

The Helmholtz Digitization Ontology (HDO): Harmonized semantics for the Helmholtz digital ecosystem

Said Fathalla¹ // Gerrit Günther² // Leon Steinmeier³ // Christine Lemster⁴ // Volker Hofmann¹ // Pier Luigi Buttigieg⁴

¹Institute for Advanced Simulation – Materials Data Science and Informatics (IAS-9); Forschungszentrum Jülich, Jülich, Germany.

²Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany

³German Cancer Research Center (DKFZ), Heidelberg, Germany

⁴GEOMAR Helmholtz-Zentrum für Ozeanforschung, Kiel, Germany

Objectives

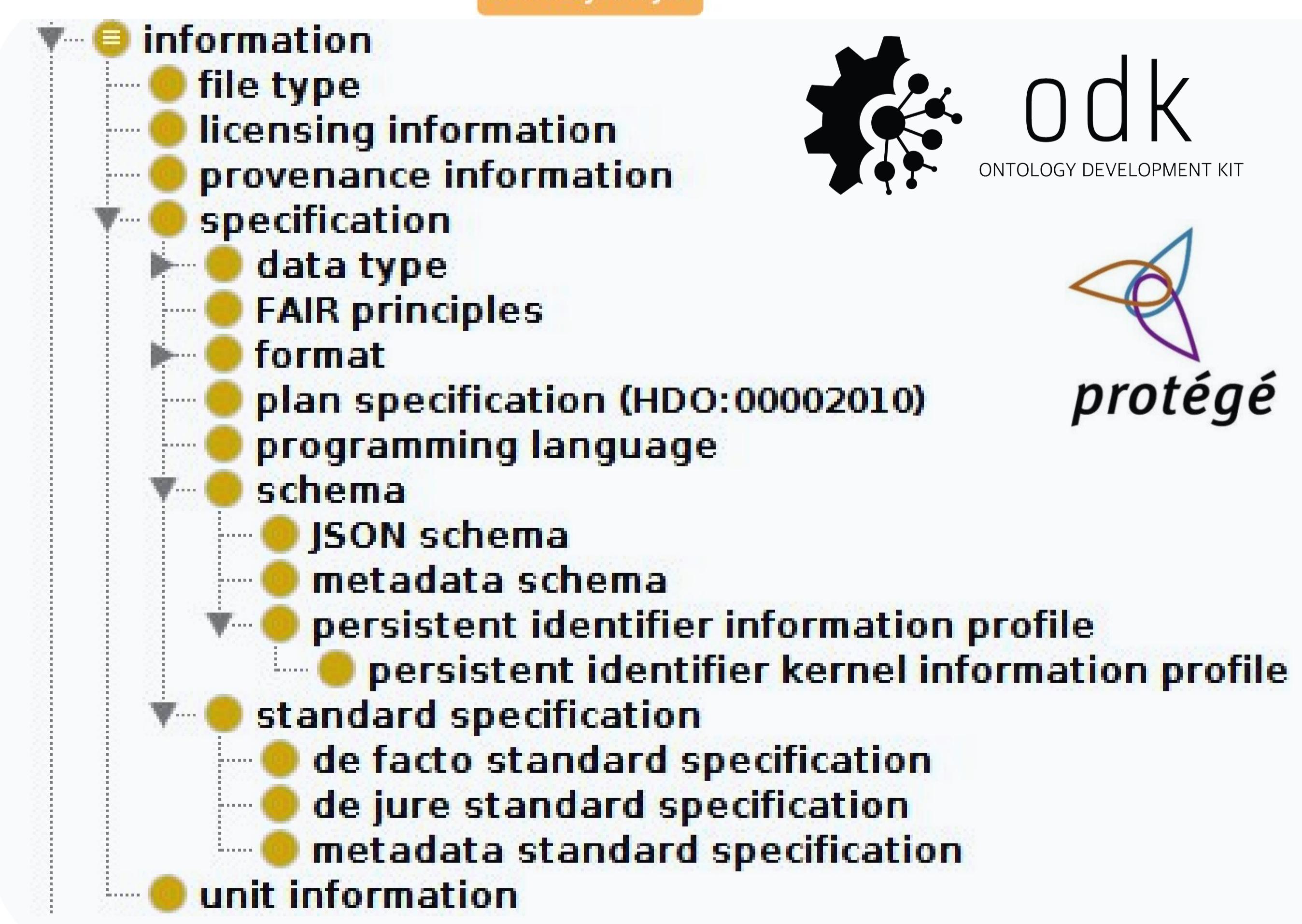
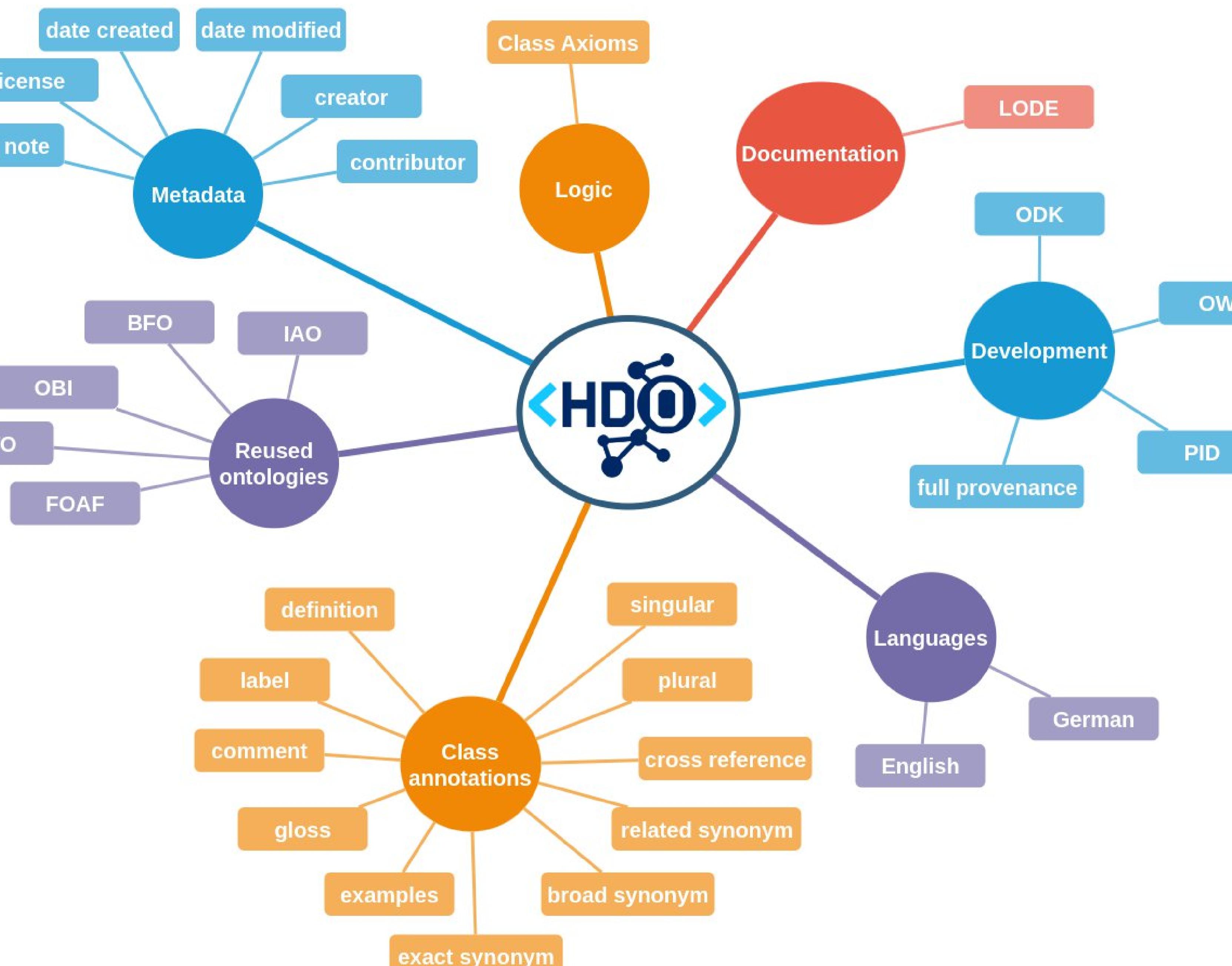
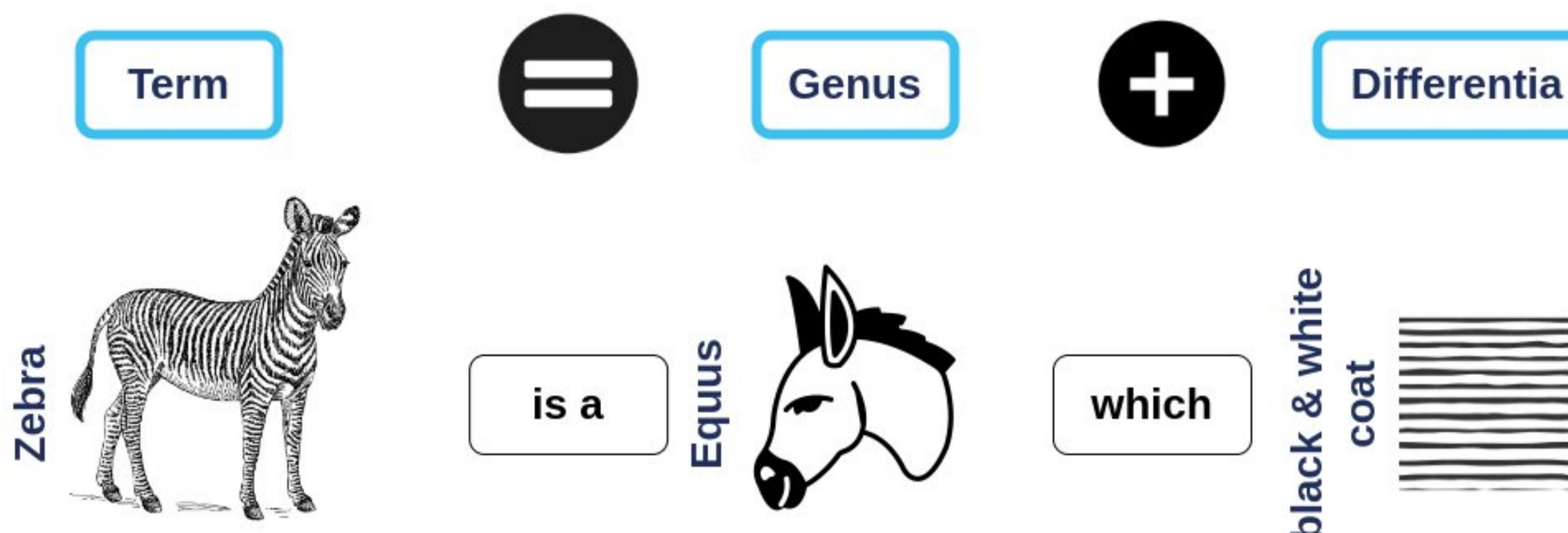
- ✓ Semantic harmonization across HMC.
- ✓ Create a machine actionable semantic artefact.
- ✓ Easy-to-understand definitions for HMC Glossary.

Scope

- ✓ HDO contains machine-actionable descriptions of digital assets and data handling processes relevant to the Helmholtz digital ecosystem.
- ✓ Serve as an HGF institutional reference for the understanding of these concepts.

Features

- ✓ Bilingual class labels and definitions (**EN** and **DE**)
- ✓ Further information, including **synonymy**, **singular**, **plural**, **gloss**, **comments**, **micro-credits**, etc.
- ✓ Definitions in **genus-differentia** form:



Development strategy

Identification of key terms

- +175 key terms
- Precise definitions and examples
- Full development provenance
- Synonyms (exact, related, broad)

Ontology implementation

- Establish class hierarchies
- Establish interconnected relations
- Add rich annotations
- Define class axioms

Release & promotion

- Managed by the Ontology Development Kit (ODK)
- Promote as HGF wide standard
- Engage stakeholders

glossary^c

back to [ToC](#) or [Class ToC](#)

IRI: https://purls.helmholtz-metadaten.de/hob/HDO_00002002

A terminology which associates terms with explanations of their meanings (i.e. glosses).

Contributors:

- <https://orcid.org/0000-0001-7764-1517>
- <https://orcid.org/0000-0002-2209-9385>
- <https://orcid.org/0000-0002-2818-5890>
- <https://orcid.org/0000-0002-4366-3088>

Term status

http://purl.obolibrary.org/obo/IAO_0000125

has super-classes

[terminology](#)^c



HDO PID

HDO GitLab