

CERIF Refactoring

Jan Dvořák



<https://orcid.org/0000-0001-8985-152X>

Dragan Ivanović



<https://orcid.org/0000-0002-9942-5521>

CERIF Refactoring Goals

1. Keep the strong features of current CERIF
 - a. Multilinguality
2. Take away the perceived complexity of CERIF
 - a. Emphasize the conceptual model
 - b. Improve documentation
3. Modernize CERIF
 - a. Change the modeling notation
 - b. Adapt CERIF for usage in APIs and for Linked Open Data
 - c. Modern serialization formats
 - d. Allow for systematic provenance tracking and verifiable credentials
4. Involve the community in further development of CERIF
 - a. Modularity
 - b. Open source sw development practices

CERIF Refactoring Means

1. New modelling approach (and tool)
 - a. Improved documentation
 - b. Element addressability
2. Modularity ($\Rightarrow$ scalability of further CERIF development)
 - a. The Core and pluggable modules
 - b. Datatypes to represent reusable functional groups
 - c. Developed in a decentralized way
3. Modern serialization formats (with appropriate schema expressions)
 - a. JSON-LD (JSON Schema, SHACL) for APIs
 - b. RDF (RDF Schema, SHACL) for LOD
 - c. previously: XML (XML Schema, Schematron)

CERIF Core

CERIF Core

Contains:

- common data types
- abstract entities
- commonly used entities
- common constructs

The basis for:

- Particular research information interchange scenarios
- Extensions in terms of coverage

A prototype
CERIF Core
repository at
[https://github.com/
EuroCRIS/
CERIF-Core](https://github.com/EuroCRIS/CERIF-Core)

The screenshot shows the GitHub repository page for EuroCRIS/CERIF-Core. The repository is public and has 2 branches, 0 tags, 350 commits, 4 watchers, 1 fork, and 2 stars. The repository is a prototype for the CERIF Core, which is a Common European Research Information Format. The repository contains a README.md file and a directory named .github/workflows. The README.md file describes the CERIF Core and its purpose. The .github/workflows directory contains a file named plantuml.yml, which is used for generating diagrams from plantuml files. The repository also contains a directory named datatypes, which contains files for aligning md files with example for UC1. The repository also contains a directory named diagrams, which contains files for adding generated diagrams. The repository also contains a directory named entities, which contains files for adding Person_Identifier as an entity. The repository also contains a directory named examples, which contains files for link correction. The repository also contains a directory named guidelines, which contains files for Let Attributes and Relationships sections. The repository also contains a directory named serializations/RDF, which contains files for Rename Affiliation Statement -> Affiliation. The repository also contains a directory named tools, which contains files for Correct the links to the parent entity. The repository also contains a README.md file, which contains files for Fix the links to entities.

← → ↺ https://github.com/EuroCRIS/CERIF-Core

EuroCRIS / CERIF-Core Public

Edit Pins Unwatch 4 Fork 1 Star 2

<> Code Issues 1 Pull requests Actions Projects Wiki Security Insights

main 2 branches 0 tags Go to file Add file <> Code

actions-user adding generated diag... d1e218d on Aug 26 350 commits

.github/workflows	Update plantuml.yml	17 months ago
datatypes	Aligning md files with example for UC1	5 months ago
diagrams	adding generated diagrams	3 months ago
entities	Add Person_Identifier as an entity	3 months ago
examples	link correction	13 months ago
guidelines	Let Attributes and Relationships sections ...	3 months ago
serializations/RDF	Rename Affiliation Statement -> Affiliation	5 months ago
tools	Correct the links to the parent entity	4 months ago
README.md	Fix the links to entities	3 months ago

README.md

CERIF Core

CERIF (=Common European Research Information Format) covers the domain of research information with a focus on the administrative and organizational aspects. It aims to provide machine-processable

About

The CERIF Refactoring Pilot project started in 2021 by euroCRIS.

- Readme
- 2 stars
- 4 watching
- 1 fork

Releases

No releases published
[Create a new release](#)

Packages

No packages published
[Publish your first package](#)

Contributors 3

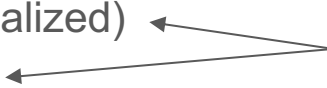
- jdvorak001 Jan Dvorak
- chenejac Dragan Ivanovic
- actions-user

CERIF Agent

Def: Anything that has the ability to perform actions.

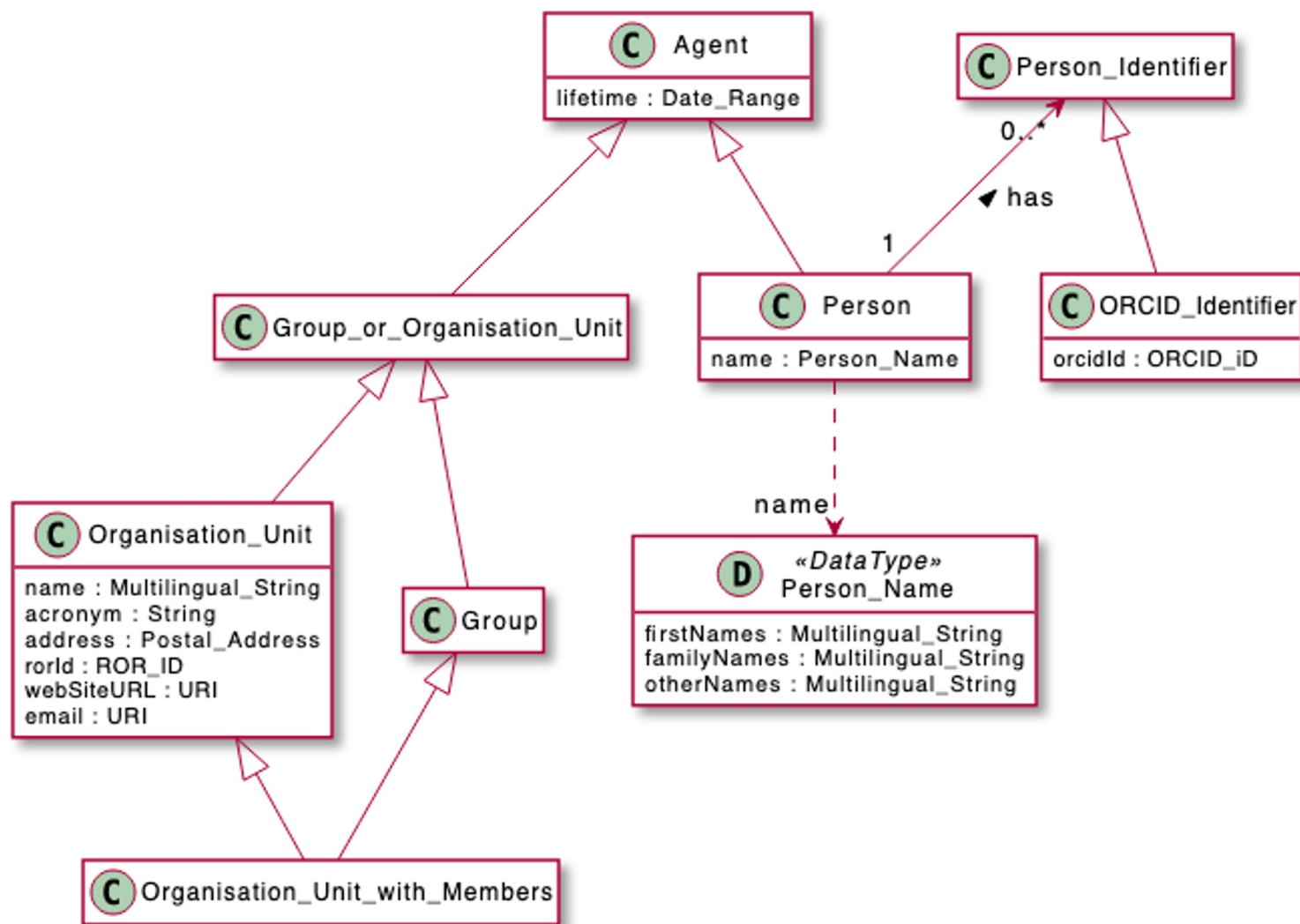
Generalizes the former cfPerson + cfOrgUnit

Subclassed as:

- Person
 - Group_or_Organisation_Unit
 - Organisation Unit (formalized) ←
 - Group (has members) ←
- Organisation_Unit_with_Members
- 

(following FOAF)

The Agent Hierarchy



CERIF Activity

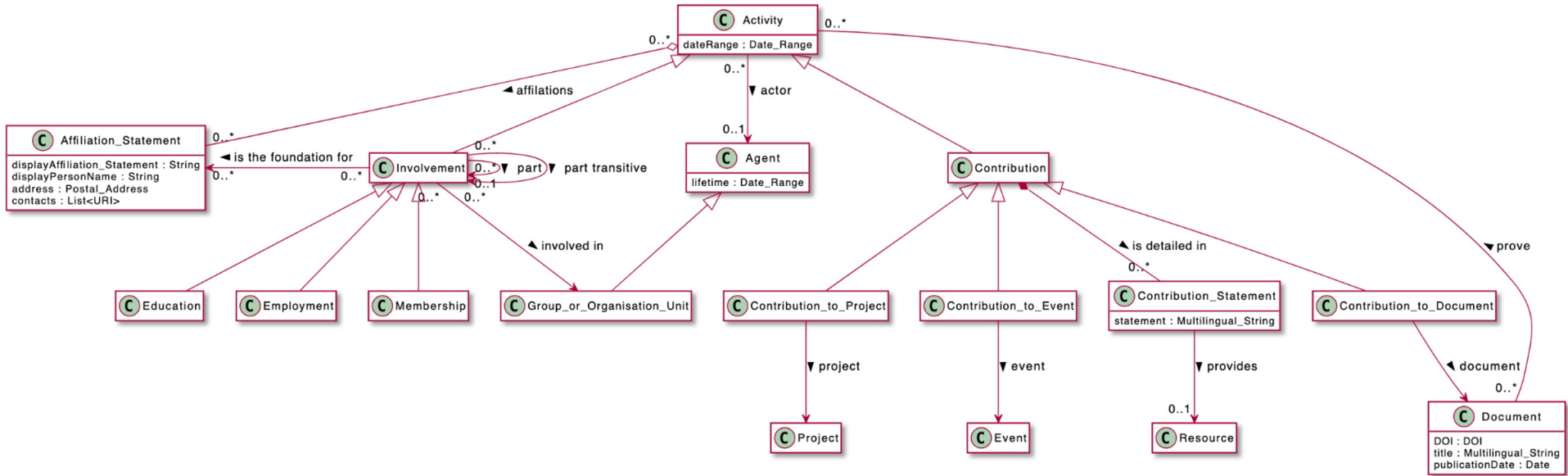
Def: Anything an Agent does.

Subclassed as:

- Involvement (Membership, Employment or Education)
in a Group or Organisation Unit
- Contribution to a Document, a Project, an Event, ...

This is a refinement of the Linking Entities of current CERIF
starting from cfPerson or cfOrgUnit
(dateRange is an attribute of Activity)

Activity hierarchy



The simple case: Agent performs Activity on its own

Person:

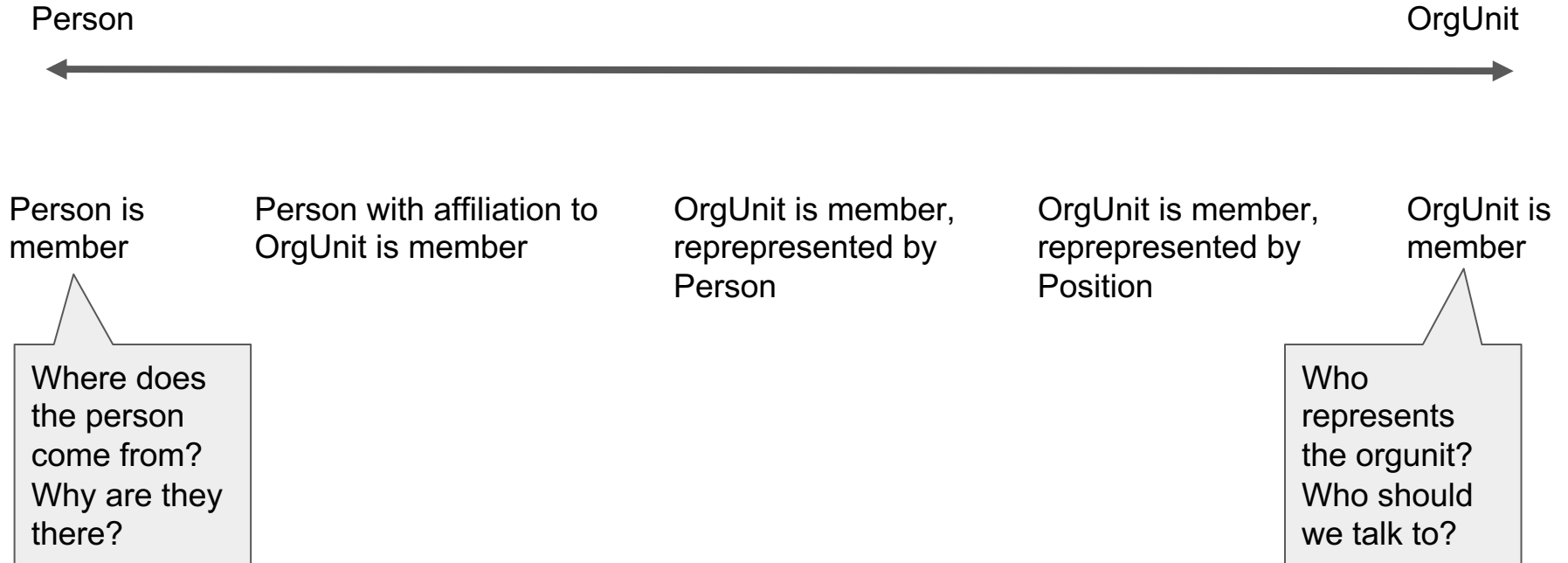
Jan Dvořák is member of the Czech Association of Scientific and Technical Societies.

OrgUnit:

Charles University [CZ] is member of the European University Association.

CERIF AffiliationStatement

To give context to the Agent in his/her/its Activities.



Memberships and affiliations/representations: Examples

Person with Affiliation:

Jan Dvořák from the Institute of Information Studies and Librarianship of the Charles University [CZ] is member of the RDM.CZ Working Group.

OrgUnit represented by a Person (from a subunit):

The Faculty of Arts of the Charles University [CZ] is member of euroCRIS, with Jan Dvořák from the Institute of Information Studies and Librarianship of the Charles University as a representative.

OrgUnit represented by a Position:

The Czech Technical University in Prague [CZ] is member of CESNET [CZ], represented by the Director of the Computing and Information Centre.

CERIF Project & Funding

Project: A temporary endeavor undertaken to create a unique product, service or result.

(Source: the Project Management Institute)

Funding: Money provided by an organization or government for a particular purpose.

(Source: the Oxford Learner's Dictionary of Academic English)

Common confusion: funders, institutions and researchers alike may say “Project” when they mean “Project with Funding” or “Funding”.

Funding: a specific type of Resource

It's not just Funding that enables research. There is also:

- The expertise, time & effort of Researchers
- Prior knowledge (from Documents)
- Housing the research, the administrative backing by Institutions
- Services offered by Facilities:
 - Laboratories
 - Supercomputing centres
 - Data archives
 - Libraries
 - ...
- Other Services
 - Publishing

Most of these can be had in exchange for some Funding

Resources exist in different modes

Planned

Sought for

Constructed / Secured

Offered / Invitation to use

Considered

Applied for / Negotiated

Approved / Agreed upon

Contracted

Used

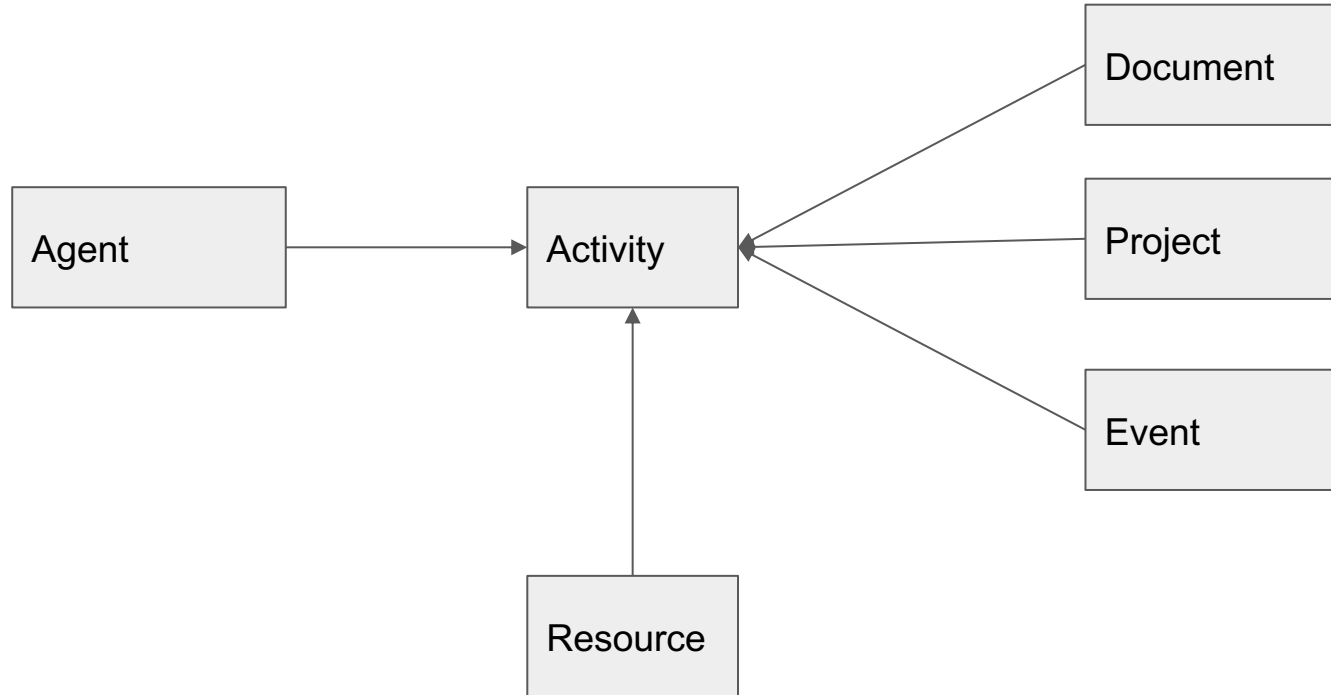
CERIF Document

Def: A document is a bounded representation of a body of information designed with the capacity (and usually intent) to communicate. A document may manifest symbolic, diagrammatic or sensory-representational information.

(Source: The Bibo Ontology, <http://purl.org/ontology/bibo/Document>)

Accommodates current cfResultPublication, cfResultPatent and some of cfResultProduct

CERIF Core “View from the Top”



Modules

CERIF Modules

Add functionality

- E.g. the Scholarly publication module

Customize the model for a specific scenario

- E.g. institutions to report publications produced with Horizon Europe funding to the EC (tentative)

Contributed by another group of people

Reuse & Extend stuff from the Core and other modules

Candidate modules:

- Dataset metadata
- Research software metadata
- Bibliometric indicators
- Project reporting
- Research Infrastructure description

CERIF Scholarly Publication Module

1st module started along with the Core

Scope:

- Journal Article
- Journal
- Monograph
- (Book Chapter)
- (Proceedings Paper)

←

→

↺

https://github.com/EuroCRIS/CERIF-ScholarlyPublicationsModule

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EuroCRIS / CERIF-ScholarlyPublicationsModule

Public

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<> Code

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📖 Wiki

🛡 Security

📈 Insights

⚙ Settings

🔗 main

🔗 1 branch

🏷 0 tags

Go to file

Add file

Code

jdvorak001

Add human-readable anchors to the journal-articles relationship

✓ 7fe3b7a on 10 Mar 87 commits

📁 .github/workflows

Update plantuml.yml

6 months ago

📁 datatypes

The initial creation of datatypes ISBN and ISSN, and update of Editor...

10 months ago

📁 diagrams

🚀 adding generated diagrams

2 months ago

📁 entities

Add human-readable anchors to the journal-articles relationship

2 months ago

📁 examples

link correction

6 months ago

📁 serializations/RDF

adding examples directory

6 months ago

📄 README.md

The Development section now references the Core

6 months ago

☰ README.md

✎

CERIF Scholarly Publications Module

A module to represent scholarly publications in the refactored CERIF. Its secondary purpose is to demonstrate the liason between the [CERIF Core](#) and a module.

Status

About

No description, website, or topics provided.

📖 Readme

☆ 0 stars

👁 3 watching

🔗 0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Contributors 3

chenejac

Dragan Ivanovic

jdvorak001

Jan Dvorak

Where we are

The Core almost complete, needs a few additions

The Scholarly publication module will need expansion with publication types

- We'd like to rely on the community here

Next bits to tackle:

Serialization formats (JSON+RDF | JSON-LD)

Funding by euroCRIS (2021–2022)

and EC (in the FAIRCORE4EOSC project: 2022 onwards)

Summary

Working towards a new CERIF that is:

- Better positioned for real-world research information interchange scenarios
- More customizable
- Engaging the community