**OEO Developer Meeting #16**

Pads:

- Notes from last meeting: https://etherpad.wikimedia.org/p/oeo-dev-15
- Pad to this meeting: https://etherpad.wikimedia.org/p/oeo-dev-16
- Pad for next meeting: https://etherpad.wikimedia.org/p/oeo-dev-17

**Date:**

- 2020-04-14, 14:00 - 18:00

**Participants: Christian, Carsten, Lukas, Michaja, Simon, Janna, Vera, Mirjam, (Martin - starting 14:37)**

- moderator: Christian, Janna
- protocol: Janna
- next meeting organisier: Mirjam, Lukas

**Preparation:**

- Read last protocol: https://github.com/OpenEnergyPlatform/ontology/wiki/OEO-developer-meetings
- https://etherpad.wikimedia.org/p/oeo-dev-15
- Check issues for next release: https://github.com/OpenEnergyPlatform/ontology/milestones
- Already prepare for next meeting: fill out dudle.
- Load software (GitHub, git, Protégé, DFN)

Agenda

**OEO paper accepted at Energy and AI!**

- A thank you all contributors \o/++
- licensed  unter CC-BY-4.0 ++
- proofreading upcomming sometime hopefully soon.

**Housekeeping**

- CH updated the release documentation, adding to have a look at stale/merged branches
- https://github.com/OpenEnergyPlatform/ontology/branches/stale

- CH contacted creators of stale branches and asked for deletion
- JH to write to Martin to confirm merging and deleting his and Meisam's branches.
- exceptions are feature/geo and  feature/sector-and-sector-concept

**Focus of the upcoming release 1.5.0 on May 03, 2021 @all**

- Discussion what can realistically be achieved.
- Note that there are subgroups working on these issues as well.
- Decide on subgroups in this meeting
- Topics:
- Finish energy subclasses and energy transformation processes - would be nice to include!
- Finalize FIBO terms - feasible good milestone
- Some ENVO terms? just do a mapping, that is feasible
- Finish scenario factsheet terms? - evaluate which terms are still missing
- Some IAMC terms?
- Renaming master branch (see below)

**FNE ontology workshop @CH**

- CH will hold a workshop on ontology development and is looking for a simple practical example.
- what is a relatively easy/straight forward/clean/elegant issue to explain things by?
- ??? help plz
- energy classes (wind energy) issue that initiated the discussion
- (fallback option CH will have to find one by himself)

**renaming master to main** @CH

like always on the internet there are people expressing opinions in all caps and fussing over a small naming issue, but there are arguments as well.

arguments for changing

- it is in fact associated like this in the US as a counterpart term to slave in tech world.
- Using this analogy has obvious problems in a society with a history in slavery.
- compare this term to "Führer" - not necessarily ill-meaning, but an avoidable term

- feelings and interpretations are subjective but relevant
- basically the motivation is to be inclusive, analogous to gender adapted language. it won't bring about world peace, but it's a welcoming gesture
- github is going to change this default setting, so it (main) will be the future de facto standard
- main - more intuitive and easy to remember (main code version)

Opposing arguments

- no technical necessity
- not always associated with slavery to many non native speakers of english
- includes me
- includes github creator in 2005 (master from master recording)
- understanding is blocked when different terms are used
- could complicate dependencies
- OEP links need update - not true anymore
- continuous integration need update
- developers need to perform a small update as well

general info

- master/slave is a communication model where one device controls one or several others.
- generally suggested naming change to primary, secondary
- this is an old concept and not the one used for naming branches
- linus torvalds approves of renaming of debated terminology
- github founder wants renaming (master origin to main and upstream)
- manual: https://www.git-tower.com/learn/git/faq/git-rename-master-to-main/
- GitHub.com links that contain the deleted branch name "master" are already redirecting to "main."
- GitHub pages have been updated to deploy from any branch.
- GitHub has added user, organization, and enterprise settings so developers can set the default branch name for all newly created repositories.

Opinions and discussion please
-> how should be proceed
in favour: ++++ ++ ++ ++
against:
neutral:00

@Janna implementation, discuss implications with Martin. Timing on/after next release, before next dev meeting. Let us know. Documentation needed for the local changes that people need to make in their locally cloned git repositories.

**TOPs for the OEO-SC 8** on 2021-04-22 (Thursday next week)

- enter suggestions here
- Mention that the OEO paper has been accepted!!

**Content**

~~0. add policies + political measures @Hannah, @Lukas ->~~ postponed

1. (target fulfillment scenarios) @Vera, @Simon

- https://github.com/OpenEnergyPlatform/ontology/issues/28
- PPT: https://onedrive.live.com/view.aspx?resid=8F40A0EE4CC43D4C!111878&ithint=file%2cpptx&authkey=!AIZlIA6mUQW0-rg

'written name' seems very generic. maybe just use is_about relation? subclass of textual entity.
Vote on (re)including 'written name' from IAO
in favour: ++ (decision in favour)
against:
neutral:

'description'- use existing 'data descriptor' or add new class 'description' as subclass of textual entity.

dimensions to cover. measurability, quantitative/qualitative tagets
goal, target, objective

option 1: add ‘goal’ def (based on FIBO): A goal is a role of a desired state that a person, organization, scenario or system envisions or plans, or to which it commits, in order to achieve this state.

we're missing the concept of a state/quality of a system

in favour:+++++
against:
neutral: 00
-> don't implement; discussion continues

scenario: A scenario is an information content entity that contains statements about a possible future development based on a coherent and internally consistent set of assumptions and their motivation.

goal description: A goal description is an information content entity that contains statements about a desired future state of a system that a person or organisation envisions or plans, or to which it commits.

in favour:++ +++++ decision in favour
against:
neutral: 0

An objective function is an information content entity stating the function that should be maximised or minimised to solve the problem.
-> not the problem, but some problem

for future Meetings / issue discussions: revisit 'objective' and 'target'
https://github.com/OpenEnergyPlatform/ontology/issues/725

option 2: also add ‘target’ and / or ‘objective’
•‘target’ is legally binding, ‘goal’ is only a desired result (in the European legislative context)
•‘objectives’ are specific steps to reach a goal, ‘goals’ are general guidelines
•add a parent class to bracket all three terms together

@Vera implement decisions of #1 and add a question in the issue for target

**### coffee break ###**

**2. pre-composition vs. post-composition** (@Mirjam, @Janna)

- funding classes (@Mirjam)
- ENVO class mapping @JH (JH notes => that not a lot of progress has been made on implementing this mapping for the terms we already discussed, but we can potentially benefit from discussing some of the energy-related terms in https://docs.google.com/spreadsheets/d/1EJ_c_t1WQhi_hLvAe8RIhUqZ0tdhKpKfce53fwXX44A/edit#gid=0 )

-> postpone to **@ topic for next meeting**

3. **Heat an other Energy Subclasses** (@Michaja)
https://github.com/OpenEnergyPlatform/ontology/issues/393
- and also other energy-related issues e.g.
  - https://github.com/OpenEnergyPlatform/ontology/issues/593?

Summary of issue #393
(https://github.com/OpenEnergyPlatform/ontology/issues/393#issuecomment-744516255=
1. We could add a new heat class to show the ambiguity of heat. The parent class could be energy transformation and the definition can be derived from that comment:
   "Heat", although it strictly speaking describes a mode of energy transfer, not an energy, is included as a colloquialism for "thermal energy", following everyday usage.
   Then we could use heat as alternative term for thermal energy and add an editorial note which points to the properly defined heat class.

2. We delete derived heat from the suclasses of thermal energy.

3. The definitions of the other suclasses need to be rewritten. So far we have:
   Geothermal energy is thermal energy that is available as heat emitted from within the earth's crust.
and
   Solar thermal energy is thermal energy from solar radiation.

4. Furter suggestions for classes:
   Ambient heat is thermal energy that is naturally around us in its diffuse and extended form and emanates from a diversity of heat sources, including earth, water, or air.

   District heat is thermal energy that is generated in a centralized location and distributed through a system of insulated pipes for residential and commercial heating requirements such as space heating and water heating. The heat is often obtained from a cogeneration plant burning fossil fuels or biomass, but heat-only boiler stations, geothermal heating, heat pumps and central solar heating are also used, as well as heat waste from nuclear power electricity generation.

At OEO-dev-15 (https://etherpad.wikimedia.org/p/oeo-dev-15) this happened:

- **geothermal energy:**
  - A (primary energy process):
    Geothermal heat transfer is a heat transfer from the earth crust to a transportable material entity. E.g. a liquid or gas.
  - B (transformation process):
    ... What is the boundary between ambient heat and geothermal heat?
    Germany definition UBA: Everything up until 400m ambient geothermal is below ambient includes river and ground temperature.
    - - deep and close to surface. close to surface is part of ambient

    appropriate question is how temperature gradient is extracted rather than where it comes from. is it possible that energy is geothermal as well as ambient?

X is a thermal energy that can be extracted/captured from naturally occuring or artificially produced

location, intent, harvesting process

Geothermal thermal energy is an X that can be extracted/captured from Y
Ambient thermal energy is an X that that can be extracted/captured from Z

Waste heat

Homework:
* What are possible points of distinction for energy (e.g. location: geothermal vs ambient, producer: natural vs anthropogenic, intent: intended vs waste, ...) @CH

https://www.umweltbundesamt.de/themen/klima-energie/erneuerbare-energien/geothermie
(DeepL translation):
Near-surface geothermal energy is the use of geothermal energy from depths of up to 400 metres. Heat from this depth must be raised to a usable temperature level due to the still relatively low temperature. Heat pumps are therefore required to heat buildings with near-surface geothermal energy, for example. Near-surface geothermal energy from the ground counts as ambient heat, along with environmental heat from the air or from surface waters.
Minority report (MP): This is just ambient thermal energy labeld "near-surface geothermal energy". Unless one gets hung up on lables, there's little problem in classifying it at such (uses heat pumps).

Eurostat's definitions:

- https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=33016556&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=2
- https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode

=EN&IntKey=16480085&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=2

- Heat energy at a useful temperature level, extracted (captured) by means of heat pumps that need electricity or other auxiliary energy to function. This heat energy can be stored in the ambient air, beneath the surface of solid earth or in surface water. Values shall be reported using the same methodology as the one used for reporting heat energy captured by heat pumps under Directive 2009/28/EC, but all heat pumps should be included regardless of their performance level.

Is that heat *before* or *after* the heat pump? Reads to me as the latter ("at a useful temperature level", "extract**ed** by heat pumps"), in which it is secondary and not primary energy. In any case: distinction by temperature level.

- C (primary energy):
  Geothermal energy is thermal energy that is released from within the earth's crust.
- D (primary energy carrier):
  rock, water
- E (relations):
  ...

- **solar thermal energy:**
  - no concensus whether it is needed or not.

- **ambient thermal energy:**
  - A (primary energy process):
    ...
  - B (transformation process):
    Ambient thermal energy transfer is a heat transfer from the ambient air to a transportable material entity.
  - C (primary energy):
    proposal from #393
    Ambient thermal energy is thermal energy that is naturally around us in its diffuse and extended form and emanates from a diversity of heat sources, including earth, water, or air.
  - D (primary energy carrier):
    earth/rock, water, air
  - E (relations):
    ...
  - No concensus on distinction between geothermal and ambient heat. CH asks expert from RLI (Jann).

- **left over topics:**
  - derived heat/district heat
    - currently equivalent classes, subclasses of thermal energy
    - rather an energy transformation process than subclass of (thermal) energy?
  - combustion energy
  - bioenergy

- ocean energy

**CH asks an expert (Jann) from RLI:** find a boundary between geothermal and ambient thermal energy as well as geothermal heat transfer and ambient thermal energy transfer

- I talked to Jann and he asked me to boil down some questions we had for him, since the issue seemed too long and ontology-specific for him to know what he could contribute
- I sent him a Mail (too late for him to respong before today), saying we wanted to include and properly differentiate
- (Geo)thermal energy
- Ambient heat (energy)
- District heat (energy)
- Industry heat
- I had trouble asking exact questions, so use this to nail down good questions
-

--> next OEO-SC meeting if that approach fails

INTERLUDE
- is the length of these meetings appropriate? Do we still have energy at this point? Is a break enough or should we abbreviate these meetings? Open question to discuss.

- web meetings for this long period is too much to take
- 2-3 max hours
- have longer break 15 minutes
- frequency higher needed to get along faster, but not realistic for everyones schedules
- someone who works on ontology continuously would help overall process
- Decision for next meeting:
- 3 hours meeting with a >=15 min break in middle
- also smaller breaks after ~45 min

**next meeting discussion:**

- How to integgrate new people into discussions in the face of shrinking oeo dev size and having to teach newcomers

**End of Meeting**
(rest is tail of topics we did not discuss anymore)

4. Continue with technologies and transformation processes (if there is still time and energy):
   - **energy subclasses:**
   - **last meetings: https://etherpad.wikimedia.org/p/oeo-dev-energy-subclasses)**
   - https://etherpad.wikimedia.org/p/oeo-dev-14
   - Missing subclasses:
   - Geothermal energy (#393)
   - combustion energy?
   - Bioenergy
   - --> define 4 classes for them:
   - A: primary energy process
   - B: transformation process
   - C: primary energy
   - D: primary energy carrier
   - E: Relations

   - Ocean Energy
   - Preparation @???
   - Overview of concepts and technologies
   - Ocean/Marine energy
   - tidal
   - https://en.wikipedia.org/wiki/Tidal_power
   - marine current
   - https://en.wikipedia.org/wiki/Marine_current_power
   - wave energy
   - https://en.wikipedia.org/wiki/Wave_power
   - Osmotic
   - https://en.wikipedia.org/wiki/Osmotic_power
   - (Ocean thermal energy)

- https://en.wikipedia.org/wiki/Ocean_thermal_energy_conversion

- Funding subclasses need "funding" suffix and funding a reclassification #246
- https://github.com/OpenEnergyPlatform/ontology/issues/246
- current state:
- funding class and subclasses have been (temporarily) deleted in PR #357
- existing relation "has_funding_source":
- Def: A relation that holds between an entity and its source of funding
- range: agent
- idea: distiguish between public and private funding
- as types of organisations / agents
- private organization: *A private organization is an organization that is not operated by a profit or a public body. It includes all businesses that are for-profit that are not government owned or operated.*.
- public organization: *A public organization is a state-run organization. It is government-controlled and is paid for by public taxation.*
- BUT: regarding funding: where does the **money** come from?
- as general terms: regarding e.g. accessibility, institution (ownership), financing... hard to find a generic definition?!

- if there is time: complete **transformative measure and policy instrument**
- https://github.com/OpenEnergyPlatform/ontology/issues/444
- check the two last comments