

Behind the metadata curtain:

What common platforms read, create
and release photo tags?

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Agenda

- I. Metadata 101
- II. What files support Metadata?
- III. Capabilities of key common metadata tags
- IV. The Metadata Curtain – Platform Comparison
- V. Best practices
- VI. Future Initiatives

Metadata 101

2 main types: EXIF and IPTC

- EXIF developed by camera mfg
http://www.cipa.jp/std/std-sec_e.html
- IPTC developed by newspaper/media
<https://iptc.org/standards/>



Metadata 101: Common fields use by Family Historians



Date



Source



Caption



Location



People

Metadata 101: Tools for reading/displaying...



Our favorites:

Jeffrey's Image Metadata Viewer

<http://exif.regex.info/exif.cgi>

The eXif.er

<https://www.thexifer.net/#xmp-gpano-tags>

IPTC Organization Site Tool

<https://getpmd.iptc.org/getiptcpmd.html>

What files support Metadata?

File Type	Release	Inventor	Quality	IPTC	EXIF
JPG	1992	Joint Photographic Experts Group	Lossy	Yes	Yes
RAW/Bitmap			Lossless	Yes ¹	Yes
TIFF	1986	Aldus (now owned by Adobe)	Both	Yes	Yes
PNG	1996	PNG Development Group (W3C)	Lossless	Yes	Yes ²
GIF	1987	CompuServe	Lossless ³	No	No
PDF	1993	Adobe	Both	Yes	Yes




1 "For IPTC: there is a ""sidecar"" file that travels with the raw content. The content of the photo is directly from the image sensor within a camera and is not yet processed."

2 "As of 2017, there has been updates that include an EXIF ""chunk"" in PNG file formats, adoption is yet to be seen.<http://ftp-osl.osuosl.org/pub/libpng/documents/pngext-1.5.0.html#C.exif>"

3 There is still a compression algorithm implemented but it is a lossless algorithm.

The Metadata Curtain: Ranking Scale

Platform's ability to read, edit, export     

Area	 Yes	 Limited	 No or N/A
Read	Find and show IPTC and/or EXIF details for all	Find and show IPTC and/or EXIF details for some	Can't find and show IPTC and/or EXIF details for any
Edit	Allows user to modify item fully	Allows user to modify item partially/without all variables	Does not allow user to modify item
Export	Detects all edits made in platform and injects into IPTC and/or EXIF fields	Detects some edits made in platform and injects into IPTC and/or EXIF fields	Unable to detect edits made in platform and inject into IPTC and/or EXIF fields

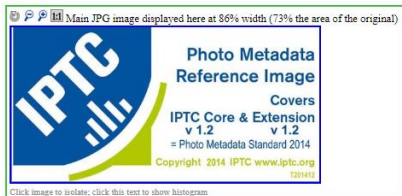
The Metadata Curtain: Test File

- Created by IPTC org
- Has EVERY possible IPTC field inside
- We added GPS coordinates



**Test Photo
Loaded with Metadata**

The Metadata Curtain: Test File (Jeffery's)



Basic Image Information

Target file: IPTC Test Photo with GPS_01March2019.jpg

Title:	The Title (ref2014)
Headline:	The Headline (ref2014)
Caption:	The description aka caption (ref2014)
Artist:	Creator1 (ref2014) Address: Creator's CI: Address, line 1 (ref2014), Creator's CI: City (ref2014), Creator's CI: State/Province (ref2014), Creator's CI: Postcode (ref2014), Creator's CI: Country (ref2014) Contact: Creator's CI: Email@1, Email@2 (ref2014), Creator's CI: Phone # 1, Phone # 2 (ref2014), http://www.Creators.CI/WebAddress/ref2014
Creator:	Creator1 (ref2014), Creator2 (ref2014)
Credit:	Credit Line (ref2014)
Copyright:	Copyright (Notice) 2014 IPTC - www.iptc.org (ref2014)
Terms of Use:	Rights Usage Terms (ref2014)
Special Instructions:	An Instruction (ref2014)
Keywords:	Keyword1ref2014,Keyword2ref2014,Keyword3ref2014
Date:	October 28, 2011 12:00:00PM (timezone not specified) (7 years, 4 months, 3 days, 22 hours, 48 minutes, 37 seconds ago, assuming image timezone of 5 hours behind GMT)
Location:	Sublocation (Core) (ref2014) City (Core) (ref2014), Province/State (Core) (ref2014), Country (Core) (ref2014) Latitude-longitude: 39° 54' 5.7" North, 82° 16' 26.7" West (39.901572, -82.274080) Map via embedded coordinates at: Google, Yahoo, WikiMapia, OpenStreetMap, Bing (also see the Google Maps pane below) Timezone guess from earthtools.org: 5 hours behind GMT
File:	525 × 263 JPEG 72,298 bytes (71 kilobytes)

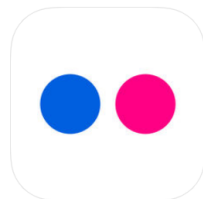
EXIF

Bits Per Sample	8 8 8
Exif Image Size	2,100 × 1,050
Photometric Interpretation	RGB
Image Description	The description aka caption (ref2014)
Orientation	Horizontal (normal)
Samples Per Pixel	3
Software	Adobe Photoshop CC 2014 (Windows)
Modify Date	2015:02:10 08:56:56 4 years, 18 days, 23 hours, 51 minutes, 41 seconds ago
Artist	Creator1 (ref2014)
Copyright	Copyright (Notice) 2014 IPTC - www.iptc.org (ref2014)
Exif Version	0221
Date/Time Original	2011:10:28 12:00:00 7 years, 4 months, 3 days, 19 hours, 48 minutes, 37 seconds ago
Color Space	sRGB
GPS Latitude Ref	North
GPS Latitude	39.901572 degrees
GPS Longitude Ref	West
GPS Longitude	82.274080 degrees
Compression	JPEG (old-style)
Image Size	1,000 × 500
Resolution	300 pixels/inch
Thumbnail Length	6,228
Thumbnail Image	(6,228 bytes binary data)

IPTC

Object Attribute Reference	A Genre (ref2014)
Object Name	The Title (ref2014)
Subject Reference	IPTC:1ref2014, IPTC:2ref2014, IPTC:3ref2014
Keywords	Keyword1ref2014,Keyword2ref2014,Keyword3ref2014
Special Instructions	An Instruction (ref2014)
Date Created	2015:02:17 4 years, 12 days, 8 hours, 48 minutes, 37 seconds ago
Time Created	17:30:01+00:00
By-line	Creator1 (ref2014)
By-line Title	Creator's Job Title (ref2014)
City	City (Core) (ref2014)
Sub-location	Sublocation (Core) (ref2014)
Province-State	Province/State (Core) (ref2014)
Country-Primary Location Code	R14
Country-Primary Location Name	Country (Core) (ref2014)
Original Transmission Reference	Job Id (ref2014)
Headline	The Headline (ref2014)
Credit	Credit Line (ref2014)
Source	Source (ref2014)
Copyright Notice	Copyright (Notice) 2014 IPTC - www.iptc.org (ref2014)
Caption-Abstract	The description aka caption (ref2014)
Writer-Editor	Description Writer (ref2014)
Application Record Version	4

The Metadata Curtain: Common Family Historian Platforms Tested



The Metadata Curtain: Platform Comparison

as of February 1, 2019



	Facebook			Leaf			Orange Tree			Green Grid			Instagram		
	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export
Date															
Source															
Caption															
Location															
People															



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



CAUTION!

Not only will Facebook trap the tags you add in the platform inside the app, it will also strip out or override nearly ALL metadata from your original file.



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



Adding insult to injury, they also compress your original file resolution.



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



Ancestry is taking steps to potentially read metadata



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



CAUTION!

**On Export, they strip the tags you added in MyHeritage
AND overrides nearly ALL original tags**



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



FamilySearch is taking steps to read metadata upon import



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



CAUTION!

**Tags are trapped in platform
AND overrides nearly ALL original tags**



Yes



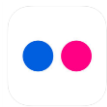
Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



	Google Photos			iCloud			Adobe Lightroom			Google Photos			MemoryWeb		
	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export	Read	Edit	Export
Date	😊	😐	😞	😊	😊	😞	😊	😐	😊	😊	😐	😞	😊	😊	😊
Source	😞	😞	😞	😊	😞	😞	😊	😊	😊	😞	😞	😞	😊	😊	😊
Caption	😊	😊	😞	😊	😊	😞	😊	😊	😊	😊	😊	😞	😊	😊	😊
Location	😞	😞	😞	😐	😊	😞	😊	😐	😐	😐	😊	😞	😊	😊	😊
People	😞	😞	😞	😐	😐	😞	😊	😊	😊	😞	😐	😞	😐	😊	😐



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



May 2018 Forever announced improvements to metadata starting 2019



Yes



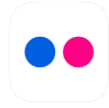
Limited



No or N/A

The Metadata Curtain: Platform Comparison

as of February 1, 2019



CAUTION!

The free version of Google Photos will compress your file resolution as your photos are uploaded



Yes



Limited



No or N/A

The Metadata Curtain: Platform Comparison Summary

Common fields as of February 1, 2019

Platform	Read	Edit	Export
Facebook	No or N/A	Limited	No or N/A
Leaflet	No or N/A	Yes	No or N/A
OpenStreetMap	No or N/A	Yes	No or N/A
Mapbox	No or N/A	Yes	No or N/A
Instagram	No or N/A	Limited	No or N/A
MemoryWeb	Limited	Limited	No or N/A
OpenStreetMap (2)	Limited	Limited	No or N/A
Leaflet (2)	Yes	Limited	No or N/A
OpenStreetMap (3)	Yes	Yes	Yes
Mapbox (2)	Limited	Limited	No or N/A
MemoryWeb (2)	Yes	Yes	Yes

Legend: Yes Limited No or N/A

Best Practices: - Adding location metadata

GOOD: Add in comments or caption

BETTER: Add in **both** IPTC and EXIF fields when given the chance

BEST: Have as GPS coordinates (so it can be read by all platforms) in EXIF

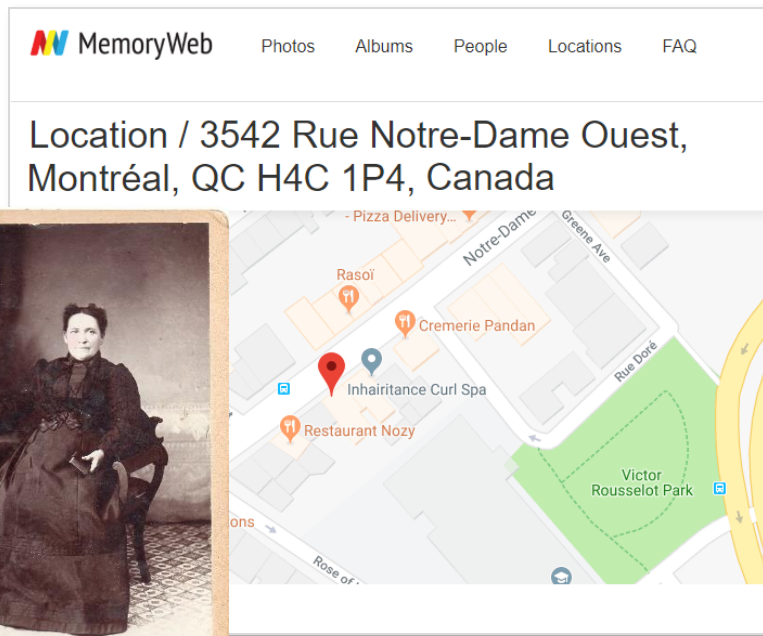


Photo courtesy of Maureen Taylor, The Photo Detective

Best Practices: Adding date metadata

GOOD: Add in comments or caption

BETTER: Add to Date IPTC and EXIF field

BEST: Allow for exact or approximate date for IPTC and EXIF fields



Done

Select what you know

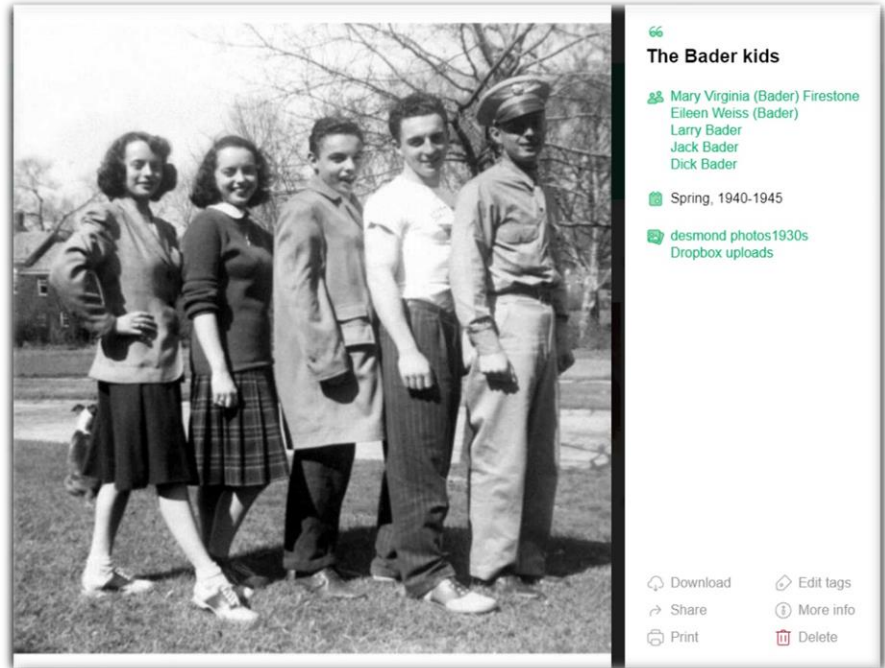
Month or Season		Exact or Range	
July		1889-90	1889-90
August		1890	1890
September		1891	1891
October	-	1892	1892
November	Winter	1893	1893
December	Spring	1894	1894

Best Practices: Adding people metadata

GOOD: Add in comments or caption

BETTER: Add to People IPTC field

BEST: Add coordinates of where faces appear on photo with People IPTC tag



Future Initiatives

- “Ask” to have family tree organizations to read metadata
- Google Search (not Google Photos) reading and displaying copyright info!
- IPTC
 - Looking to revise IPTC Standards for Genealogy!!!!
 - Contact with Photo Metadata Chair, asking for suggestions to help develop changes for Genealogy community—yeah!
 - Send your suggestions to nancyd@memoryweb.me

Behind the metadata curtain:

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and release photo tags?

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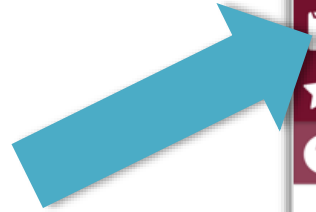


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Feedback

Remember to give feedback!

1. Go to session RT5361 in the RootsTech Mobile App
2. Tap the “Clipboard” icon
3. Rate the presentation



Session

RT5361 Behind the metadata curtain: Which common platforms read, create and release photo tags?

Location 251 D
Date Friday, Mar 1 4:30 PM
Duration 1 hour
Session Number RT5361

Metadata is the digital equivalent of “back-of-the-photo” details and can carry a picture’s story now and for future generations.

In this session we’ll uncover the metadata capabilities of platforms commonly used by genealogists to preserve and share digital photos with details. You’ll

[Show more](#)

Speakers

Speaker
Chris Desmond
MemoryWeb

Speaker
Michael Taylor
MemoryWeb

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