Metadata Wizard: An Easy-to-Use Tool for FGDC Metadata Creation in ArcGIS

Drew Ignizio Michael O'Donnell Colin Talbert USGS Fort Collins Science Center (FORT)



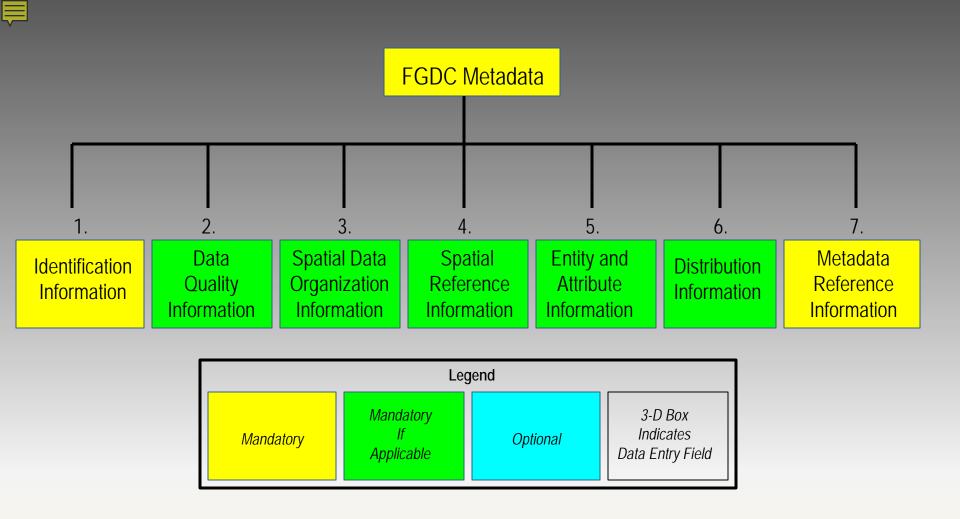






Where are we now?

- -Required to produce FGDC-compliant metadata (Executive Order 12906)
 - -Most federal agencies are using ESRI software, version 10.x
 - -Working with the FGDC standard is still very complex/esoteric
- -Formal metadata submission and many publication processes require FGDC XML files

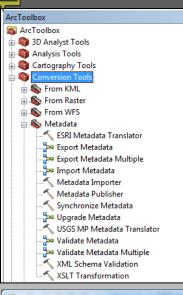




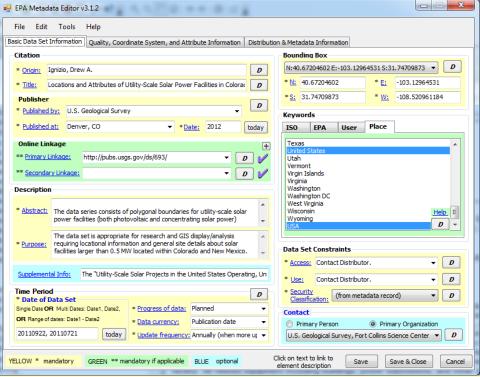
Metadata Questionnaire	

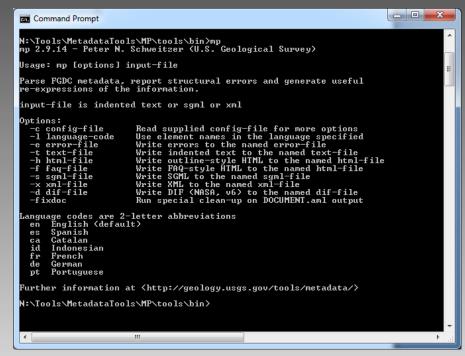
- What is the approximate location of your project? Please provide general descriptions (county names, NPS unit, lat-longs). (Description of geographic extent, bounding coordinates).
- 2) Who is the originator(s)/owner of the data set (who created the data)? Include address and telephone number.
 - a) If someone else should be listed in the metadata to answer questions about the data, please list the name, address, and telephone number. (Contact)
 - b) Are there other organizations or individuals who should get credit for support, funding, or data collection and analysis? (Dataset credit)
- 3) Include a brief description of the data set. (Abstract)
 - a) What format are the data stored in shapefile, raster, spreadsheet, database, ArcInfo coverage, text file, other (please identify). If known, also include the software version. (Native data set environment)
 - b) Are the data sensitive or classified (e.g. locations of T&E species)? Are there legal restrictions on who may obtain/use the data? (Access / use constraints)
- 4) Do any values in the dataset represent codes from a data dictionary or code book (Taxonomic or biological abbreviations, etc.)? If so, please provide references for where these values can be explained. (Entity & Attribute)
- 5) Why were the data collected (How will they be used in the scheme of a project)? (Purpose)
- 6) Are there any publications associated with this data or related works that help explain the methods or content of the data? Does the data support or represent the findings of a published project? Please include citations for these works, if relevant. (Cross reference)

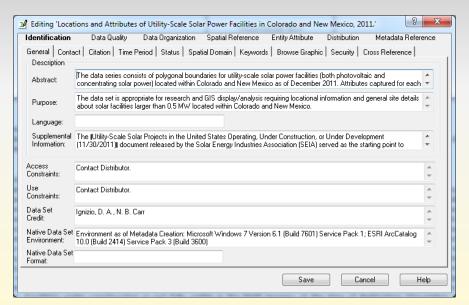
- 7) What is the time period represented by the data set? (e.g. what are the beginning and ending dates of data collection?) (Time period)
- 8) Were the data developed primarily through: (Currentness reference)
 - a) Field visits
 - b) Remote instrumentation (i.e. temperature recorders, etc)
 - c) Existing data sources
- What is the status of the data you are documenting? complete, in progress, planned (Status)
 - a) Are there plans to update the data? (Maintenance & update frequency)
 - b) If so, how frequently? Weekly, Monthly, Annually, Irregular, or As Needed
- 10) Please list any keywords associated with this project (minimum of 1 thematic keyword required). (Keywords: theme, place, stratum, temporal, taxonomy).
- 11) Does the data set contain taxonomic information? If no, skip to question 12.
 - a) What important species or communities were examined or are documented in the data? (Taxonomy)
 - b) Did you use a taxonomic authority or field guide for identification?
 - a) If so, what is the reference?
 - b) Describe any modifications, if any, to the classification.
- 12) Briefly summarize your field, lab, or analysis methods (cut & paste from other documents when possible.) If you used standard, published protocols/methods, simply put the complete citation for the reference in 12a below. (Methodology, methodology keywords)
 - a) If you used existing protocols or methods, list the references (Methodology citation)

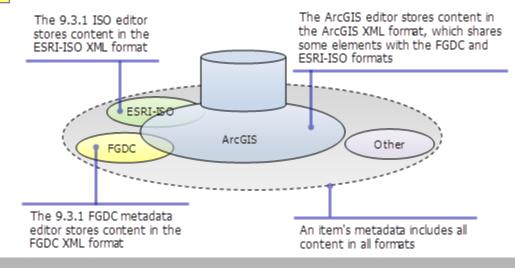


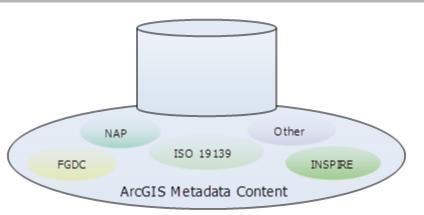


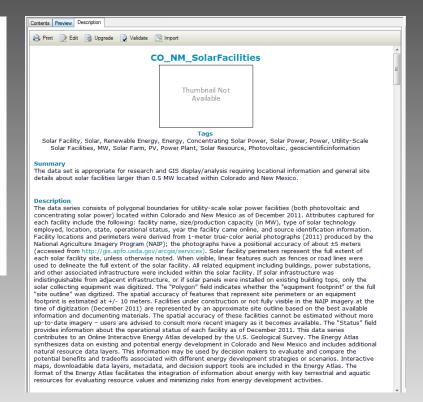






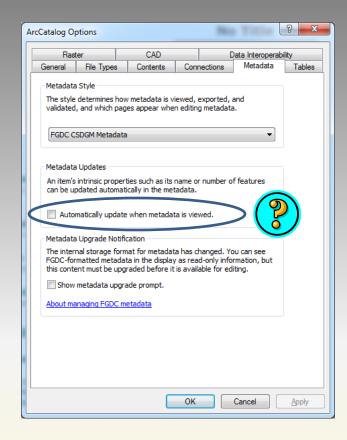






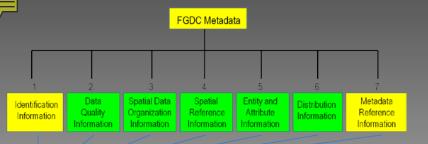
"ArcGIS provides access to metadata for all items as an XML document, regardless of how it is physically stored."



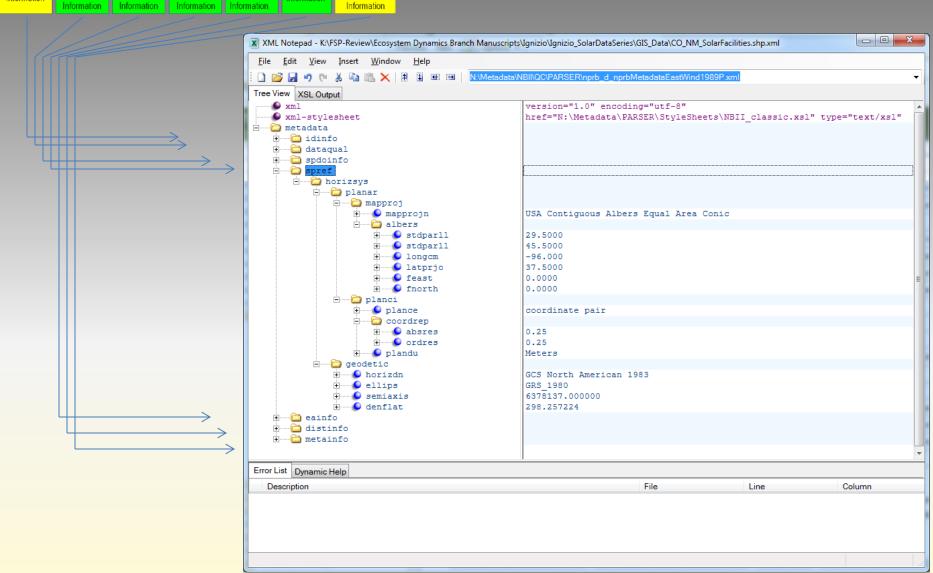




- -What 'flavor' is my metadata currently in?
- -How are other network users' ArcCatalog metadata settings configured?
- -I edited my record but I don't see my changes!
- -My UTM spatial reference looks incorrect...



Our approach? Export to FGDC XML to control content and format.





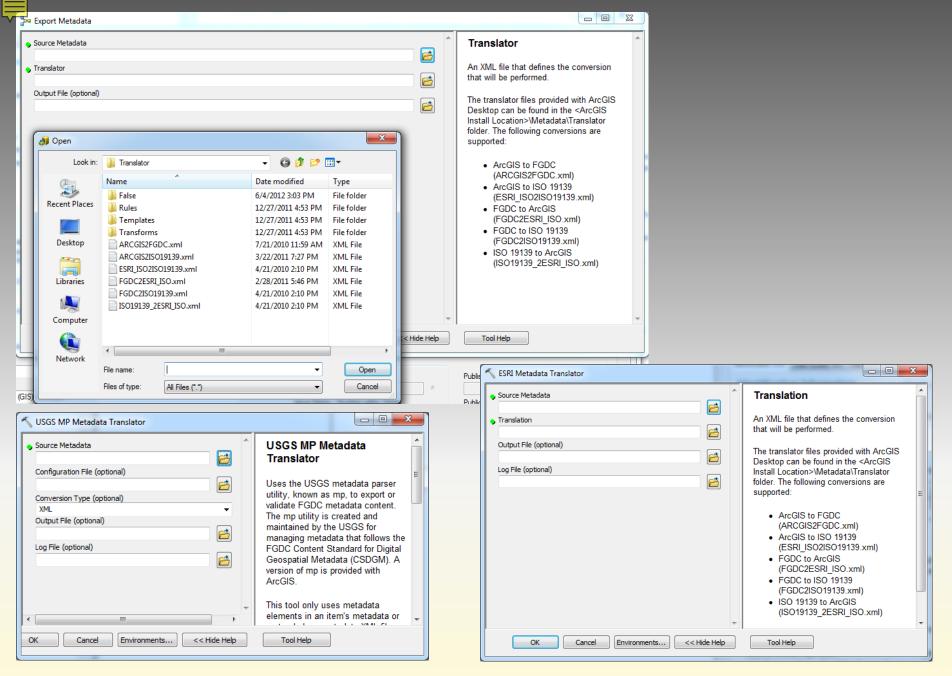


- 1. Handle conversion between ArcGIS and FGDC formats automatically.
- 2. Automate as much as possible.
- 3. Himinate antiquated and esoteric FGDC language.
- 4. Encapsulate the logic of the standard in the interface design.
- 5. Lower the learning curve for non-expert users.
- 6. Use defaults whenever possible.
- 7. Easily produce clean, stand-alone XML files.







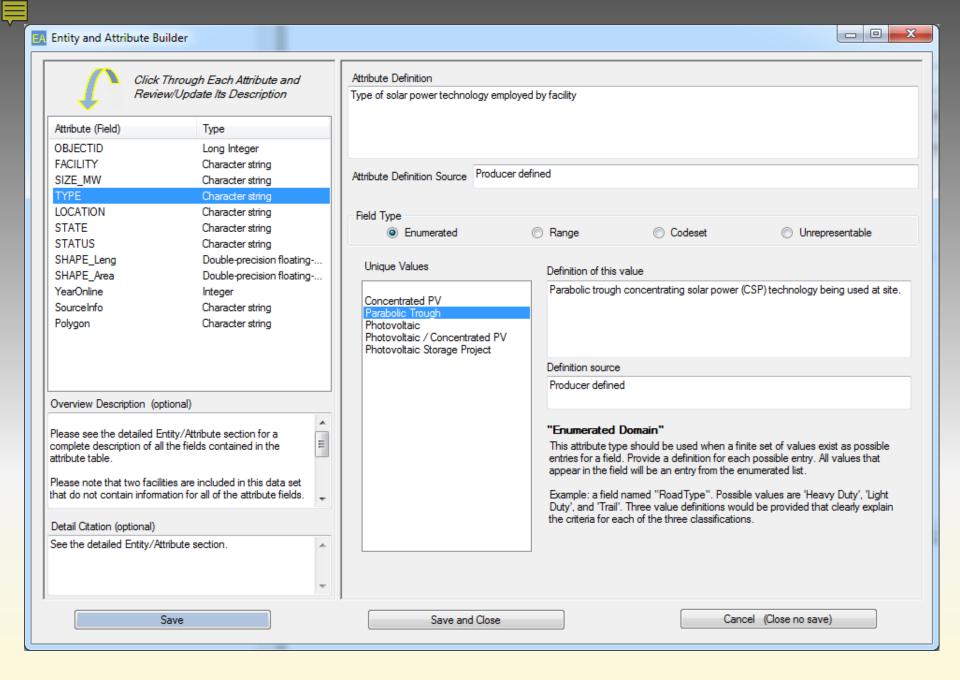


Handle conversion between ArcGIS and FGDC formats automatically.



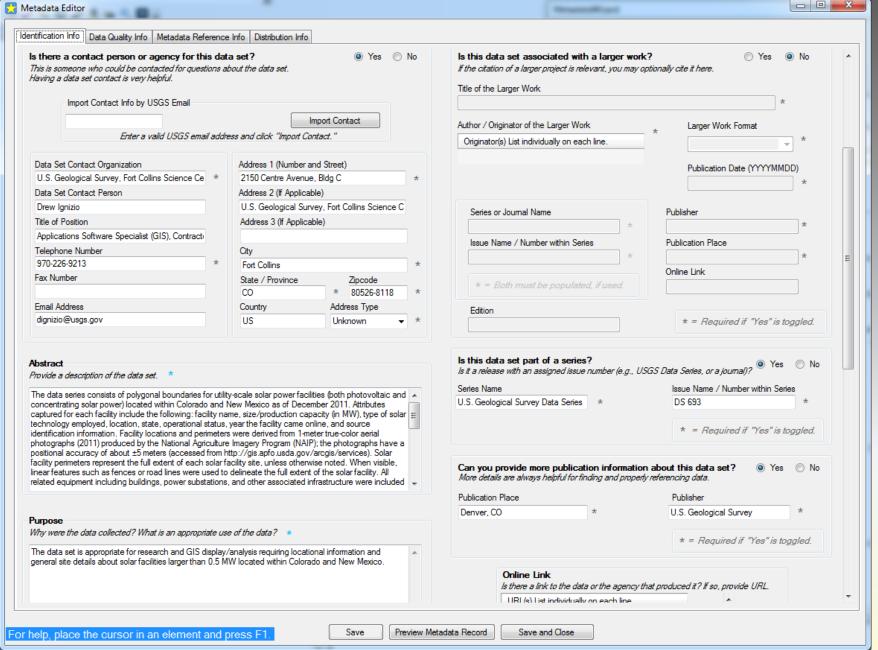
Metadata Wizard	x
Executing MetadataWizard	Cancel
111	<< Details
Close this dialog when completed successfully	
Data type being evaluated: Vector Feature type being evaluated: Polygon	^
The raw xml is now being extracted into a temporary file for further processing	r
A series of tests will now be performed to determine the current for of the metadata record	rmat
Based on certain characteristics of the xml, this metadata record he been identified as an FGDC-style record.	as
The FGDC-style record has been exported an output xml file in FGDC and is now being cleanedcleaning completed.	Format
Bounding Coordinates (Local): [-1052022.0323635594, -581238.2330891669212.10018845298, 383634.83961140458] Bounding Coordinates (Geographic): [-108.52096118299994, 31.747098730000062, -103.12964530999994, 40.67204602000006]	313, -
Updating 'Bounding Coordinates' values	
Updating 'Spatial Data Organization Info' element	≡
Updating 'Spatial Reference Info' element	
Updating 'Geospatial Presentation Form' with: Vector Digital Data Se (Polygon)	et
Updating 'Digital Transfer Info - Format Name' with: Vector Digital Set (Polygon)	Data
Environment as of Metadata Creation: Microsoft Windows 7 Version 6.3 (Build 7601) Service Pack 1; ESRI ArcCatalog 10.0 (Build 2414) Service Pack 3 (Build 3600)	
Updating 'Native Environment' information	
Updating 'Metadata Info (Date)' information	
**********	+

Automate as much as possible.



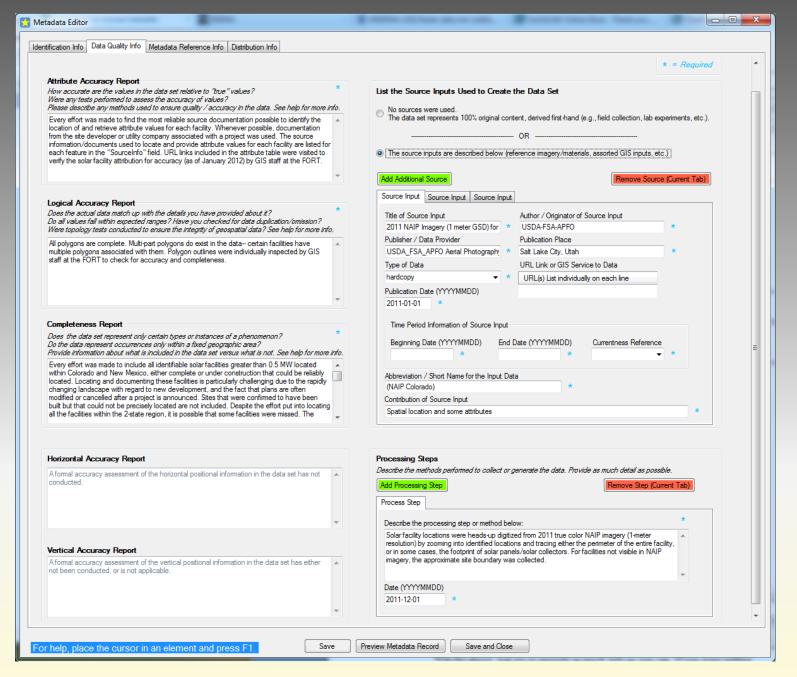
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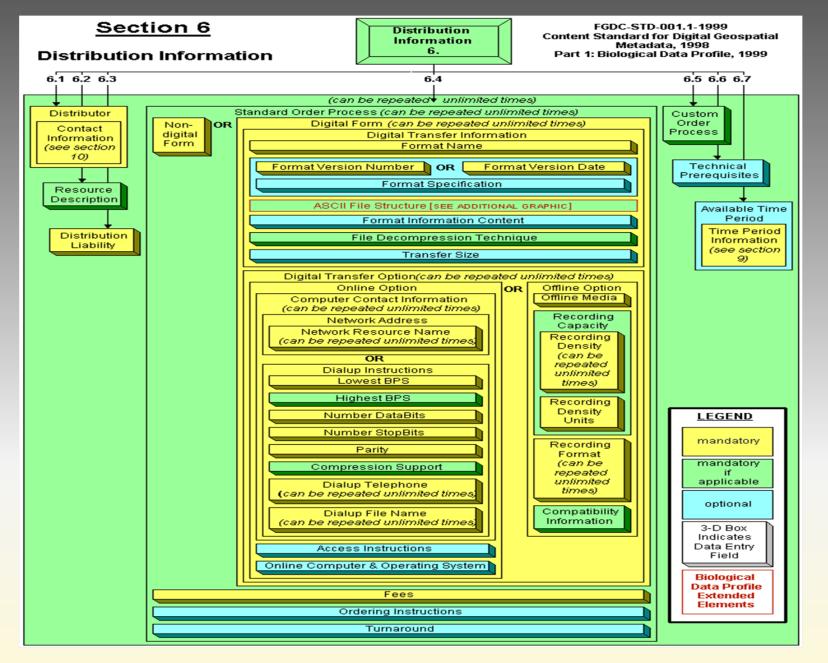
Encapsulate the logic of the standard in the interface design.



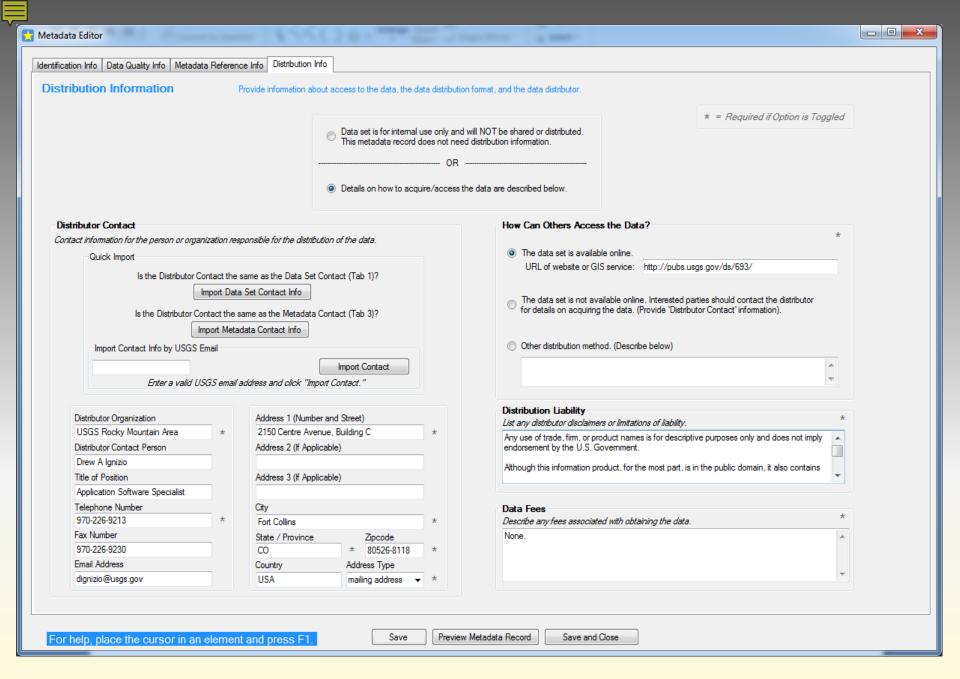


Encapsulate the logic of the standard in the interface design.

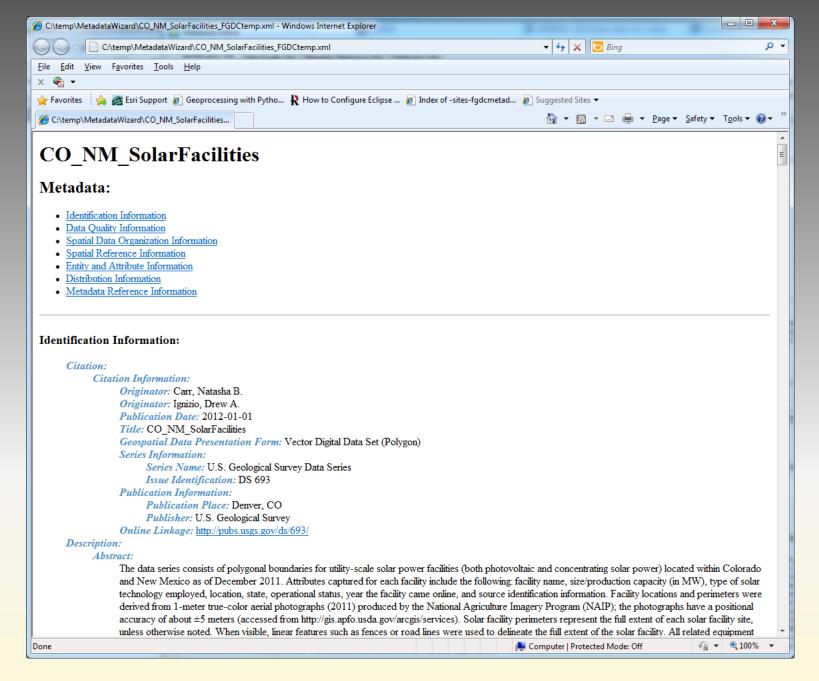




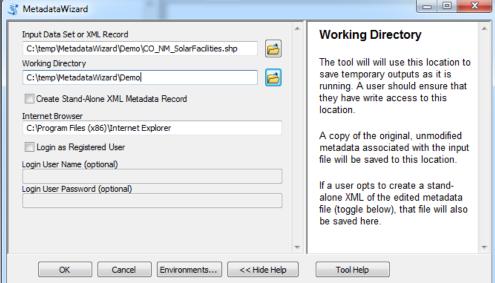
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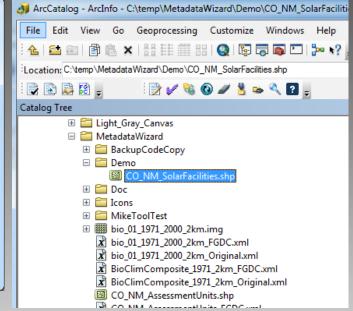






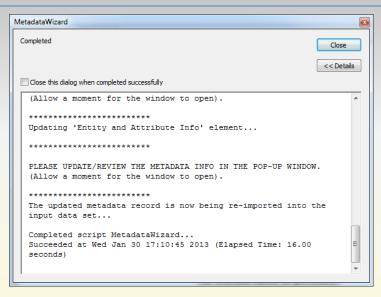


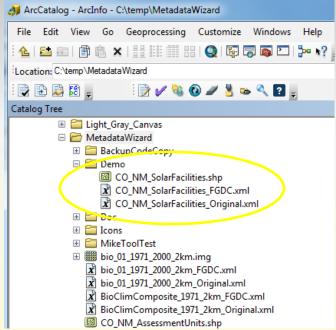




After

Before





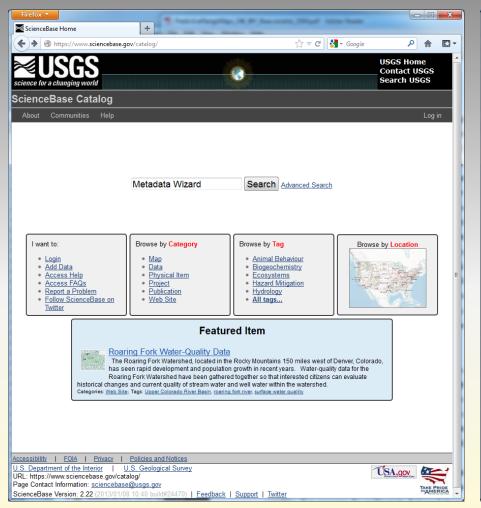
- -Time savings for metadata creation / updates
 - -Reduce potential for errors and mistakes
 - -Standardized metadata outputs
- -Reduce user frustration, increase metadata participation

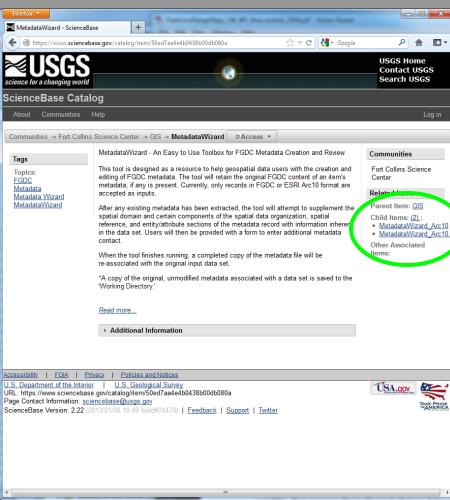


Where can I access this tool?

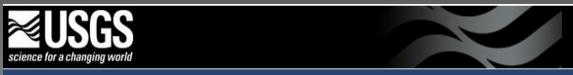
BETA version is available at: www.sciencebase.gov

Search for "Metadata Wizard"

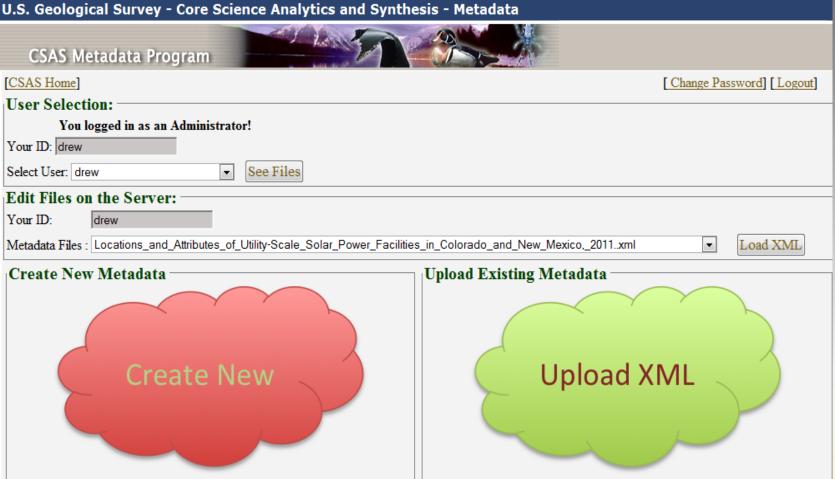








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Thank You.

USGS Core Science Analytics and Synthesis (CSAS)
Peter Schweitzer
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ESRI



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