

Managing Transition

Moving to the ISO/NAP

Why Transition?

- ▶ The FGDC/CSDGM was the FGDC “standard”
- ▶ Now ISO/NAP is the FGDC “standard”
- ▶ For federal agencies it is required
- ▶ For local and State agencies it is necessary as part of the NSDI
- ▶ Current CSDGM systems are now “legacy” and will go away over time

Transitioning to ISO/NAP

- ▶ A number of considerations before implementing or transitioning
- ▶ Need to evaluate current state of Metadata in your organization
- ▶ Determine possible paths
- ▶ Develop a plan for transitioning

Current State

- ▶ Are you using and maintaining metadata?
- ▶ If you do not have a metadata program, consider implementing one
- ▶ Evaluate the capabilities of your current systems
 - Many may already support the ISO/NAP

Evaluate your needs

- ▶ How are metadata used in your organization?
- ▶ Do your current tools and systems support ISO/NAP
- ▶ What are partner organizations doing?
 - Data providers
 - Partner agencies
 - Clients
 - Data recipients
- ▶ What tools and systems do they use?

Assess your current system

- ▶ What is the state of your metadata?
 - Some systems are already XML-based easing transition
- ▶ How many tools, services, datasets do you have?
 - What is the condition of their metadata
 - Accuracy, currentness
- ▶ What tools rely on CSDGM structured metadata and may require update?
 - Internal tools, web services etc.

Develop a Transition Plan

- ▶ Determine what your organization needs and develop a plan
- ▶ Assign a Metadata Manager to:
 - Evaluate the current state
 - Learn the issues
 - Identify the tools
- ▶ Determine an endgame
- ▶ Plan a process for transition
- ▶ Lay out a schedule

Different paths:

- ▶ Depends on current state in your organization
- ▶ Depends on who you are
 - Federal/State/Local/NGO/Corporation
- ▶ Depends on your current software environment
- ▶ Depends on availability of resources
 - People, money, tools, time

ISO/NAP Implementation Options

1. Continue with CSDGM metadata creation with no NAP implementation
2. Create new metadata using the NAP and convert CSDGM records as updated, used, or distributed
3. Full implementation of the NAP for new and existing metadata records

NAP Implementation

Continue with CSDGM metadata creation with no NAP implementation

- Benefits

- Continued return on investment of existing CSDGM expertise, capabilities, and resources

- Considerations

- No increases in metadata capabilities and richness
- Challenges using NAP metadata created by others including need for NAP-to-CSDGM
- Translation application and staff time and expertise to convert
- Eventual 'phasing out' of CSDGM support by metadata applications

NAP Implementation

Create new metadata using the NAP and convert CSDGM records as used or distributed

► Benefits

- Fewer mandatory content lends to easier template development
- Added elements for the documentation of geospatial services leads to improved discovery of services
- More effective metadata discovery through use of code lists and multilevel metadata features.

► Considerations

- Increased time and expense required for NAP metadata training and software implementation
- Effective multilevel metadata performance requires development and implementation of a strategic approach

NAP Implementation

Full implementation of the NAP for new and existing metadata records

► Benefits

- Similar to partial implementation benefits listed above
- No need to translate CSDGM metadata at time of use or distribution
- Opportunity to establish a fresh approach to metadata that encourages new ways of thinking about metadata and broader participation.

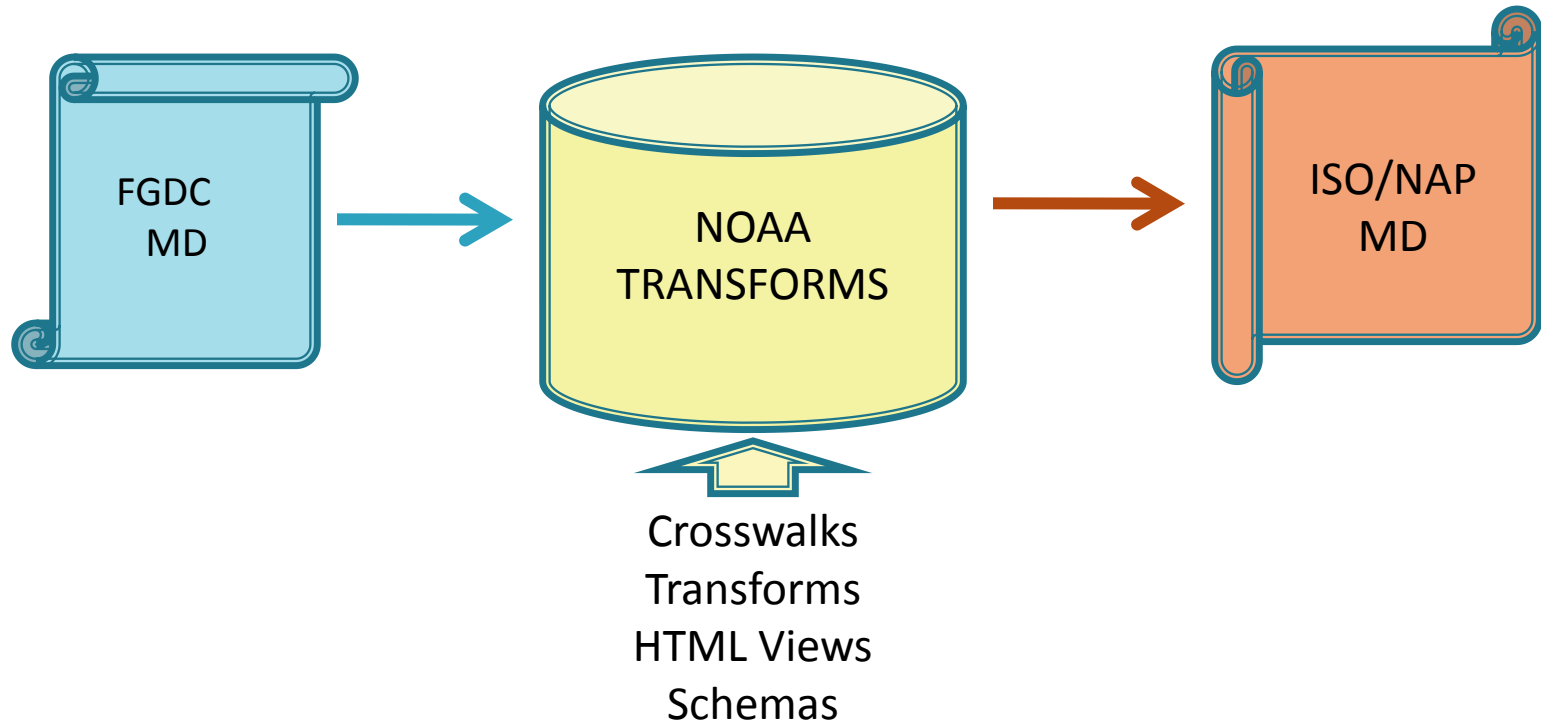
► Consideration

- Similar to partial implementation concerns listed on previous slides
- Translation of all metadata requires development and implementation of a strategic approach and significant effort

NOAA as an Example

- ▶ NOAA was an early CSDGM adopter
- ▶ Developed the first CSDGM metadata tool for an ESRI platform
- ▶ Involved in the NAP adoption process early on
- ▶ Has developed tools for transition
 - Crosswalk
 - XSLT tool

Transforming to the ISO/NAP NOAA Transforms



<http://www.ncddc.noaa.gov/technology/metadatan/xml/view>

What is a Transform?

- ▶ Extensible Stylesheet Language Transformations (XSLT) is an XML-based language used for the transformation of XML documents into other XML or "human-readable" documents

What is a Transform?

- ▶ The original document is not changed; rather, a new document is created based on the content of an existing one.



What is a Transform?

Transform can be written in a variety of output languages

-XSLT

-XSLT2

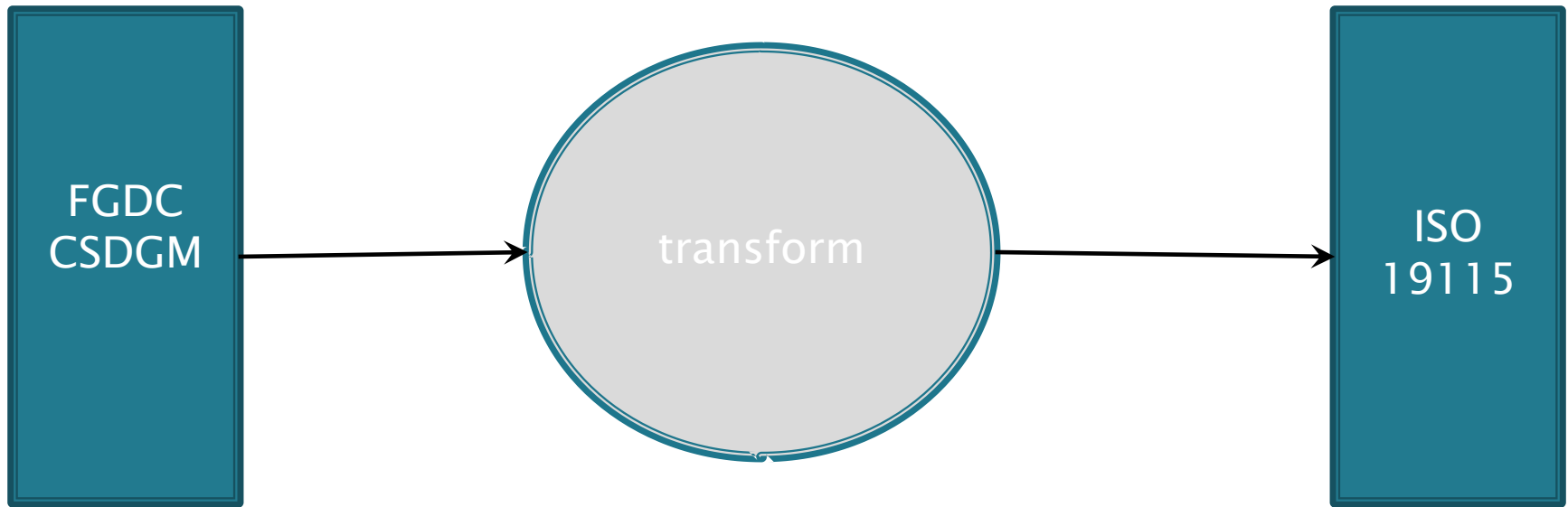
-XQ

-JAVA

-C#

-C++

How does a Transform work?



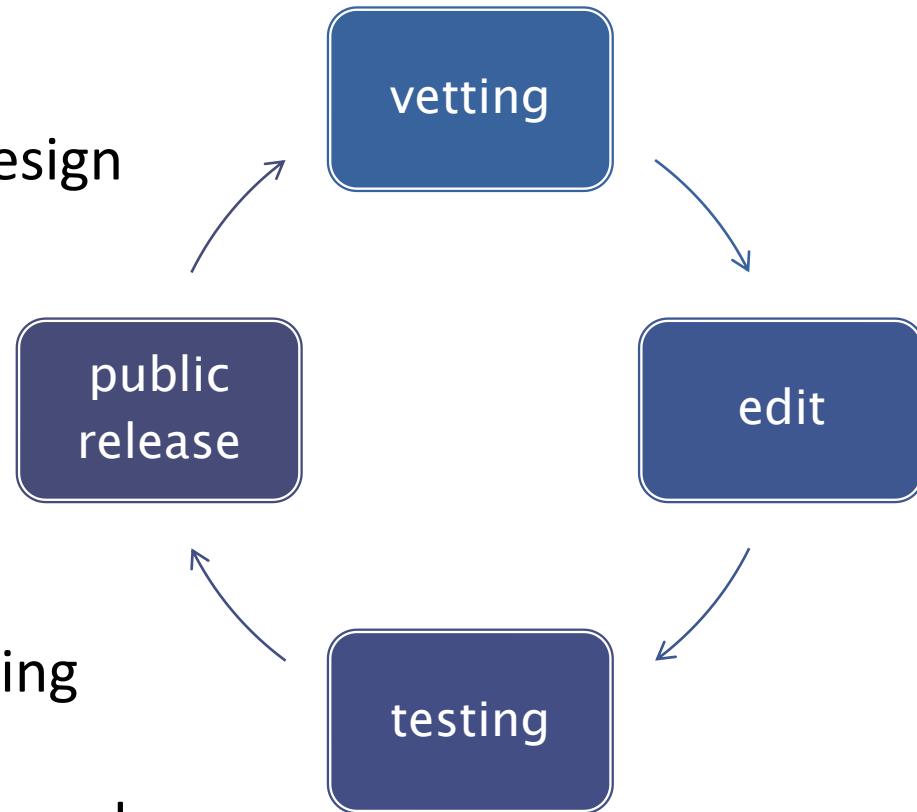
**Your input here
is an xml version
of an FGDC
CSDGM record**

**XSLT Transformation
*csdgm2iso19115.xslt***

**Your result is an
xml instance of
an ISO 19115
record**

How are Transform developed?

- Vetting on crosswalk (if xslt for transformation) or agreement on design (if xsl for view)
- Edit
- Testing
- Public Release for further testing
- Vetting of issues (issues found during testing or NAP/ISO issues, this also includes discussion of best practices and implementation)



What does a Transform not do?

**Does NOT guarantee valid XML
records against a particular
schema!!!!**

Remember

- ▶ May be different for every organization
- ▶ Depends on how fully your organization implemented Metadata policies
 - More specialized requires more management of process
 - Less formal implementation is likely to be easier
- ▶ Many common tools have ISO/NAP implemented including translation tools
 - e.g. ESRI ArcGIS 9.3/10.0
 - Intergraph

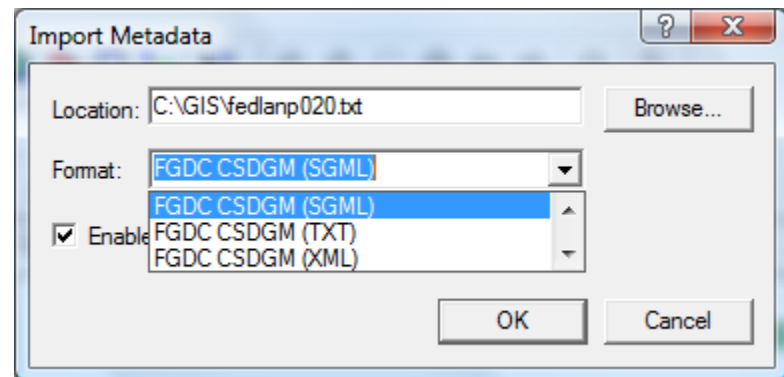
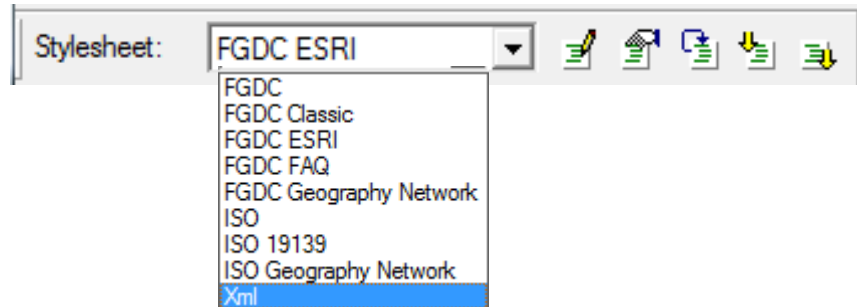
Overview of ESRI tool Implementation

- ▶ ESRI provides a range of MetaData tools in ArcGIS
 - Since NOAA developed extension for ArcView GIS 3.2
- ▶ Integrates MD with data layers/databases
 - Creates XML document automatically
- ▶ ArcCatalog
 - Metadata tab
 - Metadata toolbar



ArcGIS Metadata Toolbar

- ▶ Stylesheets
- ▶ Edit
- ▶ Refresh
- ▶ Import
- ▶ Export



File Edit View Go Tools Window Help



Location: C:\GIS\fedlanp020.shp

Stylesheet: FGDC ESRI

Contents Preview Metadata

- doctemp
- Documents and Settings
- Drivers
- GIS
 - ArcExplorer
 - data
 - Documents
 - fedlanp020.shp
 - fedlanp020.txt
- hp_P1000_P1500_Full_Solution
- MSOCache
- PerfLogs

- ArcToolbox
 - 3D Analyst Tools
 - Analysis Tools
 - Cartography Tools
 - Conversion Tools
 - Data Interoperability Tools
 - Data Management Tools
 - Geocoding Tools
 - Geostatistical Analyst Tools
 - Linear Referencing Tools
 - Mobile Tools
 - Multidimension Tools
 - Network Analyst Tools
 - Samples
 - Schematics Tools
 - Server Tools
 - Spatial Analyst Tools

Favorites Index Search Results

fedlanp020

Shapefile

Description

Spatial

Attributes

Keywords

Theme: REQUIRED: Common-use word or phrase used to describe the subject of the data set.

Description

Abstract

REQUIRED: A brief narrative summary of the data set.

Purpose

REQUIRED: A summary of the intentions with which the data set was developed.

Status of the data

Time period for which the data is relevant

Publication Information

Data storage and access information

Details about this document

File Edit View Go Tools Window Help



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fedlanp020

Shapefile

Description

Spatial

Attributes

Keywords

Theme: Boundaries, Society, Intelligence/Military

Theme: Federal lands, Polygon, Agricultural Research Service, Air Force, Army Corps of Engineers, Army, Bureau of Prisons, Bureau of Reclamation, Central Intelligence Agency, Department of Defense, Department of Energy, Department of Transportation, Forest Reserve, General Services Administration, Marine Corps, Metropolitan Washington Airports Authority, National Aeronautics and Space Administration, National Battlefield, National Battlefield Park, National Capital Park, National Conservation Area, National Fish Hatchery, National Forest, National Grassland, National Historic Landmark District, National Historic Park, National Historic Site, National Lakeshore, National Mall, National Memorial, National Military Park, National Monument, National Park, National Parkway, National Preserve, National Recreation Area, National Reserve, National River, National Scenic Area, National Seashore, National Wild and Scenic River, National Wildlife Refuge, Navy, Open Water, Public Domain Land, Purchase Unit Block, U.S. Coast Guard, United States Department of Agriculture, Waterfowl Production Area, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service, Tennessee Valley Authority, BLM, BOR, CIA, DOD, DOE, DOJ, DOT, FS, FWS, GSA, MWAA, NASA, NPS, TVA, USDA

Place: USA

Place: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New

Edit Metadata: FGDC-CSDGM

The screenshot shows the 'Editing 'fedlanp020'' window with the 'Identification' tab selected. The 'Description' section contains the following fields:

- Abstract:** This map layer consists of federally owned or administered lands of the United States, Puerto Rico, and the U.S. Virgin Islands. Only areas of
- Purpose:** These data are intended for geographic display and analysis at the national level, and for large regional areas. The data should be
- Language:** en
- Supplemental Information:** Linear federally-owned or administered land features such as national parkways, wild and scenic rivers, etc. of the United States, Puerto Rico,

The 'Access Constraints' field is set to 'None'. The 'Use Constraints' field contains the text: 'None. Acknowledgment of the National Atlas of the United States of America would be appreciated in products derived from these data.' The 'Data Set Credit' field is empty. The 'Native Data Set Environment' field contains 'Microsoft Windows Vista Version 6.0 (Build 6002) Service Pack 2; ESRI A'. The 'Native Data Set Format' field is set to 'Shapefile'.

The 'Export Metadata' dialog is open, showing the 'Location' field set to 'C:\Users\evillage\AppData\Local\Temp\fedl'. The 'Format' dropdown menu is open, showing the following options:

- FGDC CSDGM (FAQ) (selected)
- FGDC CSDGM (HTML)
- FGDC CSDGM (SGML)

The 'OK' button is highlighted.

File Edit View Go Tools Window Help

Location: C:\GIS\fedlanp020.shp

Stylesheet: ISO

- doctemp
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 - 3D Analyst Tools
 - Analysis Tools
 - Cartography Tools
 - Conversion Tools
 - From Raster
 - From WFS
 - Metadata
 - ESRI Metadata Translator
 - Metadata Importer
 - Metadata Publisher
 - USGS MP Metadata Translator
 - XSLT Transformation
 - To CAD
 - To DBASE
 - To Geodatabase
 - To KML

Favorites Index Search Results

Contents Preview Metadata

fedlanp020

Data format: Shapefile**Location:** file:///MARSH/C\$/GIS/fedlanp020.shp

ISO and ESRI Metadata:

- [Metadata Information](#)
- [Resource Identification Information](#)
- [Spatial Representation Information](#)
- [Distribution Information](#)

Metadata elements shown with blue text are defined in the International Organization for Standardization's (ISO) document 19115 *Geographic Information - Metadata*. Elements shown with green text are defined by ESRI and will be documented as extensions to the ISO 19115. Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog.

Metadata Information

Language: English**Character set:** utf8 - 8 bit UCS Transfer Format

101115

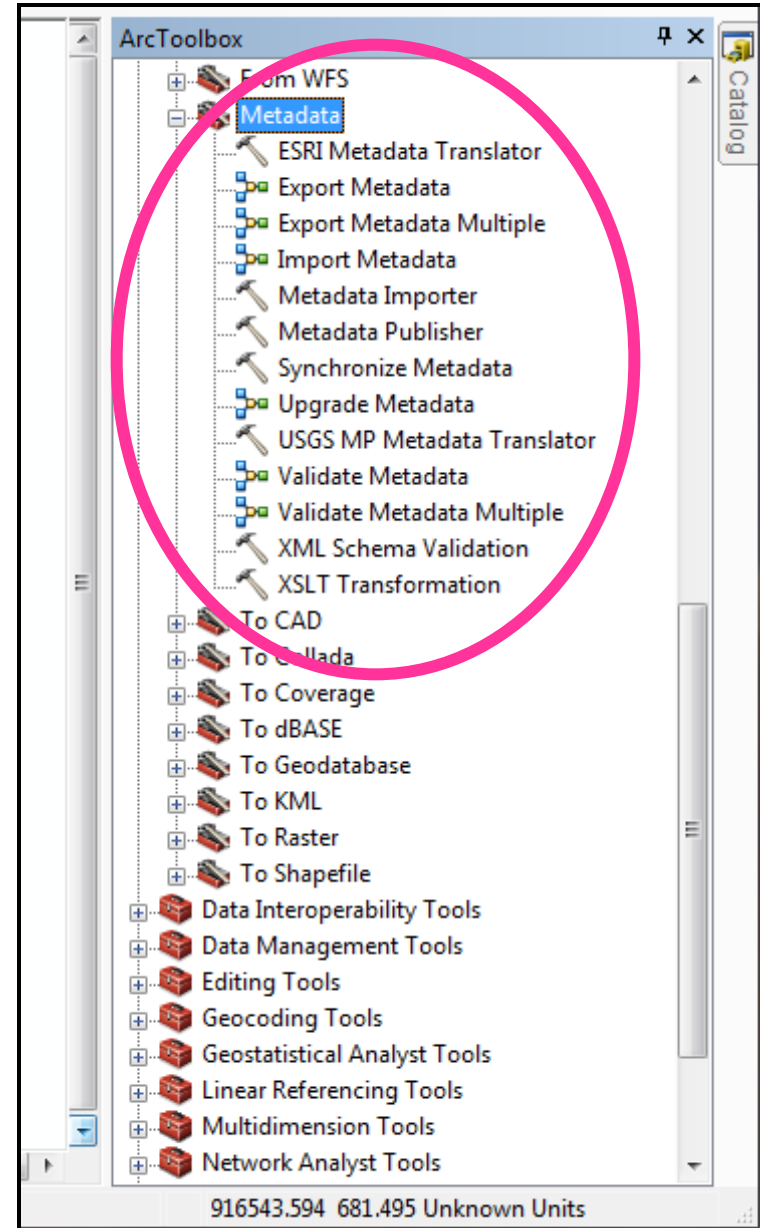
Metadata described by the metadata: dataset

Can develop your own
and place them here!

*Scene name: dataset

MD Tools in ArcGIS 10.0

- ▶ Similar to 9.3
 - But more and different!
- ▶ ArcCatalog
 - Now “Description” tab
- ▶ Inherently ISO compliant
 - More tools for conversion and management



Metadata Tools in ArcGIS 10.0

- ▶ Existing ESRI–ISO Metadata will update automatically
- ▶ 9.3.1 must be updated to 10.0 to edit metadata records
- ▶ FGDC–CSDGM Metadata will not update automatically
 - Requires explicit action
- ▶ FGDC Metadata Editor Add–in required to continue to maintain CSDGM records

ESRI ArcGIS 10.0 Online Help

- ▶ Good information on any conversion:
 - A quick tour of metadata
 - A quick tour of automatic metadata updates
 - A quick tour of creating and editing metadata
 - About viewing metadata
 - Choosing a metadata style
 - Essential metadata vocabulary
 - Metadata standards and styles
 - Upgrading existing FGDC metadata from the Description tab
 - What is metadata?

ESRI Online Webhelp

▶ ArcGIS 9.3

- http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=about_metadata
- <http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=An overview of the metadata toolset>

▶ ArcGIS 10

- <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html>
 - Look under Data Management > Geographic Data Types > Metadata

ESRI Online Webhelp

▶ ArcGIS 9.3

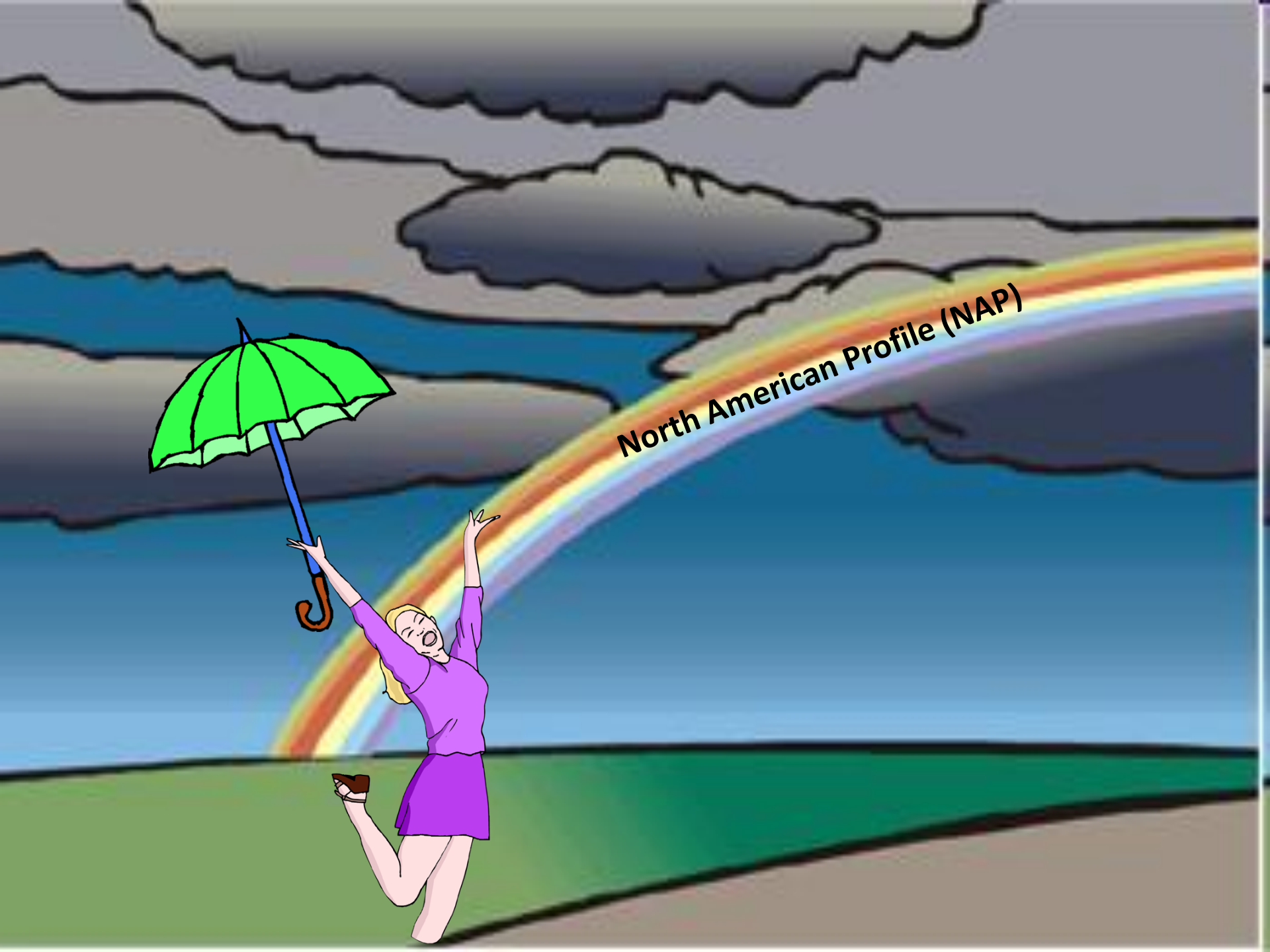
- http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=about_metadata
- [http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=An overview of the metadata toolset](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=An+overview+of+the+metadata+toolset)

▶ ArcGIS 10

- <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html>
 - Look under Data Management > Geographic Data Types > Metadata

Resources

- ▶ Preparing for International Metadata
 - <http://www.fgdc.gov/metadata/documents/csdgm-to-nap-transition-guidance.pdf>
- ▶ NSDI Training Program
 - <http://www.fgdc.gov/metadata/geospatial-metadata-standards#nap>
- ▶ FGDC Metadata Working Group
 - http://www.fgdc.gov/participation/working-groups-subcommittees/mwg/index_html



North American Profile (NAP)

Questions



Thank You!

U.S. Geologic Survey

CAP 1 Grant for funding this training

Thank You!

- ▶ **Lynda Wayne**
- ▶ **Sharon Shin**
- ▶ **Jaci Mize**

