

BioRDF Overview and Update

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BioRDF Overview

■ Objectives

- Enhance the HCLS KB
- Increase the value and use of HCLS KB by incorporating new data sets and developing scientific use cases
- Work on human-friendly user interface
- Document and publish findings to help accelerate/promote adoption of the Semantic Web

■ Participants

- Universities, pharmaceutical companies, start-up companies, government institutes, W3C, etc

BioRDF Activities/Tasks

- Invited Talks
 - UMLS, NCBO, NIF, Biogateway, WikiNeuron, Gene Wiki, 3D Web Visualization, BioSIOC/aTag, VoID
- HCLS KB
 - Two instances of HCLS KB have been created
 - DERI (Virtuoso)
 - Free University in Berlin (Allegro Graph)
- Neuroscience use case
 - add receptors to the picture
- aTags (associate text with semantic tags with relationship)
 - Matthias Samwald, Kei Cheung
- Query Federation (Receptor explorer, AIDA, FeDeRate, voiD, aTags)
 - Kei Cheung, Rob Frost, Kingsley Idehen, Scott Marshall, Adrian Paschke , Eric Prud'hommeaux, Matthias Samwald, Jun Zhao
 - A paper entitled: "A journey to query federation in life sciences" was accepted for publication in BMC Bioinformatics

Challenges

- There are many datasets that are not in RDF/OWL format
- RDF vs. OWL (terminology vs. ontology)
- Linked Data vs. SPARQL Endpoint
- Proliferation of synonymous URI's
- Performance
- Wide range of technological approaches
- Resources

Intersection with Other Task Forces

- LODD (natural alternative)
 - TCM data (gene-herb-disease associations)
- Sci. Discourse and Terminology
 - Terminological and ontological data federation in neuroscience

Future Directions

- Expand HCLS KB's
- Query federation
- aTags – semantic publishing
- Develop more use cases
- Develop Applications
- Collaborate with external groups (e.g., Bio2RDF)

BioRDF Breakout Session

- Presentations
 - AIDA (Scott)
 - Bio2RDF (Michel, Francois)
- Discussion topics
 - Expand HCLS KB's (new datasets)
 - Expand current activities and launch new activities (query federation, AIDA, atag, semantic wiki (dbpedia), voiD, FeDeRaTe, receptor explorer, web 2.0/3.0 federation, etc).
 - Collaborate with external groups (e.g., Bio2RDF)
 - Intersect with other task forces (e.g., LODD, Sci. Discourse, Terminology, etc)
 - Possible publications
- Next steps