METADATA FOR MANAGERS

A Central Florida GIS Workshop Presentation under the NSDI CAP Grant 2011-2012

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In February 2011, the Central Florida GIS Workshop, Inc. was awarded a grant under the 2011 National Spatial Data Infrastructure Cooperative Agreements Program (NSDI CAP), Category 1: Metadata Trainer and Outreach Assistance

- Metadata training for local city, county, regional and state organizations

- 3 one day, 4 half day, and 1 one hour metadata training sessions

- All training materials available on the website
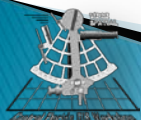
| September 2011 | October 2011 | November 2011 | February 2012 | May 2012 | July 2012 |

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The Central Florida GIS Workshop, Inc. is a volunteer effort arising from the work of a number of dedicated GIS professionals in the Central Florida region and is a nonprofit organization

Inception in 2005
Annual 2 Day Workshop
Training
Geomentoring

www.cfgisworkshop.org
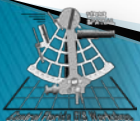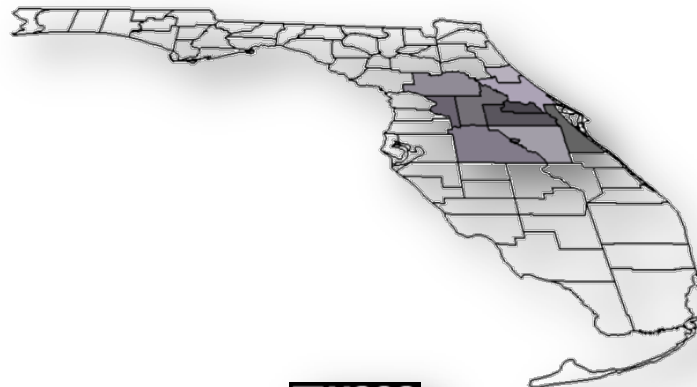
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Data about the data
… who's got the data?
… what does it mean?

- There is tons of (geographic) data on the web (if you can find it), but how do you choose what to use?

- Over 75% of GIS operations fail to adequately document their data for local, regional or national sharing

- **Item Description** - The default metadata style supports creating and maintaining the Item Description. "As crazy as it seems to the metadata community, some GIS professionals have no interest in or requirement to create standards-compliant metadata. While ArcGIS clearly embraces metadata standards, it must also support people who aren't required to follow them"
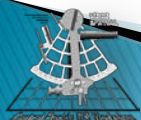
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But metadata is more then just data about your data, it's all about communicating your business standards
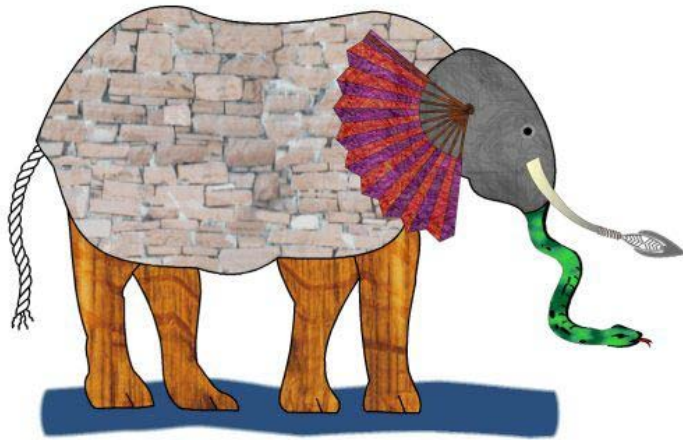
http://www.noogenesis.com/pineapple/blind_men_elephant.html

It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.
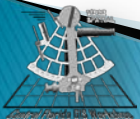
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Metadata is a business investment!

- Metadata helps you do your job

- Ensures continuity of knowledge and processes

- Avoids duplication of effort

- Promotes your agency

- Users will call you less often

- Serves as a form of liability insurance

- Documents personal contributions
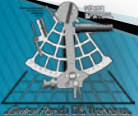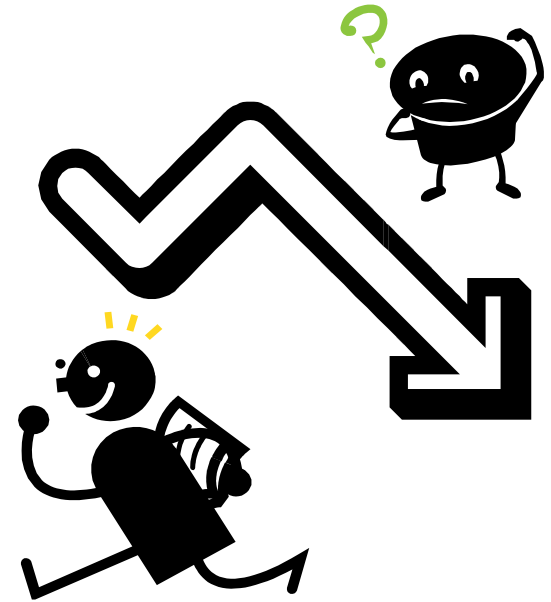
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A metadata standard is simply a common set of terms and definitions that are presented in a structured format

- Data collection and maintenance standards

- Spatial data processing standards

- Data presentation standards

- Data management standards

- Data exchange-transfer standards

The more standardized the structure and content of information, the more effectively it can be used by both humans and machines
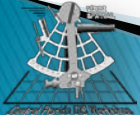
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There is no fixed minimum amount of information that must be documented in order for metadata to be considered complete

However, metadata completeness is influenced by these factors:

- What is the type of data being documented? (e.g., geodatabase, shapefile, folder, table)

- What is the purpose of the data? (e.g., Is it for internal use only? Will it be made public? Will it be shared internationally?)

- Who is the audience for this dataset? (e.g., How much do they need to know?)

- What is your organization's policy regarding metadata completeness?
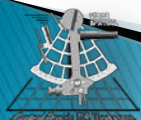
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OK, so simple or complex … but, do I have to?
Private sector, no, unless …
Public sector, yes …

There are Florida Department of State requirements for GIS data and documentation that took effect April 1, 2010 and fall into these broad categories:

➢ GIS Snapshots: Historical - Permanent retention;

➢ GIS Snapshots: Administration - one year retention.

➢ The other is "OSA" retention, meaning retain until "Obsolete, Superseded or Administrative Value lost"

GIS Source Documents / Data Item # 384 - documents and/or data used to update Geographic Information Systems (GIS). This record series may include, but is not limited to, survey data, field notes, legal descriptions, and other documents and/or data submitted to or acquired by the agency for the sole purpose of updating the agency's Geographic Information Systems

http://dlis.dos.state.fl.us/barm/genschedules/GS1-SL-changes.pdf
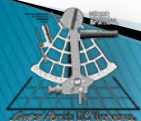
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Public sector, yes …
And there are some recommended standards
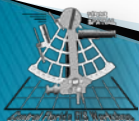
Federal guidelines and agency requirements:

- National Information Infrastructure (N.I.I.)

- National Spatial Data Infrastructure (N.S.D.I.)

- Federal Geographic Data Committee (F.G.D.C.)

The Content Standard for Digital Geospatial Metadata (CSDGM), Version 2 (FGDC-STD-001-1998) is the current US Federal Metadata standard

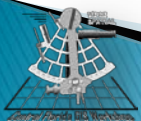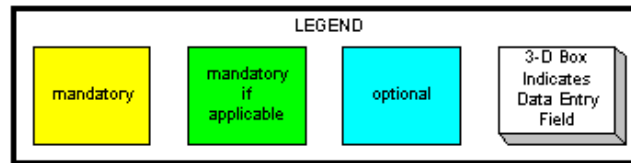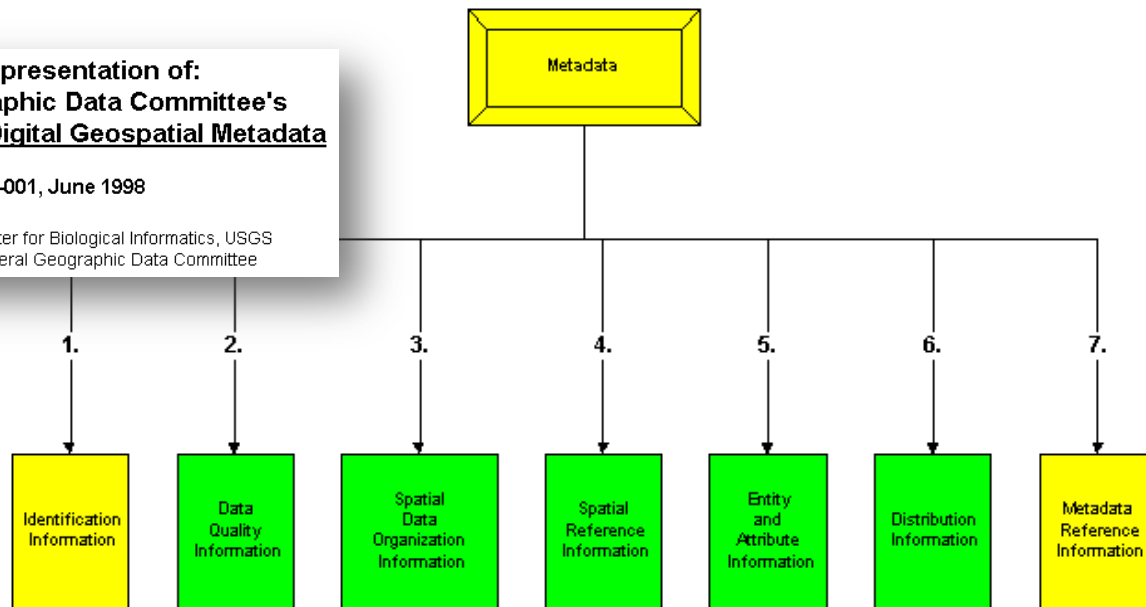- Remote Sensing

- Biological Data Profile

- Shoreline Data

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http://www.mngeo.state.mn.us/committee/standards/mgmg/metadata.htm

If only the 'mandatory' elements of metadata are included, the metadata is rather brief and may be quickly prepared as shown in this tongue-in-cheek 'minimum metadata document.' The minimum mandatory elements may be appropriate for initial data set documentation, but should not be substituted for complete documentation.

But even a "simple file" should have basic FGDC elements
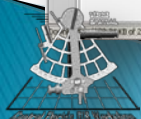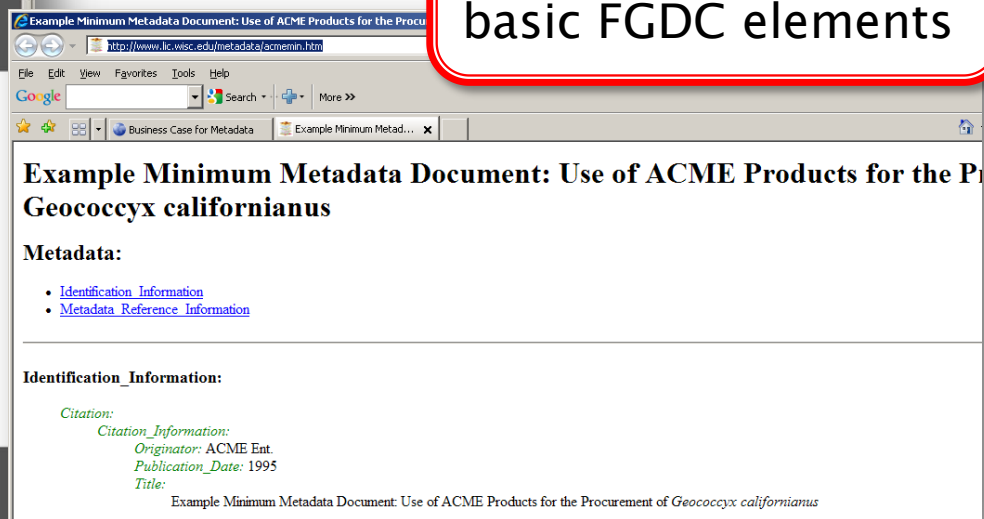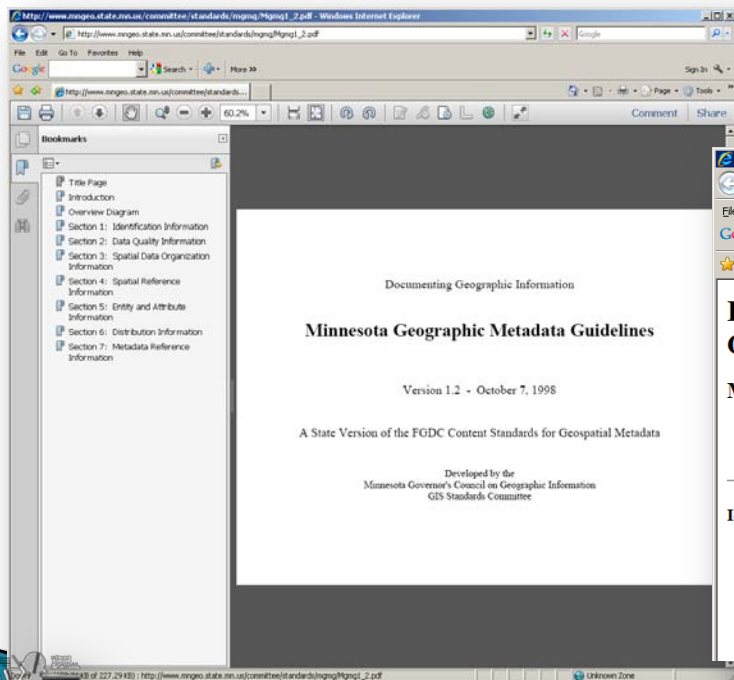
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For GIS professionals, metadata really does refer to data about our data … so what do we need to ?

- Metadata can take many forms, from simple-to-create-and-explain to the very complex.

- Do both - simple for the general public and casual users …and detailed metadata for the GIS library, professional users and automated systems

CEMETERY LOCATIONS

LAYER: CEMETERY

DIRECTORY: AEDATA/GrowthManagement/cemetery.shp

DIRECTORY: VOLUSIA.SDE/GrowthManagement/cemetery_point

TYPE: POINT

COVERAGE: ENTIRE COUNTY

AVAILABLE IN SHAPEFILE OR KMZ AT: http://www.volusia.org/gis/download/shapes.htm

DRASTIC VULNERABILITY AREAS OF THE SURFICIAL AQUIFER SYSTEM (FGDC) / aqdrsu (ISO)

FGDC Metadata

Identification Information:
    Citation:
        Citation Information:
            Originator: Florida Department of Environmental Protection
            Publication Date: 19980401
            Title: DRASTIC VULNERABILITY AREAS OF THE SURFICIAL AQUIFER SYSTEM
            Geospatial Data Presentation Form: shapefile
            Online Linkage: http://www.dep.state.fl.us/geology/default.htm
            File or Table Name: aqdrsu
            Publication Information:
                Publisher: Florida Department of Environmental Protection
    Description:
        Abstract: This shapefile contains countywide DRASTIC data for the Surficial Aquifer System. DRASTIC is a system developed jointly by the U.S. Environmental Protection Agency (USEPA) and the National Water Well Association (NWWA) to map potential aquifer vulnerability to pollution introduced on the ground's surface.
        Purpose: The methodology utilizes existing hydrogeological information to produce color-coded maps which display areas that are more or less likely to be affected by pollution introduced on the ground's surface.
        Language of Dataset: en
    Time Period of Content:
        Time Period Information:
            Single Date/Time:
                Calendar Date: 19980401
        Currentness Reference: ground condition
    Status:
        Progress: Complete
        Maintenance and Update Frequency: Irregular
    Spatial Domain:
        Bounding Coordinates:
            West Bounding Coordinate: -82.663385
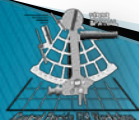   **East Bounding Coordinate:** -82.040266
            North Bounding Coordinate: 29.939313
   **South Bounding Coordinate:** 29.422649
        Local Bounding Coordinates:
            Left Bounding Coordinate: 536623.627966

USGS science for a changing world

fgdc Federal Geographic Data Committee
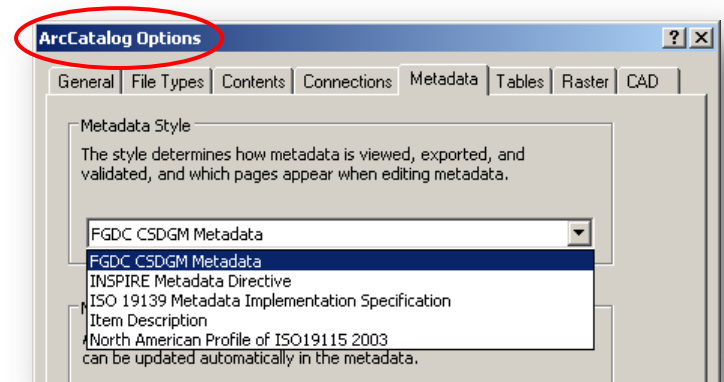
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- Keep an independent word document, html or use the *metadata editor* (Esri, FGDC, EPA, etc.)

- Standardize your metadata across the organization and train the data custodian/s, or assign a *metadata custodian*

- Many elements are common and can be created in a *metadata template* (usually an xml file)

- Publish your metadata in a spatial portal such as geo.data.gov or a regional or state data warehouse
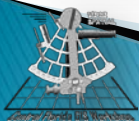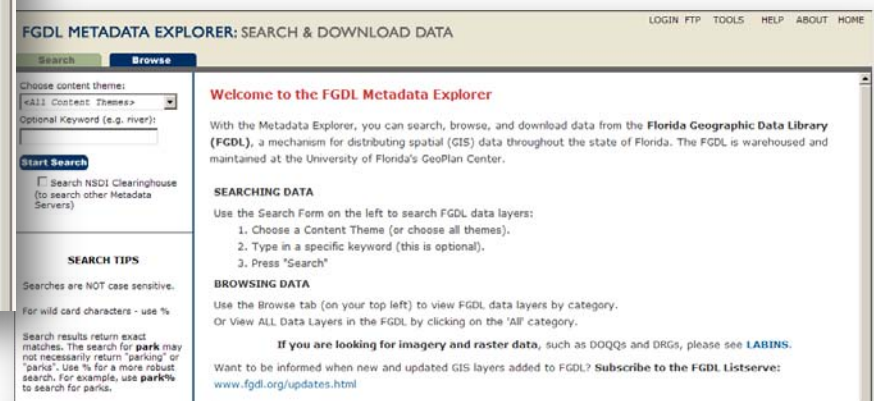
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Metadata requirements are changing!

- International Organization of Standards (ISO) developed and approved an international metadata standard, ISO 19115 – Geographic Information Metadata

- The US participated in the development of ISO 19115 and has coordinated with Canada to develop the **North American Profile** **(NAP) of ISO 19115**

- FGDC Content Standard for Digital Geospatial Metadata (CSDGM) has codified geospatial data documentation for the U.S. geospatial data community since 1994, now the NAP extends standardization across national borders
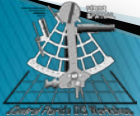
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Where to View and Edit Metadata (ArcCatalog 10 SP 4)

Item Description

- Also an editor (elements per style)
- Must upgrade to edit
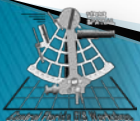
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One important step is the addition of ISO 19115 Topic Categories to the Theme Keywords of existing FGDC metadata

- Topic Categories are one of a handful of NAP mandatory elements that require new information not currently captured within CSDGM metadata records

ISO 19115 Topic Categories

farming	intelligenceMilitary
biota	inlandWaters
boundaries	location
climatologyMeteorologyAtmosphere	oceans
economy	planningCadastre
elevation	society
environment	structure
geoscientificInformation	transportation
health	utilitiesCommunication
imageryBaseMapsEarthCover	
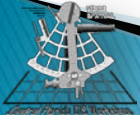
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So which Metadata Standard should I use - FGDC or ISO?
FGDC for now …

- Useful data shouldn't be a secret

- Document your data and methods

- Share the wealth
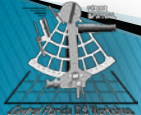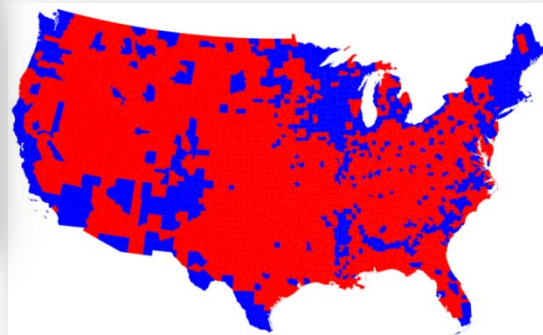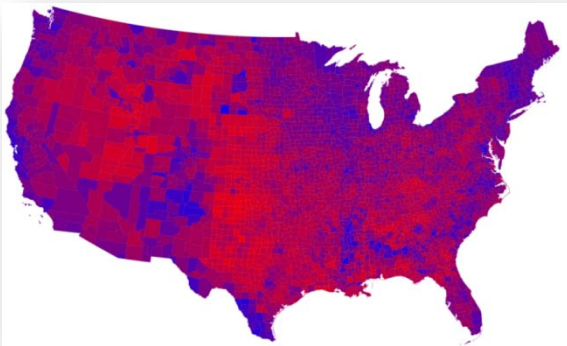
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Questions?

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