Current Research Information Systems (CRIS) as OpenAIRE Data Providers

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Index for today's talk

— Status of the CERIF-XML Guidelines for CRIS Managers

— Why should an institutional CRIS be interested in getting harvested by OpenAIRE?

— CRIS harvesting process

— euroCRIS Directory of Research Information Systems (DRIS)

What is a CRIS?

euroCRIS — Current Research Information Systems
The International Organisation for Research Information
CERIF

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Current research information system

From Wikipedia, the free encyclopedia

A **current research information system** (**CRIS**) is a database or other information system to store, manage and exchange contextual metadata for the research activity funded by a research funder or conducted at a research-performing organisation (or aggregation thereof).[1]

CRIS systems are also known as Research Information Management or RIM Systems (RIMS).[2][3]

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  2.3 Open Science implementation
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4 Further reading
5 See also
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Features [edit]

The data model underpinning a CRIS relies on a set of basic entities as defined by the Common European Research Information Format (CERIF) model maintained by the non-profit organisation euroCRIS.

The links connecting these entities provide a standardised semantic layer that provides consistency to the data model. The basic CERIF entities are **people, organisations, projects and outputs** (publications, research data, patents). Further second-level entities in the comprehensive snapshot of research provided by CERIF are for instance funding, research facilities and equipment or skills.

https://en.wikipedia.org/wiki/Current_research_information_system

OpenAIRE Data Providers*

CERIF-XML Guidelines: several iterations

M.K. Elbæk, Technical University of Denmark, Lyngby

N. Houssos, EKT/NHRF, Athens

B. Jörg, Jisc, ISC, UKOLN, University of Bath, CASRAI UK

OpenAIRE Guidelines
for
CRIS Interoperation
based on CERIF XML

OpenAIRE

EuroCRIS membership meeting, Bonn 13 – 14 May 2013

http://hdl.handle.net/11366/150

CRIS 2014

OpenAIRE Guidelines: supporting interoperability for Literature Repositories, Data Archives and CRIS

Pedro Príncipe[a], Najla Rettberg[b], Eloy Rodrigues[c], Mikael K. Elbæk[d], Jochen Schirrwagen[e], Nikos Houssos[f], Lars Holm Nielsen[g], Brigitte Jörg[h]

http://hdl.handle.net/11366/321

13th International Conference on Current Research Information Systems, CRIS2016, 9-11 June 2016, Scotland, UK

Progress in the Implementation of the OpenAIRE Guidelines for CRIS Managers

Pablo de Castro[a]*, Jochen Schirrwagen[b], Dimitris Karaiskos[c], Jan Dvořák[d], Andrea Bollini[e], Vasilis Bonis[e], Nikon Gasparis[f], Victoria Tsoukala[e], Paolo Manghi[g], Pedro Príncipe[h]

http://hdl.handle.net/11366/502

Fast forward May 2019

Fast forward May 2019

DANS (Data Archiving and Networked Services)

(CRIS SYSTEM) (OPENAIRE CRIS V1.1)

Organization: KNAW

Country: Netherlands

Website URL: https://dans.knaw.nl/en/

OAI-PMH URL: http://services.nod.dans.knaw.nl/oa-cerif

VIRTA

(CRIS SYSTEM) (OPENAIRE CRIS V1.1)

Organization: CSC

Country: Finland

Website URL: https://www.csc.fi

OAI-PMH URL: https://dwitjutife1.csc.fi/api/cerif

CRIS UNS (Current Research Information System University of Novi Sad)

(CRIS SYSTEM) (OPENAIRE CRIS V1.1)

Organization: Scientific Veterinary Institute "Novi Sad"

Country: Serbia

Website URL: https://cris.uns.ac.rs/

OAI-PMH URL: https://cris.uns.ac.rs/OAIHandlerOpenAIRECRIS

So what happened in between?

Conference:	CRIS2016 – St Andrews 📅

Abstract: The ambition of FRIS R3 is to take responsibility for a broader regional research information infrastructure that enables the participating Flemish research institutions, and other service users like funders and assessment entities, to uniquely identify and reuse relevant "research entities" such as researchers, organisations, projects, research output as well as other research related aspects – as well as showcasing Flemish Research. In this paper we present the motivation, development processes, technical architecture and implementation behind the new Flemish infrastructure for research information called FRIS R3. FRIS R3 also serves as an example of a real world implementation of CERIF XML that uncovers challenges that must be addressed if CERIF XML is intended to stay relevant in commercial and large scale contexts.

Elsevier Research Intelligence

FRIS R3 - CERIF XML in large scale exchange of research information
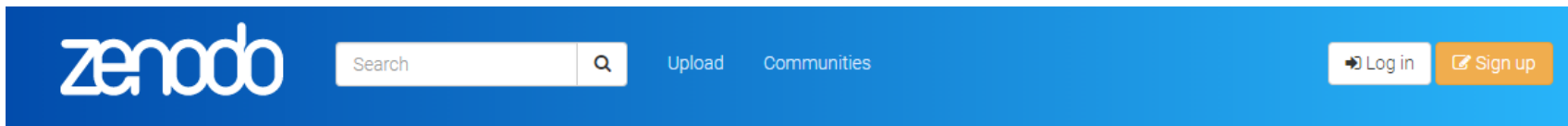
Thomas Vestdam (Atira)
Brian Plauborg (Atira)
Leen Van Campe (EWI)

Vlaanderen
is economie, wetenschap
& innovatie

http://hdl.handle.net/11366/495

So what happened in between?

zenodo

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December 20, 2018

Project milestone | Open Access

OpenAIRE Guidelines for CRIS Managers 1.1

Dvořák, Jan; Bollini, Andrea; Rémy, Laurent; Schirrwagen, Jochen

The Guidelines provide orientation for CRIS managers to expose their metadata in a way that is compatible with the OpenAIRE infrastructure. By implementing the Guidelines, CRIS managers support the inclusion and therefore the reuse of metadata in their systems within the OpenAIRE infrastructure. For developers of CRIS platforms, the Guidelines provide guidance to add supportive functionalities for CRIS managers and users. Exchange of information between individual CRIS systems and the OpenAIRE infrastructure is an example of point-to-point data exchange between CRIS systems, since the OpenAIRE infrastructure is itself a CRIS system.

Preview

Page: 1 of 61 — + Automatic Zoom

OpenAIRE Guidelines

Release 1.1.1

818 views | 506 downloads

See more details...

Indexed in
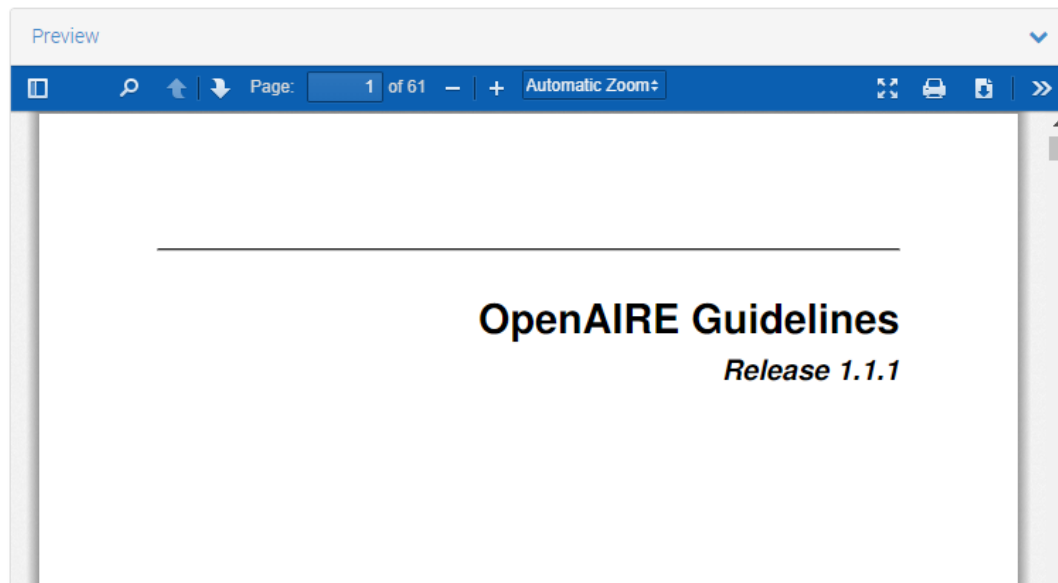
OpenAIRE

Publication date:
December 20, 2018

DOI:
DOI 10.5281/zenodo.2316420

Keyword(s):
content aggregation | OpenAIRE.eu
research information management
current research information systems | CERIF
system interoperability

Grants:
European Commission:
- OpenAIRE2020 - Open Access Infrastructure for Research in Europe 2020 (643410)

https://zenodo.org/record/2316420

So what happened in between?

METIS2OpenAIRE

This is a page for information on the **OpenAIRE-funded METIS2OpenAIRE project**. The project is running from the start of February until mid-May 2018. This page aims to collect posts on the project progress, on wider aspects related to CRIS interoperability and, *once the project comes to an end, on the further advances in making CRIS systems beyond METIS OpenAIRE-compatible*.

The following texts have been posted thus far:

- Jun 3rd, 2019: "CRIS in OpenAIRE - we take you onboard", by Pablo de Castro, METIS2OpenAIRE coordination
- Apr 30th, 2019: Data quality issues around CRIS harvesting by OpenAIRE, by Pablo de Castro, METIS2OpenAIRE coordination, and Aenne Löhden, OpenAIRE/Universität Bielefeld
- Mar 1st, 2019: First two CRIS systems test harvested by OpenAIRE (beta service), by Pablo de Castro, METIS2OpenAIRE coordination
- Nov 30th, 2018: CERIF-XML Guidelines for CRIS Managers start getting implemented, by Pablo de Castro, METIS2OpenAIRE coordination
- Jul 12th, 2018: OpenAIRE compatibility for CRIS systems discussed at the CRIS2018 conference in Umeå, by Pablo de Castro, METIS2OpenAIRE coordination
- May 25th, 2018: Test-driving the OpenAIRE CRIS Guidelines 1.1, by Jan Dvořák, technical lead for METIS2OpenAIRE
- May 8th, 2018: Making the METIS CRIS at Radboud University OpenAIRE-compatible, by Ed Simons, METIS2OpenAIRE lead at Radboud University Nijmegen
- Feb 26th, 2018: METIS2OpenAIRE: Adding CRIS systems to the list of OpenAIRE data providers, by Pablo de Castro, METIS2OpenAIRE coordination

METIS2OpenAIRE Concept

- Main aim: to make a first CRIS System OpenAIRE-compatible (METIS at Radboud University Nijmegen)

- In-house-built system chosen as allows full institutional control on dev

- To widen the project scope, further CRIS solutions included as budget-neutral partners beyond METIS: Omega-PSIR & PURE

- Project WPs include:
    - Setting up an OAI-PMH end-point on METIS
    - Building a minimally sufficient validator for CERIF-XML CRIS feeds
    - Test METIS feed against CERIF-XML Guidelines in several iterations until compliance is achieved
    - Support parallel mapping exercises by budget-neutral project partners

Where we are now

Memorandum of Understanding

Purpose
The purpose of this Memorandum of Understanding (MoU) is to establish and promote a strategic and cooperative partnership between OpenAIRE and euroCRIS.

Objective
The strategic partners will work together:

(a) To realise optimal interoperability between the central OpenAIRE system and CRISs based upon the international standard CERIF exchange format, resulting in:

- An enrichment of the OpenAIRE database with an extended set of additional contextual metadata
- A substantial extension of the kind and number of data providers to the OpenAIRE aggregation, enabling a more complete coverage of the research information domain
- The gradual addition of the research information management community to the group of parties that have a stake in OpenAIRE

https://www.eurocris.org/sites/default/files/MoU_euroCRIS-OpenAIRE_final_20190527.pdf

Why making CRIS OpenAIRE-compliant?

- Even if the institutional repository is already OpenAIRE-compliant, it makes sense to implement the CERIF-XML Guidelines on the CRIS for the sake of the *contextual information not included in the repository items*

- Adding *National CRIS* to the range of OpenAIRE data providers may also involve significant benefits in terms of comprehensiveness, esp in countries with weaker repository networks

- Institutions in some countries (UK) are often not able to deliver their EU-funded project outputs into OpenAIRE via their repositories: having an alternative route will help with this

Contextual research information

This may include information on:
- Affiliations
- Funded projects
- Associated datasets
- Research equipment/ facilities

euroCRIS: promoting the use of CERIF

euroCRIS
Current Research Information Systems

Mission

"To promote collaboration within the research information community and advance interoperability through CERIF"

Main features of CERIF

CERIF (the Common European Research Information Format) is:

- A concept about research entities and their relationships – Specification (Conceptual Level)
- A description of research entities and their relationships – Model (Logical Level)
- A formalization of research entities and their relationships – Database Scripts (Physical Level)

https://www.eurocris.org/cerif/main-features-cerif
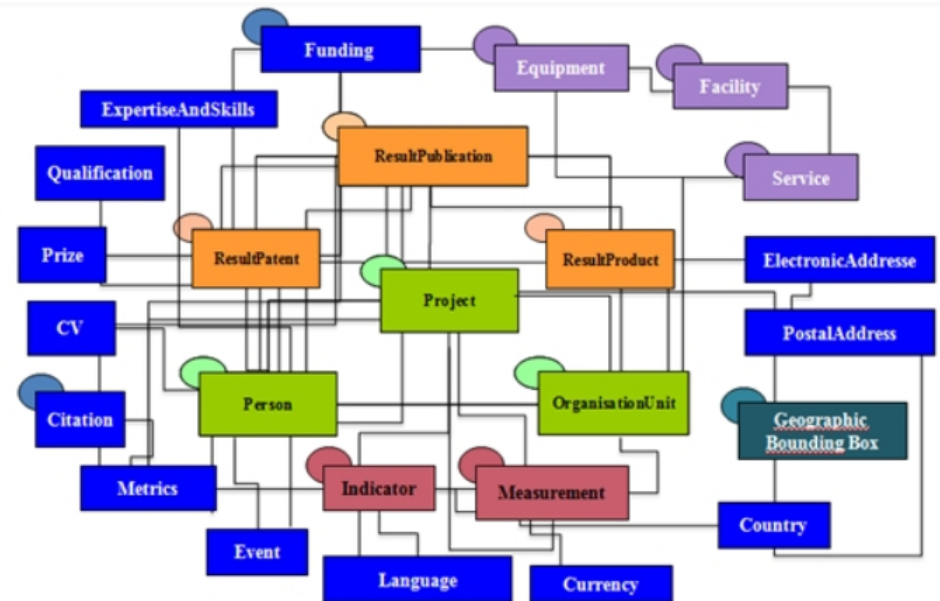
System interoperability a key concept
for Open Science implementation

WHEAT INITIATIVE

ABOUT   EVENTS   FUNDING   IWC   NEWS   PUBLICATIONS   RESOURCES

WheatVIVO

The Wheat Initiative is developing an open-access web portal that aims to provide information regarding wheat researchers and international projects.

The WheatVIVO portal will facilitate access to information concerning researchers and research projects amongst the global public-private wheat community. This web portal will be a useful tool for researchers to search for partners in order to develop collaborations. WheatVIVO can also be used by students and post-docs to identify labs in which they would like to work, as well as by policy makers and funding agencies to better understand research priorities in different countries.

https://www.wheatinitiative.org/wheatvivo

Open Science implementation gradually moving onto subject-specific approaches

First BE OPEN Event - Open Science in Transport at ETC2019

11.10 2019

Add to calendar

47th European Transport Conference (ETC 2019)
Dublin Castle, Dublin, Ireland

This is the first workshop of the project which will be organized in relation to the activities of WP1 "Open Science framework and stakeholders views" and WP2 "Mapping of existing Open Science sources in transport".

We are looking forward to engaging stakeholders into the discussion around the Open Science in Transport, and more particularly around the terminology for Open Science understanding and around the needs of the different modes of transport regarding Open Science in Transport.

https://beopen-project.eu/events/open-science-session

Mapping available RIM infrastructure: the DRIS

DRIS entry

Research Object OMEGA-PSIR@WUT

📊 View Statistics | 🔔 Email Alert | 📶 RSS Feed

☰ Information

Details

Name of the CRIS OMEGA-PSIR@WUT   **Acronym** OMEGA-PSIR@WUT

Description

OMEGA-PSIR@WUT is the fully functional CRIS operated at the Warsaw University of Technology (WUT). It provides the University Management with a complete view of research achievements of the University, and reports the achievements to the national authorities. It also functions as Institutional Repository, making it possible to archive full-texts, and provides access directly to the users. It is compliant with the OAI-PMH protocol. The system grants end-users access to the files according to the copyright permissions and the users' privileges. For example, for an authorized user a publication can be provided directly from the system, otherwise the system directs the user to the publisher site.

Status In Operation   **Scope** University   **Date of establishment** 02-01-2013   **URI** http://repo.bg.pw.edu.pl/index.php/en/

Number of users 4300   **Annual number of DB requests** 860,000   **Software** Commercial/In-house software

CERIF-Compatibility CERIF wrapped: Non-CERIF storage model but CERIF interface (query and reporting) **CERIF-version** CERIF-1.4

Coverage Projects
    Persons (researchers)
    Organisations (Institutes, Departments...)
    Publications
    Products (resulting from research: e.g. software, video, audio)
    Awards / Prizes (local, national, international)
    Patents
    Events (e.g. conferences, seminars...)
    Facilities (e.g. large laser laboratory)
    Equipment (e.g. x-ray spectrometer)
    Services (as outcome of research or linked to research)
    Person CV
    Person skills

Links to systems within the institution Institutional Repository
    HRM-System
    Financial System
    Library System
    SIS (Student Information System)

Links to external systems outside the institution CRIS of other Institutions

https://dspacecris.eurocris.org/cris/dris/dris00977

How CRIS harvesting is meant to work

Register your datasource

Literature Repository

Make sure your repository is already registered in OpenDOAR, the authoritative directory of institutional and thematic OA repositories.

List provided by OpenDOAR □

Data Repository

Make sure your data repository is registered in Re3Data, the global registry of research data repositories from different academic disciplines.

List provided by Re3data □

Open Access Journals

Make sure that your Open Access Journal is compatible with the OpenAIRE literature Guidelines.

For any questions please contact the OpenAIRE helpdesk. □

Aggregator

Make sure that your publications aggregator is compatible with the OpenAIRE literature Guidelines.

For any questions please contact the OpenAIRE helpdesk. □

CRIS Systems

Stay tuned

Software

Stay tuned

Catch-all

Stay tuned

Other Sources

Stay tuned

Screenshot courtesy of Antonis Lempesis, OpenAIRE at Athena Research Centre, Athens

How CRIS harvesting is meant to work

Screenshot courtesy of Antonis Lempesis, OpenAIRE at Athena Research Centre, Athens

First step: exposing CRIS metadata feed

Suggested feature implementation sequence

0. An empty, but compliant OAI endpoint (Service)
1. Your institution and its organisational structure (OrgUnits)
2. Your academic staff with affiliations to your departments (Persons, OrgUnits)
3. The funders you have met (OrgUnits)
4. Funding programmes, incl. the links to their funders (Funding, OrgUnits)
5. Equipment
6. Projects
7. Journals your staff has published in (Publications)
8. Your staff's journal articles (Publications)
9. Proceedings, conferences (Publications, Events)
10. Your staff's other publication outputs (Publications)
11. Datasets, software, websites, videos and other outputs (Products)
12. Patents

Source: Jan Dvořák, euroCRIS, http://hdl.handle.net/11366/713

First step: exposing CRIS metadata feed

Make sure you only expose public information

Do not show:

- Project proposals

- Contractual research projects

- Metadata of internal documents and non-disclosable outputs

- Persons who exercised their right to be forgotten
  - or some other opt-out

=> Do not show what you wouldn't put on your institution's public website! <=
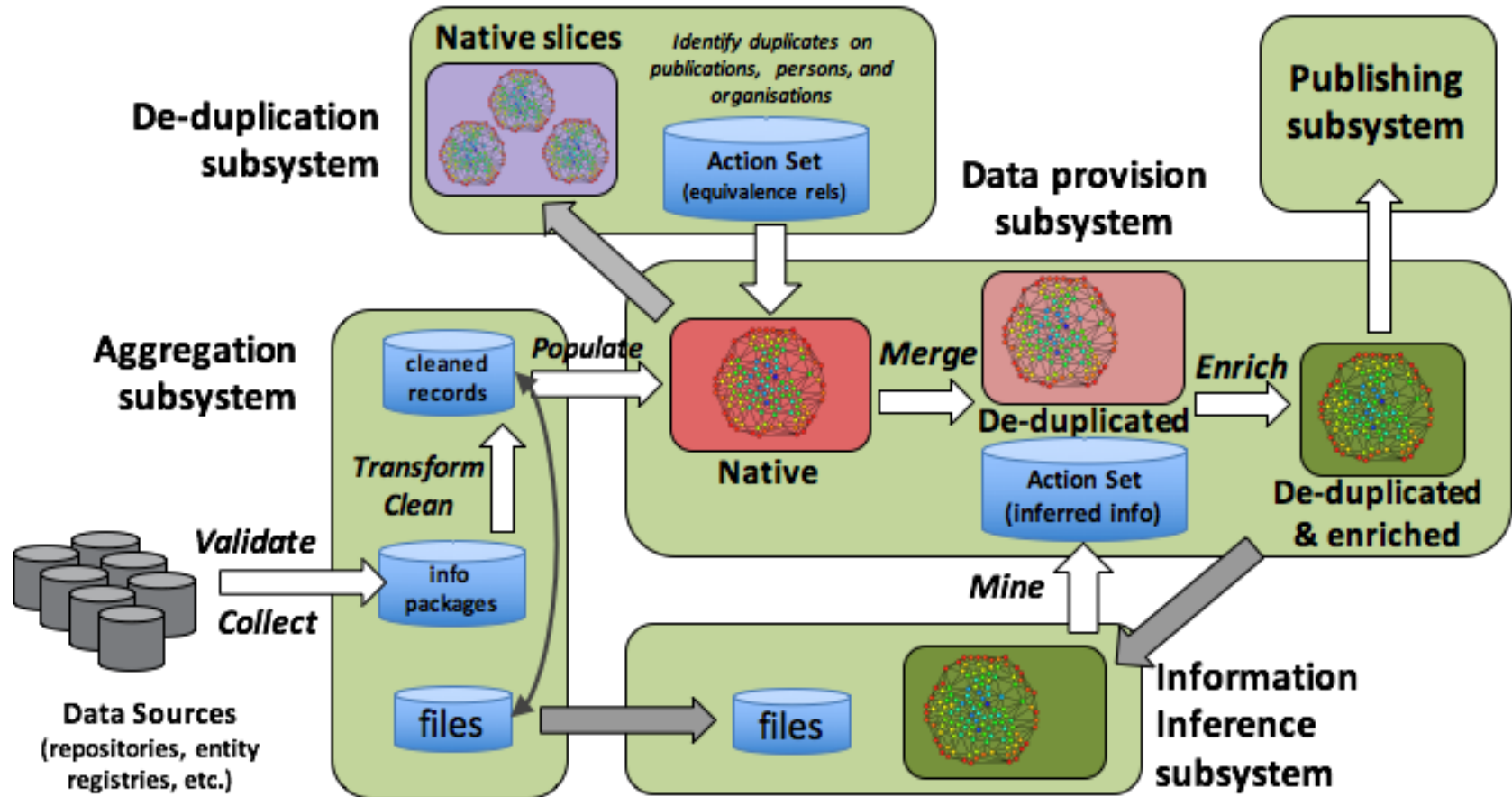
Source: Jan Dvořák, euroCRIS, http://hdl.handle.net/11366/713

Test harvesting & data quality analysis

Diagnostic findings of CRIS metadata

- Abstracts, subjects often not given, subjects not based on thesauri.
- Language attribution missing, undeclared, or wrong for titles, abstracts, subjects.
- Resource types frequently too unspecific (other or text).
- Reviews lacking explicit specification of reviewed item (as prose in title).

What is the described item about?

- Author names quite differently formatted and sometimes lacking IDs.
- Container publication (journal, book) without IDs (ISSNs, ISBNs).

Where does it stem from?

OpenAIRE

Source: Aenne Löhden, OpenAIRE at Uni Bielefeld, http://hdl.handle.net/11366/976

OpenAIRE aggregation pipeline

Source: Jan Dvořák, euroCRIS, http://hdl.handle.net/11366/713

Some conclusions

- CRIS harvesting highly relevant for OpenAIRE and for Open Science implementation

- Including CRIS as data providers for Literature Broker Service offers interesting opportunities in the area of contextual metadata

- Still at an early stage with just a few early adopters of the CERIF-XML Guidelines for CRIS Managers (but it's going to get much bigger soon)

- CRIS 'vendors' (incl 4Science) interested in offering this as a service to their customers will mean a key driver

OpenAIRE

Realizing the implementation of the OpenAIRE-CRIS-CERIF Guidelines in DSpace-CRIS

📁 infrastructure services & data, scholarly communication 👤 Andreas Czerniak 🕘 Monday, 20 May 2019
👁 915 Hits

OpenAIRE-CRIS-CERIF Guidelines in DSpace-CRIS

Supported by OpenAIRE, 4Science will implement the most recent version of the OpenAIRE Guidelines for CRIS Managers in the open source software DSpace-CRIS which extends the DSpace repository platform by research data and information management.

https://www.openaire.eu/blogs/realizing-the-implementation-of-the-openaire-cris-cerif-guidelines-in-dspace-cris-1

Thanks!

Questions?

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