METADATA

a friendly introduction

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Introduction

Hey! Welcome to my very first eBook on Metadata. I hope this can be the most *friendly* introduction to what can be quite the complicated topic, Metadata. Feel free to pace yourself, take in one chapter at a time and really indulge yourself into this world. For those interested in learning more, all of the sources for the information will be cited in the appendix for ease of use.

   *Enjoy!*

What is Metadata?

Now you are probably wondering what this topic is actually about? What even is metadata? Why do we need to learn about it? Why is it useful. Let's start off with some basic definitions:

- **Meta**: An underlying definition or description *(WhatIs.com, 2019*[1]*)*.
- **Data**: Information in digital form that can be transmitted or processed *(Merriam-Webster*[2]*)*.
- **Metadata**: Data that describes other data.

So let's get more specific you probably have tons of questions. Metadata is important because it tells us everything we need to know about our data. For example, the metadata of a .JPG photo file could tell us the data and time the photo was taken, when it was modified, the focal length of the lens, the colour space, and much more. Here are some of the other things metadata can tell us: author, file size, attributes, width/height, keywords, source, etc.

1. https://whatis.techtarget.com/definition/metadata
2. https://www.merriam-webster.com/dictionary/data
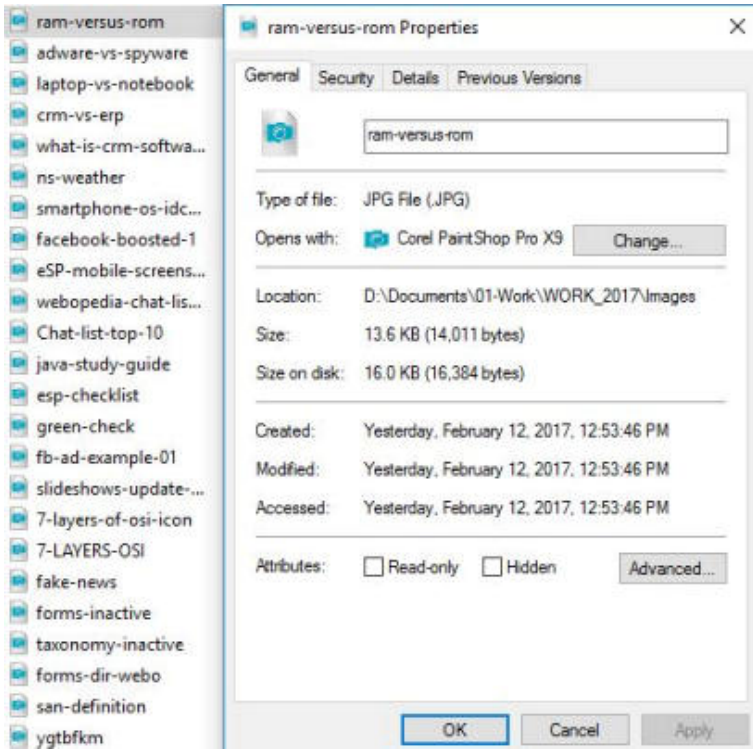
I've inserted a screenshot of some metadata in a .JPG photo file (Beal, 2007[3]). As you can see, this information IS metadata! It tells you more about the actual document/file.

Can you tell me what day this file was created? Modified? Accessed?

What is the file size?

Look at you reading all that metadata, you're learning so fast!

3. *https://www.webopedia.com/insights/metadata-2/*

The Three Types

*There are **THREE (3)** different types of metadata: <u>descriptive, structural, and administrative.</u>*

<mark>Descriptive:</mark> describes a resource for purposes such as discovery and identification. It can include elements such as title, abstract, author, and keywords.

<mark>Structural:</mark> indicates how compound objects are put together, for example, how pages are ordered to form chapters.

<mark>Administrative:</mark> provides information to help manage a resource, such as when and how it was created, file type and other technical information, and who can access it. There are several subsets of administrative data; two that are sometimes listed as separate metadata types are:

–Rights management metadata, which deals with intellectual property rights

–Preservation metadata, which contains information needed to archive and preserve a resource (Riley, 2017[1]).

1. https://www.niso.org/publications/understanding-metadata-2017

Non-editable Properties ────────────

Color space:	RGB
Dimensions:	1600 x 1200 x 24

Document Properties ────────────

Authors:	Greg Perry
Copyright:	
Subject:	Vineyards
Title:	

Picture Properties ────────────

Aperture:	F/ 7.09	
Camera make:	Canon	
Camera model:	Canon DIGITAL IXUS	
Contrast:	Normal	
Creation software:		
Date digitized:	10:41:17 PM	2/05/2002
Date taken:	10:41:17 PM	2/05/2002

What types of metadata can you find in this screenshot? (GP Software[2]).

2. https://www.gpsoft.com.au/help/opus10/index.html#!documents/Editing_Metadata.htm

Function of Metadata

Why learn about metadata?

1. *To discover resources*

   - *Allowing resources to be found by relevant criteria;*
   - *Identifying resources;*
   - *Bringing similar resources together;*
   - *Distinguishing dissimilar resources;*
   - *Giving location information.*

2. *To organize resources*

   - *Organizing links to resources based on audience or topic.*
   - *Building these pages dynamically from metadata stored in databases.*

3. *Facilitating interoperability*

   - *Using defined metadata schemes, shared transfer protocols, and crosswalks between schemes, resources across the network can be searched more seamlessly.*
     - *Cross-system search, e.g., using Z39.50 protocol;*
     - *Metadata harvesting, e.g., OAI protocol.*

4. *Digital identification*

   - *Elements for standard numbers, e.g., ISBN*
   - *The location of a digital object may also be given using:*

- a file name
- a URL
- some persistent identifiers, e.g., PURL (Persistent URL); DOI (Digital Object Identifier)
  - Combined metadata to act as a set of identifying data, differentiating one object from another for validation purposes.

5. _To archive and preserve_

  - Challenges:
    - Digital information is fragile and can be corrupted or altered;
    - It may become unusable as storage technologies change.
  - Metadata is key to ensuring that resources will survive and continue to be accessible into the future. Archiving and preservation require special elements:
    - to track the lineage of a digital object,
    - to detail its physical characteristics, and
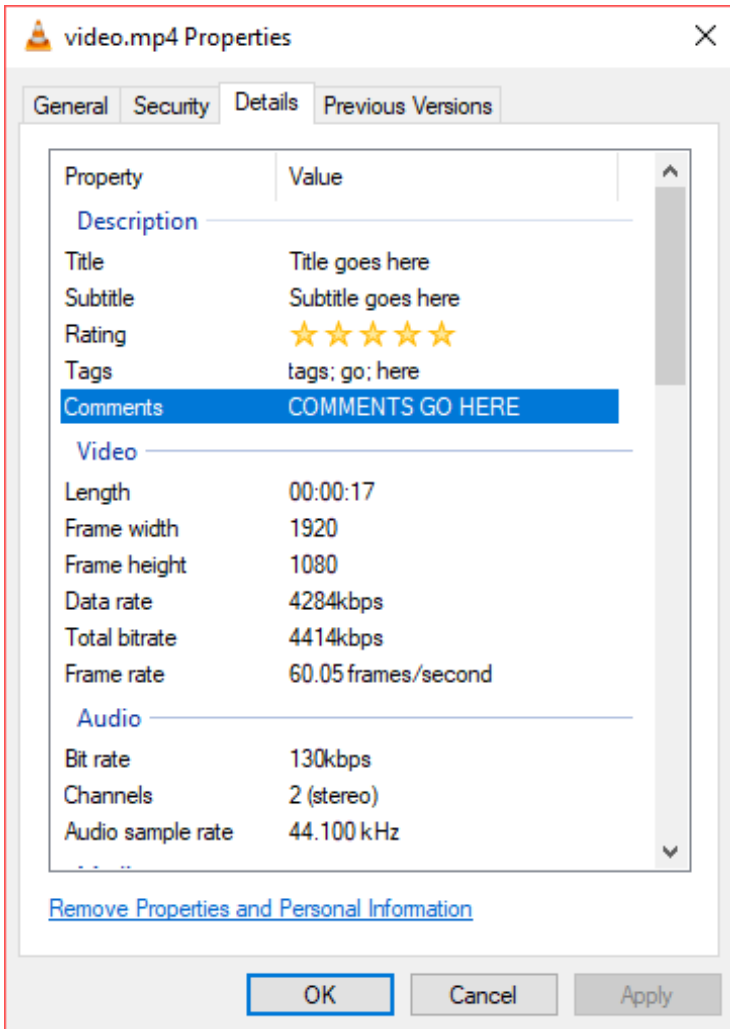   - to document its behavior in order to emulate it in future technologies.

*All information in this chapter is credited to: (Riley, 2017[1]).

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1. https://www.niso.org/publications/understanding-metadata-2017

Practical Example

Metadata is very important as it can help you sort through and organize your files in a DAM (digital asset management) system. With full metadata, you can search by any term, like creation date or author. Let's take a look at an example of metadata for a video uploaded to a DAM (Lochner, 2018[1]).

1. https://stackoverflow.com/questions/52816497/write-properties-metadata-comments-title-etc-to-a-video-php-curl

As you can see, the metadata for this video has been prefilled with all of the necessary information. Using this metadata, we know the length of the video, the framerate, etc. Now, we can use that information to search our database if we are looking for this file, regardless of how the file is named. Handy, right? We are also able to fill in part of the metadata (like the title, comments, tags) to give our file more ways to be

sorted and searched. For example, we can tag this video as "cooking" and then when we require cooking videos, we can just search by that tag, instead of digging through all of the files.

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