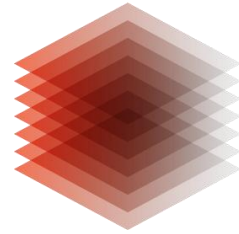

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TIB

Supporting a VIVO Regional Community

Christian Hauschke
Technische Informationsbibliothek (TIB)
Webinar, 2018-06-11

Facts about TIB

- German National Library of Science and Technology
- Leibniz Information Centre for Science and Technology
- University library of Leibniz Universität Hannover
- Public-law foundation of the Federal State of Lower Saxony (since January 2016)
- World's largest specialised library with unique resources
- Joint funding of federal government (30 %) and federal states (70 %)
- Member of Leibniz Association
- Staff: 536

Agenda

- 1. Goal: VIVO for German institutions & researchers**
- 2. Fields of action**
 - **Laws, regulations, guidelines**
 - **Translation**
 - **Ontology**
- 3. Community – tools and communication**
- 4. The need for investigations**

Goal: a German VIVO

Adaption to specific needs in Germany ...

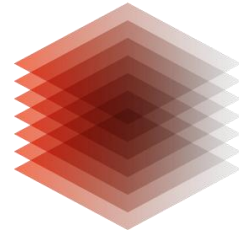
- language
- (academic) culture
- laws and regulations
- features

... means work on

- true multiple language support
- ontology
- community
- documentation
- code



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**Laws,
regulations,
and guidelines**

Making VIVO more secure



Bundesamt
für Sicherheit in der
Informationstechnik

- German Federal Office for Information Security
- IT Baseline Protection Manual[1]
- Creating IT security concepts
- IT security management

[1] https://www.bsi.bund.de/DE/Themen/ITGrundschutz/itgrundschutz_node.html

New mechanism for password hashing

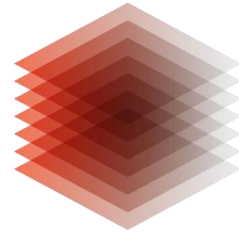
- Substitution of insecure mechanisms in VIVO

Checklist	MD5	Argon2i
Salted	✗	✓
Configurable (memory, time, parallelism)	✗	✓
Vulnerable (brute force, GPU attack, hash collision)	✓	✗
Time (hash generation)	Fast	Slow
Hash Length	128 bit	Configurable 192 bit

MD5 Hash
4BBA69E66998C59F03530EE02C406CB0

Argon2i Hash
version memory time parallelism
\$argon2i\$v=19\$m=1024,t=1000,p=1\$YGRB2tUxW
2POXdL/nd85TA\$auNkQocp9gFlhypooG/OQLREy
JQ7PmpmrpU8T5yE6K0
encoded random salt and hash

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Translation

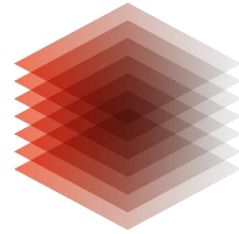
Translating VIVO

Basic translation

- **Basic translation of most language related files for since VIVO 1.6:**
 - **ontology**
 - **templates**
- **Now available for VIVO 1.10.X**
- **Collaborative effort of the German Community**

<https://github.com/VIVO-DE/VIVO-languages>
<https://github.com/VIVO-DE/Vitro-languages>

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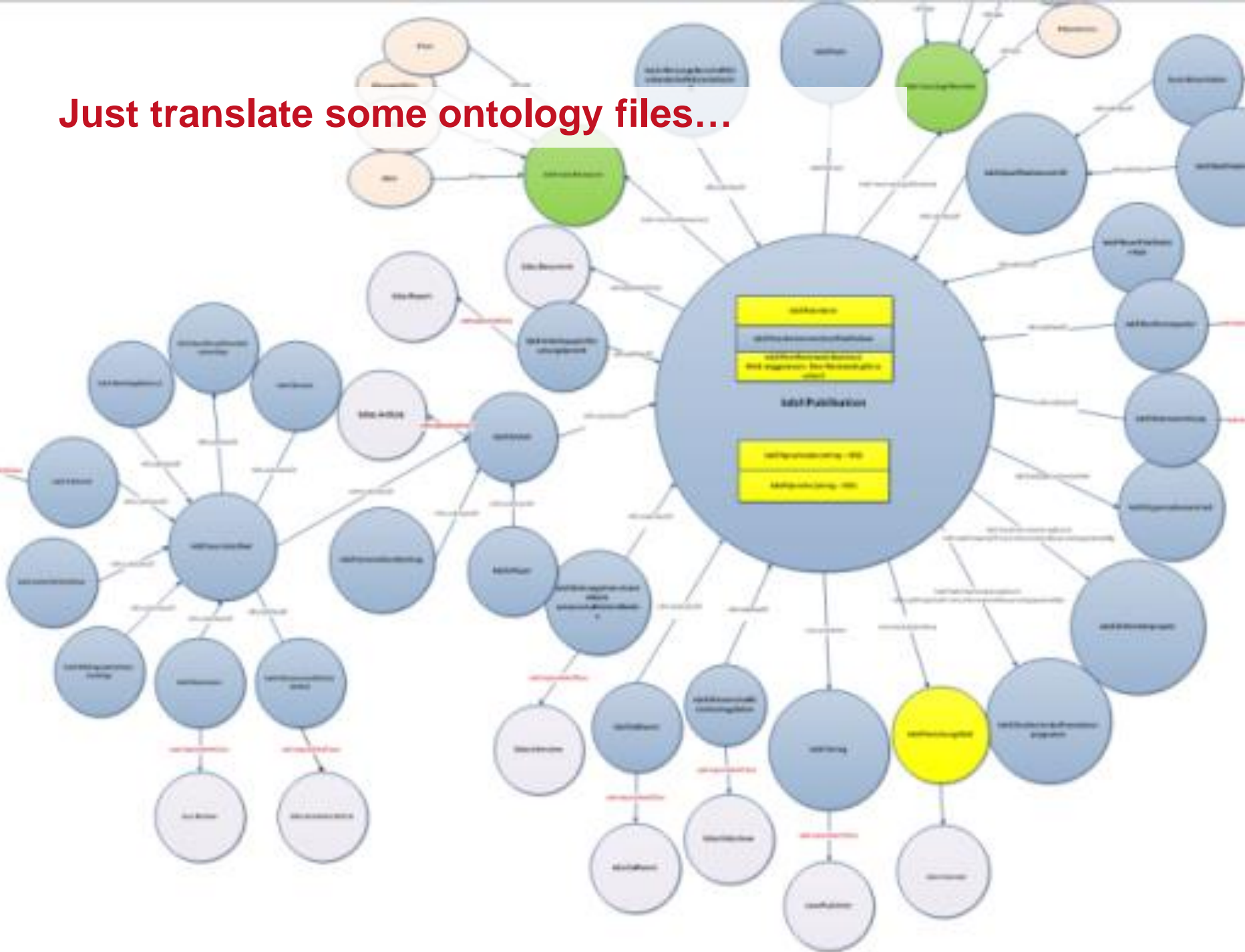


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Ontologies

VIVO-ISF, VIVO-DE, KDSF

Just translate some ontology files...



Why an extension for German institutions?

- **Localization requires local ontologies**
- **Specifics of research infrastructure in Germany**
 - **Example: grants vs. Projekt**
 - **Classes for organizations: Lehrstuhl, Fakultät**

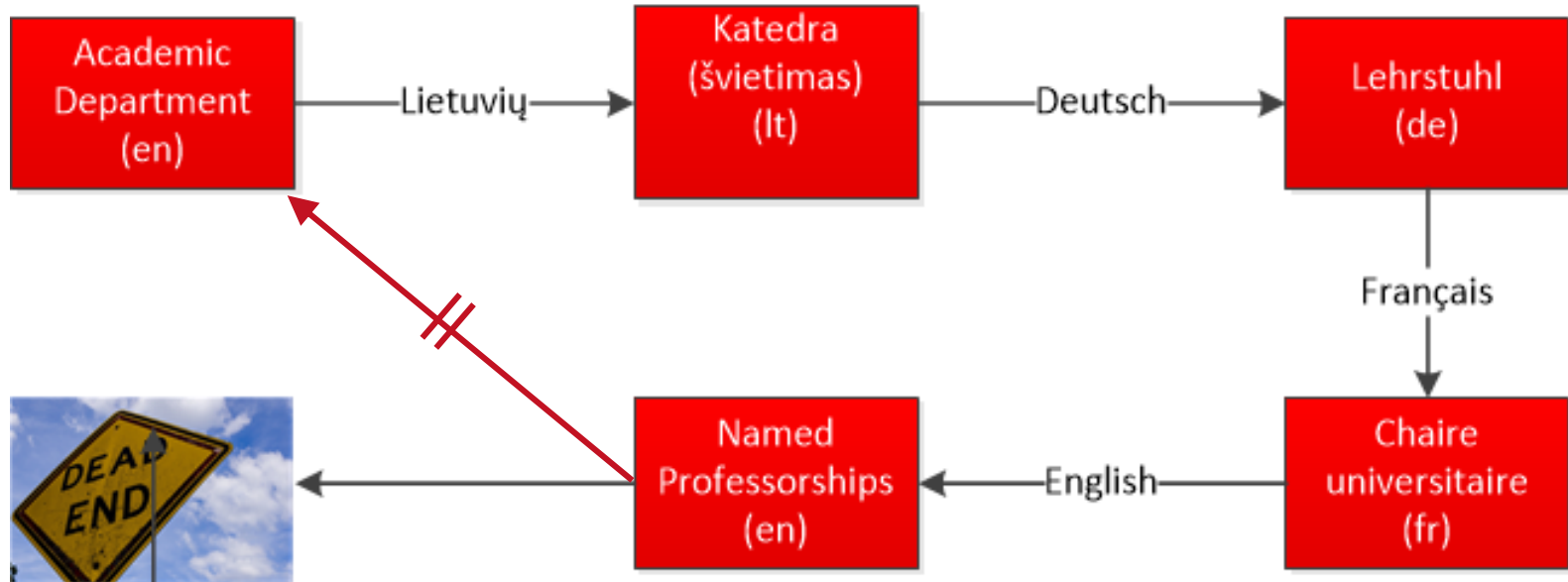
To achieve interoperability of German VIVOs:

Collaborative approach for an ontology extension



WIKIPEDIA

How Wikipedia translates „Academic Department“



VIVO-DE ontology extension

- adding properties and classes
- avoiding „false friends“

Rules for the extension:

- German class name, if there's no English equivalent
- Translated class name, if there is an equivalent in English, but not in the VIVO-ISF ontology
- Labels consequently for English and German
- If the class seems to be very general, but is meant for a very narrow case, it comes with an explaining abbreviation
- All classes are merged with one of the VIVO ontologies
- All classes come with annotation properties

<https://github.com/VIVO-DE/vivo-de-ontology-extension>

VIVO-DE in numbers

- **Classes: 18**
- **Object properties: 0**
- **Data properties: 1**

Annotations 

[rdfs:label](#) [language: en-us]
URN

[rdfs:label](#) [language: de-de]
URN

[hiddenFromDisplayBelowRoleLevelAnnot](#)
<http://vitro.mannlib.cornell.edu/ns/vitro/role#public>

[hiddenFromPublishBelowRoleLevelAnnot](#)
<http://vitro.mannlib.cornell.edu/ns/vitro/role#public>

[inPropertyGroupAnnot](#)
<http://vivoweb.org/ontology#vitroPropertyGroupidentifiers>

[prohibitedFromUpdateBelowRoleLevelAnnot](#)
<http://vitro.mannlib.cornell.edu/ns/vitro/role#public>



Research Core Dataset (KDSF)

“will provide the foundations for a quality-assured data exchange between universities or research institutions and recipients of the information in the German research system.” [1]

The KDSF ...

- aims to be a widely used standard for research reporting
- delivers definitions for core indicators in research
- is essential to most research institutions in Germany

[1] <http://www.forschungsinform.de/kerndatensatz/en/index.php?home>

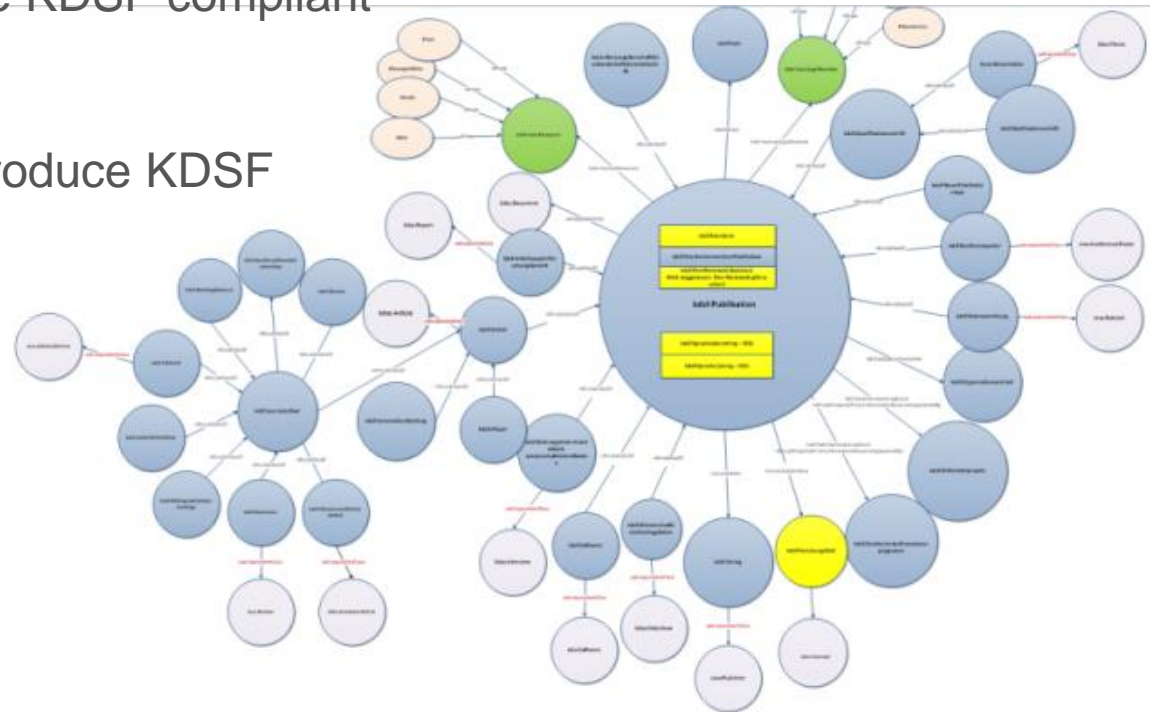
VIVO-DE: Research Core Dataset (KDSF)

To Do

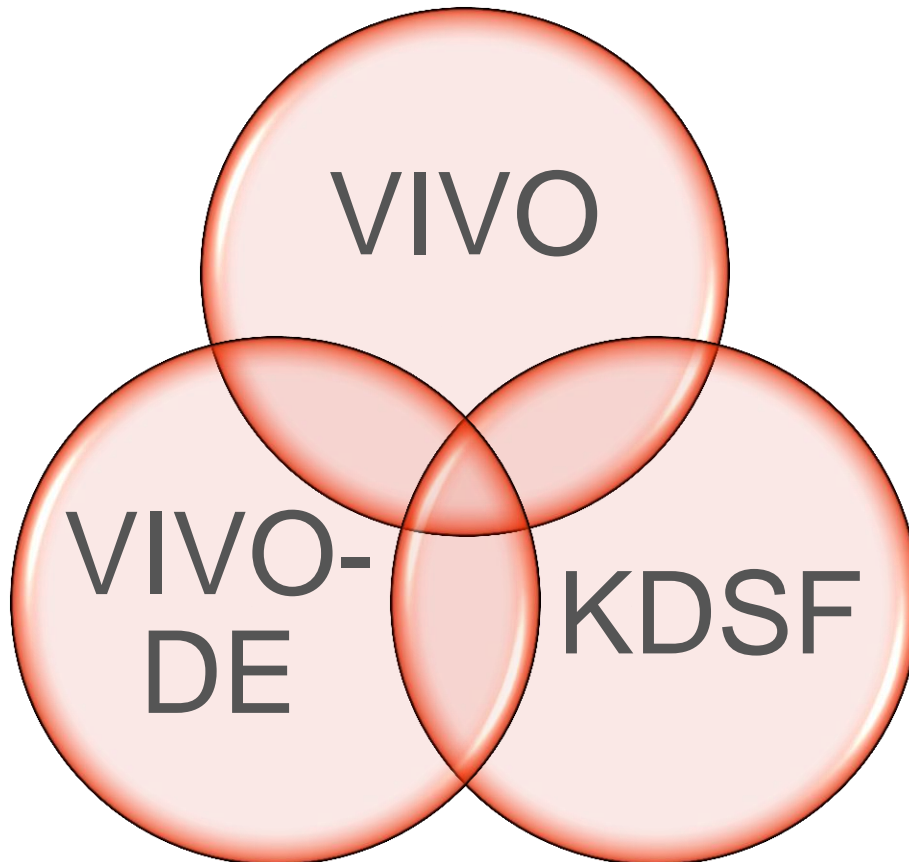
- transformation of the KDSF data model
- matching and merging with the VIVO ontology

Goals:

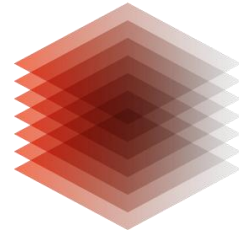
1. Being able to aggregate KDSF compliant data in VIVO
2. Using data in VIVO to produce KDSF compliant reports



VIVO, VIVO-DE, KDSF... ontologies à la carte



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The VIVO-DE Community

Workflows, tools, communication

VIVO-DE – the community

VIVO Registry

Check out who's using [VIVO](#) on the site registry below. To register your VIVO [click here](#).

Search the Registry

Institution/Company	Country	Type of Institution	Site	VIVO Version
Rheinische Friedrich-Wilhelms-Universität Bonn	Germany	academic	<input type="checkbox"/>	1.6
Hochschule Hannover	Germany	academic		
TU Dresden	Germany	academic		1.8
University of Freiburg, Osteologic Database	Germany	academic		1.8
Zentrum für Europäische Wirtschaftsforschung	Germany	research center		
Universität Osnabrück	Germany	academic		Other
Technische Informationsbibliothek (TIB) – German National Library of Science and Technology	Germany	academic	<input type="checkbox"/>	1.9
University of Münster	Germany	academic		1.9
Deutsches Institut für Erwachsenenbildung - Leibniz-Zentrum für Lebenslanges Lernen e.V.	Germany	academic		1.9

Communication

- **Mailing list**
<https://lists.tib.eu/mailman/listinfo/vivo-de>
- **Slack channel**
<https://bit.ly/vivo-slack> - #vivo-de
- **German VIVO Workshops**
 - 2015, 2017, 2018<https://events.tib.eu/vivoworkshop2018/>

Status quo of collaborating on VIVO-DE

- Github based workflow
 - Github repo with ontology files
 - issues
 - wiki for documentation

<https://github.com/VIVO-DE>

Github is not user-friendly...

... if the user is not a computer scientist.


[European Knowledge Acquisition Workshop](#)

... EKAW 2016: [Knowledge Engineering and Knowledge Management](#) pp 303-319 | [Cite as](#)

VoCol: An Integrated Environment to Support Version-Controlled Vocabulary Development

Authors

[Authors and affiliations](#)

Lavdim Halilaj , Niklas Petersen, Irlán Grangel-González, Christoph Lange, Sören Auer, Gökhan Coskun, Steffen Lohmann

- **Collaborative ontology development**
- **Heterogenous and distributed environments**
- **Developed at Fraunhofer-Institut für Intelligente Analyse- und Informationssysteme (IAIS)**

Editing Turtle on GitHub

Load, view, edit, check, and save a turtle file on GitHub.

Username (for login):

Password or Token:

Owner of Repository:

Repository:

Branch:

Content editor: kdsf-vivo-alignment.ttl

```

60
61
62 ### http://vitro.mannlib.cornell.edu/ns/vitro/0.7#offerCreateNewOpt
63 vitro:offerCreateNewOptionAnnot rdf:type owl:AnnotationProperty .
64
65
66 ### http://vitro.mannlib.cornell.edu/ns/vitro/0.7#prohibitedFromDps
67 vitro:prohibitedFromUpdateBelowRoleLevelAnnot rdf:type owl:Annotati
68
69
70 ### http://vitro.mannlib.cornell.edu/ns/vitro/0.7#publicDescription
71 vitro:publicDescriptionAnnot rdf:type owl:AnnotationProperty .
72
73
74 ### http://vitro.mannlib.cornell.edu/ns/vitro/0.7#selectFromExistin
75 vitro:selectFromExistingAnnot rdf:type owl:AnnotationProperty .
76
77 #####
78 # Object Properties
79 #####
80 ### http://kerndatensatz-forschung.de/owl/Basis#hatArt
81
82
83
84
85

```

Type a concept to search...

Ignore Case

Type: All Class Object Property Datatype Property Individuals

View: RDF(S) SKOS

Show others: Show Type Show File

prerequisiteFor

preferredNamespaceUri

prefixName

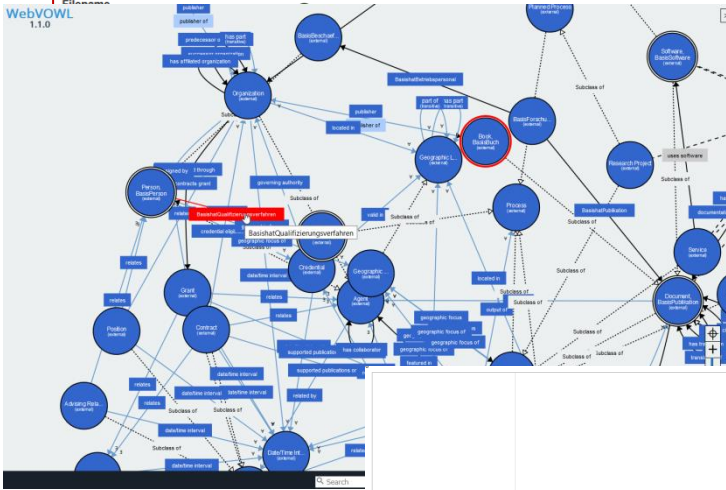
prerequisiteFor

presentedAt

Documentation Source Graphical Depiction

Details: publisher

Predicate	Object
owl:inverseOf	publisherOf
rdf:type	owl:ObjectProperty
IAO_0000112	Public Definition source (http://www.answers.com/topic/publisher).
rdfs:label	publisher@en



No title available

<http://vivoweb.org/ontology/core/proposals>

Version: --

Author: --

Language: en

Description

Vivo Home Editing Documentation Visualization Querying Evolution Analytics Validation

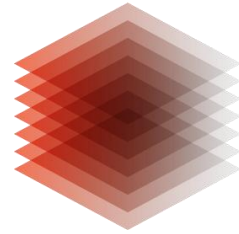
Validation

- Error Number: 1
 Found in file: ./vivo-de-0.3.ttl **Error: Expected dot to follow quad at line 83.**
- Error Number: 2
 Found in file: ./kdsf-vivo-alignment.ttl **Error: Syntax error: unexpected "rdf:type" on line 71.**

Please fix the error(s) in the turtle file(s).



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The need for investigations

What's needed? Who are our users?

What do they want & need, and how can we find out?

German VIVO Workshops



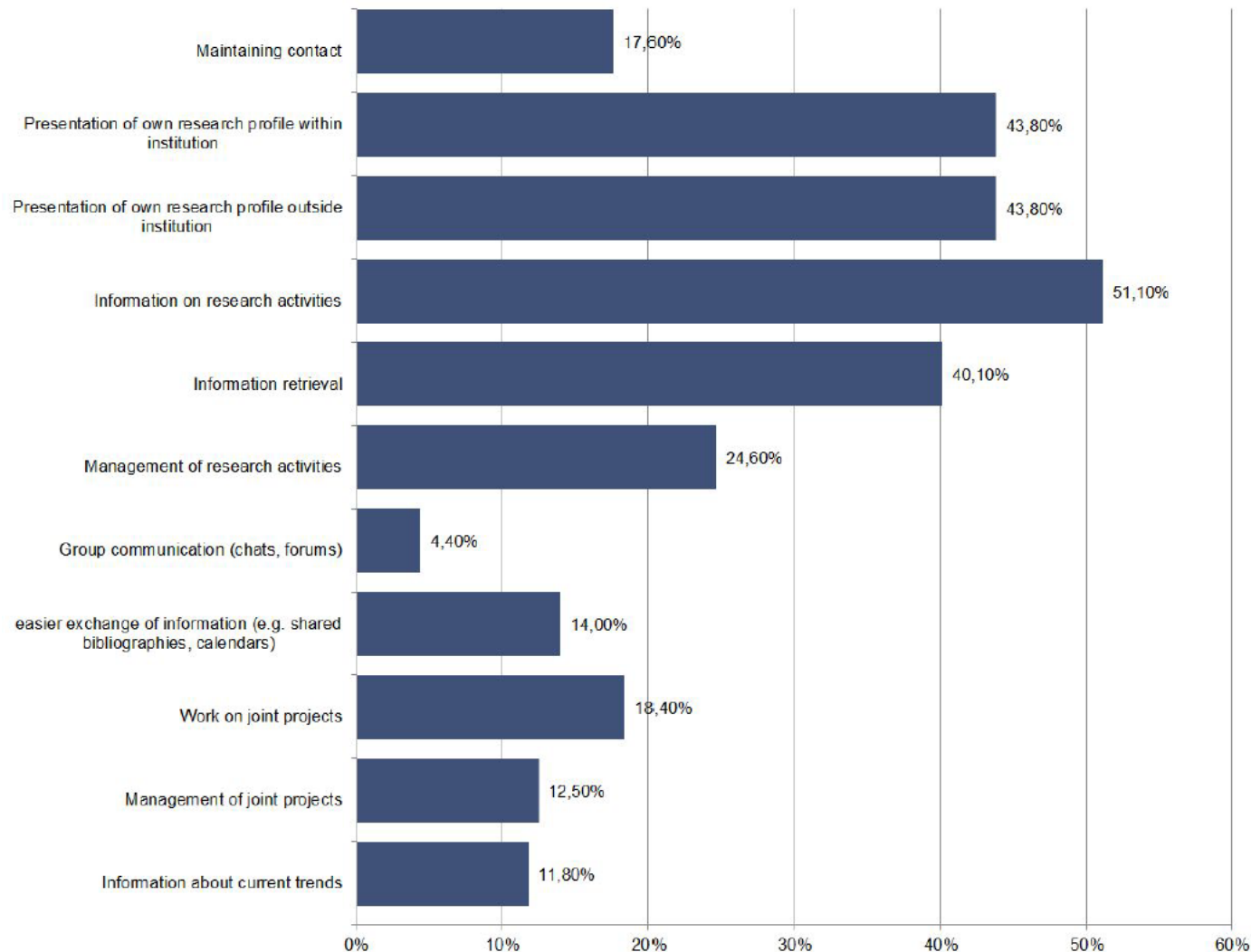
- Reporting, reporting, reporting
- Advanced role management
- Networking, training & exchange
- Improved data integration
- Workflows in VIVO
- ...

Use of research information systems in research institutions

- 30 semi-structured interviews with researchers
- 20 semi-structured interviews with research administration
- Both from universities and non-university research institutions

Survey on information & publication behaviour of researchers in science & tech (n = 1,460)

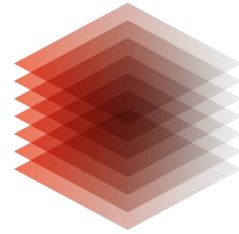
What do you intend to / do you use the research information system for?



To be done...?

- **More research on the needs of researchers and research administrations with regards to VIVO**
- **Starting in-depth research on the information needs and behaviour of the public**
- **Exchange of knowledge about users on a national and international level**
- **More communication about and between VIVO projects and related projects**
- **Intensify work with international communities**

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**Thanks a lot for your
attention!**

Questions?

Contact

Christian Hauschke: christian.hauschke@tib.eu

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