ToolMatch: Matching Visualization Tools with Data – an Ontology-Based Web Service

Nancy Hoebelheinrich1 (nhoebel@kmotifs.com), Christopher Lynnes2 (christopher.a.lynes@nasa.gov), Matt Ferritto3 (ferrim2@rpi.edu), Patrick West3

1 Knowledge Motifs, 2 NASA Goddard Space Flight Center, Greenbelt, MD 3 Rensselaer Polytechnic Institute, Troy, NY

Motivations:
- Supported by ESIP Semantic Web Cluster
- A service based on community-built semantic web applications
- Provide users with the means to match their datasets with a list of useful, appropriate tools
- Provide data tool developers with the means to find datasets and data collections to work with their tools
- Working with ESIP Energy and Climate Cluster in integration of ToolMatch service with Decision Support Tools Catalog and Community of Practice
- Will consist of a simple ontology and set of rules that will describe what kinds of tools work with what kinds of datasets.
- Initial launch will be September 30, 2014 as part of the ESIP Products and Services Testbed.

Capabilities:
Panoply can Display Swatch Data via OPeNDAP on a Map
Ferret can Display Swatch Data via OPeNDAP as a Grid

For more information:
ToolMatch on github: https://github.com/ESIPFed/Toolmatch
ESIP ToolMatch wiki page: http://wiki.esipfed.org/index.php/ToolMatch

Sponsors:
- ESIP

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Initial Use Cases:
I have data & need to know which tools I can use
- I need data with measurements of atmospheric aerosol optical depth sliced along latitude and longitude, returned as netcdf data, and accessible in Matlab

Develop Model Ontology:

Matching and Linking:

Datasets available in Giovanni available in certain formats with certain features. Which tools can be used to visualize them?

Also available as a web service

Next Steps:
- Collect information about more tools using crowd sourcing
- Complete implementation of the matching capabilities
- Splash screens for instance data to include schema.org and RDFa markups

Glossary:
- CMAP/COE – Concept Mapping Application Ontology Editor, built on top of the IGMC CmapTools concept mapping software
- DC Terms – Dublin Core Terms (http://purl.org/dc/terms/)
- DOAP – Description of a Project ontology (http://usefulinc.con/ns/doap#)
- ESIP – Earth Science Information Partners (http://www.esipfed.org)
- FOAF – Friend of a Friend (http://xmlns.com/foaf/0.1/)
- OWL – Web Ontology Language
- RDFS – Resource Description Framework Schema
- SPARQL – Simple Protocol and RDF Query Language