

The following tables show the standard updates to first and second indicators. Indicate if you want the standard MARS 2.0 Update processing indicator updates. You may elect to modify the processing by describing desired changes in the First Indicator or Second Indicator Updates tables in this section and returning copies of the edited tables with your profiles.

FIRST INDICATOR UPDATES TABLE

MARS 2.0 Update service makes these changes to the first indicator:

Tags	From	To
017	any	#
048	123	#
082	#	0
082	2	1
100	#2	1
110, 111	#	2
130	#	0
210	#	1
222	any	#
240, 243	2	0
240, 243	3	1
260	01456789	#
400	#2	1
410, 411	#	2

Tags	From	To
505	#	0
511	#23	0
534	01	#
535	03	1
550	any	#
600	#2	1
610, 611	#	2
630	#	0
700	#2	1
710, 711	#	2
730	#	0
800	#2	1
810	#	2
811	#	2

SECOND INDICATOR UPDATES TABLE

MARS 2.0 Update service makes these changes to the second indicator:

Tags	From	To
050	#123	0
051	0123	#
060	#123	0
061	0123	#
070, 071	0123	#
072	#	0
100, 110, 111, 130	any	#

Tags	From	To
210	123456789	#
260	any	#
440	#	0
490	any	#
600, 610, 611, 630	#	0
650, 651	#	0
700, 710, 711, 730, 740	013	#



NOTES

007 FIELD

MARC update processing can add an 007 Physical Description Fixed Field containing default values. This table shows the format of the record, the values the format is based on and the values in each default 007 field:

Record Format	LDR Byte Values	Default 007
Map	06 = e or f	aj canzn
Sound Recording	06 = l or j	sd bungnmmneu
Videorecording	06 = g and 008, 33 = v	vf cbahou

1XX MAIN-ENTRY-IS-SUBJECT

In the past, the second indicator for 1XX Main Entry fields indicated when the 1XX field served a dual function within the bibliographic record. A value of **1** meant the 1XX heading represented both the main entry and a topical subject access point. A MARC update in 1990 made use of the 1XX second indicator for this purpose obsolete.

Standard MARS 2.0 update processing generates a 6XX Subject Added Entry field when the 1XX Main Entry field has second indicator value **1** (main entry is subject). The second indicator of the 1XX Main Entry field is changed to a **blank**—the only value currently authorized for a 1xx second indicator. The first indicator of the new 6XX field will match the 1XX field and the second indicator will be '0'.

245 \$h SUBFIELD ADDED (MEDIUM)

MARS 2.0 processing can check for the absence of a \$h subfield (Medium) in the 245 Title Statement and add a missing General Material Designation (GMD) in some cases:



EXAMPLE:

245 10\$aOlympia town square /\$cby Fred Smith.

Changes to:

245 10\$aOlympia town square\$h[cartographic material] /\$cby Fred Smith.

.....



The following 245 \$h subfields are added based on the values indicated:

245 \$h	LDR Byte 06 Value	008 contains
[cartographic material]	e or f	
[electronic resource]	m	
[filmstrip]	g	byte 33 = f
[kit]	o	
[microform]	a or t	byte 23 = a, b or c
[motion picture]	g	byte 33 = m
[slide]	g	byte 33 = s
[sound recording]	i or j	
[transparency]	g	byte 33 = t
[viderecording]	g	byte 33 = v

To modify any values in this table, please indicate changes in Step 2-7.

MARS 2.0 update processing can also standardize GMDs already present in the 245 \$h subfield. MARS 2.0 GMD Standardization is described in Step 2-9.

Note: *\$h Subfields (Medium) in other title fields and subfields are normally deleted in keeping with current cataloging practice (see the Subfield Deletes table in Step 2-4).*

017 FIELD

MARS 2.0 update processing adds \$b subfield (Source) if not present in field 017 Copyright Registration Number. The \$b subfield in field 017 carries the name of the agency assigning the copyright registration number. Because the \$b subfield is now required, and records input before 1980 do not contain it, MARS 2.0 update processing can add the appropriate \$b subfield code and data "U.S. Copyright Office" to field 017.

028 FIELD

If the subfield order in an 028 field is \$b \$a, MARS 2.0 reorders the subfields so they follow the current standard order of \$a \$b.

032 FIELD

MARS 2.0 update processing adds \$b subfield (Source) if not present in field 032 Postal Registration Number. \$b Subfield in the 032 field carries the name of the agency assigning the postal registration number. Because \$b subfield is now required, and records input before the subfield was defined do not contain it, MARS 2.0 update processing can add the appropriate \$b subfield code and data "USPS" to field 032.

NOTES



NOTES

260 FIELD

MARS 2.0 update processing can convert field 260 \$d subfield to field 028 \$a. Field 260 \$d subfield was defined as “Plate or publisher number,” but was made obsolete when field 028 Publisher Number for Music was defined. If a 260 \$d subfield exists in a bibliographic record and the value in Leader byte 06 is **c, d, i** or **j**:

- 028 field with indicator values ‘02’ is generated
- 260 \$d subfield & contents moved to 028 \$a subfield
- 260 \$b subfield contents copied to 028 \$b subfield
- Punctuation in the 260 field is corrected, if necessary

The 260 field conversion option includes special routines that update the punctuation in all 260 fields in the bibliographic records being processed. These punctuation routines update much of the punctuation in 260 fields to the current standards, including:

- <space> + <colon> before \$b subfield
- <comma> before \$c subfield
- Adding the appropriate final field punctuation

262 FIELD

Field 262 is restricted to pre-AACR2 records for sound recordings. Field 260 is valid for use with all music materials including sound recordings for the data contained in the 262 \$a \$b \$c subfields. Field 028 was defined for the data in the 262 \$k \$l subfields.

If field 262 exists in a bibliographic record, MARS 2.0 update processing:

- Changes the tag from 262 to 260
- Ensures first & second indicators are blank (in accordance with current MARC 21 Bibliographic Format)
- Retains the subfield codes: \$a \$b \$c

For each 262 \$k subfield present, MARS 2.0 update processing:

- 028 field, with indicator values '02' is generated
- 262 \$k subfield & contents moved to 028 \$a subfield
- 262 \$b subfield contents copied to 028 \$b subfield

For each 262 \$l (lowercase L) subfield present, MARS 2.0 update processing:

- 028 field, with indicator values '12' generated
- 262 \$l subfield & contents moved to 028 \$a subfield
- 262 \$b subfield contents copied to 028 \$b subfield

If the 262 field does not contain a \$k subfield or \$l subfield, MARS 2.0 update processing does the following additional conversions:

- 262 \$c subfield & contents moved to 028 \$a subfield with indicator values '02'
- 262 \$e subfield & contents moved to 028 \$b subfield with indicator values '12'
- 262 \$b subfield contents copied to 028 \$b subfield
- 262 \$d subfield code changed to \$c subfield code

After all conversions have been completed, the punctuation in the 028 fields and 260 field are updated.

NOTES



301 FIELD

In 1983, field 301 was made obsolete for visual materials. Physical description data is now carried in field 300 Physical Description, with the formerly separate color (\$c), sound (\$b) and videorecording speed (\$f) data recorded in field 300 \$b subfield.

If field 301 exists in a bibliographic record, MARS 2.0 update processing:

- 301 tag changed to 300 tag
- Ensures first & second indicators are blank
- Retains subfield codes \$a and \$e and data
- \$d subfield code changed to \$c subfield code

Data from field 301 \$b \$c \$f subfields is combined into a single \$b subfield in field 300.

305 FIELD

Field 305 Physical Description for Sound Recordings is a pre-AACR2 field made obsolete by format integration. Field 305 was functionally replaced by field 300 Physical Description.

If field 305 exists in a bibliographic record, MARS 2.0 update processing:

- 305 tag changed to 300 tag
- Ensures first & second indicators are blank
- Retains subfield codes \$a and \$c
- Concatenates the contents of \$b \$d \$e and \$f subfields present into a single \$b subfield
- Updates the punctuation

For each \$m subfield present in the 305 field, MARS 2.0 update processing:

- 028 field, with indicator values '02' and \$a subfield generated
- 305 \$m subfield contents moved to 028 \$a subfield
- 260 \$b subfield & contents copied to 028 \$b subfield

For each \$n subfield present in the 305 field, MARS 2.0 update processing:

- 028 field, with indicator values '11' (one one) and \$a subfield generated
- 305 \$n subfield contents moved to 028 \$a subfield
- 260 \$b subfield & contents copied to 028 \$b subfield



Historical Note

The **705** Added Entry-
Personal Name (Performer)
and **715** Added Entry-
Corporate Name
(Performing Group) fields
were made **obsolete in
1980**.

**EXAMPLE**

260 \$aNew York, N.Y. \$bColumbia,\$c1959.

300 \$a1 sound disc (20 min.) :\$banalog, 33 1/3 rpm, stereo. ;\$c12 in. \$mSTMA 8007

Changes to:

028 02 \$aSTMA 8007\$bColumbia

260 \$aNew York, N.Y. :\$bColumbia,\$c1959.

300 \$a1 sound disc (20 min.) :\$banalog, 33 1/3 rpm, stereo. ;\$c12 in.

**EXAMPLE**

\$a1 sound disc (18 min.)\$c10 in.\$b74 rpm\$dstandard\$emonaural\$mSTMA\$nL27410X

Changes to:

028 02 \$aSTMA 3059

028 11 \$aL27410X

300 \$a1 sound disc (18 min.) :\$b74 rpm, standard, monaural ;\$c10 in.

705 & 715 FIELD CONVERSION

MARS 2.0 update processing converts 705 tags to the equivalent 700 tag and 715 tags to 710. MARS 2.0 update also adds a Relator Code (\$4) subfield. The default content of the added subfield \$4 is **prf**, the code for “performer.”

Note: Indicate in Step 2.7 if you would like a value different from **prf** in the new subfield \$4.

NOTES



NOTES

X11 CONFERENCE NAME HEADINGS

MARS 2.0 updates Conference Name fields [111, 611, 711, 811] to conform to AACR2 and current MARC 21 standards. To change the obsolete \$b subfield code to \$n, MARS 2.0 update processing rearranges the subfields in AACR2 order and corrects the punctuation.



EXAMPLE

Pre-AACR2

711 01 \$aIndiana University Eighteenth
CenturyConference,\$b6th,\$d1970

Changes to AACR2 form:

711 0 \$aIndiana University Eighteenth Century
Conference\$n(6th :\$d1970)



EXAMPLE

Pre-AACR2

111 01 \$aInternational Conference on the Chemistry
and Uses of Molybdenum,\$b1st,\$cUniversity of Reading,
\$d1973

Changes to AACR2 form:

111 0 \$aInternational Conference on the Chemistry
and Uses of Molybdenum\$n(1st :\$d1973 :\$cUniversity of
Reading)



NOTES

245 & 440 FIELDS

MARS 2.0 programs examine field 245 and any 440 fields present in each bibliographic record. MARS 2.0 programs check \$a subfield for any initial article in the language of the item (as coded in fixed field 008, bytes 35-37). If an initial article is found in field 245 or 440, the second indicator (Nonfiling Characters) is set to the value in the MARS 2.0 Initial Article Table.

If the field does not begin with an article in the language of the item, and the Nonfiling Characters indicator contains a number, no processing is done. This prevents setting an incorrect indicator value when a heading has been correctly coded for an initial article in a language other than that of the item as a whole.

If the second indicator contains a blank (or any other character except a number), MARS 2.0 looks for the presence of an initial **A**, **An**, or **The**. If the heading begins with one of these three text strings, the heading is included in the Possible Leading Articles Report (see Step 5.2, Report 14). If no other condition is satisfied, a blank Nonfiling Characters indicator is set to zero.

MARS 2.0 initial article processing is fully compliant with the February 20, 2003 Library of Congress change in counting non-filing characters. Diacritics associated with the initial letter of the following word are no longer included in the filing indicator.



EXAMPLE

```
245 05 $aDer öffentliche Dienst ...
440 5 $aLos últimos alazapas ;$v2
```

Changed to:

```
245 04 $aDer öffentliche Dienst ...
440 4 $aLos últimos alazapas ;$v2
```

Diacritics associated with the initial article and special characters other than diacritics, however, continue to be included in the filing indicator as shown in the examples below:

```
245 14 $aHē Monē ...
245 05 $a[The Part of Pennsylvania that ...
townships].
245 15 $aThe "other" person ...
```

MARS 2.0 programs do **not** examine the \$p subfield.

OTHER FIELDS

MARS 2.0 programs examine the beginning of each instance of these fields and subfields for initial articles:

SUBFIELD \$a		
130	210	240
630	211	242
730	212	243
740	214	246
830	222	247

SUBFIELD \$t		
100	110	111
400	410	411
600	610	611
700	710	711
800	810	811

For fields that have a Nonfiling Characters indicator defined, the initial word is extracted based on the filing indicator and is compared with all articles in the MARS 2.0 Initial Article Table.

If the initial word is an article:

- The word is deleted
- The first letter of the subsequent word is capitalized
- The filing indicator is reset to zero

If the article is not found, MARS 2.0 programs include the field in the Suspicious Filing Indicators Report for local review (see Step 5.2, Report 13).

MARS 2.0 programs use a different process if:

- The filing indicator is a zero or a blank
- No filing indicator has been defined for the field
- The subfield being examined is a \$t subfield
- If the subfield begins with **The**:
- The initial article is deleted
- The first letter of the subsequent word is capitalized
- The filing indicator (if defined) is reset to zero

Additionally, if the first word is **A** or **An**, it is included in the Possible Leading Articles Report (see Step 5.2, Report 14).

NOTES



NOTES

COUNTING NONFILING CHARACTERS

With the advent of MARC 21, the method of counting non-filing characters was clarified. On February 20, 2003 the Library of Congress implemented a change in practice for counting non-filing characters to reflect the MARC 21 clarification. This change applies when definite or indefinite articles are present and the first filing word following the article begins with a character modified by a diacritic. When an initial article is present, the rule for counting non-filing characters is as follows:

*Count the article, diacritics associated with the article, any blank space, an alif, an ayn, or any mark of punctuation preceding the first filing character. Do **not** count a diacritic associated with the first filing character (the alif and ayn are not diacritics, they are special spacing characters not considered for filing).*

This practice is best illustrated by the following examples.



EXAMPLES

Old practice:

245	13	\$aL'été ...
245	15	\$aLos últimos ...
245	05	\$aDer öffentliche Dienst ...
440	5	\$aLos últimos alazapas ;\$v2
245	15	\$aal-'Ālam ...

New practice:

245	12	\$aL'été ...
245	14	\$aLos últimos ...
245	04	\$aDer öffentliche Dienst ...
440	4	\$aLos últimos alazapas ;\$v2
245	14	\$aal-'Ālam ...

Other helpful examples with and without initial articles (these do **not** reflect a change in practice):

245 04 \$aal-‘Arabīyah ...
 245 14 \$aHē Monē ...
 245 12 \$aL’enfant criminal.
 245 05 \$a[The Part of Pennsylvania
 that ... townships].
 245 15 \$aThe “other” person ...
 245 10 \$a[Diary] ...
 245 10 \$a”Full steam ahead!” ...

.....
 The LC database is currently being analyzed to identify existing records that need to be changed programmatically as a result of the new practice. LC staff creating or updating bibliographic records in Voyager or OCLC are asked to begin following the new practice immediately.

Note: *The following characters can be considered candidates as “the first filing character”:*

- Latin letters
- Arabic numbers
- Super- or subscript numbers
- Æ – AE digraph
- Œ – OE digraph
- Ð – Crossed d
- ð – Eth
- İ – Turkish i
- Ł – Polish l
- ℓ – Script l
- ǒ – Hooked o
- ǔ – Hooked u
- Ø – Slashed o
- Þ – Icelandic thorn
- # – Hatch mark
- & – Ampersand
- + – Plus sign

NOTES

NOTES

MARS 2.0 INITIAL ARTICLE TABLE

The table shown on the next four pages is used in the MARS 2.0 MARC Update processing. It lists each initial article, and the associated filing indicator, by language.

This table is not intended as a comprehensive list, but rather a tool that is used within a specific automated process. Generally, initial articles that cannot be correctly converted in all headings without manual review are not included in the table.

Language	Article	Ind
<i>language not coded or language code not found in this table</i>	a	2
	an	3
	the	4

Afrikaans	die	4
	'n	3

Arabic	al-	3
	el-	3

Baluchi	al-	3
---------	-----	---

Basque	bat	4
--------	-----	---

Catalan	el	3
	els	4
	en	3
	l'	2
	la	3
	les	4
	un	3
una	4	

Danish	de	3
	den	4
	det	4
	en	3
	et	3

Dutch	de	3
	een	4
	eene	5
	het	4
	'n	3
	't	3

Language	Article	Ind
English	a	2
	an	3
	d'	2
	de	3
	the	4

Esperanto	la	3
-----------	----	---

French	l'	2
	la	3
	le	3
	les	4
	un	3
une	4	

Frisian	de	3
	'e	3
	in	3
	it	3
	'n	3
	't	3

Gaelic	a'	3
	am	3
	an	3
	an t-	5
	na	3
	na h-	5

Gallegan (Galician)	a	2
	as	3
	o	2
	unha	5



NOTES

MARS 2.0 INITIAL ARTICLE TABLE (3 OF 4)

Language	Article	Ind
Icelandic	hin	4
	hina	5
	hinar	6
	hinir	6
	hinn	5
	hinna	6
	hinnar	7
	hinni	6
	hins	5
	hinu	5
	hinum	6
	hio	4
	'r	3

Irish	an	3
	an t-	5
	na	3
	na h-	5

Italian	gl'	3
	gli	4
	i	2
	il	3
	l'	2
	la	3
	le	3
	lo	3
	un	3
	un'	3
	una	4
uno	4	

Malagasy	ny	3
----------	----	---

Maltese	il-	3
	l-	2

Language	Article	Ind
Norwegian	de	3
	dei	4
	den	4
	det	4
	e	2
	ei	3
	ein	4
	eit	4
	en	3
	et	3

Panjabi	al-	3
---------	-----	---

Perisian	al-	3
----------	-----	---

Portuguese	a	2
	as	3
	o	2
	os	3
	um	3
uma	4	

Provençal	ih-	3
	il	3
	l'	2
	la	3
	las	4
	le	3
	les	4
	lh	3
	lhi	4
	li	3
	lis	4
	lo	3
	los	4
	lou	4



NOTES

PROFILE STEP 2.9

9 - GMD Standardization (check all that apply)

- Form of GMD
- Use AACR2 Standard Terms Table (Level 1)
 - Use Common Practice Terms Table (Level 2)
 - Use Custom GMDs List (attach a GMD Table)
 - No GMD Standardization
- Bracketing of GMD
- Add square brackets
 - Remove square brackets

GMD STANDARDIZATION

MARS 2.0 Update also updates obsolete General Material Designations (GMDs) to the current authorized form, and corrects most incorrectly spelled GMD variants.

The full MARS 2.0 Update process (Step 2.1) uses the AACR2 Standard Terms Table (Level 1) and adds square brackets. Please indicate which GMD table you would like to use and your preferred bracket practice by filling out Step 2.9 section 'a' and 'b'.

GMD LOCATION

MARS 2.0 Update will examine GMDs in the first subfield \$h (Medium) in each 245 Title Statement. The processing assumes it has reached the end of the 245 \$h subfield when it encounters one of the following characters: subfield delimiter, end-of-field delimiter, forward slash, back slash, colon, semicolon, equal sign, and period.

MARS 2.0 Update will also move the subfield \$h if it is not in the correct location within the 245 field. The 245 \$h subfield will be moved:

- Before a subfield \$b
- After a subfield \$n or \$p in headings with a subfield \$b
- Before a subfield \$c in headings without a \$b, \$n or \$p



EXAMPLES

245 14 \$aThe royal gazette /\$cNew Brunswick\$hmicroform.

245 04 \$aThe Green bag :\$ba useless but entertaining magazine for lawyers\$h[microform].

245 00 \$aDaily report.\$h[microform]\$pPeople's Republic of China /\$cFBIS.

Changes to:

245 14 \$aThe royal gazette\$h[microform] /\$cNew Brunswick.

245 04 \$aThe Green bag\$h[microform] :\$ba useless but entertaining magazine for lawyers.

245 00 \$aDaily report. \$pPeople's Republic of China\$h[microform] /\$cFBIS.

AACR2 STANDARD TERMS (LEVEL 1)

In the AACR2 Standard Terms option (GMD Level 1), MARS 2.0 processing will convert as many GMDs as possible to the terms authorized in the current edition of AACR2. For example, both **\$h[computer file]** and **\$h[computer fille]** would be modified to **\$h[electronic resource]**. Most libraries will want to select this level of GMD processing. A list of the terms in both processing levels is shown on pages 55 and 56.

COMMON PRACTICE TERMS (LEVEL 2)

In their local catalog, some libraries use GMDs which are not included in the AACR2 list of authorized GMDs (AACR2 paragraph 1.1C). The MARS 2.0 Level 2 GMD list contains 'common' terms used in many libraries.

For example, using the Level 2 Common Practice Terms table, the GMD **\$h[audicassette]** would be corrected to **\$h[audiocassette]**, while in the AACR2 Standard Terms option (Level 1) **\$h[audicassette]** would be corrected to the standard AACR2 GMD **\$h[sound recording]**.

Obsolete terms (i.e., terms that were once authorized by AACR2 and have been replaced by a different term) are normally updated to the replacement term even in Level 2. For example, **\$h[computer file]** is replaced by the newer term **\$h[electronic resource]**.

NOTES



NOTES

CUSTOM TERMS

You can easily modify either of the GMD term options available in MARS 2.0. For example, if you would like to standardize all your GMDs to the AACR2 Standard Terms, but retain the non-standard terms “microfiche” and “microfilm”, simply notate it in Step 2.10 under Additional Information.

UNRECOGNIZED TERMS

If the MARS 2.0 GMD tables do not contain a particular GMD variant, that GMD will be included in the Unrecognized GMD Report (See Step 5.2, Report 51). You can request this report on Step 5.2 of your profile.

BRACKETS

MARS 2.0 programs can also add square brackets around the GMD if not present. Similarly, if the GMD is enclosed in parentheses, angle brackets, etc. MARS programs change them to square brackets. MARS 2.0 can also remove brackets from GMDs to support system in which the brackets cause display problems.



EXAMPLES

245 14 \$aThe royal gazette\$hmicroform
/\$cNew Brunswick.

245 10 \$aPride and prejudice\$h(vidrecording)
/\$cMetro-Goldwyn-Mayer.

Changes to:

245 14 \$aThe royal gazette\$h[microform]
/\$cNew Brunswick.

245 10 \$aPride and prejudice\$h[videorecording]
/\$cMetro-Goldwyn-Mayer.

.....
The MARS 2.0 staff recommends adding square brackets to the 245 \$h subfield. Even if your present local system generates the necessary square brackets, it is likely a future system will require them in the record.

Note: Brackets around GMDs can only be added or removed if GMDs are being standardized. If GMDs are not being standardized, no changes will occur in the 245 \$h subfields.



SUMMARY

The table below shows the results of selecting the various GMD Standardization options in Step 2.9:

Original Form of GMD in Bib Record: \$haudiocaste

Corrected Form of GMD	AACR2 Standard Terms Level 1 selected	Common Practice Terms Level 2 selected
Add Brackets	\$h[sound recording]	\$h[audiocassette]
Remove Brackets	\$hsound recording	\$haudiocassette

MARS 2.0 GMD TABLE – AACR2 STANDARD TERMS (SPELLING VARIANTS NOT SHOWN)

Level 1 - AACR2 Standard Terms		
activity card	flash card	object
art original	game	picture
art reproduction	kit	realia
braille	manuscript	slide
cartographic material	microform	sound recording
cartographic material (tactile)	microscope slide	technical drawing
chart	model	text
chart (large print)	motion picture	text (large print)
diorama	multimedia	toy
electronic resource	music	transparency
filmstrip	music (braille)	videorecording

NOTES

MARS 2.0 GMD TABLE – GMD COMMON TERMS (SPELLING VARIANTS NOT SHOWN)

Level 2 - Common Terms		
activity card	globe	record
art original	government document	serial
art reproduction	graphic	slide set
atlas	kit	sound recording
audiocassette	large print	sound recording (cassette)
braille	laser disc	sound recording (compact disc)
cartographic chart	LP	sound recording (CD)
cartographic material	manuscript	sound recording (LP)
cartographic material (tactile)	map	study print
CD recording	map (tactile)	technical drawing
CD-ROM	microfiche	text
CDV	microfilm	text (large print)
chart	microform	toy
chart (large print)	microopaque	transparency
compact disc	microprint	US document
diorama	microscope slide	VHS
DVD	model	video CD
DVD-ROM	motion picture	video single disc
electronic resource	music	videocassette
electronic resource (CD-ROM)	music (braille)	videodisc
federal document	newspaper	videodisc (DVD)
filmstrip	periodical	videorecording
flash card	photograph	videorecording (DVD)
floppy	picture	videorecording (VHS)
game	realia	VSD

NOTES