W3C LBD CG - TPAC Call

Attendees:

- Georg Ferdinand Schneider (Individual CLA but affiliated with Schaeffler)
- Mads Holten Rasmussen (NIRAS, Denmark)
- Maxime Lefrançois (Associate Professor, MINES Saint-Etienne, France)
- Ana Roxin (Associate Professor, Univ. Burgundy, France)
- Pouya Zangeneh (Phd at Univ. Toronto, Canada)
- Hervé Pruvost (Fraunhofer IIS EAS, Germany)
- Vladimir Alexiev (Chief Data Architect, Ontotext Bulgaria)
- Jyrki Oraskari (involved in H2020 BIM4REN)
- Kevin Mugumya (PhD at the University of Nottingham, Malaysia)
- Shams Ghazy (1st year PhD, University of Nottingham, Malaysia)
- Bart van Leeuwen (Owner Netage B.V.)
- Katja Breitenfelder (Fraunhofer Institute for Building Physics, TU Munich, Germany)

Date and time

- 13/10/2020
- 15:00-16:30@UTC, 17:00-18:30@CEST, 16:00-17:30@BST, 08:00-09:30@PDT, 23:00-00:30@CST
- Connection details: https://lists.w3.org/Archives/Member/internal-lbd/2020Oct/0000.html

Agenda (tentative)

1. Introduction round of all participants
2. introduction of W3C LBD CG
    - https://github.com/w3c-lbd-cg/lbd/commit/c6bbb319ac3ec72d1028e4b4f04c08f0336532a4
3. Open discussion

Minutes

1. Introduction round of all participants
2. introduction of W3C LBD CG
    - https://github.com/w3c-lbd-cg/lbd/commit/c6bbb319ac3ec72d1028e4b4f04c08f0336532a4
    - Presentation of Linked Data principles, how we work, members, liaisons to other standardization initiatives & bodies, links to other W3C groups, what we produce (use cases and requirements, BOT Building Topology Ontology, developed tools, etc.)
3. Open discussion
    - Q [Maxime]: What is the interest of new group members in the group?
        - Kevin:
            - Reinforcement learning more used in buildings domain
            - Participated in LDAC 2019 Lisbon

- Interested in connection between LBD tools and community and AI
- Documented models help to develop own models
- Community is active and approachable

- Shams:
  - What are the regular meetings about? -> explained
  - Is there groups about mobility? -> There is also automotive group
- Vladimir & Ana:
  - What is the exact scope of LBD ontologies ? If it keeps growing, you'll end up with something like IFC, right?
  - Pretty much everyone agrees IFCowl is too complex to be usable. However, tons of work are going into IFC, so we should find a way to incorporate IFC into RDF, not throw it out completely
  - Do not turn everything into triples, but only the "high-value" stuff: metadata, relations, things that we'd want to query about.
    a. Example: a node for each floor and each room, relations for their connectivity (BOT)
    b. But not the detailed geometry of each wall
  - Keep the detailed data in its original format (Note: IFC STEP is more widely used than IFC XML)
  - However, we need to be able to refer to specific IFC pieces by URL, and be able to transfer them over the net. Need an approach that would allow to "serve pieces of IFC data" while keeping only the metadata in RDF.
  - HDF5 is a network-enabled data format, is there something similar for IFC?
    a. Thomas Krijnen & Jakob Beetz
       i. Efficient binary serialization of IFC models using HDF5 (at ResearchGate)
       ii. Jyrki Oraskari: An efficient binary storage format for IFC building models using HDF5 hierarchical data format (at ScienceDirect)
  - Has anyone an interest for IFC4Roads / IFC4Infrastructures / IFC4Railways ?
    a. Damage Topology Ontology for Bridges
    b. IFC5 roadmap says these will be merged into IFC5: https://download.afnet.fr/ASD2018/ASD2018-7B-ChristopheCastaing-MediaConstruct.pdf
  - Link to Product Catalogues (GS1, IEC, ISO, eClass…)
  - Is there a possibility to query IFC files? Eg there is XQuery and XSLT for XML, what's an analog for IFC? How do people need to query into IFC?
    a. In STEP - no
    b. Mads: BIM-SPARQL (query language for 3D building models) is an analog of geoSPARQL but for buildings
    c. With MVD (Model-View Definitions) approach - specify sub-views of an IFC file : https://www.buildingsmart.org/standards/bsi-standards/model-view-definitions-mvd/
    d. With Semantics :

i. Pieter Pauwels, Tarcisio Mendes de Farias, Chi Zhang, Ana Roxin, Jakob Beetz, et al.. A performance benchmark over semantic rule checking approaches in construction industry. Advanced Engineering Informatics, Elsevier, 2017, 33, pp.68 - 88. ⟨10.1016/j.aei.2017.05.001⟩
ii. Nicolas Bus, Ana Roxin, Guillaume Picinbono, Muhammad Fahad. Towards French Smart Building Code: Compliance Checking Based on Semantic Rules. Linked Data for Architecture and Construction (LDAC'2018), Jun 2018, Londres, United Kingdom.
iii. Tarcisio Mendes De Farias, Ana Roxin, Christophe Nicolle. A rule-based methodology to extract building model views. Automation in Construction, Elsevier, 2018, 92, pp.214 - 229. ⟨10.1016/j.autcon.2018.03.035⟩.

- More from the chat:
  - Maxime Lefrançois: https://saref.etsi.org/
  - Ana Roxin: STEP is ISO10303 standard family
  - Maxime Lefrançois: by group size, the LBD CG is 18/346 groups
  - Mail archives https://lists.w3.org/Archives/Public/public-lbd/
  - https://sem4tra.linkeddata.es/
  - https://www.w3.org/auto/events/data-ws-2019/report.html
  - http://www.semantic-web-journal.net/blog/call-papers-special-issue-transport-data-web

Next Call

TPAC 2021 ;-)