



Communicating across disciplines: *a community effort for glossary in electron microscopy and NeXus*

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HMC Hub Matter

&

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HMC Hub Information

HZB Helmholtz
Zentrum Berlin





- make research Data **FAIR** - findable, accessible, interoperable and reusable
- we work **across scientific boundaries** to provide comprehensive and sustainable services, consulting, information and tools for efficient metadata handling.
- we are located at 6 different locations in the Helmholtz Network and collaborate closely with NFDIs and Helmholtz external institutions

- Turning FAIR into reality* on all levels to enable reuse of data
- Develop HMC as a research infrastructure platform!

british english



Dog
Fun
Reliable



hiberno english

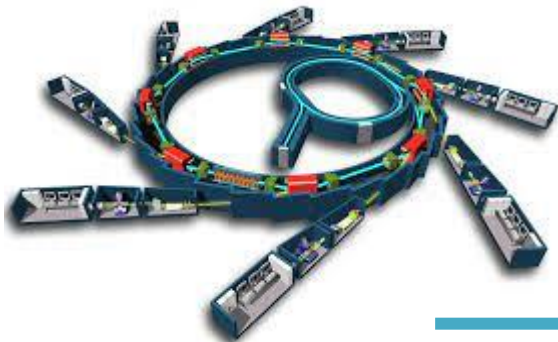
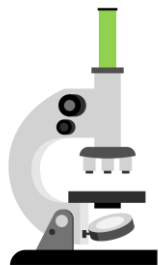


Dog
Craic
Sound

Match
Map
Disambiguate

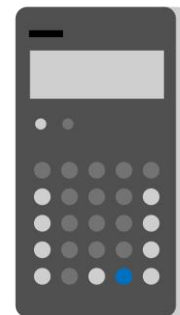


The potential for two independent agents to work on the same data in a coordinated manner.



NeXus

EM Glossary



 ChEBI

scientific development

community driven
*input from relevant
projects and disciplines*

consolidate terms
*identify and define commonly
used terms*

transparency & credit
*open and visible work,
micro crediting system*

implementation

semantic interoperability
*ensure compatibility with
semantic web standards*

don't reinvent the wheel
*build on available specs
use available examples*

forge the power
*HMC will also support the
technical implementation*

continuous development

**continuous community
development**
*include user needs into
further development*

ensure maintenance
*update technical specs
between releases*

encourage (re-) use
*engage relevant projects
& stakeholders*



EM_Glossary 
gitlab.hzdr.de/em_glossary

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MAX-PLANCK-GESELLSCHAFT



Materials Science and Technology



UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386



TECHNISCHE
UNIVERSITÄT
DRESDEN



universität
wien



FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA



TECHNISCHE
UNIVERSITÄT
WIEN
Vienna University of Technology



Universität Regensburg

get in touch & join us:

via email

get mailinglist membership

HMC-matter@helmholtz-berlin.de
HMC@fz-juelich.de

on twitter

follow: [@helmholtz_hmc](https://twitter.com/helmholtz_hmc)

tweet: #EMGlossary

GitLab repo:

https://gitlab.hzdr.de/em_glossary

Happy St. Patricks day!



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community effort
*input across relevant
projects & disciplines*

consolidation of terms
*identify and define commonly
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transparency & credit
*visible & documented work,
micro crediting system*

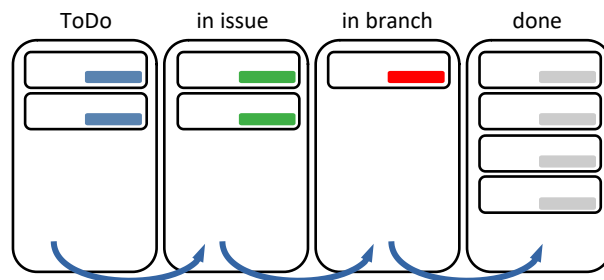


GitLab development workflow
open, remote, structured, asynchronous
& full provenance recorded

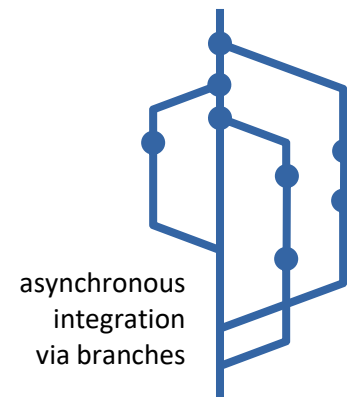
1



EM_Glossary 
gitlab.hzdr.de/em_glossary



issue boards for discussion and management



asynchronous
integration
via branches

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```
! Term.yml
home > v.hofmann > WORKING > EM_Glossary > ! Term.yml > ...
1  ---#-Free-text-name-of-definition-source-
2  labels:
3  |--label_en: term
4  singular:
5  |--singular_en: terms
6  plural:
7  |--plural_en: terms
8  synonyms:
9  |--exact_synonym_en:
10 |---idiom
11 |--broad_synonym_en:
12 |---expression
13 |---phrase
14 |---word
15 |--iri: https://iris.hmc-services.de/term/00000001
16 definitions:
17 |--definition_en: >
18 |---a-expression-that-(1)-has-a-precise-meaning,-and
19 |---(2)-is-used-to-describe-a-thing.
20 sources:
21 |---https://www.merriam-webster.com/dictionary/term
22 comments:
23 |--comment_en: >
24 |---The-meaning-of-a-term-might-be-different-in-different
25 |---contexts-i.e.-such-as-e.g.-in-different-scientific-
26 |---fields.-The-expression-is-usually-labeled-by-a-specific-
27 |---string-and-might-have-synonyms-and-antonyms.
28 contributors:
29 |---https://orcid.org/0000-0003-0000-4784
30 |---https://orcid.org/0000-0002-1008-4530
31 |---https://orcid.org/0000-0002-5149-603X
32 ratified: False
33
```

structured text files (YAML)

GitLab development workflow

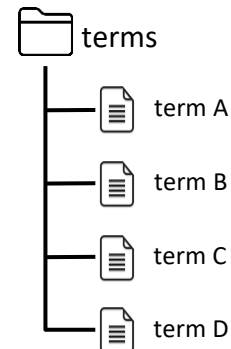
open, remote, structured, asynchronous
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1

term definitions
in structured text
with high level
of detail

2

repository



scientific development

community effort

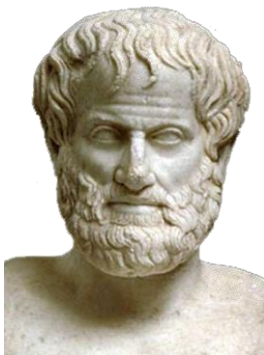
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wikimedia.org

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in structured text
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of detail

2

rigorous semantics

lightweight, unpacked definitions
aristotelian genus-differentia form
machine actionability

3

TO BE INTEROPERABLE:

- I1. (meta)data use a **formal**, accessible, shared, and broadly applicable language for **knowledge representation**.
- I2. (meta)data use vocabularies that **follow FAIR principles**.
- I3. (meta)data include **qualified** references to other (meta)data.