Metadata:
What is it & Why do I care?

Katy Ginger (ginger@ucar.edu)
Today’s goals

- My career path: the many hats of the data management professional
- What is metadata?
- How do I use it?
- How do I create?
- Why do I care?
- Where does it fit in a data management plan?
About me

- Hold meteorology & education degrees
- Worked for Amer. Met. Soc. (AMS) and UCAR
- Hired as a meteorologist
  - now classified as a software engineer
  - but do library science/collections management as job

- Use education degree/background to
  - create learning modules (like what UCAR COMET does)
  - participate in sessions like this

- Typical day: help customers create, share, manage & manipulate their XML data with scripts and web applications

- Wear many hats. I call myself all of these:
  - meteorologist, software engineer, metadata architect, instructional designer or collections manager
Best piece of career advice

- Ask for what you need and want
- Recent book (& UCAR seminar) describes gender difference between men & women about negotiation skills
- Turns out women don’t negotiate well on their own behalf.
- This has repercussions on money earned, health and general happiness.
- Money example
Structured, descriptive information about an object/resource/data that allows for judging relevancy, quality and usefulness of a thing.

- What is the thing?
- Who created it?
- Where do I find it?
- How can I use it? When was it done? etc., etc.,

Information returned to a user in search interface/engines

Information shared across data repositories
Can you name some instances?

Katy Ginger UCAR phone
(303) 497-8341

Water temperature before making tea
62F
A pint of whole milk

- Look at all this metadata!
- Milk is the actual data/content
- But it’s this nutritional metadata about the milk that provides info for making a decision
What time of year is it?:
What is the *critical* missing metadata?
What time of year is it?:
What is the *critical* missing metadata?

Visible Image

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NCEP/NWS/NOAA
Think about end user. They will read your descriptions & work with your classifications.

What search terms would you use, if you were looking for an item such as this?

What information would you need and want as a potential user?

Your characterization will assist users in finding what they want.
Metadata consumer: how was the metadata created?

- Has a classification system been used for organization? If so, determine it and use it.
- To what level is description provided? Is there an overall description & individual item descriptions? *(Data managers must carefully balance these versus time and money)*
- Does the copyright information allow use in the way that you intend?
- How was the metadata created and by whom? *(is it trustworthy and helps in finding/discovery)*
Mystery metadata game

- **Goal**: how create metadata and why do I care?
- Break into teams of three
- Examine the “data” contents of your bag
- Describe your data with an overall description
- Determine appropriate metadata fields that can be used to describe the individual items.
- Then list those fields and complete them for 1 item in your bag.
Is the special item in your mystery collection?

Is the special item in your own collection?
## Mystery metadata game cont’d

<table>
<thead>
<tr>
<th>Team</th>
<th>Special Item (in or out)</th>
<th>Collection Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
<td>in</td>
<td>Kitchen items (wooden spoon, can opener, nut cracker)</td>
</tr>
<tr>
<td>Team 2</td>
<td>out</td>
<td>Maps of cities, national parks and states</td>
</tr>
<tr>
<td>Team 3</td>
<td>?</td>
<td>Greeting cards (birthday, x-mas, father’s day)</td>
</tr>
<tr>
<td>Team 4</td>
<td>in</td>
<td>Recyclables (egg carton, can, cardboard, foil)</td>
</tr>
<tr>
<td>Team 5</td>
<td>out</td>
<td>Wind up toys</td>
</tr>
</tbody>
</table>

- For some collections, it was relatively easy to decide in or out because the item just didn’t belong while for others it was more difficult. Why?

- The granularity (detail) of what should be described about the item influences the placement in a collection.
Take aways

- Metadata, the actual data and the management of both, form the triad for preservation and use of data.

- Metadata is used in decision making about relevancy, usefulness and quality of data.

- Metadata is often an afterthought but it really goes hand-in-hand with data creation/collection.