

OEO Developer Meeting #27

Pads:

- Pad to this meeting: <https://etherpad.wikimedia.org/p/oeo-dev-27>
- Pad for next meeting: <https://etherpad.wikimedia.org/p/oeo-dev-28>
- Notes from last meeting: <https://etherpad.wikimedia.org/p/oeo-dev-26>

Date: 04.11.2021, 10:00 -- 12:00 a.m.

Participants: Mirjam, Carsten, Martin, Vera, Ludwig, Adel, Lukas, Kai, Christian, Janna

- moderator: Mirjam
- protocol: Christian until 11:08,
- next meeting organiser: Kai

Preparation:

- Read last protocol:
<https://github.com/OpenEnergyPlatform/ontology/wiki/OEO-developer-meetings>
- Check issues for next release:
<https://github.com/OpenEnergyPlatform/ontology/milestones>
- Load software (GitHub, git, Protégé, DFN)

Agenda

- Notes from dev meeting 25 and 26 are still missing in the wiki -- upload pls
 - CH is uploading it
- Maybe issue: <https://github.com/OpenEnergyPlatform/ontology/issues/492>: Should we include more derived predicates in the ontology to ease RDF data description (?) Carsten and Patrick would prepare this.
 - attendance of JH and MG required
 - JH: create shortcut and allow these to be translatable, then it's fine - more usable for linked data use case and aok
 - JH: create module for just this kind of shortcut predicates. as long as we make clear what the translations of these shortcuts are, there is no problem
 - PK: ontology structure is set by us. people instantiate this structure and have to do so, but that shouldn't be the case.
 - setting up a dataset of 3 wind turbine a,b,c
 - wind turbine a has hub height a
 - in a second tripe i can say what hub height a is
 - I cannot say that turbine a has specific hub height with one triple
 - it would be practical to have specific relationships. has_property

is a generic relation.

- JH: this is a use case question. what are node types and what are edge types?
 - excel tables
 - rdf data - very rare at the moment, but with possibly huge potential. using the oeo as implicit data format
 - MG:
 - Example of RDF usage (note the replaced OEO-IDs):
 - `:turbine_a a OEO:`wind_turbine`.`
 - `:turbine_a OEO:`has_quality` :hub_height_of_turbine_a;`
 - `:hub_height_of_turbine_a OEO:`has_quantity_value` _:2.`
 - `_:2 OEO:`has_value` 125.`
 - `_:2 OEO:`has_unit` UO:meter(?)`.
 - Will this create a double structure?
 - we'd prefer that it's rather simple
 - nevertheless we need to talk about this
 - if we don't use the oeo for rdf triples we're missing out big time
 - proposal remove property from class
 - disregarding the effort: would this create a benefit?
 - JH: this is duplication which is why we should create them as shortcut notations. shouldn't be too much work. finite set of shortcut relations. they are core functions of the domain. so it's not so serious, but just needs to be well documented.
 - PK on the motivation:
 - we're interested in storing data. we always have classes, which we are talking about. dataset contains description of those classes. then we have attributes to those classes. this is our daily business. having the terms we're using conformant, but also the attributes. we want those to be ontology conform. IF annotation becomes too complicated, we're losing a lot of support for this. That's why it's very relevant in my opinion.
 - MG: we might be mixing two use cases. users won't read xml databases. normalized relational databases are inherently unreadable. storage and usage are different things. maybe simplifying the graph is not the right approach, but simplifying the access to the graph.
 - agreed. no matter the solution, the issue remains relevant
 - JH: solving the label problem with shortcuts still good approach
 - MG: yup, just be careful. Hiding behind properties could result in loss of information
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- we need a list of requested shortcut relations?
 - no just an example for now
 - PK: how do we propose to store this example information in a triple. that will be very helpful.
 - JH: owl might be reducible into a graph as rdf representation, but you end up with clunky construct without the finesse of the original

language.

- PK: aha, both things, RDF and ontologies, are not the same. we might not need the links between the classes within the ontology.
 - JH owl gives you language for defining things. should for the linked data use case we should employ shape constraint language SHACL. this would be a different layer.
 - PK: thx all. No idea about the ideal solution, but i trust in you.
 - CHK: SHACL discussion is a larger discussion. bigger than possibly our current project. so maybe a good follow-up project. rdf based technology database. Let's talk about that some more! Maybe let's talk about that more next week.
 - Implement the example shortcut to bring the discussion a bit more into practice
 - list of wanted shortcuts would also be nice to get an idea of how many shortcuts we're talking about
 - only concerning technology data. say 100 technologies (conversion, creation, consumption, transport)
 - each of those classes would be defined by attributes, many of them being the same (like investment cost)
 - very rough estimate 5 times 100
 - depends a little on how generically we can do this
 - should be easy to compile a first list
 - MS: might get difficult, but worth trying, because of promised usability.
 - Conclusion: talk about it again in 2 weeks, then maybe implement "hub height" shortcut and see how it works, --> add rotor diameter
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- Open issues ready for implementation
 - #889 space requirement - MS
 - #892 rotor diameter - CHK
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- From last meeting hydrocarbons:
<https://github.com/OpenEnergyPlatform/ontology/issues/811#issuecomment-954891433>
 - discussion about prestructure <https://etherpad.wikimedia.org/p/oeo-dev-issue-922>
 - which classes need to be added? which classes have to be modified?
 - ideally use structure that we have
 - include liquid, solid, gaseous fossil fuels classes
 - same for renewable, bio, syn fuels, combustion fuel
 - LE and KS take care of it!
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- From last meeting @Hedda
 - Meta Issue: Collection of new OEO terms originating from LOD-GEOSS @Hedda

- <https://github.com/OpenEnergyPlatform/ontology/issues/822>
 - Capacity factor
 - entity/continuant/generically dependent
continuant/information content entity/quantity value
 - entity/continuant/specifically dependent continuant/quality
 - entity/occurrent/process attribute/ (emission factor)
- Extensions to existing concepts:
 - Variable operation & maintenance costs
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - *suggestion: Variable costs are a company's costs that are associated with the number of goods or services it produces. A company's variable costs increase and decrease with its production volume.*
 - Cost of Equipment
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - Cost of grid connection
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - Cost of rent of land
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - Cost of decommissioning
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - Other costs
 - entity/continuant/generically dependent
continuant/information content entity/quantity
value/economic value/cost
 - Investment costs:
 - *Capital investment costs means costs, beyond the research and development phase, associated with capital improvements, including the acquisition and development of land, the design and construction of new facilities, and the making of renovations or additions to existing facilities.*
 - Fixed operation and maintenance costs:
 - *A company's fixed costs are costs for operation and maintenance that do not vary with the volume of production. Fixed costs remain the same regardless of whether goods or services are produced or not. Thus, a company cannot avoid fixed costs.*
 - Delivery costs (for materials, energy carriers):

- *Delivered costs for a product or service refer to the total unit cost of a product or commodity delivered to a certain market, city or customer. It is normally composed of all associated transport costs and the unit cost of production for that product.*

- Specific power
 - entity/occurrent/process attribute/power
 - specific separate?
- Lifetime
 - entity/continuant/specifically dependent continuant/quality
- Construction time
 - entity/continuant/specifically dependent continuant/quality