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TIB

How to find existing ontologies (Terminology Service of NFDI4Ing)

MSE Day 2023: Research field crossing activities

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Agenda

- Research Data Management
- NFDI4Ing Terminology Service
- NFDI4Ing Terminology Service Sandbox

Research Data Management (I/II)

Research data is of inestimable value (*)

- *Empowers research*
- *Advance knowledge*

Nationale Forschungsdaten Infrastruktur

New research bases on existing research data (*)

- *Transparent*
- *Reproducible*

} *Reusable*

Current situation in Germany (*)

- *Data is stored decentraly*
- *Stored temporarily*
- ***Non-standardised metadata***
- *Varied quality*

NFDi4ing

Terminology Service (I/II)

1. **Domain specific** (Engineering, Culture, Chemnistry, …) and **community specific**

2. **Evolving continously and dynamicaly over time**

3. Must be **accepted, developed** and **maintained** by a **designated community (avoid isolated solution!).** Includes a.o.
   a) promotion (make community aware of its existence)
   b) aligned with further metadata initiatives (moving away from silos)
   c) applicable in RDM (in RDM practise)

- NFDI4Ing supports terminology development and use through **introduction of engineering specific Terminology Services** for **Ontologies**

- **Ontologies** → Enabling a machine-usable, formal description of information and knowledge (more on this in the next presentation(s)).

Terminology Service (II/II)

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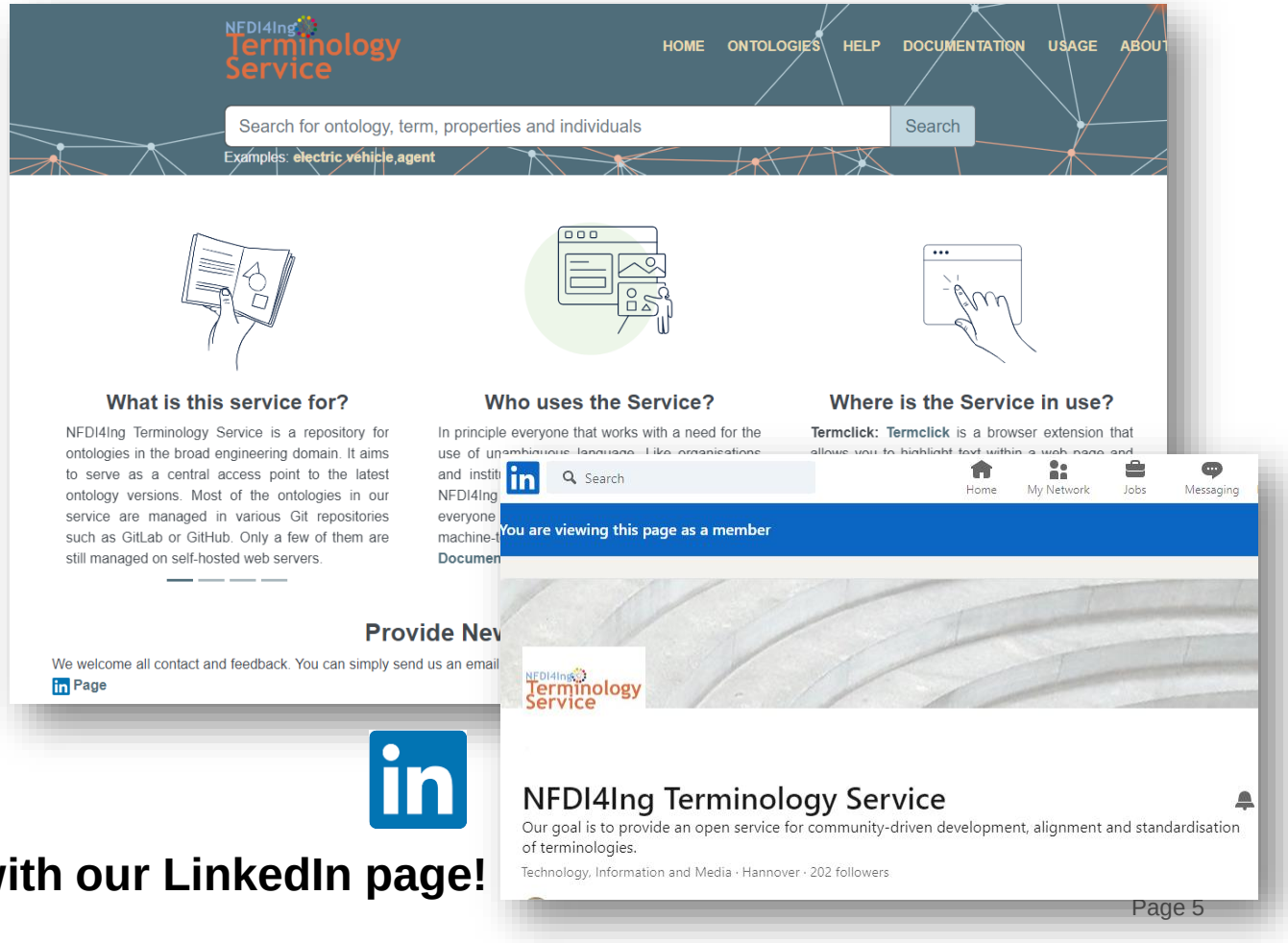
Terminology Service: a collection of tools to foster reuse of existing engineering ontologies

Functional service offer

- Freetext search searching
- (for- and within ontologies)
- Browsing and filtering
- Visualisation
- Issue tracker
- Machine to machine communication (REST interfaces)

Some statistics

1. 93 ontologies
2. ~160.000 Terms
3. ~12.000 properties



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Terminology Service (II/II)

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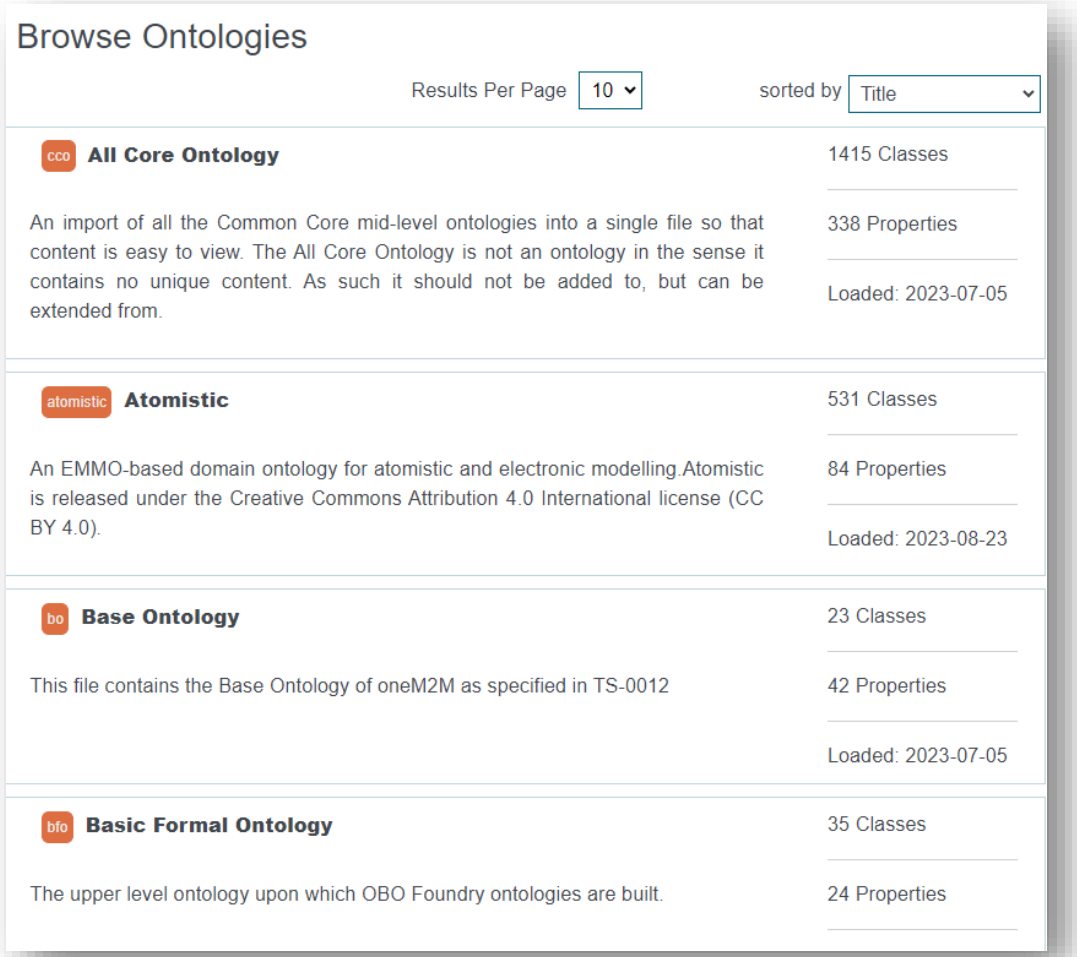

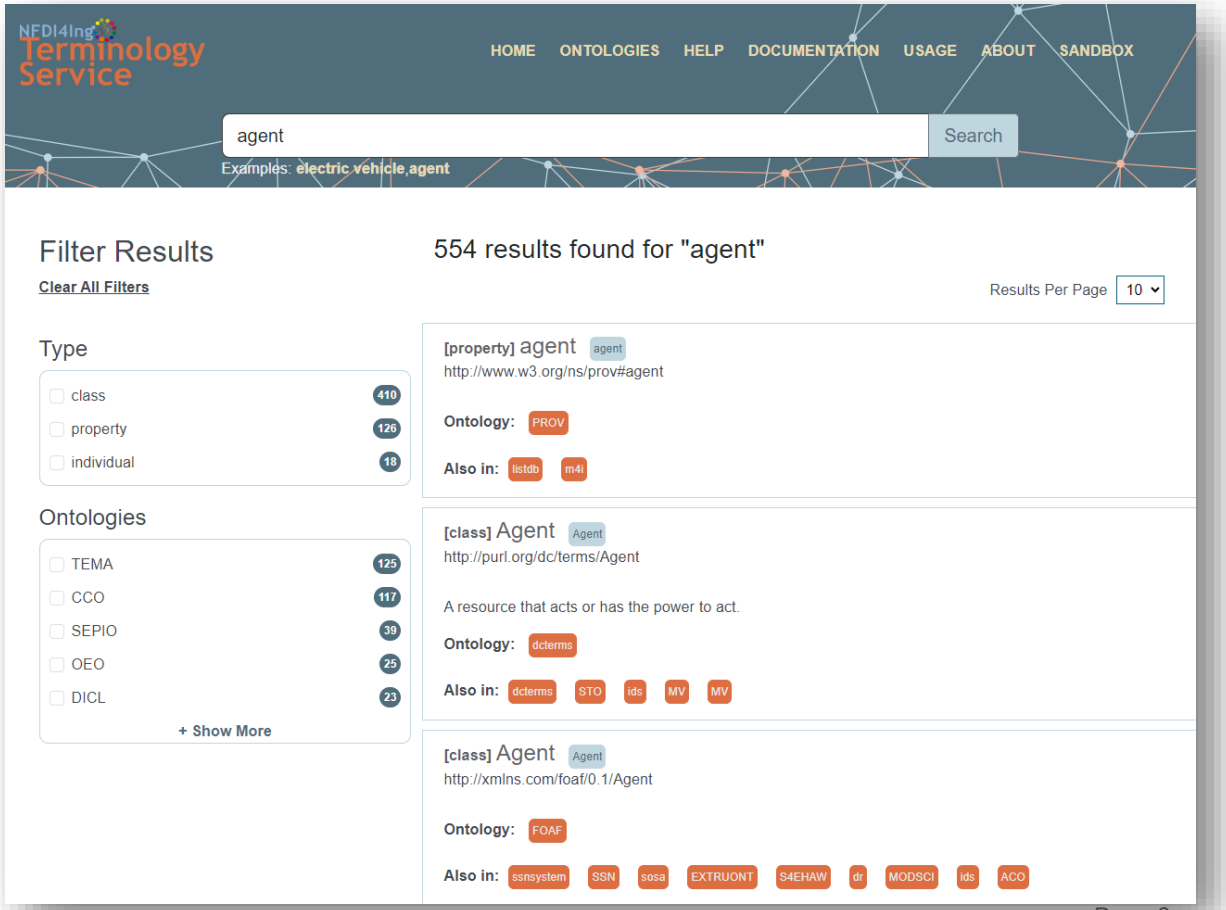

Terminology Service (II/II)

TIB TS NFDI4Ing: Metadata and Swagger

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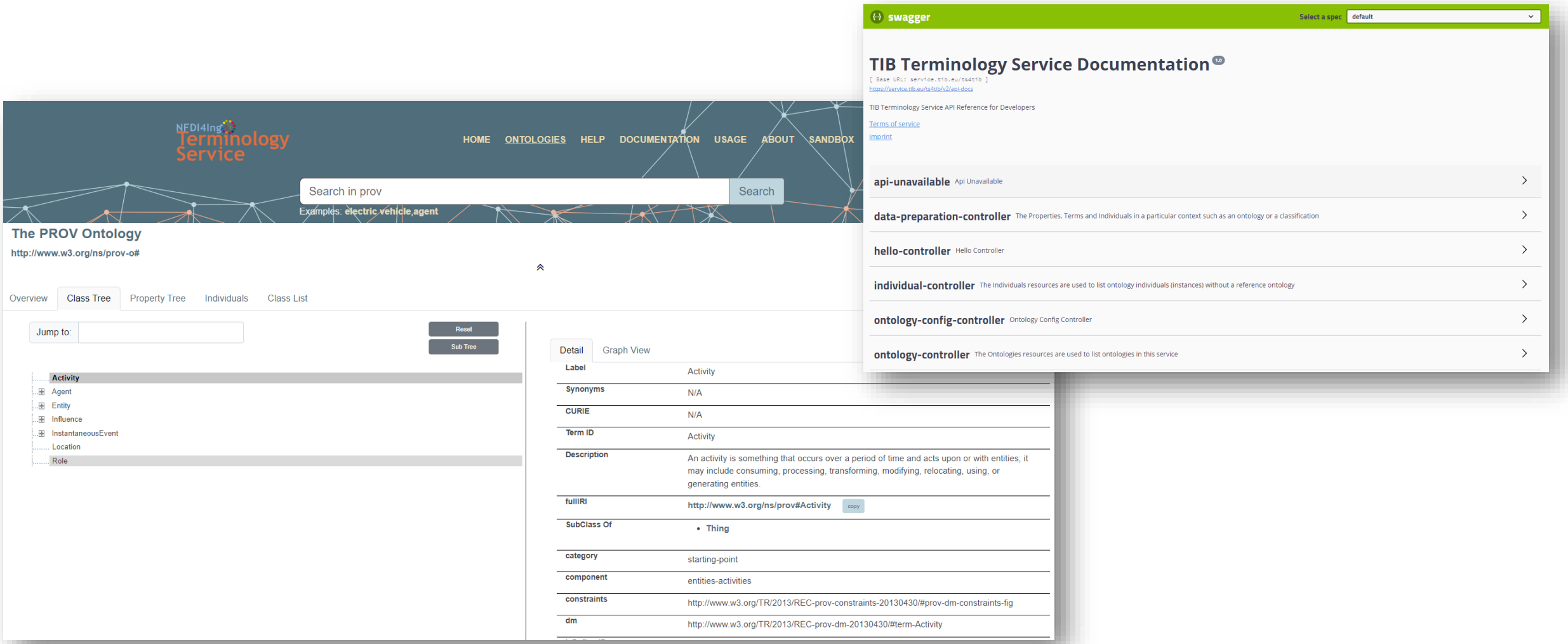
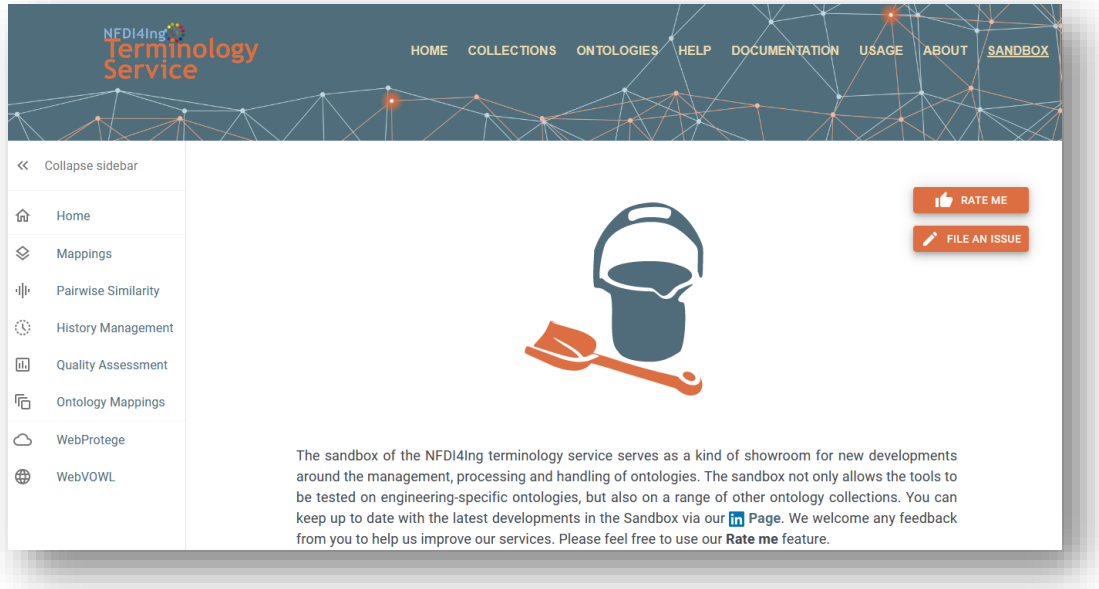


TS Sandbox and Appliactions (I/VIII)

- **Sandbox** is a place to **introduce and gather feedback** for new ideas to work on- and with ontologies
- Developed within (at this time) **four projects**
- A first insight from Sandbox tools **candidates**
  - **Development**
    - **Semantic Difference** over commit history
    - **Ontology Mapping** → Presentation Nenad
    - WebProtege <-> Git integration
  - **Application**
    - Domain specific **Entity Recognition** in text
- **Go live:** ~ September 2023



THANKS!

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