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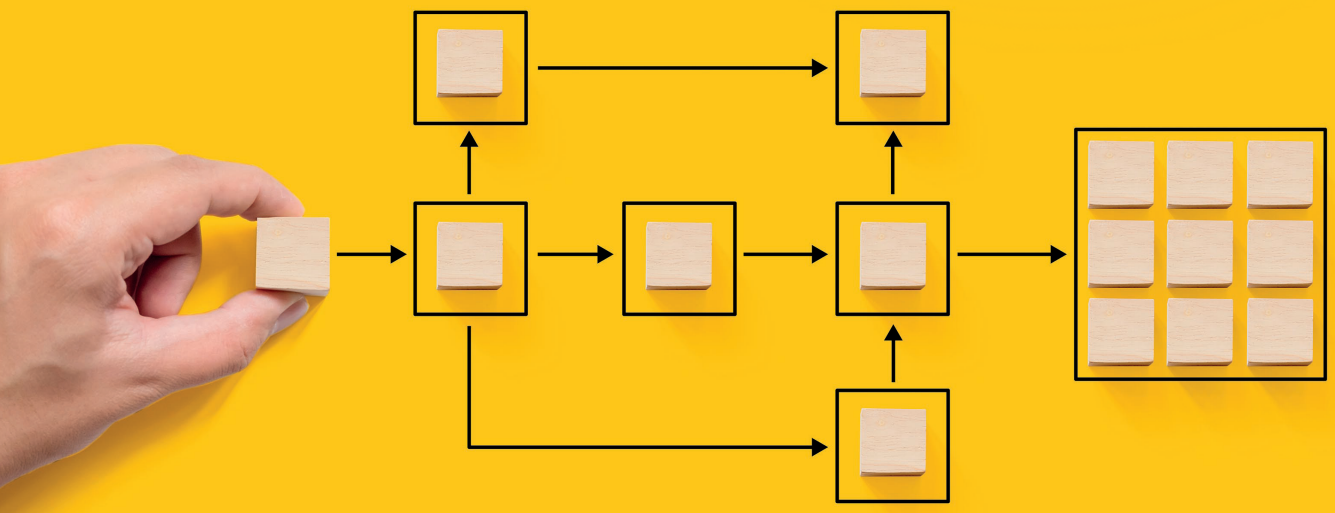
Implementing FAIR signposting in the University of Novi Sad in-house developed eInfrastructure



IMPLEMENTATION STORY

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Support action:

FAIR signposting and RO-Crate. During the 3 month support action, participants took part in three virtual workshops to implement FAIR Signposting and/or RO-Crate to improve the discovery and consumption of their content and/or metadata. Participants benefited from interacting with mentors representing FAIR Signposting and RO-Crate.

Keywords:

FAIR signposting, RO-Crate, research outputs repository, CRIS

Summary:

The University of Novi Sad software research infrastructure development team implemented FAIR Signposting level 1 to improve the machine readability of their in-house developed platform for research outputs and information.

Introduction

At the University of Novi Sad, we rely on an open-source solution for research outputs and information which has been developed in-house for the needs of our university for the past 15 years (http://dosird.uns.ac.rs). We have a research information system integrated with a digital library or repository, with 30k results, 5k digital objects (usually pdfs but also some research outputs with associated zip files), and 3k researcher profiles. To make our data more accessible, we export it through the OAI-PMH protocol to aggregators such as OpenAIRE, NDLTD, NaRDuS (our national platform for PhD dissertations), or eNauka (eScience platform in Serbia).

We are currently reengineering the platform to make it more modern and responsive and make more content available in English. Many things have changed since we started, and we would like to improve our data model to include social network activities and more information about datasets and other responsibilities the researchers may have. We are hoping the platform will be ready at the beginning of next academic year (Sep/Oct 2024). Improving the machine readability of the platform was something we had not considered until we saw the support action call. In the introduction of the first workshop of the support action, we learned about FAIR signposting and thought that would work well for us.

Approach taken:

We wanted to make the landing pages of research entities in our platform more machine readable by implementing FAIR Signposting links in the HTTP responses of the landing pages. The idea was to have some publications linked to author profile pages by using the DOI, and to also link to institution profile pages.

During the support action we implemented FAIR signposting level 1 at landing pages of research entities at our current platform, using the HTTP response header link approach. It was implemented for landing pages of journal articles, conference articles, monographs, chapters in monographs, PhD theses, researchers, and institutions. We also considered how to implement Signposting level 2 and RO-Crate (at least for supplement materials that can be associated with journal articles or PhD dissertations) after the reengineering of the platform.

FAIR signposting level 1 was quite easy to implement in our architecture. It is only required to implement a phase listener in JavaServer Faces to produce HTTP response header link elements.

Challenges encountered and addressed:

We wanted to include signposting links between authors and their affiliated institutions, as well as between PhD dissertations and the institutions where they were defended, but those relation types were not available in the specification. The mentors advised that we could use any class in Schema.org and suggested using class affiliation to include this information in the researcher landing page, and class sourceOrganization in the PhD dissertation landing page to link to the organisation in which it was defended. We also included information about the parent organisation in the institution landing page using class parentOrganisation.

There are some tools for validation of the implemented FAIR signposting which are, unfortunately, not mature and reliable enough at the moment.

Impacts:

While users might benefit from their data being more findable thanks to the improved web crawlers' ability to find the resources, I think they will benefit more from the RO-Crate, when we implement it, as it will improve the download options.

We are presenting the work we have done during the support action and how we have improved the machine readability of our platform using signposting at conferences for the regional and European communities. For example, we presented a poster on this work at the International Conference on Information Society and Technology (ICIST 2024)[1].

We are currently reengineering our platform and we expect the work will be completed by the beginning of next academic year (Sep/Oct 2024). We have already created a project plan to introduce signposting level 2, to further improve machine readability, and RO-Crate support, to improve the download options for users, once the new version of the platform is ready.

Key messages:

If there is a landing page, it shouldn't be too complicated to add header link elements in the HTTP response.

If the relation types needed are not available in the specification, other classes from schema.org can be used.

1 https://www.eventiotic.com/icist2024/ICIST2024program.pdf

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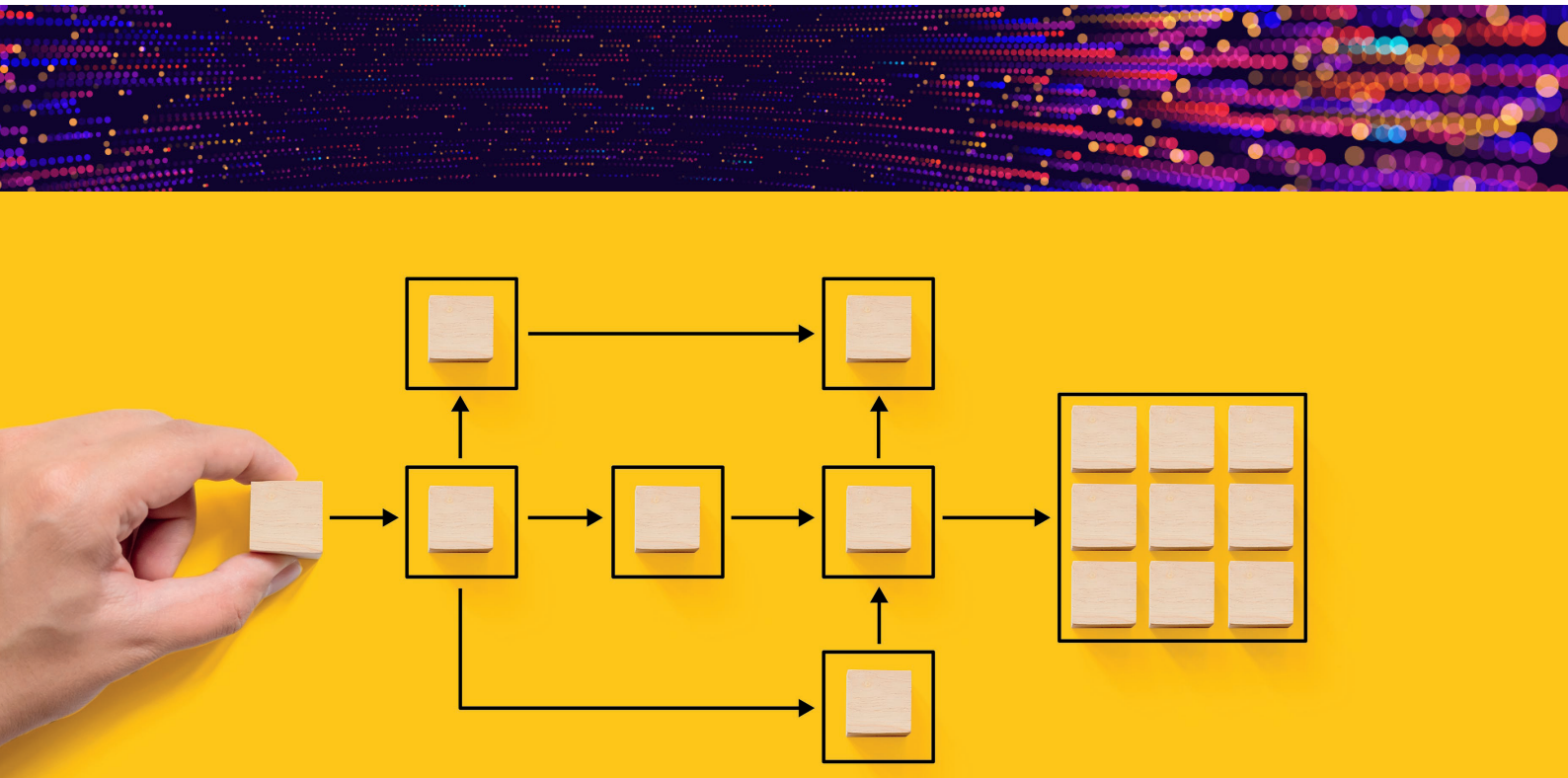

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