

## Attendees

- Pieter Pauwels [Ghent University]
- Mads Holten Rasmussen [DTU]
- Mathias Bonduel [KU Leuven]
- Georg Ferdinand Schneider [Fraunhofer IBP]
- Walter Terkaj [ITIA-CNR]
- Matthew Waychoff [Array Architects USA]
- Georgios N. Lilis [TUC]
- Pouya Zangeneh [University of Toronto]
- Claudio Mirarchi [Polimi]
- Ana Roxin [UBFC]

## Date and time

- 04/06/2018
- 16:00 CET

## Agenda

- BOT open Git Issues
- PROJECT ontology status
- PRODUCT open Git Issues
- Open remarks (round table)
- Postponed to follow-up meeting

## Minutes

### 1. BOT open Git Issues

- [Documentation] First draft initiated: <https://w3c-lbd-cg.github.io/bot/>
  - Help welcome: review text, add examples. Thank you.
- [Pull Request] changed alignments of S4BLDG and BRICK according to comments
  - <https://github.com/w3c-lbd-cg/bot/pull/22>
  - [Georg] this pull request needs to be reviewed by me before merging. E.g. Alignments with the BRICK ontology don't seem to use the bot:Zone class correctly.
- [Open] Spaces running over multiple storeys
  - <https://github.com/w3c-lbd-cg/bot/issues/21>
  - Mads: examples added in section 5. Common Modeling Questions - <https://w3c-lbd-cg.github.io/bot/#>
  - Georg: numbering order for storeys? can one define the first storey of a building?
    - Matthias: take into account storey elevation ?
  - Mads: added section 4 about vertical segmentation (alignments with BRICK, DogOnt, ifcOWL, etc.) - <https://w3c-lbd-cg.github.io/bot/#VerticalSegmentation>
  - This issue will be further discussed at LDAC, when examples are available.
- [Closed] Potential ambiguity in bot:Zone rdfs:description

- <https://github.com/w3c-lbd-cg/bot/issues/17>
- Mads: something that is spatially defined
- Comment added online: definition of Zone to be refined to: *A defined area with spatial 3D volume that groups spaces and has a particular characteristic, purpose, or use, or subject to particular restrictions. A bot:Zone can contain other bot:Zones defined by the relation bot:containsZone, and it can be connected to other bot:Zones defined by the relation bot:adjacentZone. Connections can be made with other ontologies; namely, BRICK:HVAC\_Zone would be a subclass of bot:Zone, for example.*
- Other classes to be checked as well (e.g. Space).
- [Closed] Few undeclared annotation properties make BOT not OWL DL
  - <https://github.com/w3c-lbd-cg/bot/issues/15>
  - Resolved
- [Closed] Infer relation between a storey and adjacentElement of a Space
  - <https://github.com/w3c-lbd-cg/bot/issues/23>
  - Comment added online - issue closed: A bot:hasElement property is to be added in BOT as a superProperty of bot:containsElement and bot:adjacentElement.
- [Closed] bot:adjacentElement and bot:containsElement should be disjoint properties
  - <https://github.com/w3c-lbd-cg/bot/issues/24>
  - Mathias his example should be covered specifically
  - Maxime's remark about OWL 2 EL - OWL 2 EL isn't targeted specifically, so making the props disjoint should be okay - issue closed
- [Closed] Should we generally consider specifying schema:domainIncludes and schema:rangeIncludes? I have already suggested some in the docs.
  - Mathias: There are a number of opinions about this, arguing for and against domain/range, domainIncludes/rangeIncludes, union, and so on: <https://github.com/dbpedia/ontology-tracker/issues/14> and <https://docs.google.com/document/d/1pQPO61d3RJY05yHSxlcu4DsR1NEcW8n9URoTci4IFJY/edit#>
  - [Ana] UnionOf would make it unnecessary difficult for a reasoner, so not a good idea.
  - DomainIncludes / rangeIncludes is the preferred option

## 2. PROJECT ontology status

- A new subgroup has been started for Project Management
  - GIT repository is set up for managing the proposed ontology: <https://github.com/w3c-lbd-cg/project>
  - Working group document: <https://docs.google.com/document/d/1hlsQxLXZI-0rupm4qKSOWuigy71l8fo0AvLg2bOcA1U/edit>
  - The subgroup is led by Pouya Zangeneh, who presented this proposal earlier: [https://github.com/w3c-lbd-cg/lbd/blob/gh-pages/presentations/project/20180326\\_PZangeneh\\_ProjectOntology.pdf](https://github.com/w3c-lbd-cg/lbd/blob/gh-pages/presentations/project/20180326_PZangeneh_ProjectOntology.pdf) (UP-Onto: Uniform Project Ontology)

### 3. PRODUCT open Git Issues

- [Pull Request] added products from IFC (MEP and buildingElement subtrees)
  - <https://github.com/w3c-lbd-cg/product/pull/12>
  - Accepted for merge
- [Closed] Linking PRODUCT and BOT ontologies
  - <https://github.com/w3c-lbd-cg/product/issues/7>
  - Product and BOT ontologies are in principle unrelated. An element can be both a bot:Element and a product:Product, but that is a modeller's choice. One is not a subClass of the other. Thus, a product can just be a product. As soon as product is part of a building, it should be specified by the software that it is also a bot:Element.
- [Closed] Substantial overlap to existing product data modelling approaches
  - <https://github.com/w3c-lbd-cg/product/issues/6>
  - Pieter: "There is overlap with existing product modelling approaches, yes. The main idea for this product ontology is that explicitly present building elements (walls, windows, etc.) in specific existing buildings can be modelled using this ontology (not classified - cfr. FreeClass and all), in inspiration of IFC. From that placeholder, further links to other product data and classifications can be added as instance data, thereby using many of the existing product modelling approaches in a linked data fashion."
  - Mathias: Then the definition of Product should be changed so that it does not specify that the product is sellable.
  - Agreed => closed

### 4. Open remarks

### 5. Postponed to a follow-up meeting

- BOT ontology Git Issues
  - Foaf:name
    - <https://github.com/w3c-lbd-cg/bot/issues/11>:
    - There's a problem with defining and using foaf:name as a datatype property because of a "datatype and annotation property ambiguity" in the source foaf ontology (see <https://mailman.stanford.edu/pipermail/p4-feedback/2011-July/004010.html>). Other ontologies (e.g. SOSA, <http://www.w3.org/ns/sosa/>) use foaf:name as an annotation property.
  - Continuous Integration / Quality Assurance
    - <https://github.com/w3c-lbd-cg/bot/issues/12>
    - It might make sense establish an automated way to check a commit on consistency prior to merging it into the master branch.
  - Multiple languages
    - <https://github.com/w3c-lbd-cg/bot/issues/14>
  - Cardinality restriction on interfaces

- <https://github.com/w3c-lbd-cg/bot/issues/20>
- Mads: Cardinality restriction of interfaceOf is now 2. I think it would be better if it was minimum 2. A cold bridge can for example be an interface between a space, a window and a wall.
- Where is the docs
  - <https://github.com/w3c-lbd-cg/bot/issues/25>
- Should w3id.org/bot forward to <https://w3c-lbd-cg.github.io/bot/> when header = html?
- bot:Element and bot:Zone are stated to be disjoint classes but they are also disjoint with bot:Interface
- bot:Space, bot:Storey, bot:Building and bot:Site should also be disjoint
- PROJECT ontology
- PRODUCT ontology
  - Alignment to e-commerce ontologies
    - <https://github.com/w3c-lbd-cg/product/issues/2>
  - ifcOWL alignment
    - <https://github.com/w3c-lbd-cg/product/issues/3>
  - DogOnt alignment
    - <https://github.com/w3c-lbd-cg/product/issues/4>
  - SOSA alignment
    - <https://github.com/w3c-lbd-cg/product/issues/5>
- PROPS ontology
  - Discussion about PROPS-PSET ontology (collection of samples)
    - <https://github.com/w3c-lbd-cg/props/issues/2>
  - Requirements with relation to Properties Ontology
    - <https://github.com/w3c-lbd-cg/props/issues/3>

## Previous minutes

[https://docs.google.com/document/d/1aDcXfWSIDtwLpV5F1hTA2le3X1vt64if\\_-8a9G2xxiM/](https://docs.google.com/document/d/1aDcXfWSIDtwLpV5F1hTA2le3X1vt64if_-8a9G2xxiM/)

## Next Call

Live in LDAC London.