¡Bienvenido a VIVO!

Moving from a custom application to one that uses VIVO-compatible Linked Open Data

Paul Friedman; Warren A Kibbe, PhD; Violeta Ilik, MLIS; Kristi Holmes, PhD; Justin B Starren, MD/PhD

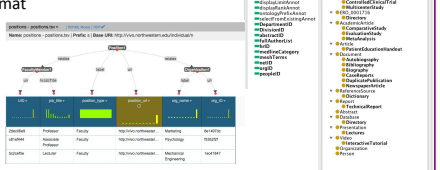
Migration

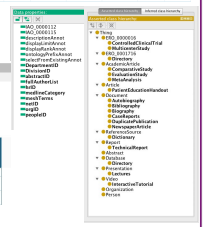
Objective

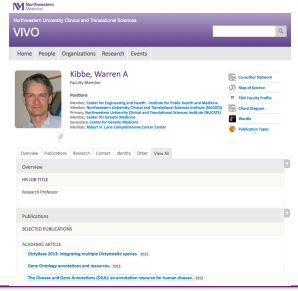
- **Map existing data to the VIVO-ISF ontology**
  - Faculty data (appointments, research interests, clinical narrative)
  - InfoEd (grand and contract data)
  - PubMed (biomedical publications with collaborators)
  - Northwestern Active Directory (name, title, contact info)
- **Ensure functionality remains in new system**
  - Manage publication lists for reporting and metrics
  - Identify researchers involved in a specific area
  - Provide tools to visualize collaborations
  - Highlight faculty publications

Process

- **Extract raw data into .csv files**
  - Publication export files match Symplectic Elements format
- **Create local ontology extensions**
  - https://github.com/vioil/ontology_extensions
  - Ontology extensions to match NLM publication types
  - Additional data types created to accommodate unique identifiers and robust LatticeGrid data set
- **Map data using Karma**
  - Person, organization, positions, and publications data sets
  - http://usc-isi-i2.github.io/karma/
  - https://github.com/NUBIC/R2RML-Karma
- **Import RDF via VIVO Site Admin**







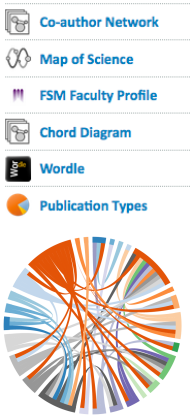
Outcome

- **VIVO production instance with:**
  - Faculty Member data
  - Organizational appointments and affiliations
  - Publication and co-author data

Modularization

Objective

- **Extract functional components from the existing application**
  - Visualizations:
    - Co-author network graphs
    - Organizational network graphs
    - Word clouds
  - Reporting
  - Institutional membership lists
  - MeSH similarity
- **Repurpose components for any VIVO-compatible Linked Open Data instance**
- **Keep fully open-source**

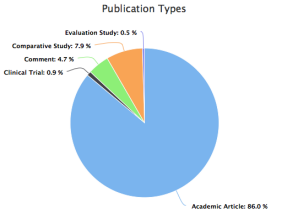


Process

- **Note the functionality that does not exist in the VIVO software**
- **Talk to users to see which functions are most used and which are not**
- **De-couple components from the data schema and software stack**
- **Determine the libraries and data used by those components**
- **Extract as much code as possible:**
  - UI (html, css) pulled out with very small changes
  - JavaScript left completely intact
- **Create automated tasks to build data used by visualization libraries**
- **Leverage VIVO SPARQL Query API to extract data from triple-store**

Outcome

- **Open source project on github**
  - https://github.com/NUBIC/vivo-vl
- **Visualizations woven into VIVO instance**



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