

Hackathon-Clinics Project HC-06

# **ISO 15926 Reference Data Validation**

TechInvestLab.ru  
project initiator

# Goals

Evaluate publicly available ISO 15926 reference data:

- compliance to the best practices of ontology engineering;
- compliance to logical model and upper ontology constraints;
- diagnose problems in reference data;
- make suggestions for data improvement;
- evaluate ease of access, understanding and use of existing ontology data.

# Schedule

- Sat 2013.03.30 at 2:00pm Moscow / 11:00am CET / 10:00 UTC – teams gathered in Moscow (TechInvestLab.ru office)
  - Open telecommunication infrastructure (Skype+Mikogo) for all willing to join
  - Discussions and planning
- 5:00am PDT / 8:00am EDT / 4:00pm MSK / 1:00pm CET / 12:00 UTC – 1 h. 45 min. open session with expert panel
- 9:00am PDT / 12:00 EDT / 8:00pm MSK / 5:00pm CET / 4:00pm UTC – 1 h. break with possible continuation if commands wish to work further

# Work cycle

1. Selection of a Test or a Metric.
2. Short presentation of a Test or a Metrics from the most competent participant.
3. Discussion of its application to ISO 15926 upper ontology or reference data, suitable algorithm and tools (software environments) selection. Try to do each Test or Metric in at least two environments.
4. Implementation (performed concurrently if several tools/software environments selected).
5. Test on real data, discussion of results.
6. Preliminary documenting of results.
7. Go to (1) .

If only one team team takes implementation of some Test or Metric, steps 1-3 can be performed in a loop until all people/teams capable to do implementation have some task assigned.

# Collaborators

- TechInvestLab.ru team – .15926 Platform tools
- AgentLab team <http://agentlab.blogspot.ru> – Eclipse-based modelling toolset
- More teams invited
- We'll welcome all collaborators with generic or specialized tools to work with ontologies and/or SW data
- We'll welcome anyone willing to discuss ontology and reference data Tests or Metrics, validation methodologies and algorithms.

# Ontologies

- Upper ontology of the ISO 15926 – see <https://www.posccaesar.org/wiki/ISO15926inOWL>
- JORD Reference Data Library
  - <http://posccaesar.org/endpoint/>
  - <http://posccaesar.org/endpoint/sparql>
  - <http://rds.posccaesar.org/downloads/PCA-RDL.owl.zip>

# Initial task set

- Verification of upper ontology (currently distributed between 6 OWL files)
- Reference data compliance to upper ontology (requirements coming from ontology restrictions: abstract classes and disjoint classes, mandatory relationships (properties), membership relations between classes of classes and classes, etc.)
- Filling gaps in entities and relations (classes of individuals, classes of classes and classes of relationships can be viewed as corresponding taxonomy systems, thus suggestions for missing members in these taxonomies can be deduced from the existing correspondence relations)

# What we need

- More Tests
- Metrics ((like OntoClean, OQuaRE or OntoQA) – our knowledge of these comes only from the Summit materials
- More tools - any generic or specialized software tools to work on proposed ISO 15926 datasets. We will welcome software tool developers willing to show use of their instruments for project tasks
- More hands - basic knowledge of Python programming language will be enough to join us in the project with our own tool .15926 Editor (freely available at <http://techinvestlab.ru/dot15926Editor>, get acquainted)
- More expertise – just join us!



# Deliverables

We'll try to get some or all:

- the list of “hard” problems (errors, inconsistencies, missing data, etc.) in existing JORD Reference Data Library
- characterization of any “soft” problems with data identification, availability, understandability, etc.
- adopted or new ontology quality metric methodologies for ISO 15926 ontology
- ontology quality metrics calculated for JORD Reference Data Library
- suggestions for improvement of data consistency and quality in JORD Reference Data Library
- algorithms, scripts, software tools proven to be useful for verification and quality assessment of ISO 15926 data, made available to ISO 15926 community

# Contacts

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