

OEO Developer Meeting #39

Pads:

- Notes from last meeting: <https://etherpad.wikimedia.org/p/oeo-dev-38>
- Pad to this meeting: <https://etherpad.wikimedia.org/p/oeo-dev-39>
- Pad for next meeting: <https://etherpad.wikimedia.org/p/oeo-dev-40>

Date: 16.06.2022

Participants:

- moderator: Janna
- main reporter: Janna
- next meeting organiser: Lukas
- developers with affiliation:
- Hannah (Öko-Institut)
- Ludwig (RLI)
- Janna (OvGU)
- Markus (OVGU)
- Alex (OvGU)
- Christoph (RLI)
- Lukas (Öko-Institut)

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)

Agenda:

- It's a public holiday in some parts of Germany!!
- @JH:
- *I added these as proposed topics: Protégé-Bug, has Institution (role), "extended" release*
- *Feel free to decide concerning inclusion/exclusion from agenda.*
- *Total time estimate always contains a 5-min-buffer.*
- OK great! Thanks :-)
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(~30 min) Bug in Protégé leading to data-loss when annotating axioms directly [MR]

- - <https://github.com/OpenEnergyPlatform/ontology/issues/1179>
- (5 min) Short explanation of bug + steps to counter it
- Two approaches to add annotations: at class level or at axiom level
- Adding at axiom level results in the axioms being lost on the *subsequent* save of the file (not the first save)
- Two things to decide on: how to proceed in the meantime until the bug is fixed, and how do we treat potential lost data in the past.
- (5 min) Estimation of extent of effects (aka how often is this feature currently used)
- Bug seems to relate only to files saved in RDF/XML (i.e. mainly imports modules)
- There seem to be fewer than 15 of these.
- Workaround for these modules will be to attach annotations to the class/object property directly rather than the axiom
- Alternative option "proceed with caution"
- Question: is it a problem with Protege really or with switching branches while protege is open? Workflow: close Protege, switch branch, open Protege... This avoids other problems, but this particular problem is reproducible without switching branches.
- Would a different format work better? RDF/XML vs. Manchester syntax. But, general class axioms can't be saved in Manchester syntax.

- There are no guidelines about at which level to add the annotations. Should we have a general agreement to always use class-level annotations? Warning that tools for browsing ontologies likely do not show axiom annotations.
- Additional guidance would be nice about saying in the annotation what happened in the change, which for example Lukas always does.
- Proposal: move all the currently affected axiom annotations to class-level annotations. (agreed)
- (15 min) Discussion concerning treatment of potential data already lost (cost-benefit of retrieval)
- Should we look carefully at the Git commit history in order to find any potentially lost annotations?
- Not needed because even accidental changes would have been seen in the pull request. Several such issues occurred in the past and were picked up on peer review.

das a

(~25 min) `Range` of `has Institution (role)` (DRY vs duplicating structure) [MR, LE, ?]

- <https://github.com/OpenEnergyPlatform/ontology/issues/1161>
- (5 min) Short explanation of issue
- Contradiction from current axiomatic structure was resolved by using organisational role for the axiom involving the institution. We could make this the general solution by relabelling has institution to has organisation, simplifying the representation.
- (15 min) Decide: Relabel of `has Institution` vs duplicating structure vs smart 3rd way
- Agreed to go with the simplifying suggestion rather than the duplicating option.

(~15 min) Release an "extended" version containing redundant axioms, too? [MR, ?]
@JH maybe the OVGU-meeting is more suitable, as this is mainly technical stuff?

- touches:
- `SubClass` axioms needed?
<https://github.com/OpenEnergyPlatform/ontology/discussions/966>
- Inference of domain+range
<https://github.com/OpenEnergyPlatform/ontology/issues/1157>

- ROBOT provides to "relax/expand" axioms. So, we could provide a fullgrown version for users who don't have access to reasoning?
- The step to add the relaxed axioms could be added to the release process.
- We already have a release version that is closed under logical inference. But this will contain many additional axioms. <-- will be oeo-full-inferred or materialized <--- was delayed by the inconsistency addressed earlier.
- The proposal is for something in between specifically for subclasses and domains+ranges.
- We also talked about having a released merged single file version with all imports realized in the single file. <-- oeo-full release, not displayed on OEP yet.
- Nobody uses the OEO viewer from the development branch.
- OEO viewer will NOT work from the full-inferred release. This materializes all the subsumption relations, including that all classes are subclasses of Entity for example - completely indirect subsumption relations needed for other purposes but not advised for viewing.
- So we DO need an additional file with just the viewing-friendly subsumption relationships.
- Further discussion to proceed within the OvGU team meeting
- **~ 5min [INFO/ORGA] Release process [CM]**
- from oeo-dev-37
- guideline for review needed - has been updated now.
- changelog, reasoning in protégé ...
- <https://github.com/OpenEnergyPlatform/ontology/wiki/How-to-release-a-new-ontology-version>
- Action for next release is to try out having Adel do the part that used to be dependent on Martin on the OvGU side. Update release documentation to refer to both Adel and Martin.
- **~ 5min [ORGA] Process: How to join dev-meetings [CM]**
- "Everyone is invited to attend the meetings" - no link given?

- <https://github.com/OpenEnergyPlatform/ontology/wiki/oeo-dev-meeting-plan>
- Should be via the mailing list ? People who are interested should join the mailing list, send a short introduction via the mailing list, and then the next meeting organiser should add the person to the calendar invite which gives the connection details for the meeting.
- Need a way for people to request joining the mailing list?
- Makes sense to bundle this with the open energy family and not just the ontology
- Need to create an in-route for new members of the community across the full family of resources
- Could we solve this with a GitHub issue as first point of contact?
- GitHub issue might be missed, also having the community-related requests archived with the project-related content might be strange
- What speaks against having the meeting link public? Risk of having completely not appropriate joiners.
- Action: Ludwig to take the issue away and figure out the best publicly advertisable access route for new members to join and get access to the meeting links, mailing lists etc. To bring back to next meeting.
- <https://github.com/orgs/OpenEnergyPlatform/teams/oeo-community-manager>
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- **Question about guidelines for how specific or detailed we make the definitions:**
- We use Aristotelian definitions - start from the parent class and then say what differentiates this particular class from other members of the parent class. Other information can be added in examples, elaborations, comments etc.
- Definition should be as long as it needs to be and this is part of the discussion process
- as simple and straightforward as possible to achieve its goals
- further detail in comments, links
- anti complexity intuition - to keep it as usable as possible
- long definitions tend to define not only the concerning concept
- Guidance on the wiki:
<https://github.com/OpenEnergyPlatform/ontology/wiki/Principles-for-Definitions>
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To continue from last meeting:

Scenario projection: [HF, other domain experts]

<https://github.com/OpenEnergyPlatform/ontology/issues/970>

Scenario projection editor note / example: A scenario projection is an intentional process (with human participation): A scenario is either created or selected, its assumptions are translated into data sets. These datasets are quantified and serve as inputs to a model calculation which is applied to quantitatively project one or more variables of interest into the future.

(Intentional: a research question is basis for the projection to be done)

Suggested definition: A scenario projection is an intentional process in which output (endogenous) data of interest are quantified for future points in time using one or more model calculations based on a scenario.

- Discussion: should we broaden the definition to also include back-casting projections of the past ?
- Back-casting is a separate entity for the ontology, not the same one as scenario projection, could be added, but should then have a different definition. Scenario is strictly future defined.
- Is 'applied to a scenario' the best formulation for what is being done? We apply model calculations to assumptions that are expressed in a scenario.
- used 'based on' rather than 'applied to'
- Scenario projections are tied to just a single scenario at a time. If you take multiple scenarios into consideration, you still have to first combine them to form an additional, separate, composite, single scenario, before making a scenario projection. We could add a separate class - scenario creation, where we describe this process.
- Do we want the 'based on' relationship to extend from the specific scenario on which the projection is based, to the other scenarios that this scenario was based on?
- Complicated, because different assumptions vary very specifically.
- The additional relationships between scenarios that are combined is not 'based on' but maybe something like 'derived from'??? (derived from in this case would have at least two sub-properties - 'alteration of' and 'combination of')
- If these properties between scenarios (perhaps for the knowledge graph) we should log a separate issue for them.

add process of **scenario creation** to ontology? - Need a separate issue.

Example: How do future GHG emissions evolve in a world where current policies and measures are continued, GDP grows strongly, population increases slowly, and fuel prices remain at high levels.

Process of translating a verbal assumption into a numerical representation in a scenario.

Time scale is an important dimension (target year / base year / year of projection (now))

--> Scenario projection is now ready for implementation. Other issues will be logged separately.

Model calibration / parametrisation [HF, other domain experts]:

<https://github.com/OpenEnergyPlatform/ontology/issues/1040>

Is there a common term which modellers commonly use that describes the setting the parameters / assumptions in their models in a way so that they reflect the narrative of a scenario?

In German we use usually the phrase "ein Modell für eine Szenario parametrisieren", but I don't know whether the word by word translation "to parameterise a model for a scenario" is used in English-speaking modellers in the same way.

- parameterisation is the process of translating assumptions into something the model can use. -> part of the model and scenario creating process

- E.g. if you have a coal powerplant in your model, you have to say which powerplant has to shut off at which date.

- in contrast, model calibration is tweaking so that the model reproduces the known data (e.g. historical) as far as possible. -> part of the model validation and verification process, but the calibration step involves making changes e.g. to parameters etc. after validation/verification in order to improve the fit, iteratively

Question about spelling of 'parameterise' or 'parametrise':

Select one of these two options:

- <https://en.wiktionary.org/wiki/parametrise>: To describe in terms of parameters.
- <https://en.wiktionary.org/wiki/parameterise>

<https://dict.leo.org/englisch-deutsch/parametrise>

Put the other one as a synonym.

- 'parameterise' more popular on Google Scholar (and Ngram) - more than double the number of hits than 'parametrise'
- So we agree to use that spelling and if needed to change it later.

--- Ready for implementation (HF)

From OEO DEV 37 (were not addressed in 38):

- **Measurement device (from OEO dev 36)**
- As a separate class parallel to e.g. energy converting component?
- continuent-> independet continuant > material entity -> object->artificial object -> measurement devices.....
- In OBI:
https://www.ontobee.org/ontology/OBI?iri=http://purl.obolibrary.org/obo/OBI_0000832
- Defined as a device in which a measure function inheres
- Many subclasses including 'radiation measurement device' which may mean something different to what we are trying to define
- Their 'processed material' and 'device' classes probably come close to our 'artificial object' class.
- As they do not distinguish objects from material entities in this hierarchy, perhaps we should cross-reference these classes rather than importing them.
- Proposed def: A measurement device is an artificial object that is used in some measurement process.
- The measurement process has output some measured data. Do we have 'measurement process' in the ontology already? Seems not?
- All measuring instruments are subject to varying degrees of instrument error and measurement uncertainty

-- Ready to implement measurement device, look at definition of measurement process later, but this is well understood in general.

e.g.:

variable wavelength detector:

https://www.ontobee.org/ontology/OBI?iri=http://purl.obolibrary.org/obo/OBI_0000501