Pharma Ontology

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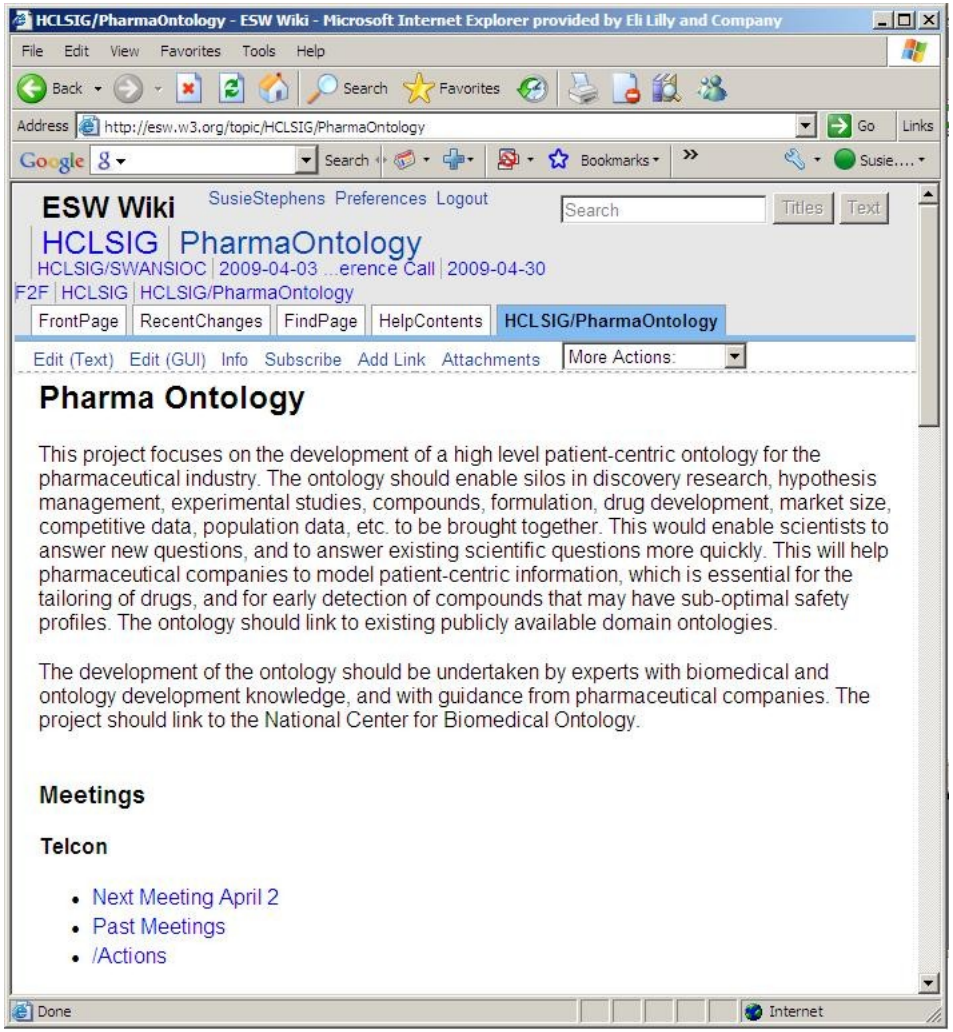
Susie Stephens – Principal Research Scientist, Eli Lilly
Elgar Pichler – Principal Scientist, AstraZeneca

Pharma Ontology

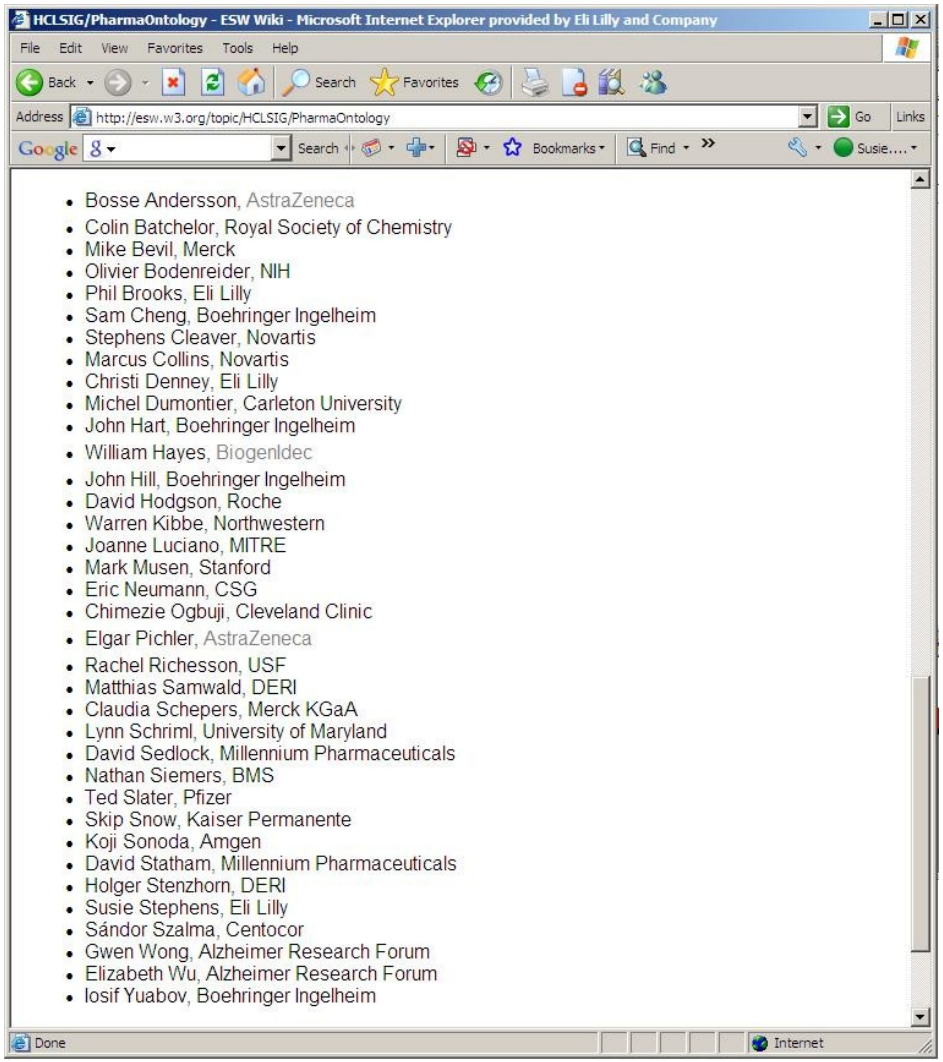
http://esw.w3.org/topic/HCLSIG/PharmaOntology

Focus on development of a high level patient-centric ontology.



Participants

- ~40 participants.
- Representatives from pharma/biotech and academia.

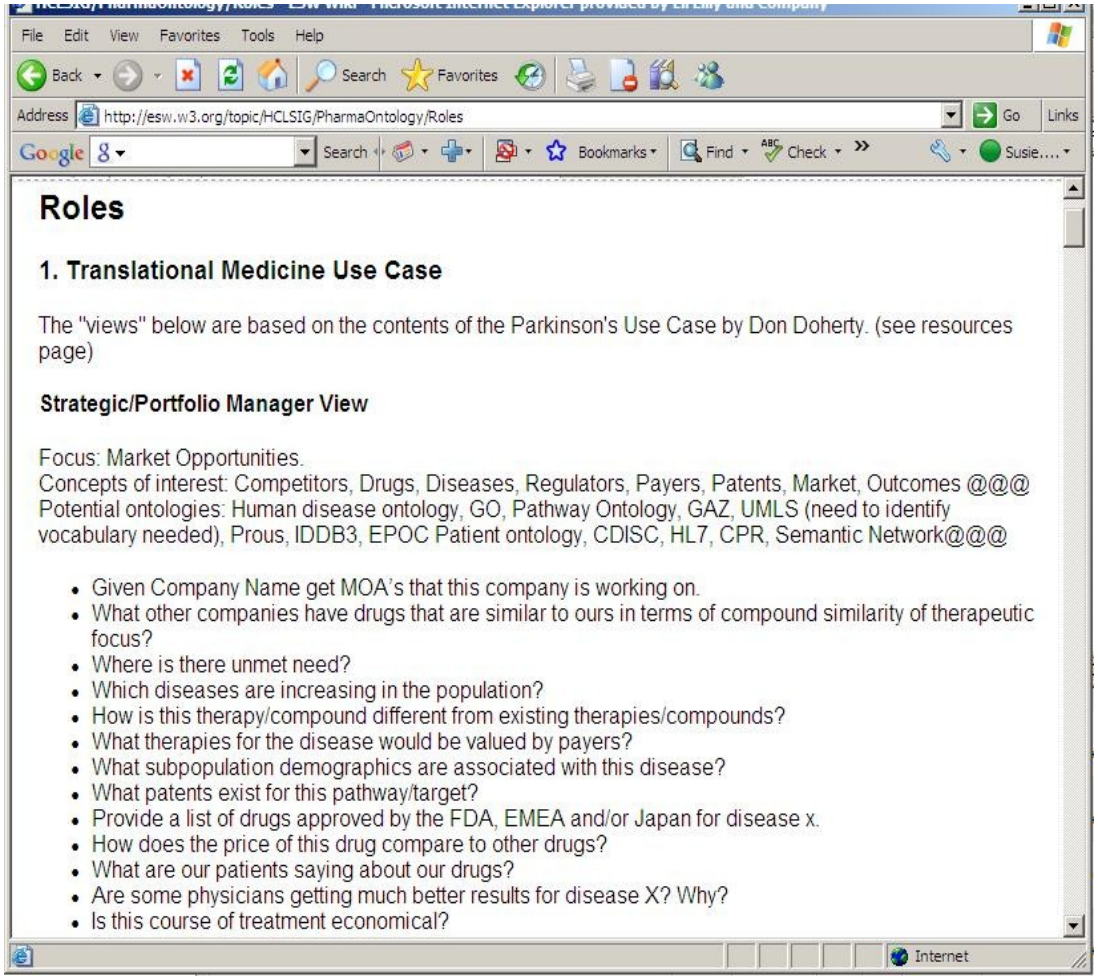


Pharma Ontology Goals & Deliverables

- Identify scope of a pharma ontology through understanding of employee roles.
- Identify roughly 30 entities and relationships for template ontology.
- Create 2-3 sketches of use cases (that cover multiple roles).
- Select and build out use case (including references to data sets).
- Review existing ontology landscape.
- Build relevant components of ontology for the use case.
- Build an application that utilizes the ontology.

Roles within Translational Medicine

- Strategic/Portfolio Manager View
- Project Manager
- Immunologist
- Cheminformatician
- Systems Physiologist
- Cellular and Molecular Biologist
- Medicinal Chemist
- In-Vitro/Vivo Biologist
- Clinical Trial Formulator/Lead Physician
- Clinical Decision Support System Implementer
- Statistician
- Sales and Marketing
- Primary Care Clinician
- Specialty Medical Provider
- Health Plan Provider



Entities of Interest

Disease

Drug

Patient

Target

Gene

Risk

Pathway

Population

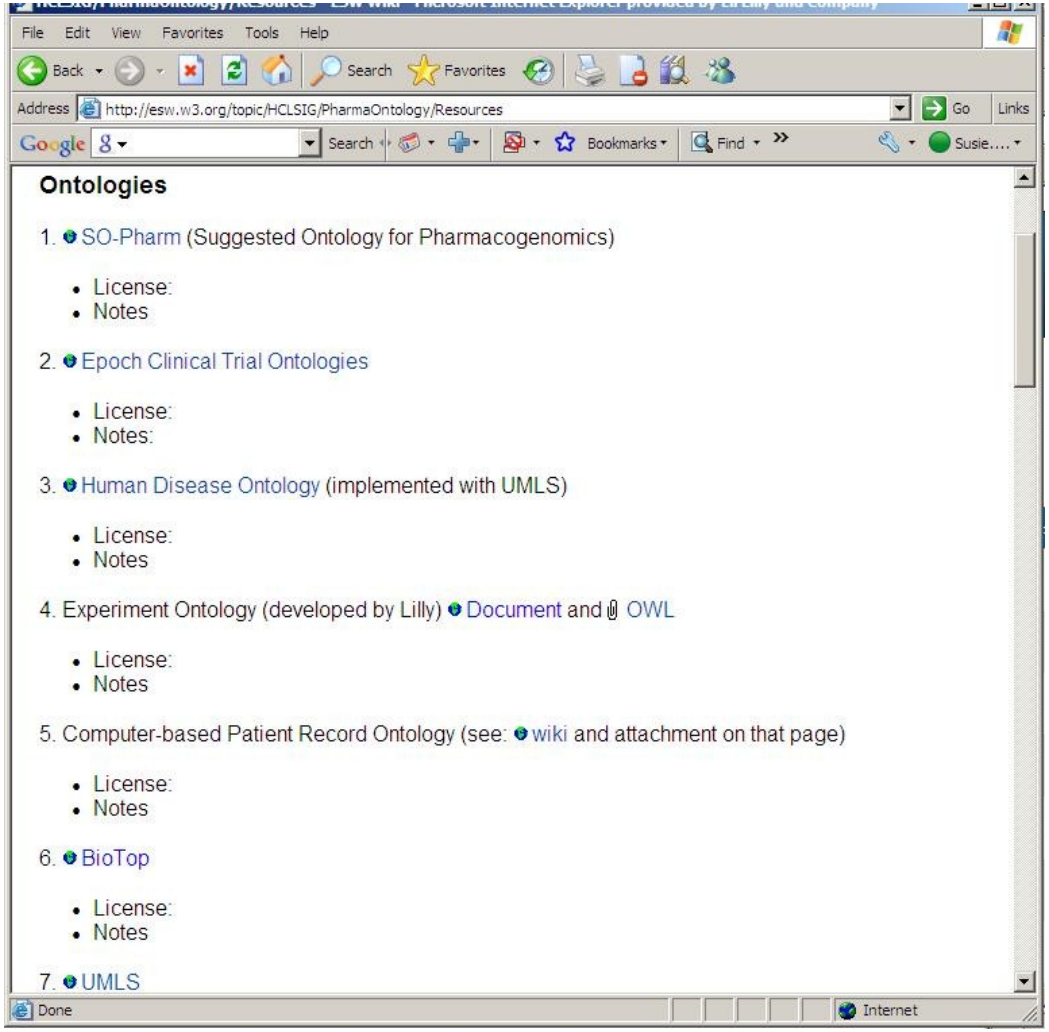
Phenotype

Treatment

...

Existing Resources

- Ontologies, taxonomies, vocabularies.
- Data.
- Tools.



Technical Challenges

- Selecting less than 50 classes to bridge translational medicine.
- Identifying ontologies for connecting with the Pharma Ontology.
- Enable interoperability across domain ontologies.
- Deciding upon the necessary level of expressivity.

Next Steps

- Determine key entities and predicates.
- Create a few use cases and decide which one to implement.
- Prepare poster for ICBO (International Conference on Biomedical Ontology).

Task Alignment

- Gain access to data for the use case from LODD (Linked Open Drug Data).
- Provide an ontology template that Scientific Discourse can utilize.

Summary

- Develop a high-level, patient centric ontology for translational medicine, which will draw on existing domain ontologies.
- Few ontologies exist that bridge genomics, chemistry, and medicine.
- Align Pharma Ontology with BFO (Basic Formal Ontology) and OBO (Open Biomedical Ontologies) Foundry to ease interoperability.
- Work to finalize key entities and predicates and determine the application for implementation soon.