Ontology API service

Sustainability sheet

The PaN technique ontology service is a software that allows clients to expand a photon and neutron technique (PaNET) term into an equivalent search query that includes all PaNET sub-term: those that are more specific research techniques. It can also display the PaNET ontology.





Target audiences

PaN software engineers

Benefits

- Single point of entry for getting PaNET terms
- Faster and more reliable than Bioportal
- Unauthenticated access
- Can be easily plugged into existing software



Accessibility

The <u>API service</u> (1) can be accessed by anyone Source code (2)

Documentation

- For users and developers (4)
- For developers (5)
- For developers (6)

Feedback mechanism

GitHub issue tracking (3)

Licence

2-Clause BSD (7)



Competitors

- Bioportal APIs
- Possibly OWL API (8) for the owl file parsing

Technology readiness

Prototype: might need revision to accommodate more extended use of the owl syntax

EOSC integration status

A production instance of the ontology service, provided by PSI, has been on-boarded (9)



Plans and conditions for long-term sustainability

- Service will continue to be hosted by PSI via Hetzner cloud provider, as long as there are no tangible extra costs
- Code will continue to be hosted in github.com (10), likely under SciCat and ICAT organisations
- Upgrades and future developments are linked to PaNET uptake and to the MoU on FAIR data management that is being drafted by several PaN facilities



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Exploitability potential

- PaN training platform (11) is about to adopt it
- Beneficial for other search-APIs when wanting to use PaNET
- Useful for the PaNOSC data portal (12) as it can expand its current use to show the techniques tree
- Useful for facilities at ingestion time, allowing to reference the used technique with the PaNET id
- Useful to other PaN grants/projects wanting to use PaNET, e.g. <u>DAPHNE4NFDI</u> (13)
- Originally built for PaNET but could work with all ontologies

Conditions to increase exploitability

- Advertise to other PaN projects
- Include its future and further adoption by other PaN products in the FAIR data management MoU
- Explain and demo the use at ingestion to PaN facilities

Links

- https://pan-ontologies.psi.ch/
- https://github.com/ExPaNDS-eu/pan-ontologies-api
- https://github.com/ExPaNDS-eu/pan-ontologies-api/issues
- (4) (5) https://github.com/ExPaNDS-eu/pan-ontologies-api/tree/main/docs
- https://github.com/ExPaNDS-eu/pan-ontologies-api/blob/main/README.md
- https://pan-ontologies.psi.ch/explorer/
- https://opensource.org/licenses/BSD-2-Clause
- https://github.com/owlcs/owlapi
- https://marketplace.eosc-portal.eu/services/photon-and-neutron-techniques-ontology-service
- (10) https://github.com/ExPaNDS-eu/pan-ontologies-api
- (11) https://pan-training.eu/
- (12) https://data.panosc.eu/
- (13) https://www.daphne4nfdi.de/english/index.php



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