

W3C LBD Community Group Minutes - Call 14/12/2021

Attendees:

- Mathias Bonduel (KU Leuven and Neanex Technologies)
- Anna Wagner (individual assoc. with PROSTEP AG)
- Alex Donkers (Eindhoven University of Technology)
- Jeroen Werbrouck (Ghent University & RWTH Aachen)
- Katja Breitenfelder (Fraunhofer IBP)
- María Poveda Villalón (UPM)
- Michel Böhms (TNO)
- Rahel Kebede (Jönköping University, Sweden)
- Diellza Elshani (University of Stuttgart)
- Kevin Luwemba Mugumya (University of Nottingham Malaysia)
- Christian Kreyenschmidt (Jade University Oldenburg)
- Elena Vollmer (Karlsruhe Institute of Technology, Germany)
- Ruben Verstraeten (Ghent University)
- Hervé Pruvost (Fraunhofer IIS EAS)
- Conor Shaw
- Mads Holten Rasmussen (NIRAS)

Presentation slides

- https://github.com/w3c-lbd-cg/lbd/blob/gh-pages/presentations/technical_interoperability/20211214_LBDserver_JeroenWerbrouck.pptx

Date and time

- 14/12/2021, Tuesday, 16:00-17:30@UTC/ 17:00-18:30@CET/ 08:00-09:30@PT

Moderator

1. Mathias Bonduel

Agenda

1. Introduction of new/returning members
2. Presentation by Jeroen Werbrouck
3. Q&A

Minutes

1. Mathias Bonduel asked all attendees whether it is okay to record this session. No objections raised. Jeroen agreed.
2. Presentation by Jeroen Werbrouck
 - a. Background:
 - i. Have neutral CDEs to avoid vendor lock-in

- ii. enable stakeholders to keep control over their own data
 - iii. integrate existing (modelling) software tools
 - iv. Previous work on Scan-to-Graph (see LBD CG meeting on 01/12/2020)
 - b. Data Patterns
 - i. Base technology: Solid for Linked Data Platforms
 - ii. Concepts for Social Linked Data can be projected to AEC data, too
 - iii. For uniform processing, a data structure is proposed
 - 1. Two important subfolders
 - a. Datasets - using dcat ontology. A project may consist of multiple distributions.
 - b. References - to store references to other Pods
 - 2. Satellites: external services for (Project)Pods, require access-rights
 - c. Sub-document linking
 - i. Relies on ICDD standard for describing references (links)
 - ii. Enrichment via creating local aliases (referenced via owl:sameAs) that can be equipped with new information by a different user
 - iii. This could also allow to enrich references to create comment-chains
 - d. End-user interaction
 - i. Dynamically created UIs via modular microfrontends as standalone plugins or combined configurations based on Webpack 5
 - ii. One config file defines which microfrontends are combined and how - can be changed during runtime
 - iii. Interaction between microfrontends are possible
 - e. Demo: <http://demo.lbdserver.org>
 - f. More information at: <https://github.com/JWerbrouck/consolid-server>
3. Q&A
- a. [Michel] Context ist project-focused. Would this be relevant to non-projects, too? E.g. asset information that is shared amongst stakeholder _after_ creation/development
 - i. "Project" is rather a misleading name. The concept is "aggregators" - so it is not project-centered at all. So: yes.
 - b. [Kevin] Regarding machine learning models that are trying to access federated data. E.g. smart city applications where each building has its own data pod. If the city wants to estimate their load, what challenges would they face?
 - i. Discovery should not be a problem, as aggregators hold a collection of all sources
 - ii. If projects are not open to the public, they cannot be found by aggregators - so the access rights have to be defined well
 - c. [Kevin] Also, how much granularity is wanted for data pods? If a building has a Pod, and in the building, there are Pods for zones, domains, objects?
 - i. Performance should not be affected by granularity, since the aggregator is serving as central collector

- d. [Kevin] Read/write access: How can I be sure that the person reading my data is not just copying it?
 - i. This is a legal matter. Currently, we cannot make sure of that.
- e. [Pierre] References are in different Pods on different physical machines. How do you maintain those references? What happens, if there are changes on one side?
 - i. Similar to managing aggregations: Everyone is the master of their own reference registry. Backlinking when creating such an alias would enable satellite to orchestrate automated updates, if something has changed
 - ii. However, this is not yet implemented.
- f. [Michel] Isn't it possible by the Solid system for the engineer to write directly into the architect's Pod?
 - i. Yes. But I would recommend against it. That way you can identify provenance much more easily.
- g. [Mathias] Would you be against *copying* information from other Pods? E.g. after handovers? If not: What would happen, if the other Pods go down? Do you have a fallback mechanism?
 - i. A satellite could link to a backup-server
- h. [Diellza] Let's say I am an engineer, I open the geometry- a column that the architect created. Is it enough to be able only to enrich semantically? What if after running some simulations, I want to change the properties (length, or cross-section)?
 - i. It does not matter how you enrich the data. If you want to change the properties, that happens on the dataset level, not enriching. So you would call the architect to make changes in the dataset. Versioning could be realized with other LBD concepts (OPM)
- i. [Diellza] And as well, maybe for me as an engineer, geometry is not the way I want to represent something. A column might be for me a bar element (start point, endpoint and cross-section). So this raises the question of where is data generated, platform-wise and the data schema of this software, and how this software represents building data?
 - i. This would be on the dataset distribution level which has a multi-model concept. So this issue should be addressed by other technologies, i.e. Speckle.
- j. [Mads] On historical changes and capturing that. The OPM dataset would be shared amongst all stakeholders to allow change management and retrieving "old" information, if needed, but ignoring it if not.

Next Call

- **TBD**, Tuesday, 16:00-17:30@UTC/ 17:00-18:30@CET/ 08:00-09:30@PT

Agenda: TBD

We are interested in getting suggestions from the community about potential agenda items and **Elevator Pitches** for the following calls. Please send your suggestions to the chairs or to internal-lbd@w3.org, whether you have a short presentation to bootstrap the discussion, and an approximate duration you think the discussion will last.

Previous minutes

<https://www.w3.org/community/lbd/meeting-minutes/>
<https://github.com/w3c-lbd-cg/lbd/tree/gh-pages/minutes>