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