CONTROLLED KAOS

WORKFLOW FOR A METADATA OBSERVATORY

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WHAT IS KAOS?

[Knowledge-Advancing Organization Systems]

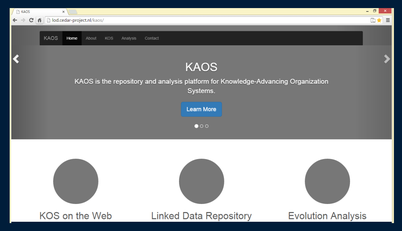
A tool enabling exploration and discovery of the controlled vocabularies we use to organize and describe our universe

PURPOSE

- To serve as a repository of metadata standards from every domain
- To visually represent of the evolution of and relationships among the metadata vocabularies
- To provide a platform for querying, analyzing, and extracting data about metadata

DESIGN

- A web-based front end provides access to the repository and a platform for analysis



- When fully functional, KAOS will store and publish metadata as linked data

CHALLENGES

- Interoperability
- Versioning
- Scope and scale

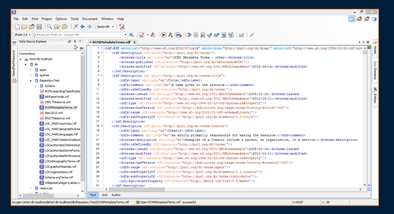
SELECTION

- Collect metadata vocabularies from both individual publishers and metadata registries

- Most standards are made freely available in an XML or XML-compatible formats

STORAGE

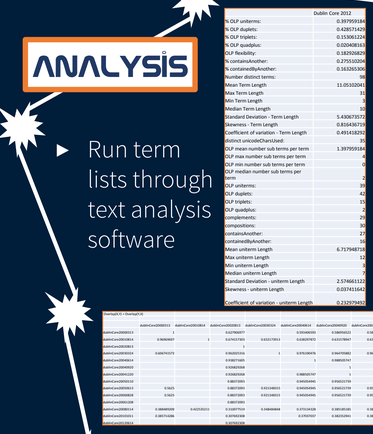
- Use XML database, **eXist-db,** to store vocabularies represented as XML, XML schema, RDFXML, and RDF schema



- XML databases preserve structural information in the metadata files that would be lost in a relational database

ANALYSIS

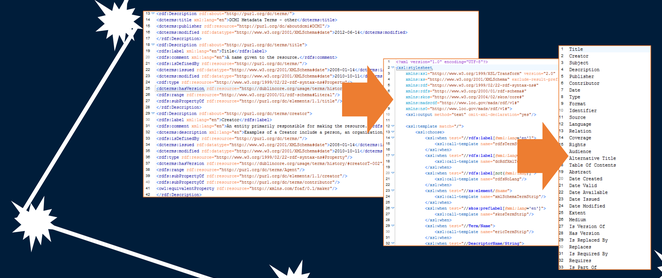
- Run term lists through text analysis software



- Produce metrics for each metadata vocabulary and comparative metrics for multiple vocabularies

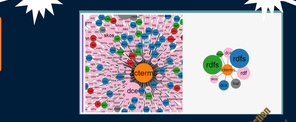
TRANSFORMATION

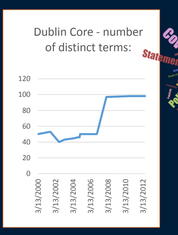
- Extract terms from structural metadata with an XSL Transform, enabling automated text analysis

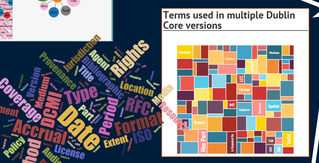


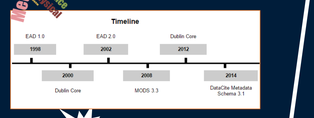
VISUALIZATION

- Use Excel and other data presentation tools to create meaningful visual representations of data









NEXT STEPS

- Automate ingest and transformation processes
- Update and expand the collection
- Establish long-term storage, maintenance, and infrastructure plan
- Develop interactive visualizations and other functionalities for the user interface

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Observatory graphic: *Observatory.* Retrieved from: http://www.marysrosaries.com/collaboration/index.php?title=File:Observatory_%28PSF%29.png Background : trompehalf (artist). *Constellation Antique* . Retrieved from: http://markevansfineart.com/?attachment_id=2