

Introduction to Photo Metadata

Tony Knight



About Tony Knight

tonyknight@groma.net

- California Native*
- Combat Photojournalist in USMC
- UC Berkeley Grad
- Technologist and Inventor

*almost

Agenda

- Data Longevity — Unfinished Business
- All about Photo Metadata

Break

- Real world usage
- QromaScan



Analog Stuff vs. Digital Stuff



File Formats for the Future

Audio



Image



Documents



Video



Digital Photos are

Digital Photos are data.

Digital Photos are data.

- searchable

Digital Photos are data.

- searchable
- ubiquitous

Digital Photos are data.

- searchable
- ubiquitous
- context-able

What is Photo Metadata?

- A standard by which descriptive information about a photo is stored
- It's data about data
- It's embedded into a special unseen portion of digital photos photos
- It is searchable and indexable

Who uses Photo Metadata?

- Operating Systems
- Photo Organization software
- Mobile applications
- Web services

What can Photo Metadata do for you?

- Makes your photos searchable in very complex ways
- Creates relationships between photos in a way never possible with prints.
- Transfers the 'story' of your photos into the digital domain in ways print never could.



Photo Metadata is

Photo Metadata is esoteric.

Photo Metadata is esoteric.

- Hard to apply
- Sometimes proprietary
- Destined to become easier

Photo Metadata Standards

Photo Metadata Standards

EXIF

- Exchangeable Image File Format
- Adopted by digital camera manufacturers to display:
 - camera settings
 - date and time information
 - geolocation

Photo Metadata Standards



More Info	
General Info Inspector	
Exif	
GPS	
IPTC	
JFIF	
TIFF	
Aperture Value	2.275
Brightness Value	0.033
Color Space	sRGB
Components Configuration	1, 2, 3, 0
Date Time Digitized	Mar 25, 2016, 6:32:17 PM
Date Time Original	Mar 25, 2016, 6:32:17 PM
Exif Version	2.2.1
Exposure Bias Value	0
Exposure Mode	Auto exposure
Exposure Program	Normal program
Exposure Time	1/4
Flash	Off, did not fire
FlashPix Version	1.0
FNumber	2.2
Focal Length	4.15
Focal Length In 35mm Film	29
ISO Speed Ratings	100
Lens Make	Apple
Lens Model	iPhone 6 Plus back camera 4.15mm f/2.2
Lens Specification	4.15, 4.15, 2.2, 2.2
Metering Mode	Pattern
Pixel X Dimension	2,448
Pixel Y Dimension	3,264
Scene Capture Type	Standard
Scene Type	A directly photographed image
Sensing Method	One-chip color area sensor
Shutter Speed Value	1/5
Subject Area	2,068, 1,337, 535, 536
Sub-second Time Digitized	022
Sub-second Time Original	022
White Balance	Auto white balance
Regions	1 region (Face)

Photo Metadata Standards



2016-03-25-030.jpg

More Info

General Exif **GPS** IPTC JFIF TIFF

Altitude 146.68 m (481.23 ft)
Altitude Reference above sea level
Date Stamp Mar 26, 2016
Destination Bearing 201.478
Destination Bearing Reference True direction
GPS Version 2.3.0.0
HPositioningError 5
Image Direction 201.478
Image Direction Reference True north
Latitude 37° 15' 30.498" N
Longitude 122° 1' 59.61" W
Map Datum WGS-84
Speed 0
Speed Reference Kilometers per hour
Time Stamp 01:32:18 UTC
Track 201.478
Track Reference True direction

A map showing the location of the photo in San Jose, California. The map includes labels for Prospect Rd, San Jose Blvd, Campbell, San Jose, Monte Sereno, and Los Gatos. A red pin marks the location of the photo near the intersection of Prospect Rd and San Jose Blvd.

Photo Metadata Standards

Photo Metadata Standards

IPTC

- International Press Telecommunications Council
- Developed by journalists to define standards by which news and commercial photographers could exchange information about photographs.
- Contains 'who, what, where, when and how' information in a variety of predetermined fields, including
 - City/State/Country
 - Headline/Caption/Title
 - Keywords

Photo Metadata Standards



More Info

General Exif GPS IPTC JFIF TIFF

City **Saratoga**
Country **United States**
Date Created **Mar 25, 2016**
Digital Creation Date **Mar 25, 2016**
Digital Creation Time **6:32:18 PM**
Keywords **Lucia Knight, Izzy Knight**
Province/State **California**
Time Created **6:32:18 PM**

The Metadata Trifecta

	Standard
Date	EXIF Capture Date
Location	IPTC City, State, Country, Location EXIF Long/Lat
People	IPTC Keywords
Story	IPTC Description/Caption

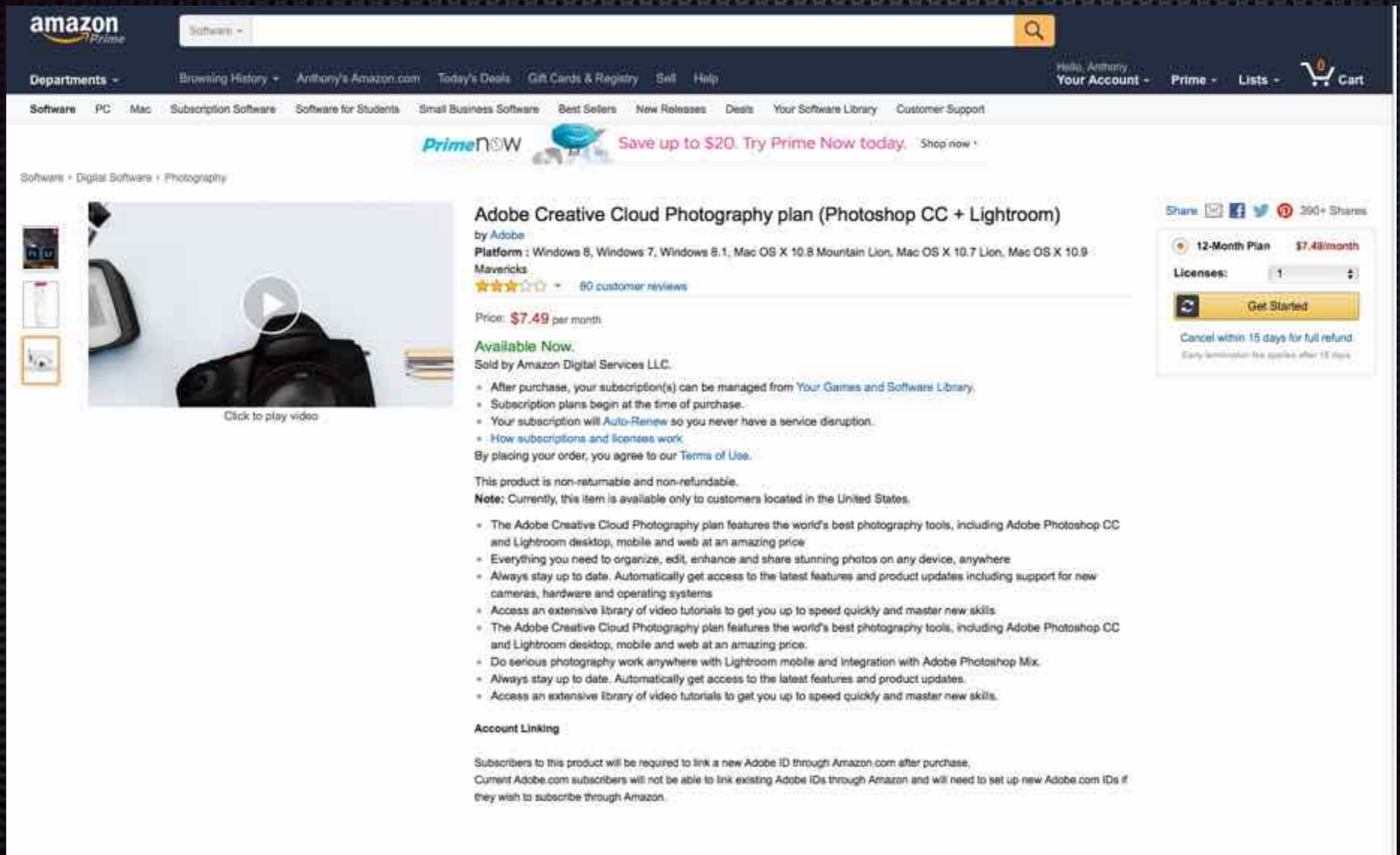
Metadata Considerations

	Scans	Digital Images
Questions	Did my scanner create an EXIF Capture Date? What was the Capture Date?	Did I use a cell phone with location services turned on?
Actions	Create/Modify Capture Date. Geotag Add Keywords	Add Keywords

Programs that use Photo Metadata

	Mac	Windows
Consumer	iPhoto, Photos, Photoshop Elements	Windows Photo Gallery, Photoshop Elements, Picassa
Professional	Media Pro, Lightroom	Lightroom, IMatch, ACDSee

Programs that use Photo Metadata



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Departments -

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Software > Digital Software > Photography

Adobe Creative Cloud Photography plan (Photoshop CC + Lightroom)

by Adobe

Platform : Windows 8, Windows 7, Windows 8.1, Mac OS X 10.8 Mountain Lion, Mac OS X 10.7 Lion, Mac OS X 10.9 Mavericks

★★★★☆ - 60 customer reviews

Price: **\$7.49** per month

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- The Adobe Creative Cloud Photography plan features the world's best photography tools, including Adobe Photoshop CC and Lightroom desktop, mobile and web at an amazing price
- Everything you need to organize, edit, enhance and share stunning photos on any device, anywhere
- Always stay up to date. Automatically get access to the latest features and product updates including support for new cameras, hardware and operating systems
- Access an extensive library of video tutorials to get you up to speed quickly and master new skills
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Get Started

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Break

Photo Metadata Tools Mentioned

Mac	Windows
Photos	Windows Photo Gallery
Houdah Geo	Adobe Lightroom
Media Pro	
Adobe Lightroom	