OEO Developer Meeting #46 2022-10-21

Pads:

- Notes from last meeting: https://etherpad.wikimedia.org/p/oeo-dev-45
- Pad to this meeting: https://etherpad.wikimedia.org/p/oeo-dev-46
- Pad for next meeting: https://etherpad.wikimedia.org/p/oeo-dev-47

Date:
Participants:

- Moderator: Eugenio
- Main reporter: Lukas
- Next meeting organiser: Mirjam
- Developers with affiliation:
    - Eugenio [DLR]
    - Lukas [Öko]
    - Alexandra [TUM]
    - Carsten [DLR]
    - Mirjam [OVGU]
    - Alexander [OvGU]
    - Christoph [RLI]
    - Ludwig M [TUM]
    - Beneharo [TUM]
    - Fabian [OVGU]
    - Hannah [Öko]

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:
Announcements

- Events - Conferences - etc.
- CHK Travels to Prague European Open Science Cloud Symposium
- MS is the new JH

Organisational

- "glossary" / list of existing OEO terms [MS, AS, EA]
    - https://github.com/OpenEnergyPlatform/ontology/pull/1319

- get feedback from CHK and other developers
  - order of colums: lables, def, IRI
- where to place the list?
  - better place on OEP instead of wiki?
- what to include/exclude in the list, e.g. BFO
- Add Letters as headers to bigger file
- markdown on OEP
- automatically updated when new release
- Separate object properties, individuals and classes ?
- Tasks:
  - Remove from wiki [EA]
  - Implement it as one file with letters as titles
  - Issue at OEP to include the file
  - Implement necessary Github Actions

Release

- next release v.1.12 planned for november 2nd
  - We skipped one release.
  - CM, AE, FN do the release, MS reviews

OEO Classes

- current situation of energy storage function. *[LE]*
  - How is it currently implemented, what problems arise with that, what are the current open tickets.
  - https://github.com/OpenEnergyPlatform/ontology/issues/1170
  - https://github.com/OpenEnergyPlatform/ontology/issues/1174
  - https://github.com/OpenEnergyPlatform/ontology/issues/1261
  - https://github.com/OpenEnergyPlatform/ontology/issues/1262
  - https://github.com/OpenEnergyPlatform/ontology/issues/1301
  - => Presentation
    - function is a subclass od disposition
    - energy storage (function) als disposition, axiomatisierung: energystorage object has function energy storage (function)
    - Use 'energy storage function' as label
    - tank: A fuel tank is a tank that stores a combustion fuel.
    - Axiom: 'fuel tank' 'has function' some 'chemical energy storage function'

Solar Meteorology

- https://github.com/OpenEnergyPlatform/ontology/issues/1076

Current status:

- Definitions:
  - direct solar radiation *is radiation that is the non-scattered **part of solar radiation** from the Sun within the extent of the solar disk only.*
  - diffuse solar radiation is *radiation that is the part of solar radiation that has been scattered by gas molecules in the atmosphere and by particles such as cloud droplets and aerosols.*
  - non scattered radiant flux density *is a **quantity value / flux density (tbd)** that measures the direct solar radiation within the extent of the solar disk only (half-angle 0.266 deg).*
  - (global radiation is the sum of direct radiation and diffuse radiation) --> alternative term of solar radiation?
  - Note: Solar radiation is the merological sum of direct solar radiation and diffuse solar radiation
- Axiom
  - Disjoint: direct solar radiation, diffuse solar radiation
  - 'non scattered radiant flux density' 'is about' some 'direct radiation'
- Where to place it in the ontology
  - As subclass of solar radiation
  - As quanity values?
  - "non scttered radiatiant flux density" as subclass of areal solar power density
- Next:
  - Direct / Diffuse / Global Horizontal radiation:
    - e.g. Direct/diffuse/global horizontal irradiation/irradiance is direct/diffuse/global irradiation/irradiance measured on a horizontal solar receiving surface
    - Axiome:
    - "An areal solar energy density (irridiation) is an areal energy density that gives the arriving energy of solar radiation per area. A synonym for areal solar energy density is irradiation."
    - "A horizontal areal solar energy density (horizontal irridiation) is an areal energy density that gives the arriving energy of solar radiation on a horizontal area."
      - same for power density, normal, inclined, vertical...
    - As a quantity value?
  - Direct / Diffuse / Global irradiation on an inclinced plane
    - eg. Direct / diffuse / global horizontal irradiation/irradiance is direct/diffuse/global irradiation/irradiance meased on an inclined plane which is defined by its azimuth and slope.
- Tracking surfaces https://github.com/OpenEnergyPlatform/ontology/issues/1088
  - Tracking sounds a lot like a process, so we should define it as such:
    - solar tracking: *Solar tracking is a process of in which a radiation receiving surface is following the path of the sun on the sky.*
    - single axis tracking: *Single axis tracking is solar tracking in which a radiation receiving surface is following the path of the sun by roting along a fixed axis. Typical axis orientations are North-South or East-West.*
    - two axis tracking: *Two axis tracking is solar tracking in which a radiation receiving surface is following the sun by rotating around two axes.* ~~*The plane is always oriented normal.*~~
  - We could additionally add something like solar tracked receiving surface and subclasses as equivalent classes:
    - solar tracked receiving surface: *A solar tracked receiving surface is a radiation receiving surface that participates in solar tracking.*
    - single axis tracked receiving surface: *A single axis tracked receiving surface is a radiation receiving surface that participates in single axis tracking.*
    - two axis tracked receiving surface: *A two axis tracked receiving surface is a radiation*