

GARP 0317: Cookbook 10 October 2012

Data and Maps (Part 4)

Overview

- Metadata in ArcGIS



1) Metadata in ArcGIS

The reason for metadata is obvious: you need to know about the data so you can use it properly. For example, you need to know how accurate and recent the data are and what attributes are included. Otherwise you have no idea if the data are actually useful for your needs.

➔ **Thus, YOU need to provide that information about YOUR data so that someone else can properly use it!**

The rest is easy: there are a variety of standard formats (= metadata styles) you can choose from to manage and save your metadata – it's all a matter of consistency!

1.1) Metadata on MassGIS

This example illustrates why metadata are important. Imagine you are asked by your boss to create a land use map for Amherst (MA). That's easy – the data are available on MassGIS at:

<http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus.html>

The metadata provided gives you all the information you need to assess whether or not the data are useful for your needs:

- How are the data organized?
- How were the data produced and by whom?
- Who paid for the data?
- Who is maintaining the data?
- List of the attribute fields included.
- Description of the land use codes.

Now you can go back to your boss and ask her some important questions *before* you start mapping and waste a lot of time:

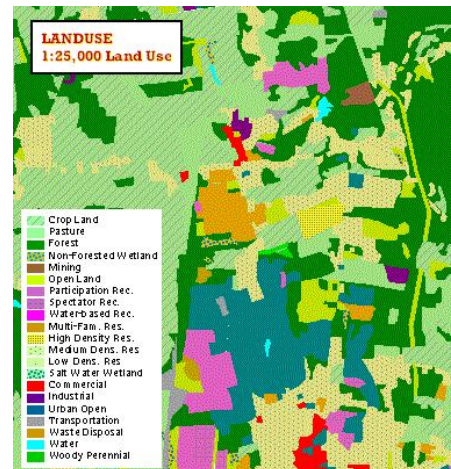
What year do you want?

What classification system do you want?

➔ **That's why metadata are critical!**

1.2) Metadata in ArcGIS

1. Download the land use data layer for Amherst from <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus.html>
2. Save into a dedicated folder and extract.



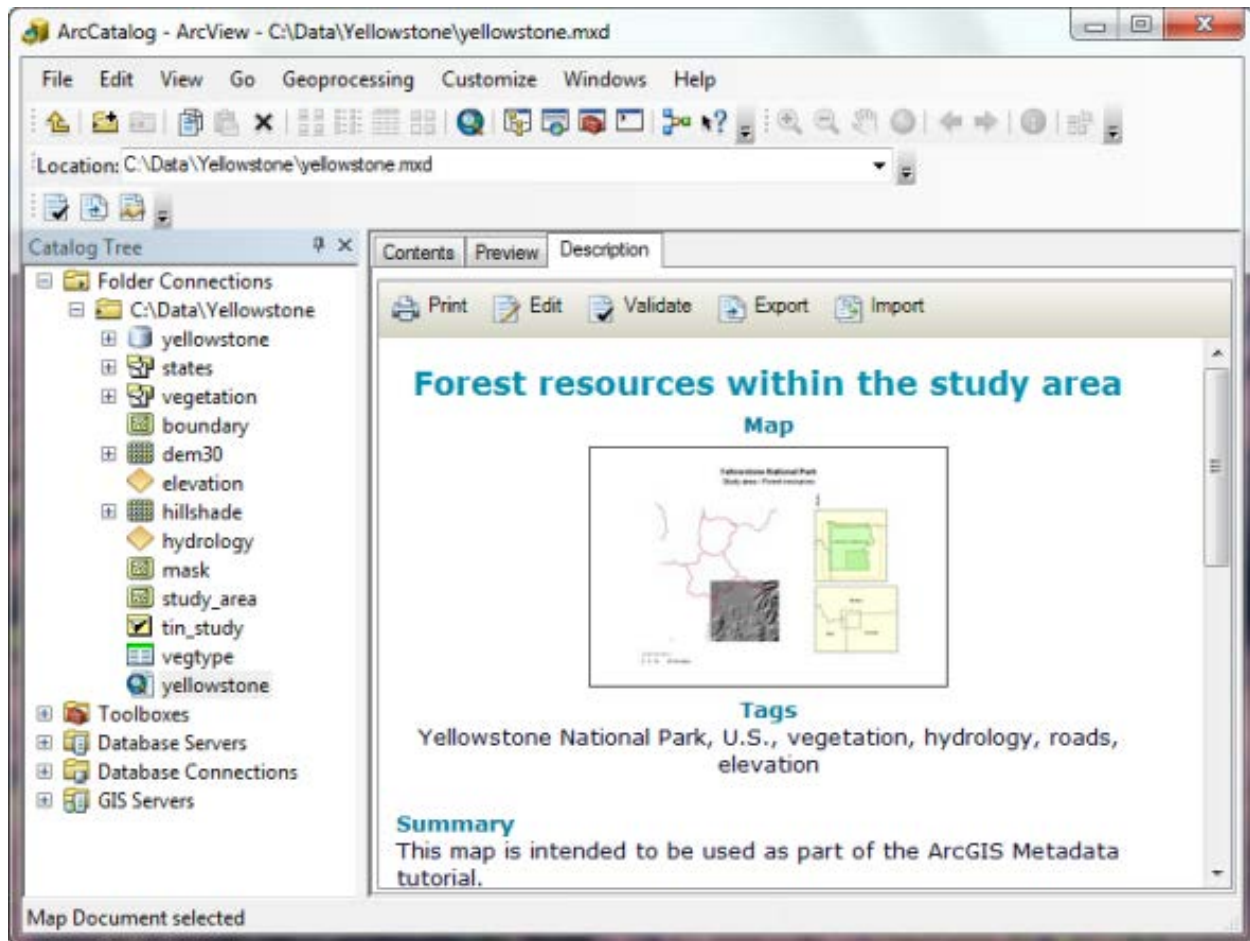
Do NOT map the data layer!

3. Start ArcCatalog and explore the land use file.

You can preview the geography (= the spatial data)

You can preview table (= the attribute data)

You can view the metadata under the **Description** tab.



Example of exploring a data set in ArcCatalog

The metadata included for the land use file are limited: summary, tags, and description – that’s it! That’s not really enough for you to assess the usefulness and veracity of the data.

4. Download the counties.zip file from Yammer into a dedicated folder, unzip, and explore in ArcCatalog. View the metadata under the **Description** tab.

Once again – the metadata provided here is very limited – insufficient really to assess the the usefulness and veracity of the data.

1.3) Metadata Styles in ArcGIS

= how much metadata do you want to see?

The metadata style identifies the metadata standard used and what information will appear in the **Description** tab when you view and edit the metadata.

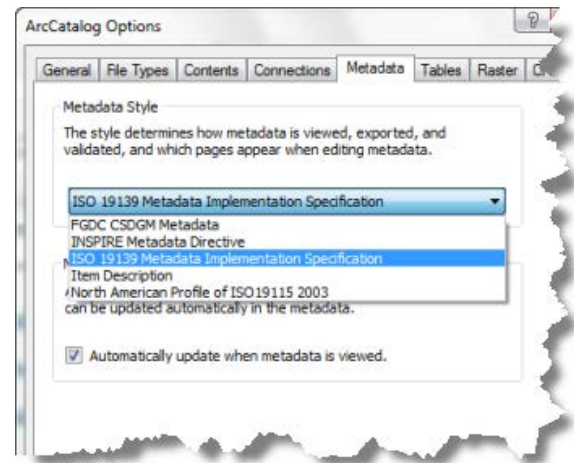
The metadata style is like applying a filter to the item's complete metadata – sometimes you don't need to and review everything and just need a brief summary of the metadata.

1.3.1) Choose your metadata style

1. In ArcMap or ArcCatalog, click Customize, ArcMap or ArcCatalog Options.
2. Choose the Metadata tab and select the metadata style you want.

The default setting is the **Item Description** metadata style that lets you see and edit a simple page of metadata = a good summary.

If you need more information than is available on the **Item Description** page, choose a different metadata style. All styles other than the default provide access to an item's *complete* ArcGIS metadata (provided that it was entered by whoever created the data layer).



All styles other than the default **Item Description** are quite similar, I suggest using the **FGDC CSDGM** Metadata style.

1.3.2) A Hands-on Example

1. Go back and explore the Amherst landuse shapefile.
2. Switch the metadata style from **Item Description** to **FGDC CSDGM**.

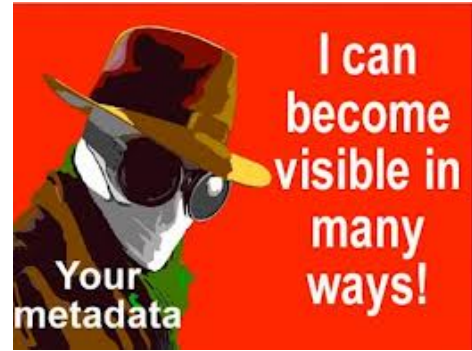
Note: after selecting the new metadata style you need to 'refresh' the display so that the new style is loaded into the **Description** tab. That's easiest done by selecting the **Contents** tab and then re-selecting the **Description** tab.

Now you can scroll down and review all the metadata available for this file!

3. Repeat the above steps for the counties shapefile.

More Information about metadata styles

- Metadata styles
http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#/Metadata_styles_and_standards/003t00000008000000/
- Choosing a metadata style
http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#/Choosing_a_metadata_style/003t00000009000000/
- FGDC metadata
http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#/Illustrated_guide_to_complete_FGDC_metadata/003t00000037000000/



1.4) Creating Metadata in ArcGIS

This is easy and an *integral* part of creating new GIS data = the Create-GIS Data Waltz!

- | | |
|--------|---------------------------------|
| First | You digitize... |
| Second | You enter the attribute data... |
| Third | You enter the metadata! |

The spatial data are meaningless without the attribute data and the entire data layer is meaningless unless properly documented with metadata!

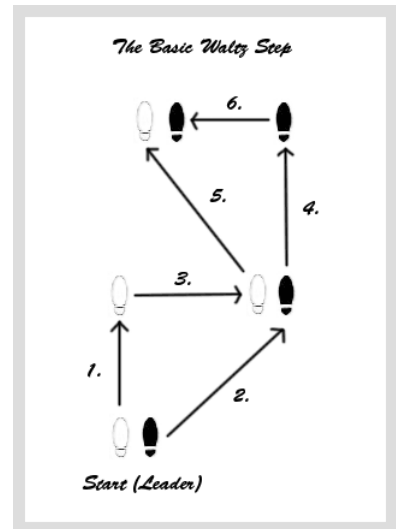
1. Create a new feature class or shapefile.
2. Explore the feature class or shapefile in ArcCatalog, select the **Description** tab and view the metadata.

Not much there yet – just the items automatically added by ArcGIS.

3. If needed, switch to the **FGDC CSDGM** Metadata style.
4. Select the Edit button and start entering your metadata by filling-out the pink boxes.

Note the sections on the left: Overview, Metadata, Resource
Note the pink disappears after you entered the information.
Note the interactive Help and Suggestions at the bottom.

➔ **Yes...this can take some time = time well spent!**



More Information

- Adding, updating, and editing metadata in ArcGIS
<http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#//003t0000001000000>
http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#/What_is_metadata/003t00000001000000/

SIMPLY EXPLAINED: METADATA

