

# Semantification of CEUR-WS with Wikidata as a target Knowledge Graph

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**TEXT2KG@ESWC 2023, Hersonissos, Greece, 2023-05-29**

# Semantification of CEUR-WS

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## Agenda

- CEUR-WS.org
- Core Entities
- FAIRness of CEUR-WS to be improved
- Workflow of the CEUR-WS Semantification
- Phases of the Semantification
- Semantification Challenges / Semantic Publishing Challenge
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- Future Work / TODOs

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- **semi-structured data about**
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  - events
  - papers
  - editors
  - authors

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## Wikidata 2022 Wikidata Workshop 2022

**Proceedings of the 3rd Wikidata Workshop 2022  
co-located with the 21st International Semantic Web Conference (ISWC2022)**

**Virtual Event, Hangzhou, China, October 2022.**

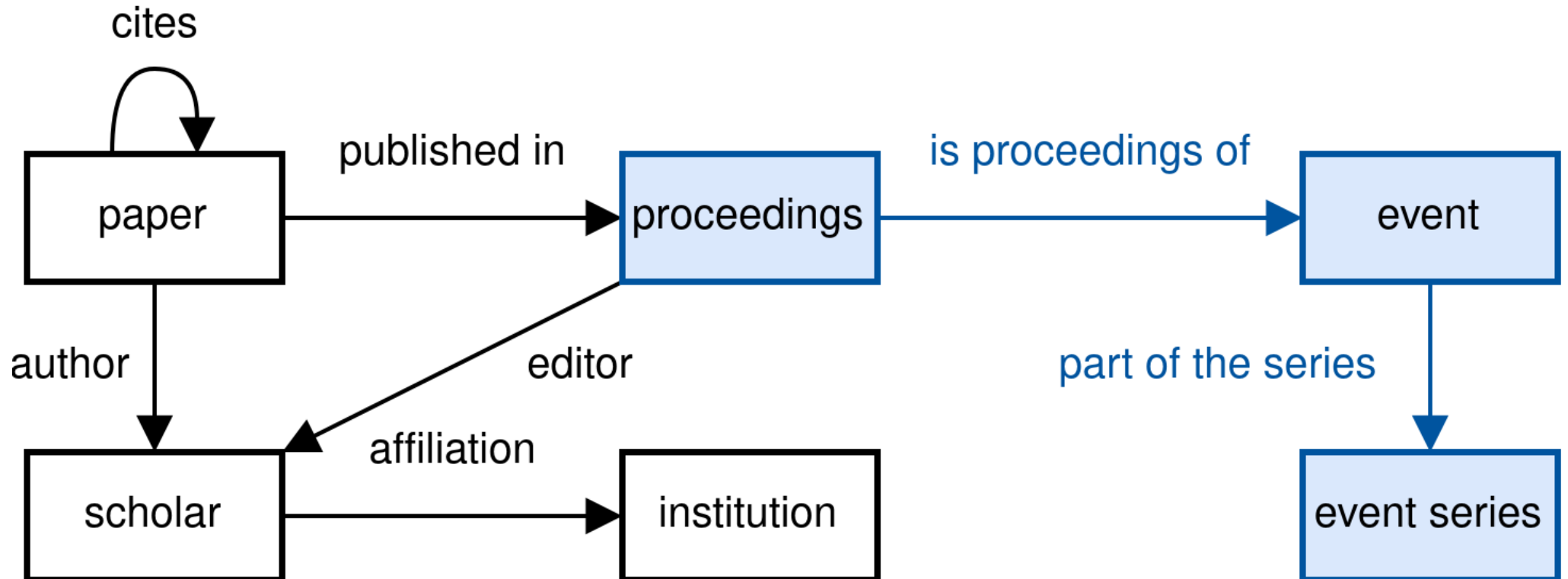
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## Core Entities



Clickable version with links to Wikidata at <https://cr.bitplan.com>

## FAIRness of CEUR-WS to be improved

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### FAIR Principles

#### Findable:

URL  URN  DOI   
DBLP  K10plus  Wikidata 

#### Accessible:

HTML  JSON 

#### Interoperable:

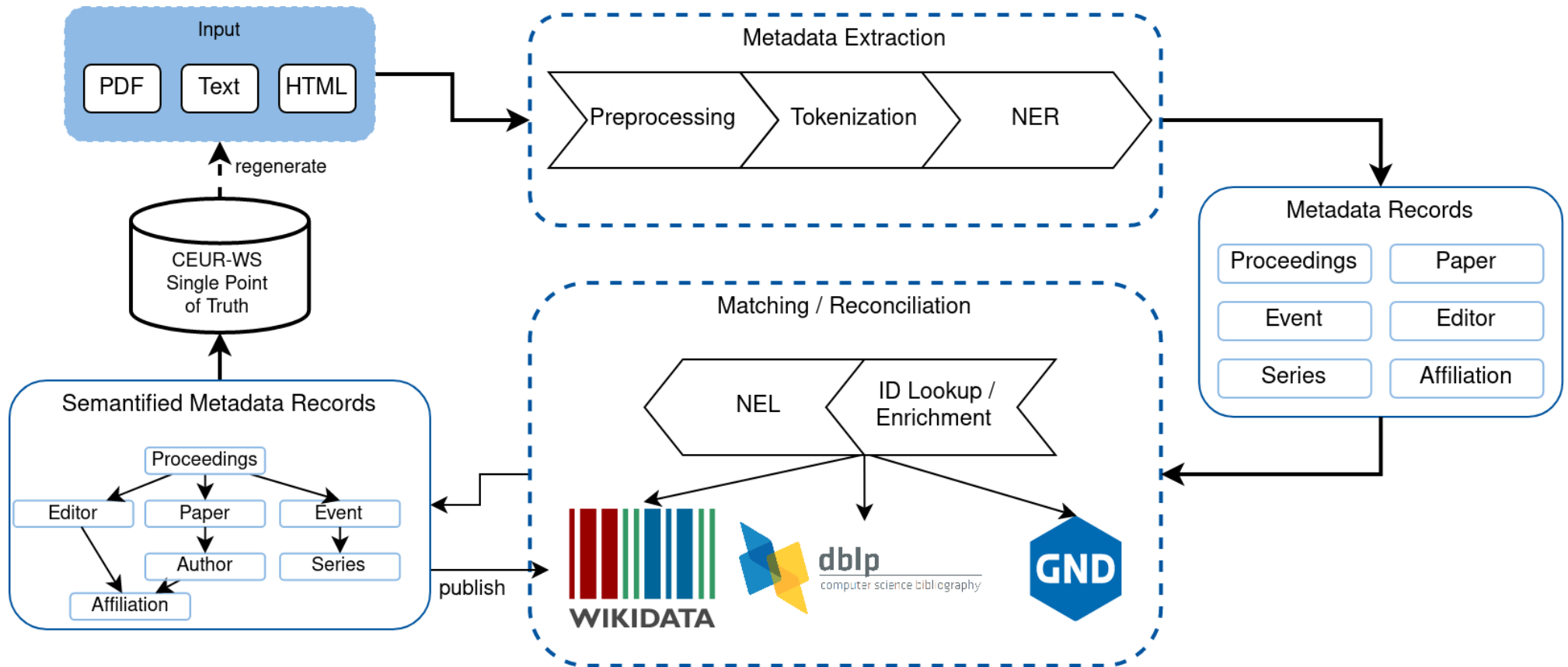
HTML  SPARQL 

#### Reusable:

HTML  OpenAPI 

Legend:  available  incomplete  in progress/focus of this work

## Workflow of the CEUR-WS Semantification



## Phases of the Semantification

### Numbers as of 2023-05-26

#### Phase 1:

##### created/matched:

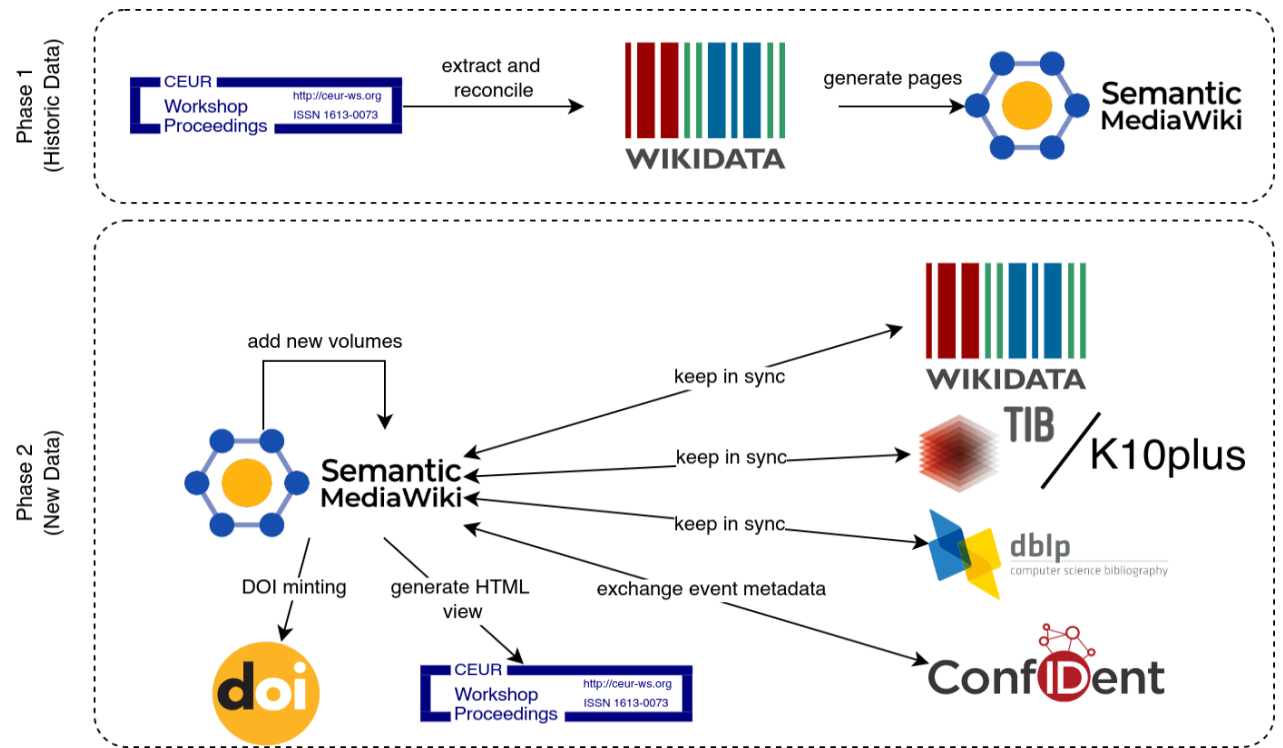
- 3,381 proceedings items
- 3,501 event items

##### next:

- editor
- paper
- author

#### Phase 2

- direct semantification of new volumes
- doi minting for event, proceeding and papers
- API for proper access
- synchronization with wikidata



## Semantification Challenges / Semantic Publishing Challenge

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### Example Challenges

- 2014/2015 Challenge by Di Iorio et al. [List of Queries](#)
  - NER with parsers for index and volumes
  - NEL via identifier match
- Wikidata
  - property P11633: [colocated with](#)
  - CEUR-WS bot approval
- Red tape
  - The Devil in the [details](#)
  - GDPR ([DSVGO Article 6](#)) conformance
  - Change of publishing Workflow ([PUT](#))
  - DOI Minting



# Implementation and Demos

## CEUR-WS Volume Browser

The screenshot shows the CEUR-WS Volume Browser interface. At the top, there is a navigation bar with icons for home, search, settings, and other functions. Below the navigation bar, the text "CEUR-WS Volume Browser" is displayed. A search bar contains the text "Volume 3184". Below the search bar, there are two buttons: a blue button with a refresh icon and a light blue button with a globe icon. Below these buttons, there are links for "wikidataitem", "dblp", "k10plus", "scholia", and "event series". The main title of the volume is "TEXT2KG 2022 & MK 2022 First International Workshop on Knowledge Graph Generation From Text and First International Workshop on Modular Knowledge". Below the title, there is a link to the "TEXT2KG 2022" proceedings and the text "Proceedings of the 1st International Workshop on Knowledge Graph Generation From Text and the 1st International Workshop on Modular Knowledge". Below this, there is a question mark followed by the text "published: 2022-08-11 00:00:00 submitted By: Sanju Tiwari".

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**TEXT2KG 2022 & MK 2022**  
**First International Workshop on Knowledge Graph Generation From Text and First International Workshop on Modular Knowledge**

# Implementation and Demos

## CEUR-WS Semantic MediaWiki

The screenshot shows the CEUR-WS Semantic MediaWiki interface. On the left is a sidebar with navigation links: Main page, CEUR-WS, Volumes, Sessions, Papers, Scholars, Institutions, Events, EventsSeries, Wiki, Search, HowTo, Random page, Help about MediaWiki, Browse categories, Browse files, Recent changes, Tools, What links here, Related changes, and Special pages. The main content area has a 'Page Discussion' tab and a search bar. Below the search bar is the heading 'List of Papers' and a table with columns: icon, Topic, name, pluralName, and documentation. The table contains one row with a paper icon, 'Paper' as the topic, 'Paper' as the name, 'Papers' as the plural name, and 'A paper is e.g. a scholarly article' as the documentation. Below this is the heading 'Papers' and a count of '10'. There is an 'add Paper' button. At the bottom is a table with columns: Paper, description, id, wikidataid, title, pdfUrl, and authors. The table lists several papers with their respective details.

icon	Topic	name	pluralName	documentation
	Paper	Paper	Papers	A paper is e.g. a scholarly article

Papers

10

Paper	description	id	wikidataid	title	pdfUrl	authors
<a href="#">Vol-1878</a>		Vol-1878/article-05.pdf		Scholarly Social Machines	<a href="http://ceur-ws.org/Vol-1878/article-05.pdf">http://ceur-ws.org/Vol-1878/article-05.pdf</a>	David De Roure
<a href="#">Vol-2535/paper10</a>		Vol-2535/paper10	<a href="#">Q117032134</a>	Towards a Knowledge Graph Lifecycle: A pipeline for the population of a commercial Knowledge Graph	<a href="https://ceur-ws.org/Vol-2535/paper_10.pdf">https://ceur-ws.org/Vol-2535/paper_10.pdf</a>	Jürgen Umbrich Dieter Fensel Umutcan Şimşek
<a href="#">Vol-2599/paper5</a>		Vol-2599/paper5		Private Digital Identity on Blockchain		
<a href="#">Vol-2644</a>		Vol-2644/paper35		Using PROVA-Rule Engine as Dispatching-Service for FHIR-Observation-Resources	<a href="http://ceur-ws.org/Vol-2644/paper35.pdf">http://ceur-ws.org/Vol-2644/paper35.pdf</a>	Gerhard Kober, Adrian Paschke
<a href="#">Vol-2644</a>		Vol-2644/paper36		Action Rules: Counterfactual Explanations in Python (winner of the 14th Rule Challenge 2020 competition)	<a href="http://ceur-ws.org/Vol-2644/paper36.pdf">http://ceur-ws.org/Vol-2644/paper36.pdf</a>	Lukas Sykora, Tomas Kliegr

## Implementation and Demos

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### Single Point of Truth Server

OpenAPI:

- <http://ceurspt.wikidata.dbis.rwth-aachen.de/docs>
- Generated HTML
- Content Negotiation – Computer and Human Readable
- Federated Queries

## Future Work / TODOs

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- Automated Editor/Author/Paper addition
- DOI minting in cooperation with RWTH Aachen Library

**Thank you for your attention!**