

## How to use this spreadsheet:

This spreadsheet is used to accompany the set of files in order to validate the reading of metadata according to the MWG specification.

Each worksheet/tab below contains a reference to the files produced for each of the MWG Core Vocabulary sections found in Section 3.4 of the document. Within each worksheet is a list of the three metadata formats -- Exif, IIM, XMP -- along with certain file properties, for example if the IIM digest is correct or not, and what text encoding was used.

Within the column for each of the metadata formats, you will see one of three phrases -- n/a, RIGHT, WRONG. These phrases mean the following:

n/a : not applicable to this section  
RIGHT or WRONG : actual text encoded into the file

For date fields, we use the following:

years with 199x: wrong value  
years with 200x: right value  
last digit of year determines which block: 1 = Exif, 2 = IIM, 3 = XMP  
month and day are which date item: 01/01 = create, 02/02 = digitize, 03/03 = modify  
first digit of fractional seconds is which block: 1 = Exif, 2 = IIM, 3 = XMP  
last 2 digits of fractional seconds are which date item: 11 = create, 22 = digitize, 33 = modify

There are some slight variations on the text encoded in the file as well. For example, you may see RIGHT-1of2 or WRONG-2of3. This is used for arrays, such as keywords, where there can be multiple values. Additionally each RIGHT or WRONG is appended with the name of the block that the value is stored in, making it easier to see how the guidance was implemented.

When validating your implementation of the MWG Specification, if you retrieve a string RIGHT (year of 200x for a date), then you have implemented the guidance correctly. On the other hand if you retrieve a string WRONG (year of 199x for a date), then you have probably implemented the guidance incorrectly. It is OK to get a WRONG value where the guidance says SHOULD, provided you have a good reason.

## About the file naming:

The name of each file describes what is contained in the file as well as some file attributes. Each filename is intended to be shorthand for the descriptions in this document.

guidance-nn\_ [+/-]Exif[+/-]IIM[+/-]XMP\_BE/LE[+/-]BOM[+/-/#]IIMDigest

guidance : short name for the MWG guidance section

nn : file number

Exif : is Exif metadata present in the file? If missing, not present and not applicable to this guidance.

IIM: is IIM metadata present in the file? If missing, not present and not applicable to this guidance.

XMP: is XMP metadata present in the file? If missing, not present and not applicable to this guidance.

BE/LE: (optional, if not present then this is not applicable to this file)

BE in the case of JPEG, if the text encoding in Exif is big endian; in the case of TIFF, if the file is big endian

LE in the case of JPEG, if the text encoding in Exif is little endian; in the case of TIFF, if the file is little endian

+/- :

+ used to designate whether the next item does exist in the file

- used to designate whether the next item does not exist in the file

BOM: (optional, only present if BE/LE is present) is the byte order mark (U+FEFF) present?

+/-/# :

+ used if the IIMDigest does exist in the file and the digest does match

- used if the IIMDigest does not exist in the file

# used if the IIMDigest does exist in the file and the digest does not match

IIMDigest : is the IIM Digest present in the file? if so, what is it's state? If missing, not present and not applicable to this file.

In the following sheets, we use \*E in the file names to represent that there will be two files created, one with BE and one with LE. Further, we use +/-BOM to represent that there will be two files created for the corresponding BE/LE, so one with +BOM and one with -BOM. In the cases where these are present, four files will be produced for the whole set: BE+BOM, BE-BOM, LE+BOM, LE-BOM.

	<b>Exif</b>	<b>IIM</b>	<b>XMP</b>	<b>IIM Digest</b>
<b>Keywords-01_-IIM-XMP_-IIMDigest</b>	<n/a>	RIGHT1of2-IIM; RIGHT2of2-IIM		
<b>Keywords-02_-IIM+XMP</b>	<n/a>		RIGHT1of2-XMP; RIGHT2of2-XMP	
<b>Keywords-03_-IIM+XMP_-IIMDigest</b>	<n/a>	WRONG-IIM	RIGHT1of2-XMP; RIGHT2of2-XMP	matches
<b>Keywords-04_-IIM+XMP_-#IIMDigest</b>	<n/a>	RIGHT1of2-IIM; RIGHT2of2-IIM	WRONG-XMP	differs
<b>Keywords-05_-IIM+XMP_-IIMDigest</b>	<n/a>	WRONG-IIM	RIGHT1of2-XMP; RIGHT2of2-XMP	missing
<b>Keywords-06_-IIM-XMP_-IIMDigest</b>	<n/a>	RIGHT1of2-IIM; RIGHT2of2-IIM		matches
<b>Keywords-07_-IIM+XMP_-IIMDigest</b>	<n/a>		RIGHT1of2-XMP; RIGHT2of2-XMP	present
<b>Keywords-08_-IIM+XMP_-#IIMDigest</b>	<n/a>		WRONG-XMP	differs

	Exif	IIM	XMP	IIM Digest
Description-01_+Exif-IIM-XMP	RIGHT-Exif			
Description-02_-Exif+IIM-XMP_-IIMDigest		RIGHT-IIM		
Description-03_-Exif-IIM+XMP			RIGHT-XMP	
Description-04_+Exif+IIM-XMP_-IIMDigest	RIGHT-Exif	WRONG-IIM		
Description-05_+Exif-IIM+XMP	RIGHT-Exif		WRONG-XMP	
Description-06_-Exif+IIM+XMP_+IIMDigest		WRONG-IIM	RIGHT-XMP	matches
Description-07_-Exif+IIM+XMP_#IIMDigest		RIGHT-IIM	WRONG-XMP	differs
Description-08_-Exif+IIM+XMP_-IIMDigest		WRONG-IIM	RIGHT-XMP	missing
Description-09_+Exif+IIM+XMP_-IIMDigest	RIGHT-Exif	WRONG-IIM	WRONG-XMP	missing
Description-10_-Exif+IIM-XMP_+IIMDigest		RIGHT-IIM		matches
Description-11_-Exif-IIM+XMP_+IIMDigest			RIGHT-XMP	present
Description-12_-Exif-IIM+XMP_#IIMDigest			WRONG-XMP	differs

	Exif (DateTimeOriginal)	Exif (DateTimeDigitized)	Exif (DateTime)	Exif (SubSecondTimeOriginal)	Exif (SubSecondTimeDigitized)	Exif (SubSecondTime)	IMM (DateCreated/TimeCreated)	IMM (DigitalCreationDate/Time)	XMP (xmp:DateCreated)	XMP (xmp:CreateDate)	XMP (xmp:ModifyDate)	IMM Digest
DateTime-01_ _Exif-IM-XMP	1/1/2001 1:11:11	2/2/2001 1:22:22	3/3/2001 1:33:33	111	122	133						
DateTime-02_ _Exif-IM-XMP_ _IMMDigest							1/1/2002 2:11:11	2/2/2002 2:22:22				missing
DateTime-03_ _Exif-IM-XMP									1/1/2003 3:11:11	2/2/2003 3:22:22	3/3/2003 3:33:33	
DateTime-04_ _Exif-IM-XMP_ _IMMDigest	1/1/2001 1:11:11	2/2/2001 1:22:22	3/3/2001 1:33:33	111	122	133	1/1/1992 2:11:11	2/2/1992 2:22:22				missing
DateTime-05_ _Exif-IM-XMP	1/1/2001 1:11:11	2/2/2001 1:22:22	3/3/2001 1:33:33	111	122	133			1/1/1993 3:11:11	2/2/1993 3:22:22	3/3/1993 3:33:33	
DateTime-06_ _Exif-IM-XMP_ _IMMDigest							1/1/1992 2:11:11	2/2/1992 2:22:22	1/1/2003 3:11:11	2/2/2003 3:22:22	3/3/2003 3:33:33	matches
DateTime-07_ _Exif-IM-XMP_ _IMMDigest							1/1/2002 2:11:11	2/2/2002 2:22:22	1/1/1993 3:11:11	2/2/1993 3:22:22	3/3/2003 3:33:33	differs
DateTime-08_ _Exif-IM-XMP_ _IMMDigest							1/1/1992 2:11:11	2/2/1992 2:22:22	1/1/2003 3:11:11	2/2/2003 3:22:22	3/3/2003 3:33:33	missing
DateTime-09_ _Exif-IM-XMP_ _IMMDigest	1/1/2001 1:11:11	2/2/2001 1:22:22	3/3/2001 1:33:33	111	122	133	1/1/1992 2:11:11	2/2/1992 2:22:22	1/1/1993 3:11:11	2/2/1993 3:22:22	3/3/1993 3:33:33	missing
DateTime-10_ _Exif-IM-XMP_ _IMMDigest							1/1/2002 2:11:11	2/2/2002 2:22:22				matches
DateTime-11_ _Exif-IM-XMP_ _IMMDigest									1/1/2003 3:11:11	2/2/2003 3:22:22	3/3/2003 3:33:33	present
DateTime-12_ _Exif-IM-XMP_ _IMMDigest									1/1/1993 3:11:11	2/2/1993 3:22:22	3/3/2003 3:33:33	differs

	<b>Exif</b>	<b>IIM</b>	<b>XMP</b>	<b>IIM Digest</b>
<b>Orientation-01_+Exif</b>	1	<n/a>	<n/a>	<n/a>
<b>Orientation-02_+Exif</b>	2	<n/a>	<n/a>	<n/a>
<b>Orientation-03_+Exif</b>	3	<n/a>	<n/a>	<n/a>
<b>Orientation-04_+Exif</b>	4	<n/a>	<n/a>	<n/a>
<b>Orientation-05_+Exif</b>	5	<n/a>	<n/a>	<n/a>
<b>Orientation-06_+Exif</b>	6	<n/a>	<n/a>	<n/a>
<b>Orientation-07_+Exif</b>	7	<n/a>	<n/a>	<n/a>
<b>Orientation-08_+Exif</b>	8	<n/a>	<n/a>	<n/a>
<b>Orientation-09_+Exif</b>	9	<n/a>	<n/a>	<n/a>
<b>Orientation-10_+Exif</b>	65535	<n/a>	<n/a>	<n/a>
<b>Orientation-11_+Exif</b>	0	<n/a>	<n/a>	<n/a>

	<b>Exif</b>	<b>IIM</b>	<b>XMP</b>	<b>IIM Digest</b>
<b>Rating-01_+XMP</b>	<n/a>	<n/a>	0.0	<n/a>
<b>Rating-02_+XMP</b>	<n/a>	<n/a>	0.3	<n/a>
<b>Rating-03_+XMP</b>	<n/a>	<n/a>	0.7	<n/a>
<b>Rating-04_+XMP</b>	<n/a>	<n/a>	1.0	<n/a>
<b>Rating-05_+XMP</b>	<n/a>	<n/a>	5.0	<n/a>
<b>Rating-06_+XMP</b>	<n/a>	<n/a>	6.0	<n/a>
<b>Rating-07_+XMP</b>	<n/a>	<n/a>	-1.0	<n/a>
<b>Rating-08_+XMP</b>	<n/a>	<n/a>	-2.0	<n/a>
<b>Rating-09_+XMP</b>	<n/a>	<n/a>	3	<n/a>

	Exif	IIM	XMP	IIM Digest
Copyright-01_+Exif-IIM-XMP	RIGHT-Exif			
Copyright-02_-Exif+IIM-XMP_-IIMDigest		RIGHT-IIM		
Copyright-03_-Exif-IIM+XMP			RIGHT-XMP	
Copyright-04_+Exif+IIM-XMP_-IIMDigest	RIGHT-Exif	WRONG-IIM		
Copyright-05_+Exif-IIM+XMP	RIGHT-Exif		WRONG-XMP	
Copyright-06_-Exif+IIM+XMP_+IIMDigest		WRONG-IIM	RIGHT-XMP	matches
Copyright-07_-Exif+IIM+XMP_#IIMDigest		RIGHT-IIM	WRONG-XMP	differs
Copyright-08_-Exif+IIM+XMP_-IIMDigest		WRONG-IIM	RIGHT-XMP	missing
Copyright-09_+Exif+IIM+XMP_-IIMDigest	RIGHT-Exif	WRONG-IIM	WRONG-XMP	missing
Copyright-10_-Exif+IIM-XMP_+IIMDigest		RIGHT-IIM		matches
Copyright-11_-Exif-IIM+XMP_+IIMDigest			RIGHT-XMP	present
Copyright-12_-Exif-IIM+XMP_#IIMDigest			WRONG-XMP	differs

	Exif	IIM	XMP	IIM Digest
Creator-01_-Exif-IIM-XMP	RIGHT1of2-Exif; RIGHT2of2-Exif			
Creator-02_-Exif+IIM-XMP_-IIMDigest		RIGHT1of2-IIM; RIGHT2of2-IIM		
Creator-03_-Exif-IIM+XMP			RIGHT1of2-XMP; RIGHT2of2-XMP	
Creator-04_-Exif+IIM-XMP_-IIMDigest	RIGHT1of2-Exif; RIGHT2of2-Exif	WRONG-IIM		
Creator-05_-Exif-IIM+XMP	RIGHT1of2-Exif; RIGHT2of2-Exif		WRONG-XMP	
Creator-06_-Exif+IIM+XMP_+IIMDigest		WRONG-IIM	RIGHT1of2-XMP; RIGHT2of2-XMP	matches
Creator-07_-Exif+IIM+XMP_#IIMDigest		RIGHT1of2-IIM; RIGHT2of2-IIM	WRONG-XMP	differs
Creator-08_-Exif+IIM+XMP_-IIMDigest		WRONG-IIM	RIGHT1of2-XMP; RIGHT2of2-XMP	missing
Creator-09_-Exif+IIM+XMP_-IIMDigest	RIGHT1of2-Exif; RIGHT2of2-Exif	WRONG-IIM	WRONG-XMP	missing
Creator-10_-Exif+IIM-XMP_+IIMDigest		RIGHT1of2-IIM; RIGHT2of2-IIM		matches
Creator-11_-Exif-IIM+XMP_+IIMDigest			RIGHT1of2-XMP; RIGHT2of2-XMP	present
Creator-12_-Exif-IIM+XMP_#IIMDigest			WRONG-XMP	differs