Invenio @ HGF

JuSER

June 17, 2013 | Alexander Wagner |

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Overview

- History
- Basic Usage
- Installation
- Backend

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Part I: History

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VDB and JUWEL

Publications database **VDB**:

- Centralized database of the scientific output
- > 62.000 entries from ≈ 13 years (≈ +4800/*a*)
- Obligatory input[1] (editors at each institute, crosschecked by ZB)
- Basis for
  - Scientific Report
  - Evaluations
  - Publication lists (e. g. WWW)

[1] cf. Publication Guidelines

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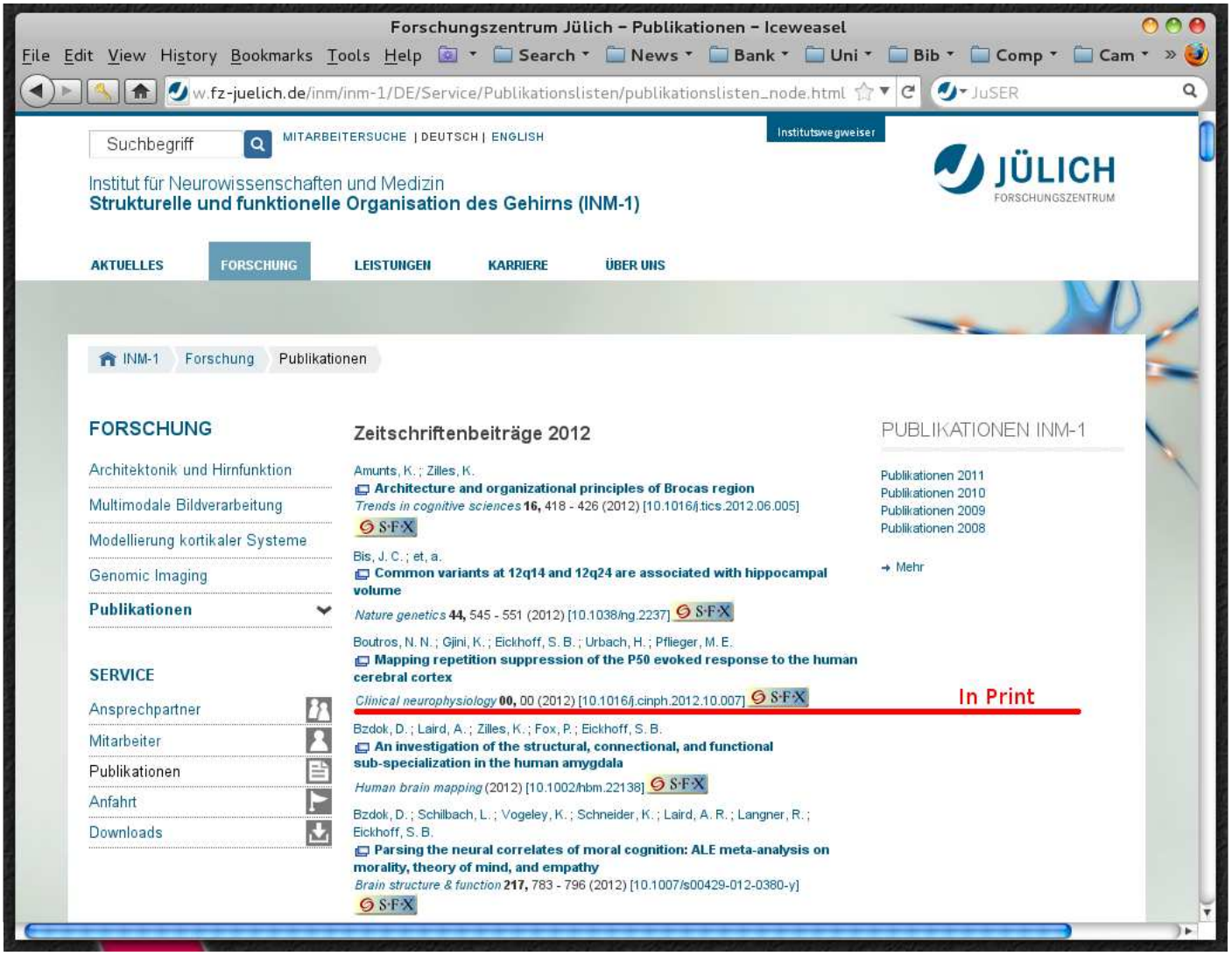

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VDB and JUWEL

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JUWEL:

- Berlin Declaration for Open Access
- Institutional repository (≈ 4500 full text files, ≈ +560/*a*)

[2] cf. Publication Guidelines

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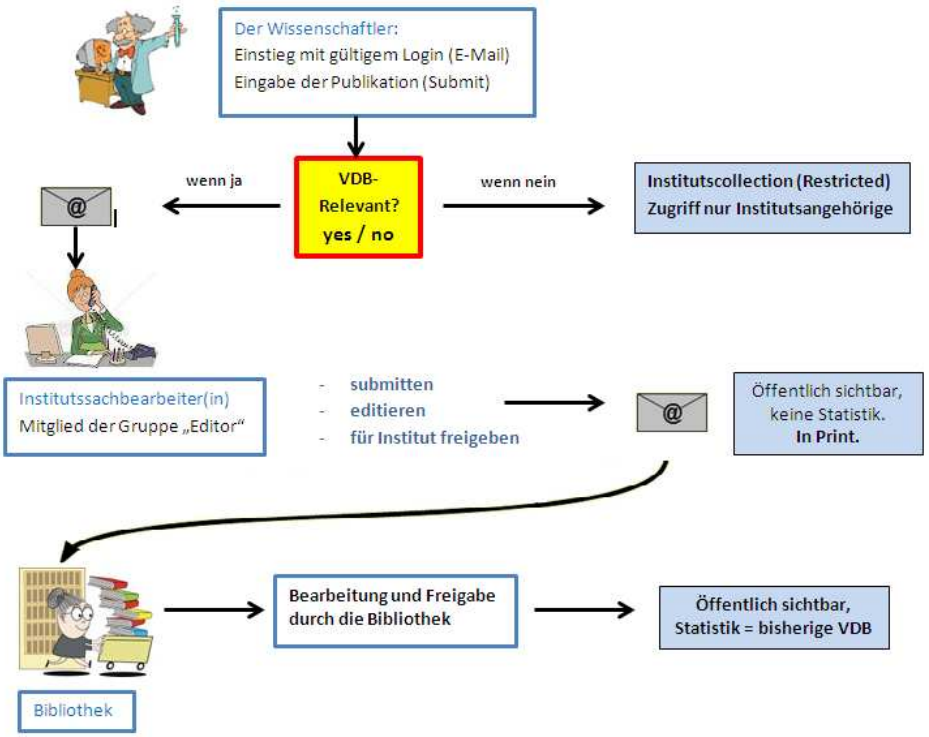
Due to reporting requirements: 3 step document flow



Thanks to H. Lexis

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JuSER – Main features

- Import interfaces (improve data quality, ease up input)
- Exports to BibTeX/EndNote (Integrate with citations management)
- Institute collections (collect and share documents)
- Add full texts
- Normalize as much as possible (Key: Authorities)
  - Authors (tell apart Meier and Meier)
  - Institutes
  - Journals
  - Projects (POF, EU, . . .)
  - . . .

. . . Users don't need to care about technical details . . .

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Collections

- Publicationsdatabase: Publications from Jülich
- Documents in Print:
  - approved by institutes editor
  - not approved by the library
  - e. g. papers just available Online (missing bibliographic data e. g. pages, volume)
  - already visible on institutes web pages
- OpenAccess repository JUWEL
- Institute Collections:
  - Institutes private workspace
  - e. g. drafts, collected literature, journal clubs . . .
  - Access for members of the institue only
- Authorities

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Institute Collections

JuSER can hold documents beyond own publications

- webbased literature management
- document exchange at the institutes
- centralized collection of papers
- easy export to formatting tools (BibTEX, EndNote)
- commenting (individual and in group)

- Institute collections require proper login
- Non-VDB relevant items do not show up on the webpage
- ZB does not care about usage

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Part II: Basic Usage

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Submit

1. Log in (LDAP based)
2. Select Submit from the main menu (http://juser.fz-juelich.de/submit)
3. Select document type
4. Fill in the submit form
   - import if possible (doi, pmid, arXiv, inspire, own recs...)
   - take care of the authors
   - Own publication? ⇒ VDB-Relevant = yes
5. Add full text
6. Submit it:
   - "Finish & Release" (proceed to next level in workflow)
   - "Postpone" (generates TEMPENTRY)

Permissions & workflow: quite complex collection structure

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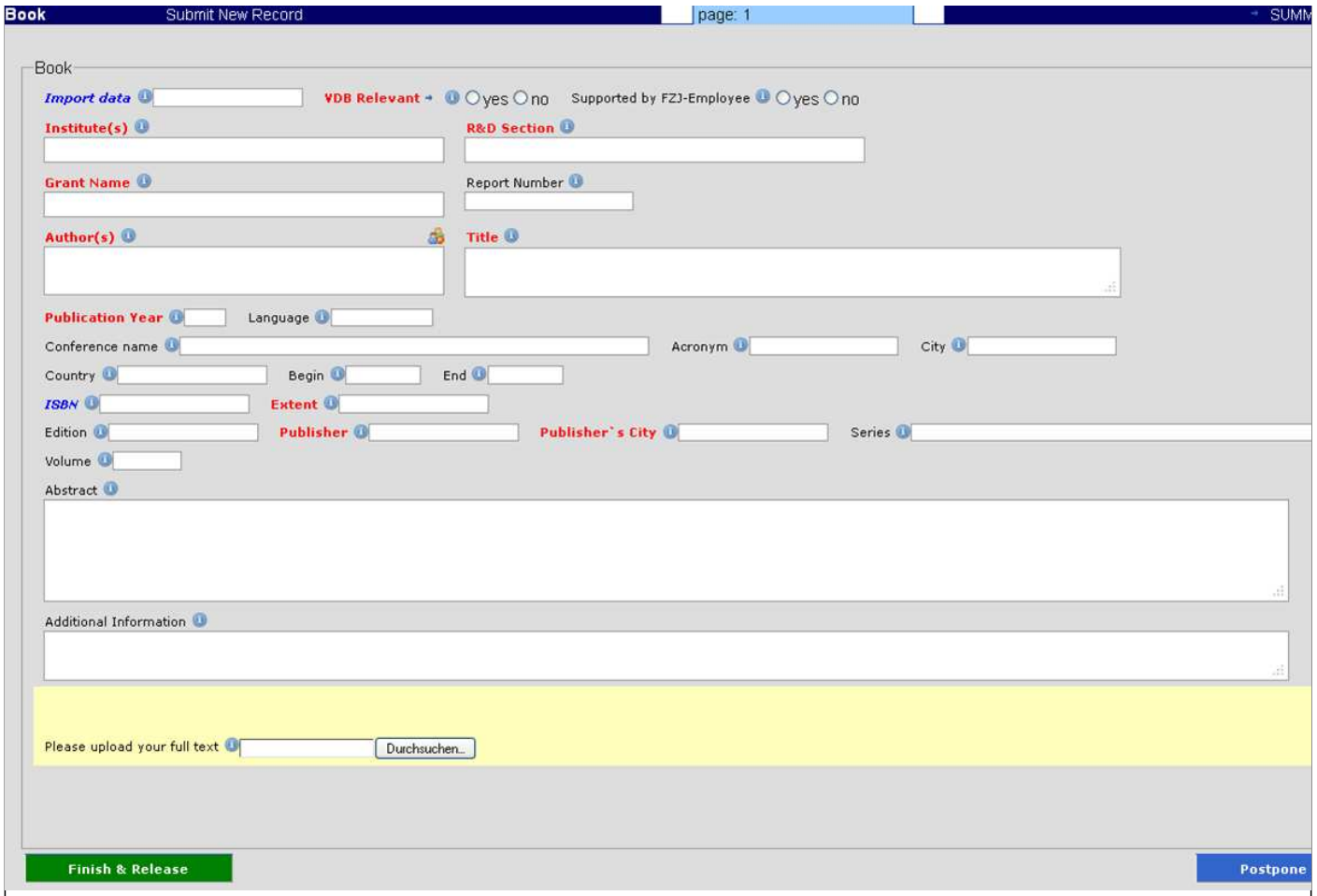

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Field designations

Red: mandantory for a full bibliographic description

Black: might not all apply

Blue: save manual work!

Import data

. . . is always available and allows to fetch data from external or internal sources.

PS: ⓘ is the manual (Wiki-based, german and english)

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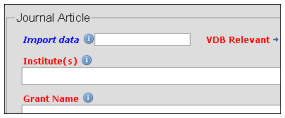
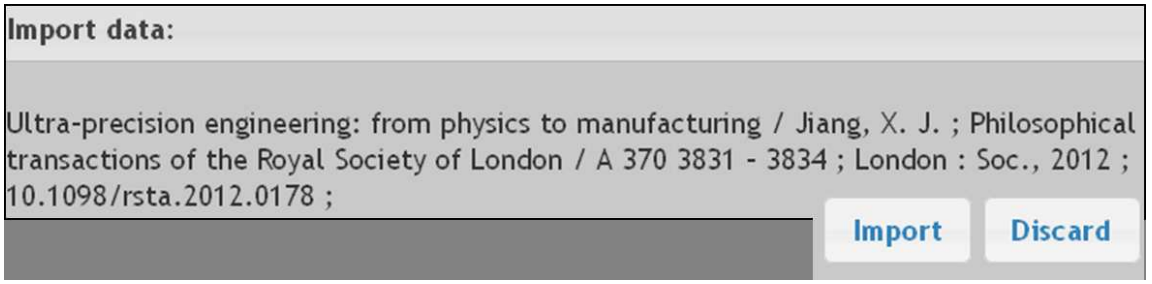
Import HowTo

- DOI: insert doi or dx.doi.org-url (e. g. 10.1016/j.physletb.2006.11.038)
- pubmed : copy as displayed (e. g. PMID: 20923669)
- arXiv.org : copy as displayed (e. g. arxiv:hep-ph/0610431)
- inspire: use URL
- own: recid: + record-Id or 037__a (e. g. recid:FZJ-2013-00499)
- ISBN: use the ISBN-field for this import





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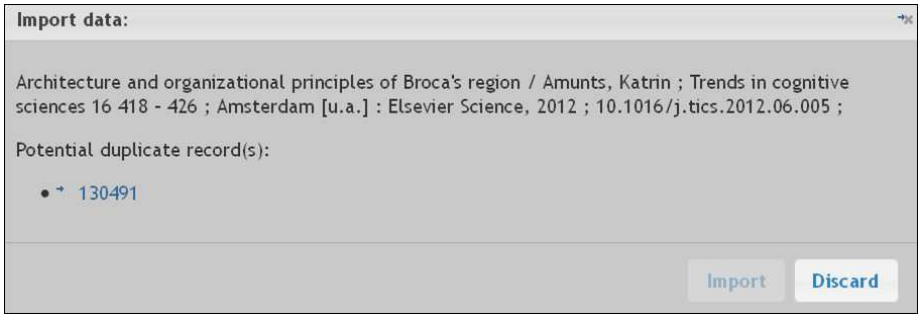
Duplicate entries



At import via doi, pmid, arXiv... JuSER

- can identify potential duplicates
- refuses the import
- shows links to the potential dupes

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E. g. DOI Import

Journal Article

Import data | VDB Relevant → ○ yes ○ no | Supported by FZJ-Employee ○ yes ○ no

Institute(s) | R&D Section

Grant Name

Author(s)
- Jiang, X. J. (Extern) Corresponding author
- Shore, P. (Extern) Author
- McKeown, P. (Extern) Author
- Whitehouse, D. J. (Extern) Author
- Ruffles, P. C. (Extern) Author

Title: Ultra-precision engineering: from physics to manufacturing

Journal: Philosophical transactions of the Royal Society of London / A | DOI: 10.1098/rsta.2012.0

Volume: 370 | Issue: 1973 | Pages: 3831 - 383

Publication Year: 2012 | Language

Conference name | Acronym | City

Country | Begin | End | Publisher: Soc. | Publisher`s City: London

Abstract

Most red fields are filled in already!

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Authors

Upon import

authors are a mere guesses by the system. Check them!

- ✓: confirm the guess
- : correct a wrong guess
- ×: remove an entry
- : clear the whole list

- Associate only authors that show an email address/institute
- If unsure, leave them red

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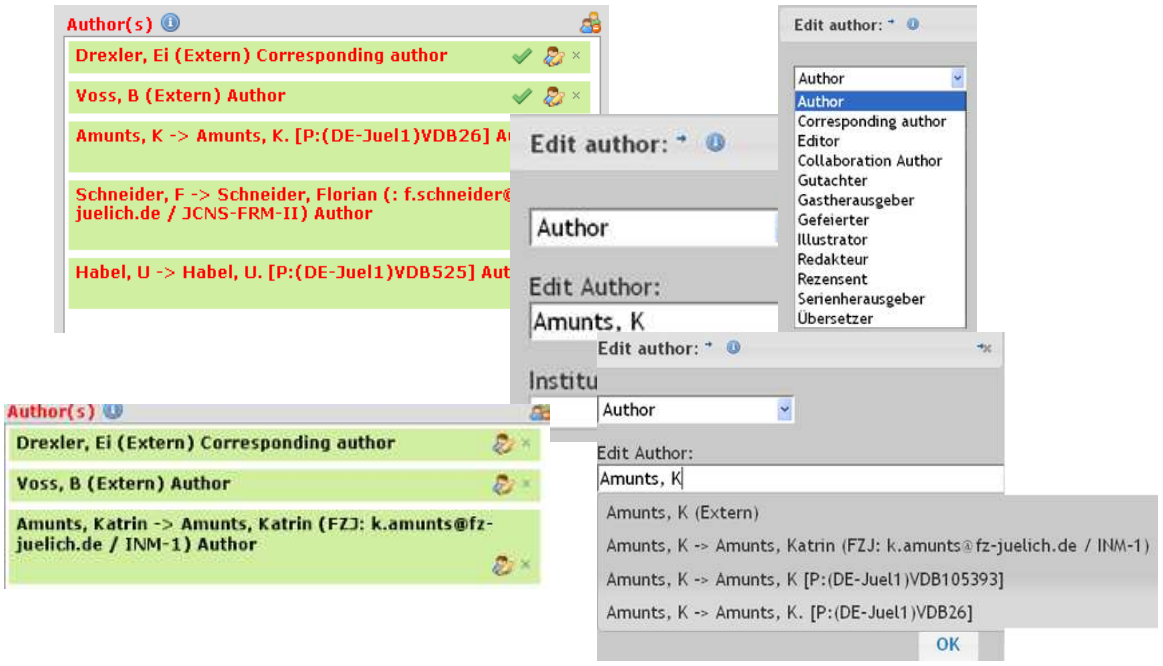
Author input and association



Note: ZB covers publication costs if the *corresponding author* is from Jülich.

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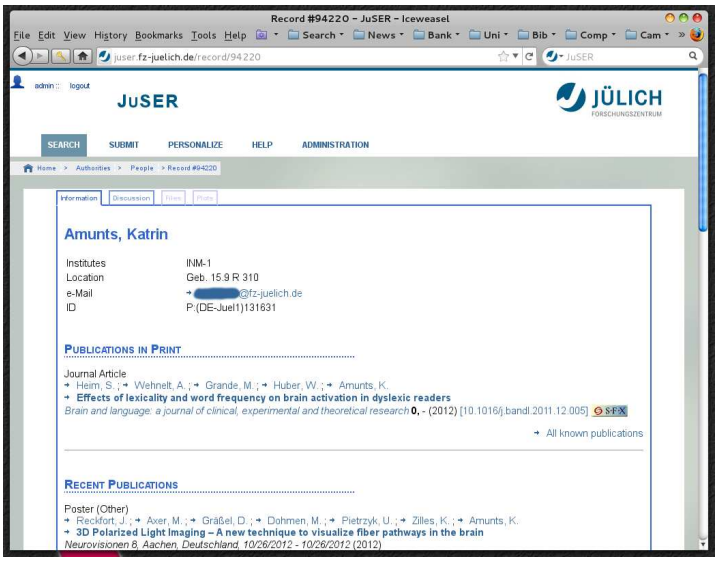
Own publications

Author association

allows easy extraction of individual and exact publication lists.



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Claim work (required only once!)

1. Log in
2. Navigate to: Authorities / People (http://juser.fz-juelich.de/collection/People)
3. Search for own name (e. g. `'Hofmann, D'`)
4. Note the IDs in question (e. g. `P:(DE-Juel1)VDB63458` and `P:(DE-Juel1)129471`)
5. Open details and check the records found by the link `All known publications` (below the list of recent publications)
6. notify `juser@fz-juelich.de`

   (e. g. if the above two people are the same, we need both ids to join them)

To search own publications use `aid:` and own ID in quotes ("")

e. g. ➡ `aid:"P:(DE-Juel1)133794"`

Want only first authorships? Use `fai` instead of `aid`.

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Part III: Installation

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Repositories @ HGF

Roll out and desaster recovery

the same code on at least 5 different instances and keep it consistent by avoiding manual configuration.

- git: `cds-invenio` (centrally kept at DESY)
  - CERN git at “our” commit
  - used for base system
  - applied by `configure/make/make install`
- git: `hgf-invenio` (centrally kept at DESY)
  - overlay for our instances (our additions)
  - our patches (no replacements!)
  - directory structure like `/opt/invenio`
  - setup routines for roll-out (e. g. collections, rolles, doctypes. . .)
  - instances configs

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InstallInvenio

InstallInvenio

sets up the whole instance at each partner in the proper layout including all global (hgf) and local configs

- assumes all deps are met and database exists
- sets up from scratch or to a given point
- compiles and installs INVENIO-src
- applies hgf patches and configs
- applies global and local customizations
- procedures based upon GUI functionality
- no need to mouse click in the GUI
- enables desaster recovery
- allows setup of an identical test environment

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Part IV: Backend

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HGF “specifics”

Broad areas of research

some INVENIO-HEP-specifics just don’t work

- Journal handling based on IDs, not names (hook up ZDB)
- allow for ingest of foreign data (e. g. ebook packages)
  - important in context of a libraries catalogue
  - stick to MARC definitions (Library of Congress)
  - avoid specialities (exceptions: 9xx)
  - implies adoption even of default defs (e. g. internal Marc, BibTEX)
- Normalize all you can get
  - to be handled by uses & librarians, not programmers
  - vitally important: Authorities

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HGF-Modules

- Importer: (crossref, pubmed, GVK, arXiv.org, inspire...)
  - hook up with web services
  - reuse old code bascially in perl (to be rewritten to Python as time allows)
  - add new stuff in Python
- HGFImport.py (call externals but allow for permission checking)
- HandleNames.py (author guessing)
- JSGetAllChildren.py (recurse to the end of tree like MARC structures)
- PubExporter.py (handle specifics needed for web export)

Other functions

Always try to use INVENIO functions like alerts, baskets, ...

Every unwritten line of code is a good line of code!

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Authorities: Types of Records

- People e. g. authors
  - individualize(!) local authors
  - entries are real people, not names (distinguish Wagner, A. and Wagner, A.)
  - connect to local institutes (incl. history)
  - allow interchange of records (e. g. Jülich with RWTH Aachen and MLZ)
- Institutes (people-like aggregates)
  - keep track of history (renaming, merging, splitting)
  - horizonal and vertical linkage
  - complex topography in names (e. g. loops)
- Grants (money-like aggregats)
  - horizoncal as well as vertical connections
  - different types (POF (HGF-specific), EU, DFG, ...)
  - flexibly extensible by librarians
  - visibility in websubmit depending on instance

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Authorities: Types of Records

- Periodicals, Journals
  - need ≈ 30.000 journals (links to german ZDB and EZB)
  - complex external tool to build up records
  - autogenerated/updated once a year (trigger: new JCR)
  - allow harvesting of records generated
  - contain statistics keys for evaluation
  - print and online edition are one journal (ISSN does not work as key)
- Statistics keys
  - database coverage (journal listed in Scopus or Web of Science, JCR or pubmed ...)
  - OpenAccess designation
  - license identifier (Allianz-licensing)
- Vocabulary
  - allow for classifications (e. g. POF level)

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Frontend

- rich, browserbased GUI: (AJAX and CSS)
- JavaScript (JQuery + x)
- use few different elements (mainly tokeninput, autocomplete, datepicker)
- browser independent (needs to cover at least IE8+, Safari, FireFox on Win, Mac and Linux)
- Tokeninput (heavily extended and debugged(!) version of jquery.tokeninput)
  - institutes
  - authors
  - grants
- JSON-returns from the backend
- avoid program logic (backend has to deliver ready to use data)
- use encoding scheme for returns (allow processing in loops)
- define hidden subfields to keep structures (e. g. repeatable fields)
- invisibly enrich data from the backend (e. g. IDs, DDC, statistics keys...)

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New stuff for Websubmit

- repeatable fields (tokeninputs)
  - authors
  - grants
  - institutes
  - ...
- structured fields (mostly hidden)
  - Identfiers
  - statistics keys

Handling

Add hidden fields for all visible fields and do the fancy stuff there. Pass on string encoded JSON structures.

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Backend

Expose records in JSON structures to JavaScript

- no repeatable subfields simplifies JSON
- define new output format: JS
- define format templates for each record type
  - use webbased frontend if possible
  - use pythonic BFE only for complex stuff
  - complex returns as ready to use text (i. e. escape substructures to strings)
- return hashes keyed as MARC:
  1. Field/Subfield: `I245__a`
  2. Structure: `I536__`
- innerrecordlinks: return from the backend (e. g. 536__ and 913__)

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Generate People Records

Use the local phone book (=LDAP, avoid privacy issues)

- LDAP harvesting (once a night, currently cron)
- unique IDs over time (email not suitable: limited TTL, recycling for common names)
- allow for arbitrary IDs
- allow for multiple IDs per entity (0247_ vs. 035__a)
- allow usage of IDs from several sources

Goal

Implement ORCiD linkup with automagic registration/fetching

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Statistics

Use Marc 915__

Upon journal association: keys → bibliographic records

- Pythonic beancounters (use `intbitsets`)
- allow live Web query (if fast enough)
- allow complex queries, e. g.
  - output per institute and/or program
  - all JCR covered journal articles with external authors
  - all Scopus listed articles from John Smith (director of Inst X)
  - ...
- CLI is enough, but should be easily adoptable
- generate LaTeX-based reports
- generate structured outputs (for spreadsheet, literature management)

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Statistics/2: Bibliometrics

Mainly in Jülich: JuSER is source for bibliometric evaluations

- link up with Web of Science (just another ID ⇒ 0247_)
- semiautomatic Web of Science-ID assignments (doi2ut)
- specific exports
- planned: direct link to workflow tools

In principle

. . . all queries can be done in the Webfrontend

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OpenAccess

- Aquire more fulltexts
- At least give a stable link (e. g. pubmed-Central, OA-Journals)
  - Use statistics key for OA-Journals (for DOAJ-listed journals)
  - enrich upon ingest
- Implement “Allianz-Licensing” (ingest publishers versions)
- Make OA-Articles more prominent (e. g. logo, collection)
- OpenAIRE compliance
- OAI-Harvesting for BASE and friends

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Next Steps

- Upgrade from 1.0 to 1.1 or, more likely, 1.2 (fix OAI Server!)
- Feed Google Scholar (how?)
- Get pending instances online:
  - RWTH Aachen
  - MLZ
- At Jülich: implement crossharvesting (RWTH ↔ FZJ ↔ MLZ)
- Add workflow for “vita” (workflows for special collections)

Continually refactor/check code to get ready to give back

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Project partners

Deutsches Elektronensynchrotron, Zentralbibliothek

Forschungszentrum Jülich, Zentralbibliothek

GSI Helmholtzzentrum für Schwerionenforschung, Biblitohek + Kern-IT

RWTH Aachen, Hochschulbibliothek

Maier-Leibniz-Zentrum, Garching

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Questions?

Alexander Wagner
Zentralbibliothek

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