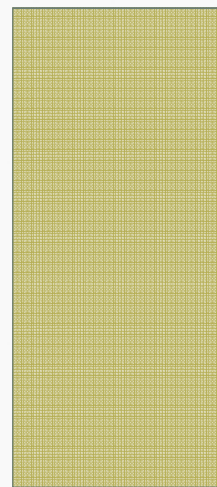


TOWARDS AN OPEN DATA ON HOW THE RESEARCH DATA ARE USED: CRIS-CERIF BASED APPROACH

SERGEY PARINOV, CEMI RAS



WHAT DOES IT MEAN: “THE OPEN DATA ON HOW THE RESEARCH DATA ARE USED”?

1. An openness of how scientists manipulate with research outputs (RO), e.g. anchoring, selecting artifacts, etc.
2. An openness of researchers motivations to use (or not) RO in producing new scientific knowledge
3. A guaranteed awareness of researchers on all facts of using their research outputs
4. An openness of detailed usage statistics (including motivations, etc.)

ON THE CRIS-CERIF SIDE

- Ecosystems:
- (1) manipulations, (2) motivations,
- (3) notifications, (4) usagemetrics

CRIS-CERIF response:

- Classification of existed types and techniques
- Use cases for CRIS users
- CERIF support
- Specific type of CRIS interoperability and interactions
- Necessary requirements for CRIS to support the ecosystem

MANIPULATIONS WITH RESEARCH OUTPUTS

- Known techniques and ecosystems
 - Open Annotation
 - Semantic linking (LOD, research relationships, etc.)
 - etc.
- On the CRIS-CERIF side
 - Information about manipulations made within one CRIS should be shared with a metasystem (research e-infrastructure) and should be available for other CRIS systems
 - CERIF data model should support such data exchange

OPEN ANNOTATION INITIATIVE

← → ↺

www.w3.org/community/openannotation/

☆

☰

WordPress

My Sites

Open Annotation Community Group

0

+ New

Events

Howdy, Sergey Parinov

LOGGED IN AS SERGEY PARINOV (LOG OUT)

DASHBOARD

MY ACCOUNT

SKIP

W3C



W3C Community and Business Groups

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REPORTS

ABOUT

 Mailing List

 Wiki

 Chat

 RSS

 Contact Group

Home / Open Annotation Community...

Open Annotation Community Group

The purpose of the Open Annotation Community Group is to work towards a common, RDF-based, specification for annotating digital resources. The effort will start by working towards a reconciliation of two proposals that have emerged over the past two years: the Annotation Ontology [1] and the Open Annotation Model [2]. Initially, editors of these proposals will closely collaborate to devise a common draft specification that addresses requirements and use cases that were identified in the course of their respective efforts. The goal is to make this draft available for public feedback and experimentation in the second quarter of 2012. The final deliverable of the Open Annotation Community Group will be a specification, published under an appropriate open license, that is informed by the existing proposals, the common draft specification, and the community feedback.

[1] <http://code.google.com/p/annotation-ontology/>
[2] <http://www.openannotation.org/spec/beta/>

Get involved!

Anyone may join this Community Group. All participants in this group have signed the [W3C Community Contributor License Agreement \(CLA\)](#).

JOIN THIS GROUP

or learn how to join or request an account.

Note: Community Groups are proposed and run by the community. Although W3C hosts these conversations, the groups do not necessarily represent the views of the W3C Membership or staff.

ANNOTATION ECOSYSTEM

Annotation Use Cases, W3C Editor's Draft 03 March 2014

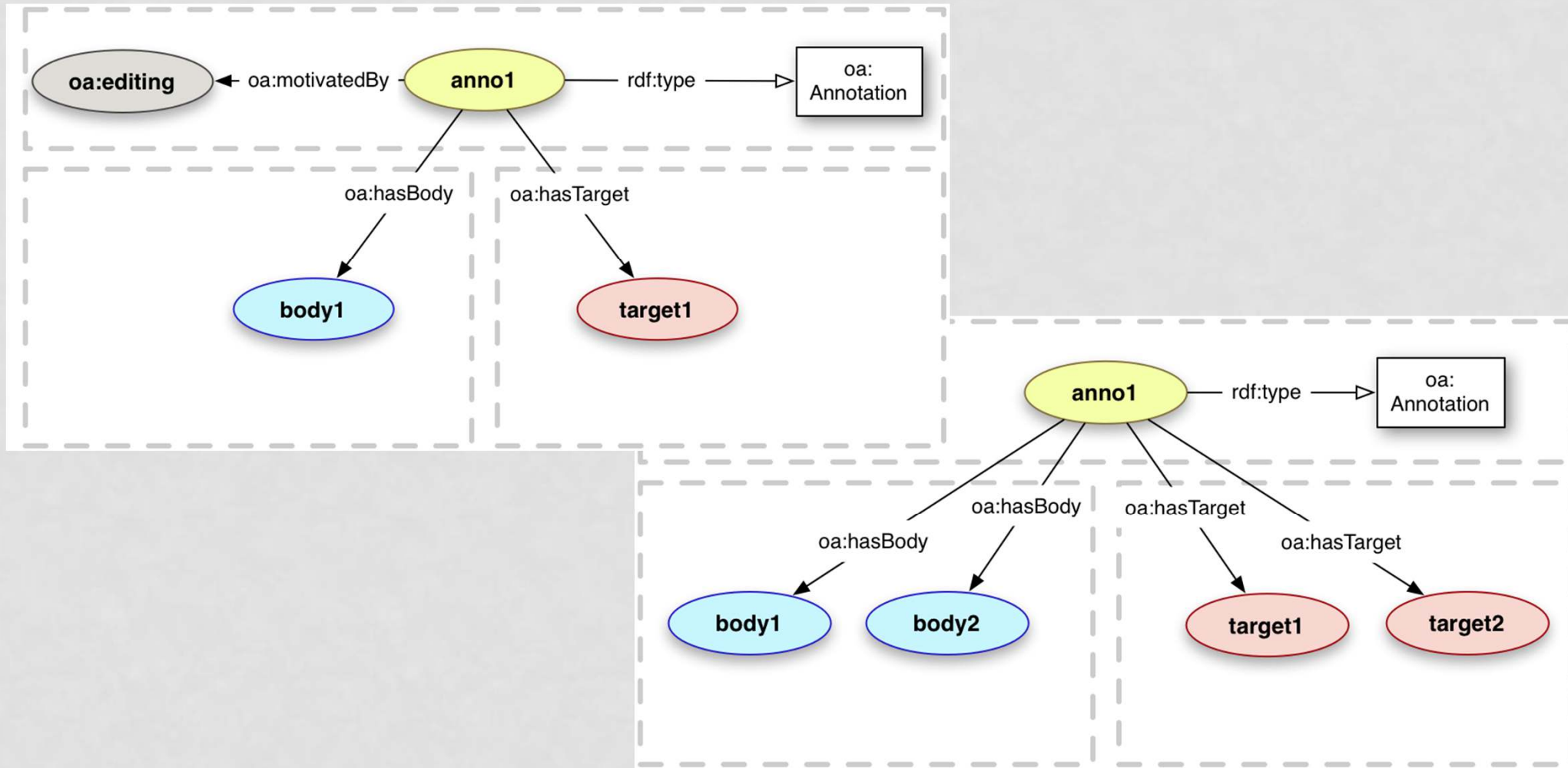
....

- **Requirements - Services**

- Discovery of Annotations Relevant to Publication
- Persistence of Annotations
- Service for Sharing Annotations, either with others or between platforms
- Management of Shared Annotations
- Authentication and Authorization in the Annotation ecosystem

Source: <http://www.openannotation.org/usecases.html>

ANNOTATION DATA MODEL



Source: <http://www.openannotation.org/spec/core/core.html>

ANNOTATIONS ON THE WEB

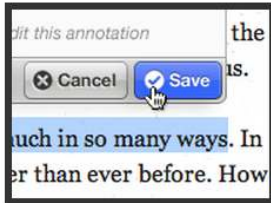
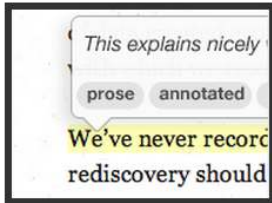
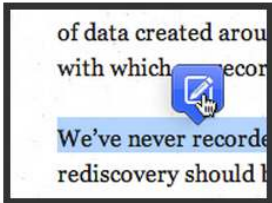


Code / Docs / Showcase / Plugins

The copy-editor of the web

Annotator is an open-source JavaScript library to easily add annotation functionality to any webpage. Annotations can have comments, tags, links, users, and more. Annotator is designed for easy extensibility so its a cinch to add a new feature or behaviour. Annotator also fosters an active developer community with contributors from four continents, building 3rd party plugins allowing the annotation of PDFs, EPUBs, videos, images, sound, and more.

[Download](#)[GitHub](#)





MANIPULATIONS WITH LINKAGES

СОЦИОНЕТ

personal data

Relations

outgoing linkages

personal opinion	11
to organization from the person	1
author - research output relationship	3
to created collections	12
to materials from the scientist	71
to out-of-date versions	3

ingoing linkages

from organizations to the person	1
author - research output relationship	187

linkage stats

Admin Links

Main Page
Admin's Help

Search

☐ by contents' list
☐ by this series
☒ overall
☐ with full text

keywords:

authors:

run search

Extended Search

Author's Personal Data

Navigation: Discipline | Services: Add/Update a Profile

name- full: **Паринов Сергей Иванович**
name- full-en: **Parinov, Sergey**



ADDITIONAL FEATURES

to materials from the scientist	71
to out-of-date versions	3

ingoing linkages

from organizations to the person	1
author - research output relationship	187

linkage stats

personal opinion
hierarchy and association
research material components
scientific inference

personal opinion
hierarchy and association
research material components
scientific inference

[1580/9355] Паринов Сергей Иванович

from organizations to the person (1)
author - research output relationship (187)
personal opinion (11)
to organization from the person (1)
author - research output relationship (3)
to created collections (12)
to materials from the scientist (71)

- [0/4] Проблема реализации инвестиционных проектов
- [0/6] Рынок-великан (Суперрынок)
- [0/75] Метрики онлайн-информационных ресурсов
- [0/12] "Все люди планеты - ваши партнеры"
- [0/3] Интернет для предприятий: "Будь готов или нет"
- [48/202] Сигнальная система Соционет
- [38/135] СоциоАрт - автоматизированное рабочее место
- [97/217] К теории сетевой экономики
- [9/22] Система Соционет как платформа для развития
- [44/164] Концепция виртуальной научной среды
- [6/11] Создание единого информационного пространства
- [12/58] Используемая в Соционет схема данных
- [14/52] Open Repository of Semantic Linkages
- [0/4] Экономический рейтинг Сибири в сравнении с другими регионами
- [10/24] Соционет.ру как модель информационно-коммуникационной среды

Source: http://socionet.ru/pub.xml?h=repec:rus:ecoper:parinov_sergey.56054-1&l=en

MANIPULATIONS WITH SCIENTIFIC TAXONOMY

collection.xml?h=spz:sparinov:adwzse&l=en

1	администратор проекта / <i>Project administration</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
2	вычисления / <i>Computation</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
3	выяснение: проведение экспериментов / <i>Investigation: performed the experiments</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
4	выяснение: сбор данных/подтверждений / <i>Investigation: data/evidence collection</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
5	изучение концепции / <i>Study conception</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
6	курирование данных / <i>Data curation</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
7	методология / <i>Methodology</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
8	надзор / <i>Supervision</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
9	обеспечение финансирования / <i>Funding acquisition</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
10	подготовка текста: визуализация/представление данных / <i>Writing/manuscript preparation: visualization/data presentation</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
11	подготовка текста: критика и доработка / <i>Writing/manuscript preparation: critical review, commentary or revision</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
12	подготовка текста: написание исходного черновика / <i>Writing/manuscript preparation: writing the initial draft</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /
13	ресурсы / <i>Resources</i> (date: 2014-04-26) Liz Allen, Amy Brand, Jo Scott, Micah Altman and Marjorie Hlava Паринов Сергей	1/0 /

SEMANTIC UPGRADE OF LINKAGES

Semantic Linkage between Research Objects

(1) Source Object	➡ Linkage Properties ➡	(2) Linked Object
Source Object: <u>Паринов Сергей Иванович</u>	Class of Relationship: Digital taxonomy to help researchers to identify their contributions to collaborative projects	Linked Object: <u>A Challenge of Research Outputs in GL Circuit: From Open Access to Open Use</u>
Data Type: person	Semantic Meaning: Methodology Semantic Code: spz:sparinov:adwzse:methodology	Data Type: paper

Author of the Linkage	Parinov Sergey
Author's e-mail	<u>sparinov@gmail.com</u>
Author's Workplace	ЦЭМИ РАН
Author's profile	<u>Паринов Сергей Иванович</u>
Organization's profile	<u>Федеральное государственное бюджетное учреждение науки Центральный экономико-математический институт Российской академии наук</u>
Creation Date	2014-5-10
Revision Date	2014-5-10

Semantic Linkage between Research Objects

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Source Object: <u>Паринов Сергей Иванович</u>	Class of Relationship: Digital taxonomy to help researchers to identify their contributions to collaborative projects	Linked Object: <u>A Challenge of Research Outputs in GL Circuit: From Open Access to Open Use</u>
Data Type: person	Semantic Meaning: Writing/manuscript preparation: writing the initial draft Semantic Code: spz:sparinov:adwzse:manuscript_writing	Data Type: paper

Author of the Linkage	Parinov Sergey
Author's e-mail	<u>sparinov@gmail.com</u>
Author's Workplace	ЦЭМИ РАН
Author's profile	<u>Паринов Сергей Иванович</u>
Organization's profile	<u>Федеральное государственное бюджетное учреждение науки Центральный экономико-математический институт Российской академии наук</u>
Creation Date	2014-5-10

SEMANTIC UPGRADE OF A LINKAGE BETWEEN THE AUTHOR AND THE PAPER

The image displays two side-by-side screenshots of the COCINET website, illustrating a semantic upgrade of a linkage between an author and a paper.

Left Screenshot (Initial State):

- Header:** COCINET logo, navigation bar with "publication info".
- Additional Features:** RePEc Authors service, Personal Z, Publish a paper at RePEc, Customiza, Add, RePEc.
- Relations:** outgoing linkages (author - research output relationship: 2, to organization: 3, to cited materials: 10), ingoing linkages (author - research output relationship: 3, from the scientist to materials: 1), linkage stats.
- Admin Links:** Main Page, Admin's Help.
- Search:** by contents' list.
- Publication Info:** title: A Challenge of Research Outputs in GL Circuit: From Open Access to Closed Access; author-name: Parinov Sergey; author-workplace: CEMI RAS; author-email: sparinov@gmail.com; author-handle: Паринов Сергей Иванович; author-name: Kogalovsky Mikhail; author-workplace: MEI RAS.

Right Screenshot (Upgraded State):

- Header:** COCINET logo, navigation bar with "publication info".
- Additional Features:** (Same as left screenshot).
- Relations:** outgoing linkages (author - research output relationship: 2, to organization: 3, to cited materials: 10), ingoing linkages (author - research output relationship: 3, from the scientist to materials: 1), linkage stats.
- Admin Links:** Main Page, Admin's Help.
- Search:** by contents' list.
- Filters:** research usage, personal opinion, hierarchy and association, research material components, scientific inference.
- Navigation over Linkages:** research usage, personal opinion, hierarchy and association, research material components, scientific inference.
- Publication Info:** title: A Challenge of Research Outputs in GL Circuit: From Open Access to Closed Access; author-name: Parinov Sergey; author-workplace: CEMI RAS; author-email: sparinov@gmail.com; author-handle: Паринов Сергей Иванович; author-name: Kogalovsky Mikhail; author-workplace: MEI RAS.
- Linkage Details:** [0/17] A Challenge of Research Outputs in GL Circuit: From Open Access to Closed Access; author - research output relationship (3); [Methodology] [1580/9355] Паринов Сергей Иванович; [Writing/manuscript preparation: writing the initial draft] [1580/9355] Паринов Сергей Иванович; [Study conception] [1580/9355] Паринов Сергей Иванович; from the scientist to materials (1); author - research output relationship (2); to organization (3); to cited materials (10).

Source: <http://socionet.ru/publication.xml?h=repec:rus:mqijxk:33&l=en>

SHARING DATA ABOUT MOTIVATIONS

- Popular approach -
 - Doing their research scientists wish to share with the community the motivations to use some research outputs, how it was used, and how it impacted on their research
- Innovative approach -
 - Scientist wish to share with the community details on their tries and fails to use some research outputs in their research (sharing data on motivation do not use it)
- On the CRIS-CERIF side
 - Data about using some research output from the content of one CRIS should be shared with a metasystem (research e-infrastructure) and should be available for other CRIS systems
 - CERIF data model should support such data exchange

NOTIFICATION ECOSYSTEM

- A scientist wishes to receive immediate notifications: (1) if other scientists manipulated or used their research outputs; (2) if other scientists changed materials which were annotated or used by the scientist
- A scientist wishes to have an ability to react on cases of annotating (using) their research outputs, e.g. to help/assist with proper using of the outputs, or to protest against wrong using, etc
- On the CRIS-CERIF side
 - Data about authors of used research output from the content of one CRIS should be shared with a metasytem (research e-infrastructure) and should be available for other CRIS systems
 - CERIF data model has supported such data exchange

USAGEMATRICS ECOSYSTEM

Центральный экономико-математический институт Российской академии наук

total linkages: by staff=13437 | by collections=3959
date: 2014-05-12 | object type: institution-object

Outgoing linkages, total - by staff: ➡ 6214 (46%) - by collections: ➡ 487 (12%)			Ingoing linkages, total - by staff: ➡ 7223 (54%) - by collections: ➡ 3472 (88%)		
Outgoing scientific relationships			Ingoing scientific relationships		
title	share	%	title	share	%
research usage (4)		0	research usage (10)		0
research material components (3)		0	from collections (21)		0
to organization from the person (1)		0	research material components (3)		0
author - research output relationship (3)		0	from person to the organization (141)		2
to created collections (44+17)		1	author - research output relationship (2650)		37
to relative materials (2)		0	from collections (9)		0
personal opinion (11)		0	from relative object (2)		0
to staff from the organization (103)		2	personal opinion (2)		0
to materials from the scientist (4963)		80	from organizations to the person (104)		1
hierarchy and association (4)		0	hierarchy and association (3)		0
to cited materials (881)		14	from citing materials (1131)		16
to out-of-date versions (178)		3	from materials to the organization (3144)		44
			from new versions (3)		0

CHALLENGES OF CRIS-CERIF DEVELOPMENT

- A CRIS system should support necessary data exchange for global manipulations, sharing motivations, notifications and collecting usagemetrics
- We should incorporate them into CRIS architecture and CERIF data model
- **A message: euroCRIS agenda on CRIS-CERIF development has to include new areas**
 - **making manipulations with RO, sharing motivations, sending notifications and processing usagemetrics**