Working with Metadata in ArcGIS

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Metadata in ArcGIS

- ArcGIS metadata goals
- Editing metadata
- Setting your metadata style
- Leveraging metadata in ArcGIS
- Upgrading 9.3.1 metadata for ArcGIS 10.x
- Importing and exporting metadata
- Tips and tricks
- Updates in 10.1 SP1 and 10.2
ArcGIS metadata goals

• Support metadata standards and selected profiles
• Common experience for all users
• Simplify workflows
• Validate metadata
• Support the ArcGIS platform
Editing metadata

- For datasets, services, tools, maps, layer files...
- Description tab in any ArcGIS for Desktop application
  - ArcCatalog
  - Item Description window
- Properties dialog box
  - maps, globes, scenes, layer files
Editing metadata

• In ArcCatalog
Editing metadata

• From the Catalog window
Editing metadata

- From the Search window
Editing metadata

- From the Table of Contents (data behind layer)
Editing metadata

• From Properties dialog box
• Maps, scenes, globes: save if they are open
Editing metadata

- Validate content as you type

Error messages in plain language

Expected value described
Setting your metadata style

- Install ArcGIS 10.2 for Desktop, then set your metadata style.
Setting your metadata style

• Default metadata style: Item Description
  - Quickly document items
  - Support discovery when items are published
  - Portion of an item’s full metadata

• Full metadata—use another style
Setting your metadata style

• Options dialog box in any ArcGIS for Desktop application
Setting your metadata style

• Determines how metadata is
  - Displayed
  - Edited
  - Exported
  - Validated

• Set once to meet organizational requirements
Setting your metadata style

• Non-default styles access full metadata content
Setting your metadata style

• Same metadata display for all non-default styles
  - ArcGIS metadata
  - FGDC-formatted content
  - ISO 19139-formatted content
  - XML structure if not a recognized format
Setting your metadata style

Full content
Setting your metadata style

- ArcGIS metadata includes all concepts for supported standards and profiles
- Most concepts the same
  - All non-default styles edit common set of pages
- A metadata style filters the full set of concepts
Setting your metadata style

- Adds or removes pages

ISO-based styles add Locales page
Setting your metadata style

• Adds or removes elements on a page

NAP style adds date type codelist values
Setting your metadata style

- Changes values in some drop-down lists

INSPIRE has fewer codelist values
Setting your metadata style

- Validation rules are appropriate
Setting your metadata style

- ArcGIS metadata also includes ArcGIS-specific content
  - Thumbnail
  - Geoprocessing history
  - Tool descriptions
  - Detailed item properties
Editing metadata

• Table of contents and errors instantly update

Page status

Missing required value or invalid data type
Editing metadata

• Save and reuse contact information

Check a contact to save it
Editing metadata

- Load saved contacts as needed

Pick the saved contact from a list
Leveraging metadata in ArcGIS

- Item description content indexed for ArcGIS for Desktop search
Leveraging metadata in ArcGIS

• New map layer or layer file, properties derived from dataset metadata
Leveraging metadata in ArcGIS

- Package brief description from item’s metadata

Populated automatically
Leveraging metadata in ArcGIS

• Package contents have full metadata
• Access it from the Catalog window
Leveraging metadata in ArcGIS

- Service description derived from item’s metadata
Leveraging metadata in ArcGIS

- Service full metadata from item’s metadata
Leveraging metadata in ArcGIS

- Description at REST endpoint from metadata
Leveraging metadata in ArcGIS

- ArcGIS Server service’s REST endpoint provides access to full metadata
Leveraging metadata in ArcGIS

- Published and packaged metadata has local content removed for security
Upgrading 9.3.1 metadata for ArcGIS 10.x

- ArcGIS 10.x stores metadata in an internal format—ArcGIS metadata
  - Edits in the Description tab
  - Automatic metadata synchronization
  - ArcGIS software writes content behind the scenes
Upgrading 9.3.1 metadata for ArcGIS 10.x

• ArcGIS platform leverages ArcGIS metadata
Upgrading 9.3.1 metadata for ArcGIS 10.x

- Used 9.3.1 FGDC metadata editor?
  - View metadata, click Yes when prompted
    - Runs Upgrade Metadata tool
  - Open and run tool manually
  - Use a script to upgrade many items
Upgrading 9.3.1 metadata for ArcGIS 10.x

- Used 9.3.1 ISO metadata editor wizard?
  - Start editing metadata, save your changes
    - Content is upgraded automatically
  - Open and run Upgrade Metadata tool manually
  - Use a script to upgrade many items
Upgrading 9.3.1 metadata for ArcGIS 10.x

- Upgrade
  - Copies information to ArcGIS metadata elements
  - Original elements remain in metadata
- Can re-upgrade with more recent software
  - Will lose edits made since last upgrade
Importing and exporting metadata

• IMPORT: Convert standard metadata XML format to ArcGIS metadata
• Use Import button in the Description tab
  - Runs Import Metadata tool
  - Set Import Type based on format of XML file
Importing and exporting metadata

- IMPORT supported from
  - FGDC CSDGM XML format
  - ISO 19139 XML format
Importing and exporting metadata

- EXPORT: Convert ArcGIS metadata to a standard metadata XML format
- Use Export button in the Description tab
  - Runs Export Metadata tool
- Conversion is determined by the metadata style
Importing and exporting metadata

- EXPORT supported to
  - FGDC CSDGM XML format
  - ISO 19139 XML format
Importing and exporting metadata

• Use exported XML files outside of ArcGIS
  - Publish to a geoportal
  - Validate files with an XML schema, Schematron, or another application, e.g. mp
Importing and exporting metadata

- ArcCatalog toolbar button exports many items
- Use Python scripts to export files periodically
  - Export Metadata tool synchronizes metadata first
Importing and exporting metadata

• Help topics compare available geoprocessing tools
  - Importing metadata
  - Exporting metadata
Tips and tricks

- Check online Help system for ArcGIS
  - Can’t find it? Use the TOC
  - Geodata > Data types > Metadata
Tips and tricks

- If Description tab in use when setting the style, don’t see changes immediately
  - Click another tab then click Description tab again
  - Click another item then click tab again
Tips and tricks

- Metadata display supports shortcuts
  - Go to bottom: Ctrl-End
  - Go to top: Ctrl-Home
  - Copy highlighted text: Ctrl-C
  - Find text on page: Ctrl-F
Tips and tricks

• Copy metadata from one item to another with the Import button
  - Use FROM_ARCGIS Import Type
Tips and tricks

• Import metadata template with the Import button
  - Template in CSDGM format, use FROM_FGDC Import Type
  - Template in ArcGIS format, use FROM_ARCGIS Import Type
Tips and tricks

• Upgrade 9.3.1 FGDC CSDGM-format metadata templates to ArcGIS format
  - Open Export Metadata tool
  - Use FGDC2ESRI_ISO.xml translator
Tips and tricks

- When upgrading metadata in a geodatabase, make sure the user who can edit data runs the tool.
- Save a copy of metadata to disk as a precaution.
  - Database views
Tips and tricks

• Copy an item’s metadata to an XML file
  - Save As XML
  - XSLT Transformation tool with “exact copy of.xslt”
Tips and tricks

• Save a copy of the HTML you see in the metadata display
  - Save as HTML
  - XSLT Transformation tool with “ArcGIS.xsl”
  - Browser must allow javascript to run, e.g. “Allow Blocked Content” in IE
Tips and tricks

• After a metadata geoprocessing tool runs, the folder containing the output is selected
  - Original item is no longer selected

• Reopen and rerun tools from the results window
  - Tool parameters already set
Tips and tricks

• Update metadata content with XSLT processing
  - Available XSLTs: XSLT Transformation tool
  - Create your own: Editing metadata for many ArcGIS items
Tips and tricks

- Update metadata content with Python processing
  - Export metadata to XML file
  - Modify contents at a specific XPath with Python
  - Import modified XML file to item
Tips and tricks

• Use exported CSDGM-format XML file with USGS MP Metadata Translator tool
  - Create other CSDGM file formats
  - Validate exported CSDGM-format XML file with mp
Tips and tricks

• Add standard-format metadata XML files to a package
  - Export metadata to standard format XML files
  - During packaging add as Additional Files
  - When package is unpacked, access files in Home folder
Updates in 10.1 SP1 & 10.2

• 10.1 SP1
  - Managing saved contacts
  - Validation errors in editor
  - Edit online linkages for all citations
  - Keep more CSDGM content with upgrade
  - Processing steps ordered by date
Updates in 10.1 SP1 & 10.2

- **10.2**
  - Title and content type kept in ArcGIS metadata after FGDC upgrade
  - Metadata display for elements with whitespace
  - ESRI-ISO upgrade improvements
Remaining metadata sessions at this UC

- Metadata Special Interest Group meeting
  - 5:30 - 7:00    Room 12
Steps to evaluate UC sessions

• My UC Homepage > “Evaluate Sessions”

• Choose session from planner

• Search for session

www.esri.com/ucsessionsurveys
Thank you...

Please fill out the session evaluation

Offering ID: 135/1281

Online – www.esri.com/ucsessionsurveys
Paper – pick up and put in drop box