Day 1

Challenges

Conceptualization on epistemology

- reverse ontology "ontology" vs. "Ontology"
- methodology, involve stakeholder communities in creating added value for sci. maps
Data
- data.gov and data.uk.gov/data
- the triple vs the graph-CWA, attribution, temporality, provenance
- unique names for objects
- citation for data/methods~ building reputation, reward models
- data qualities+ algorithm robustness
- data does not equal objects
- minimizing knowledge entropy (uncertainty)
- data Ids linked to paper DOIs
datacite.org
- getting access to structured science mapping data
- how to lie with semantics
- malicious data
- better paper semantics discipline-CVI bono?
- access to proprietary or commercially owned data in shorter time-public/private balance
- disconnect between data producers and data consumers
- scalability, complexity, security
- Ownership, as data sets distributed, bystanders effect on web

Usability
- efficiency and scalability
- making some simple sense of text using the web corpus
- resolve or at least deal with conflicting info/data, esp. context of automates reasoning
- ontologies that change over time and the relation to tools

Interface
- modularity granularity
- coordinating/making sense of multiple, parallel efforts
- semantic mining
- user friendly semantic web interface
- semantic web expertise without computational expertise (e.g. humanities students)
- Is there a simple app that my wife will need semantic web for (e.g. shopping)
- negotiate new relationship -->how to bring VCs, publishers, and others to the table

How to define impact
- cost/incentives of structured scientific publications and open science
- Differentiate output
- Influence does not equal just journal citation as science accepts new media, e.g., Boyd.

Opportunities
Data

- improvements on data quality
- transparency of science
- semantic publishing
- scholarly LOD from this workshop
- integrate all information/data together
- tidbit publishing/publishing small items
**Data provenance and data quality**
- data representation
- we can separate contents from presentation

**Data for specific applications**
- building a scale-free web of science (web semantic)
- more tools --> more data, more data --> more tools
- data app store for data and applications

**Applications**
- Expose Wikipedia semantically
- Apply semantic web techniques to content on science map notes --> network visualization of nodes.
- chances for integrating data and reasoning of data
- web 3.0 apps, creating useful new tools
- reference <-> lab data analysis + services
- Mesh up between data and tools bookmarks
- Real time mapping

**Reproducibility**
- linking data/methods/papers across discipline boundaries
- common data available for all scientists about scientists

**Inference and Discovery**
- making them scalable, (claims with your paper)
- very large scale inference
- increase openness and communication among researchers
- making discovery that is meaningful

**Usability**
- where to prototype? (referata.com)
- making analysis of science accessibility to every scientist
- “market” for visualization tools/APIs
- automate peer review and analytics by inference on summary Jem mets(?)
- tools to provide real time truth, assessment-inference on large scale knowledge

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**Day 2**

**Projects that could be done with existing funding/resources**
• Interconnect life science dataset with subject types (Michel)
• Correlate LOD -map with map of science (Frank)
• Terminology, RDF, ? -- 3D cube (Jon CR)
• Provide storage +query infrastructure in the billion triple range (Stefan) + Convert Katy’s SDB to LOD (Ying)
• Start making UML (EER) diagrams of all relevant data sources publishing & "integrate" these (Meersman)
• IDEM (Ed)
• Learn more about semantic web technology (Andre?)
• Tell someone to design ontology for usage data access control at triple level (Johan?)
• Use NWB tool to convert ISI, Scopus, NSF data into tables, then convert these tables into RDF, ontology merge into VIVO (Katy)
• RDF2 Pajek (Paul & Frank)
• Link yourself to bubble (Yuyin)
• Try to make semantic web data more readily/easily editable like GUI for converting "stuff" into RDF triples (Chintan)
• Visualize a linked open data set using a science map (Carol)
• Use more meta tags on everything I do.

Other Desires/Suggestions
• This brainstorm in RDF
• We should refuse to go to workshops do not cause a change in the number of LOD triples (Frank)
• RDF--> SSS