the central in decentral

Herbert Van de Sompel
https://hvdsomp.info

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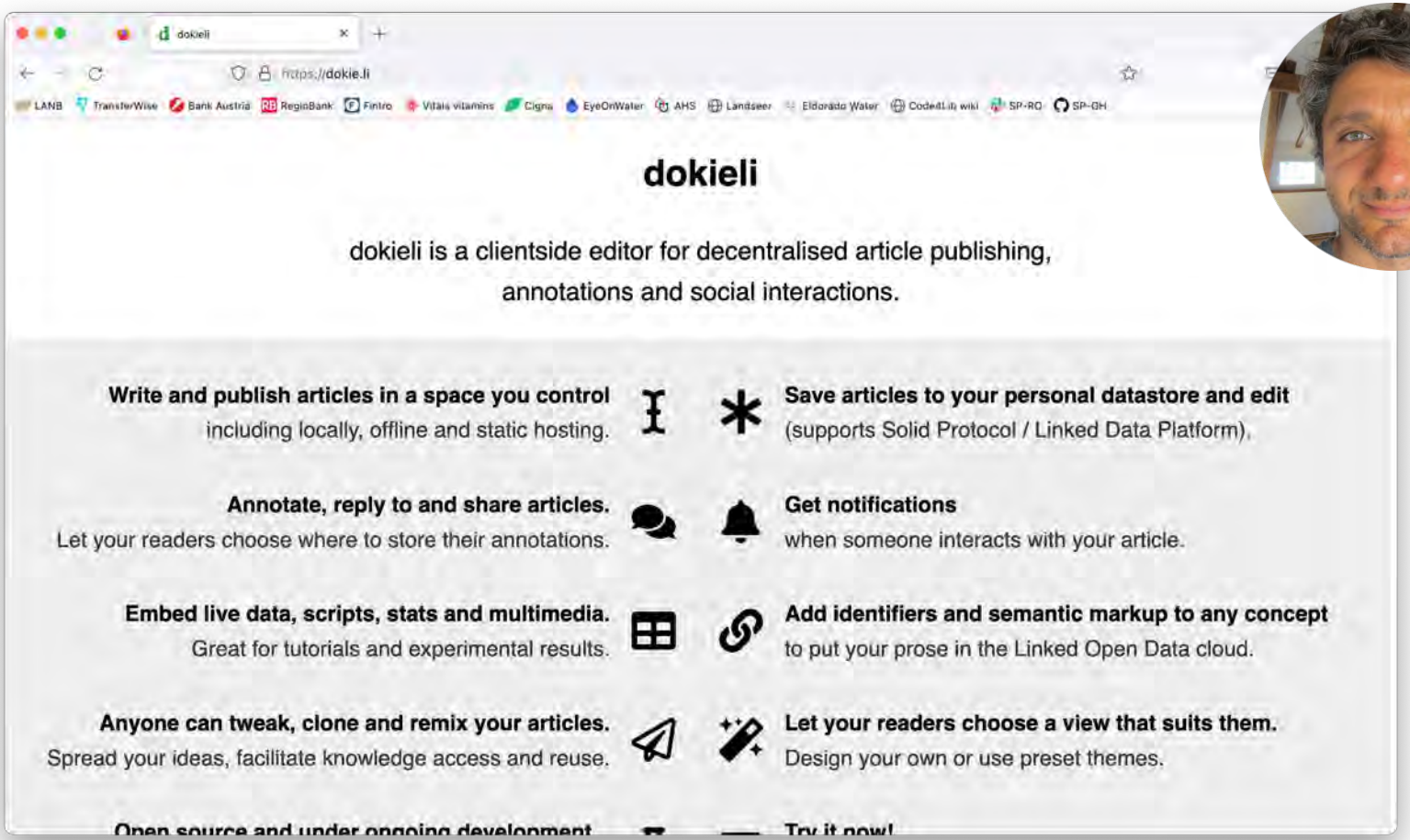
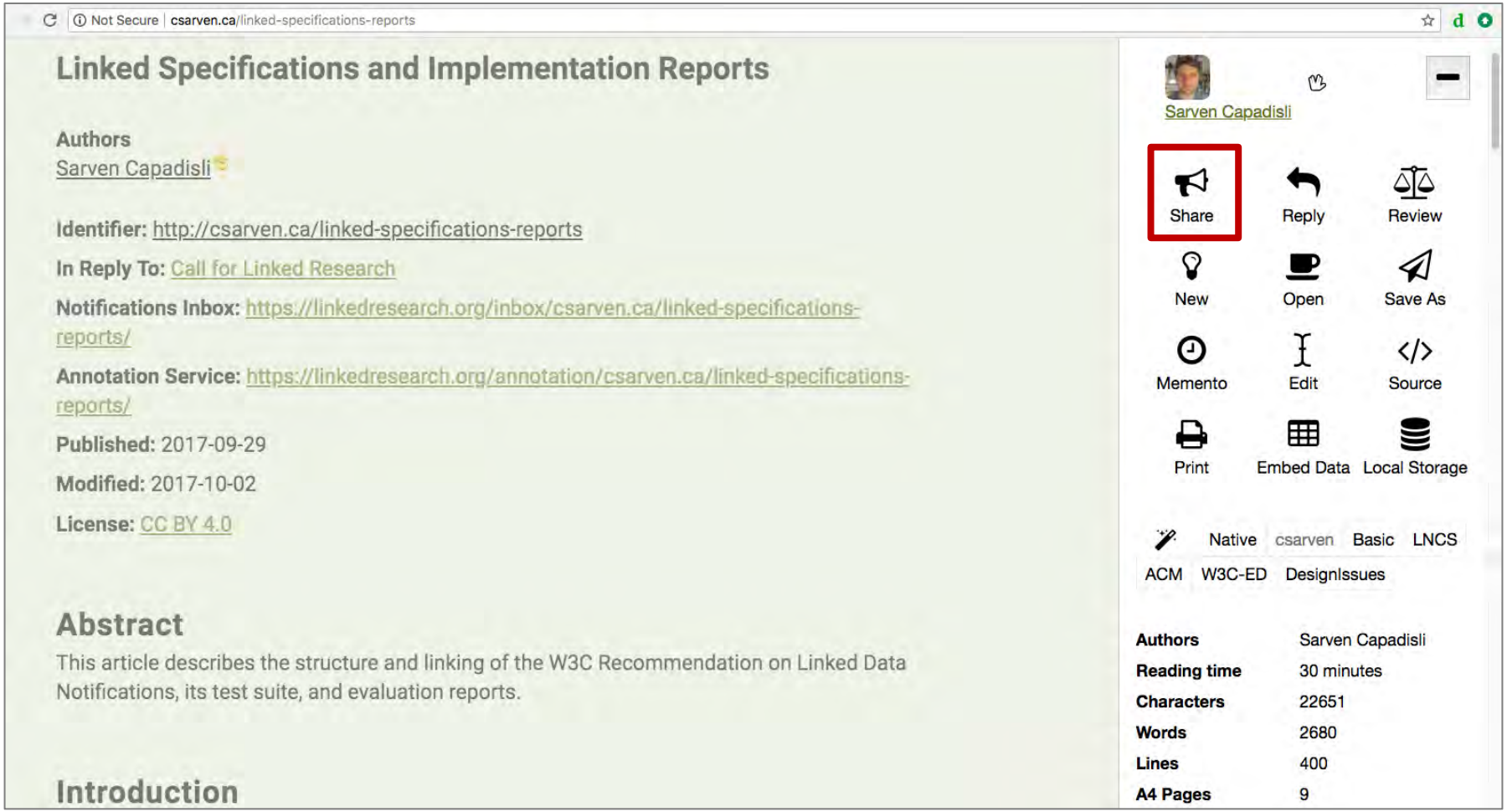
Data Archiving and Networked Services
DANS

DANS Sabbatical – Sarven Capadisli's dokie.li (2017)



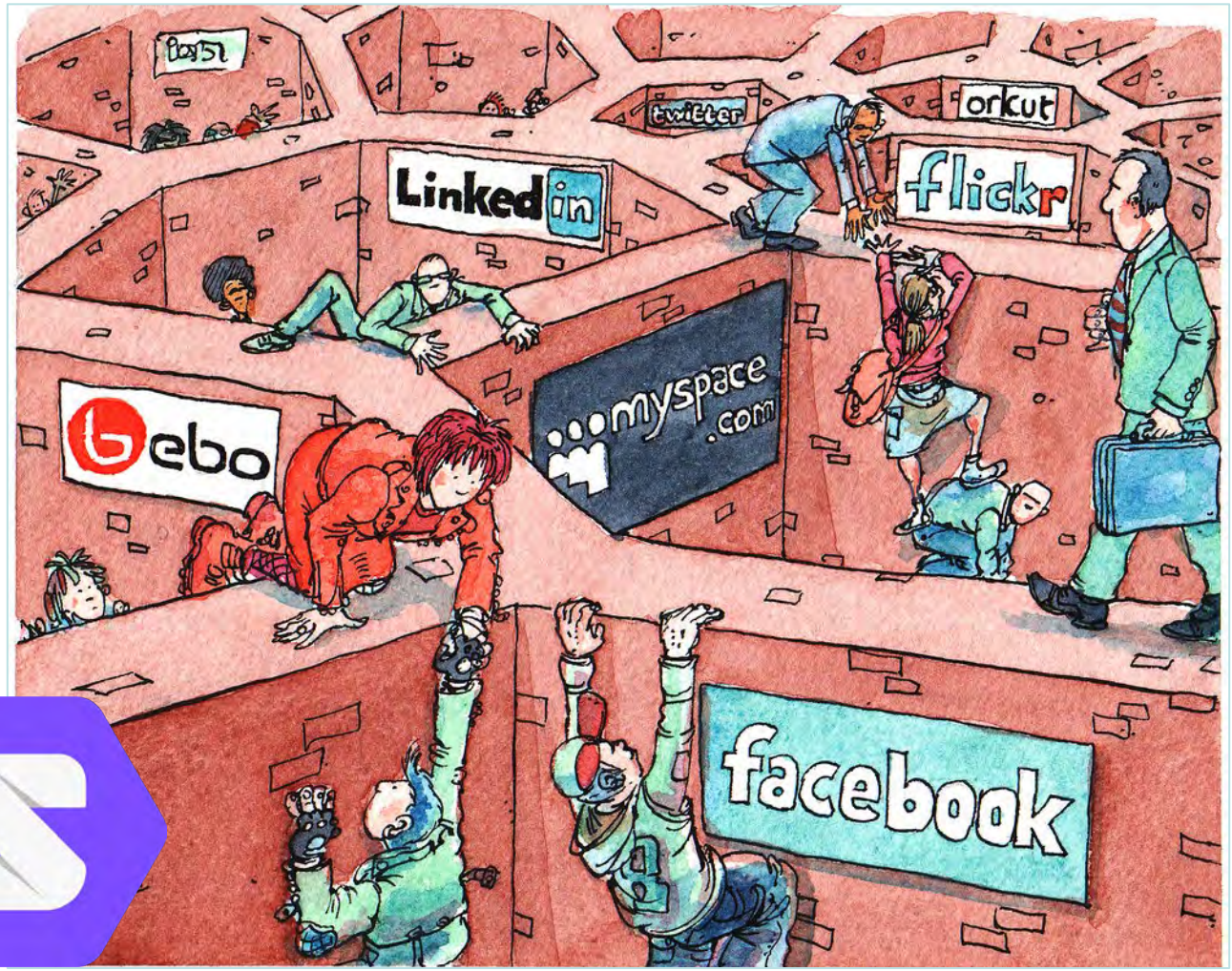
Sarven Capadisli (2017) dokieli
https://dokie.li/

dokie.li



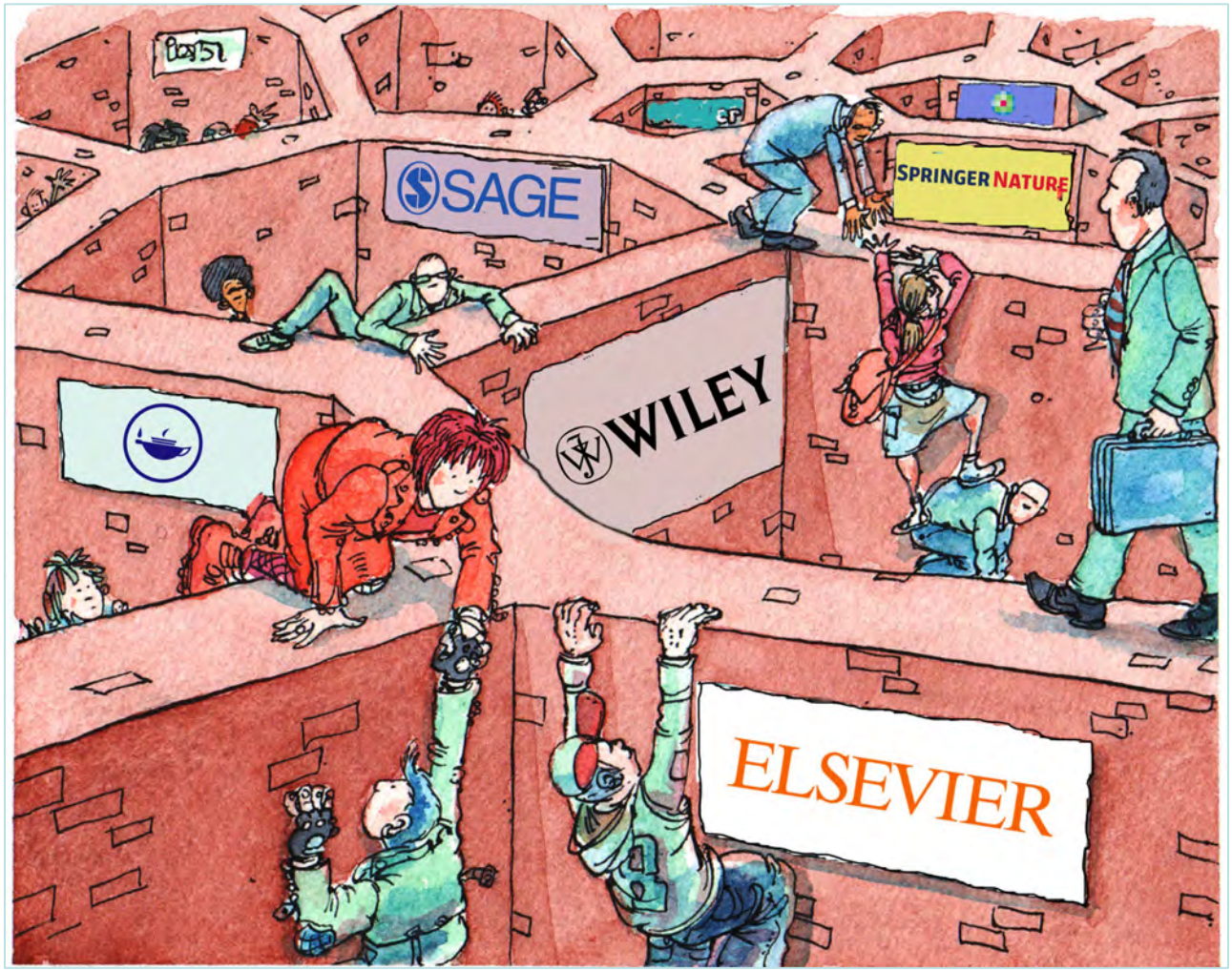
http://csarven.ca/linked-specifications-reports

dokie.li Context: Decentralized Web, Solid



Tim Berners-Lee (2011) Socially aware cloud storage.
https://www.w3.org/DesignIssues/CloudStorage.html

Scholarly Communication



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Scholarly Communication: Deconstruct and Decentralize?

A Bold Speculation Featuring

Alice

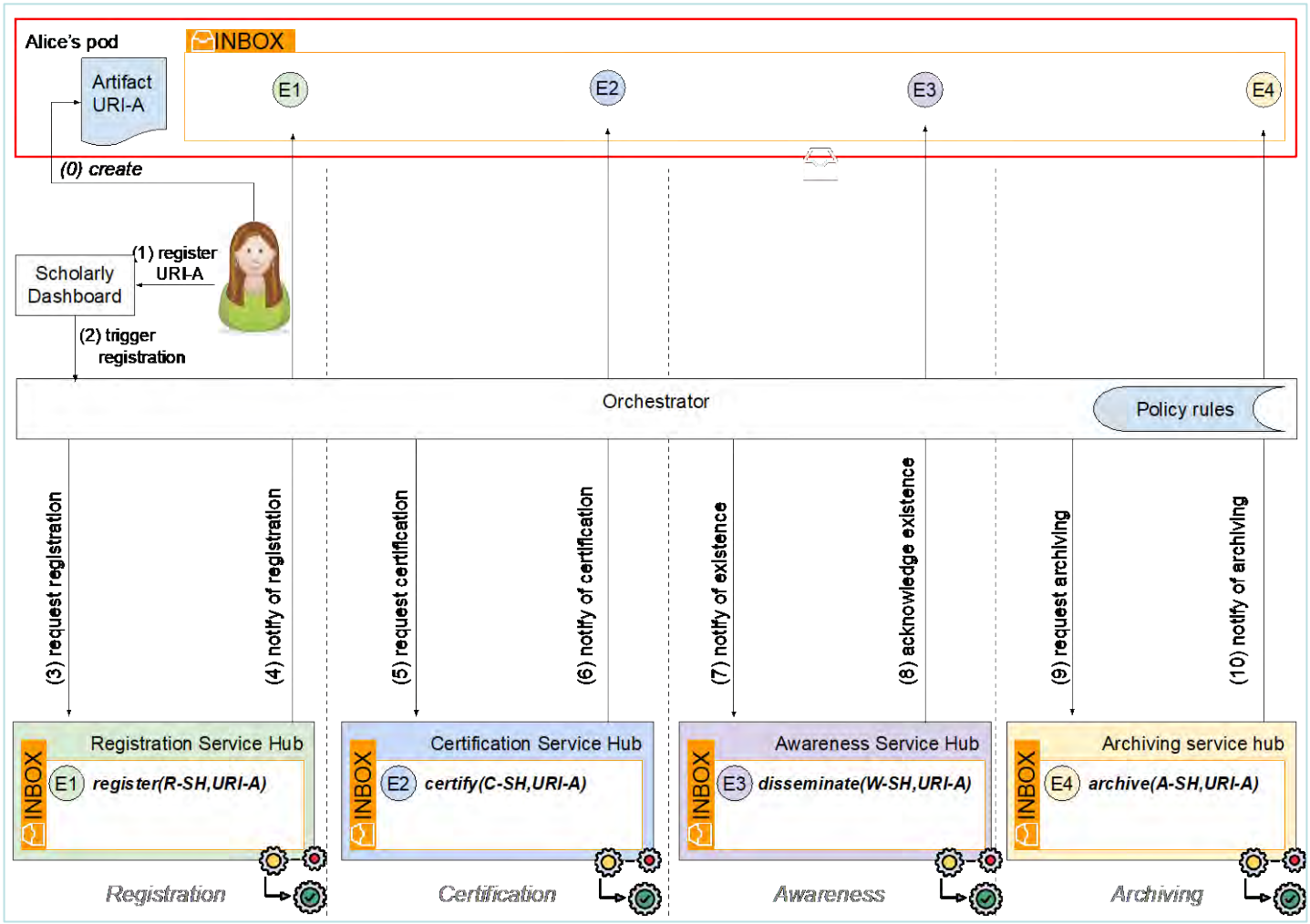
Bob

Carol

Herbert Van de Sompel
@hvdsomp
Los Alamos National Laboratory

Herbert Van de Sompel (2017) Scholarly Communication: Deconstruct and Decentralize? https://www.youtube.com/watch?v=o4nUe-6Ln-8

Researcher Pod Project, Funded by the Mellon Foundation



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Data Archiving and Networked Services
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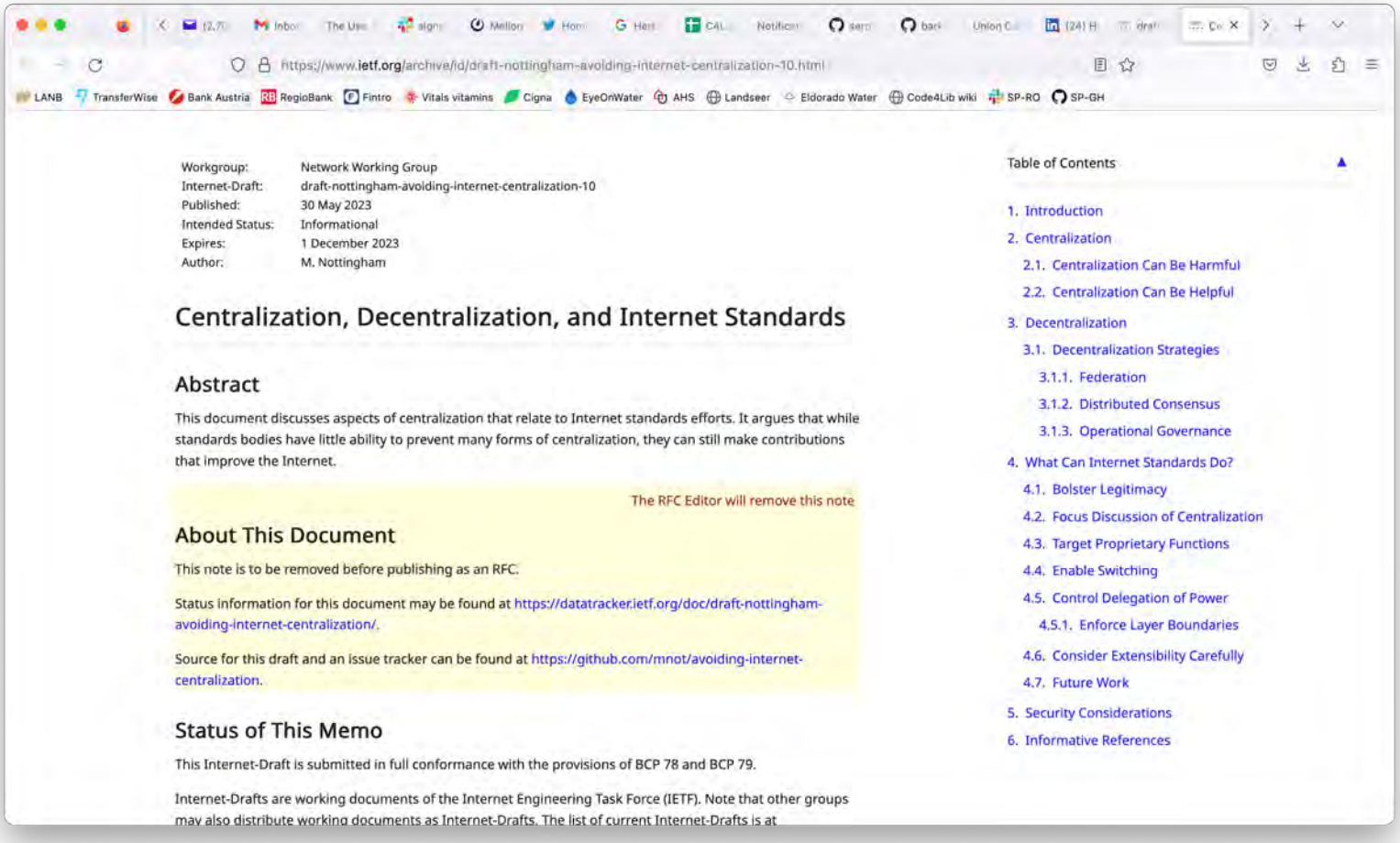
Centralization, Decentralization, and Internet Standards



https://www.ietf.org/archive/id/draft-nottingham-avoiding-internet-centralization-10.html

LANB TransferWise Bank Austria RegioBank Fintro Vitals vitamins Cigna EyeOnWater AHS Landseer Eldorado Water Code4Lib wiki SP-RO SP-GH

Workgroup: Network Working Group
Internet-Draft: draft-nottingham-avoiding-internet-centralization-10
Published: 30 May 2023
Intended Status: Informational
Expires: 1 December 2023
Author: M. Nottingham

Centralization, Decentralization, and Internet Standards

Abstract

This document discusses aspects of centralization that relate to Internet standards efforts. It argues that while standards bodies have little ability to prevent many forms of centralization, they can still make contributions that improve the Internet.

The RFC Editor will remove this note

About This Document

This note is to be removed before publishing as an RFC.

Status information for this document may be found at https://datatracker.ietf.org/doc/draft-nottingham-avoiding-internet-centralization/.

Source for this draft and an issue tracker can be found at https://github.com/mnot/avoiding-internet-centralization.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at

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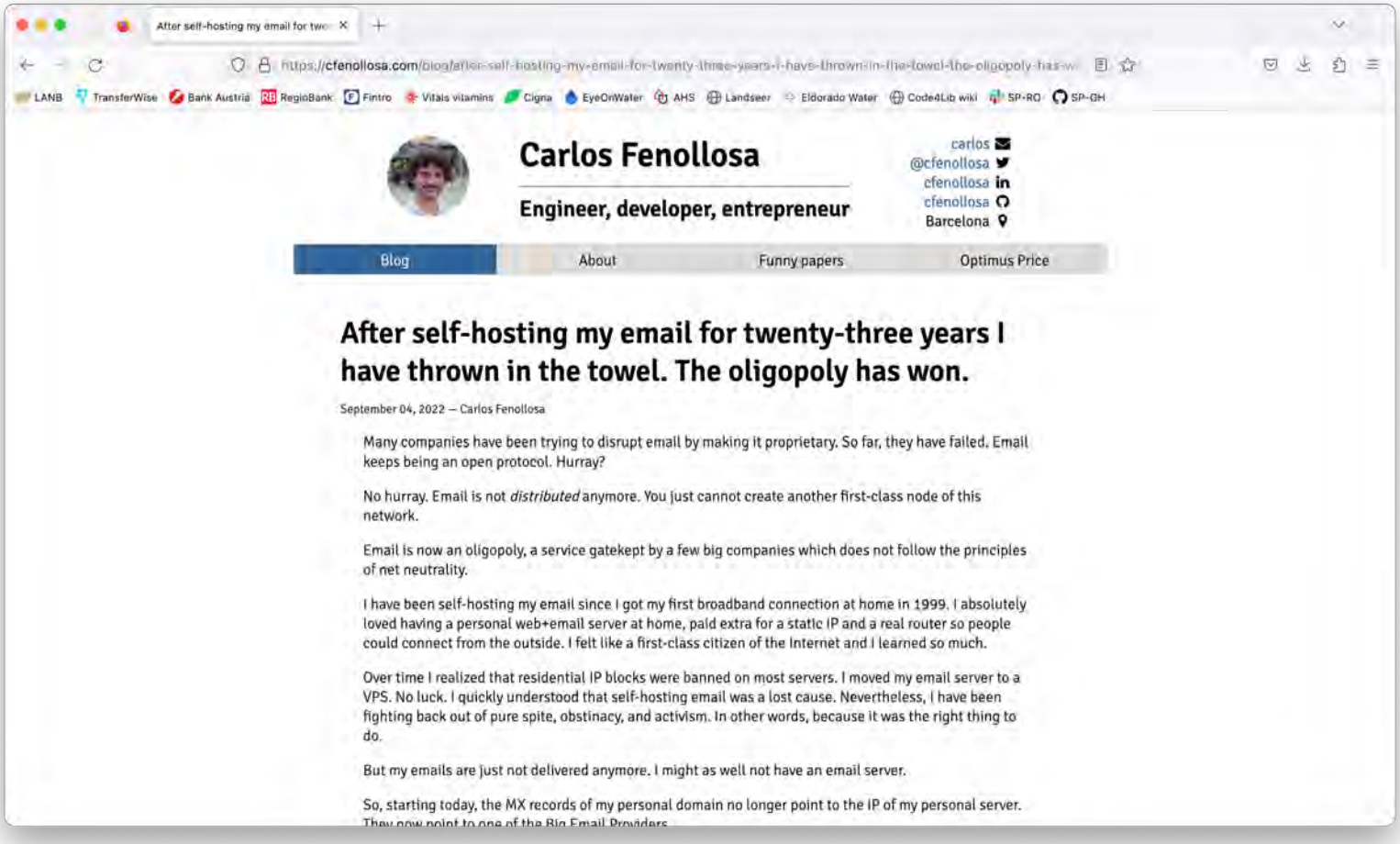
   4.7. Future Work
5. Security Considerations
6. Informative References

Mark Nottingham (2023) Centralization, Decentralization, and Internet Standards
https://datatracker.ietf.org/doc/draft-nottingham-avoiding-internet-centralization/

The (eMail) Oligopoly has Won



Carlos Fenollosa

Engineer, developer, entrepreneur

carlos
@cfenollosa
cfenollosa
cfenollosa
Barcelona

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After self-hosting my email for twenty-three years I have thrown in the towel. The oligopoly has won.

September 04, 2022 — Carlos Fenollosa

Many companies have been trying to disrupt email by making it proprietary. So far, they have failed. Email keeps being an open protocol. Hurray?

No hurray. Email is not *distributed* anymore. You just cannot create another first-class node of this network.

Email is now an oligopoly, a service gatekept by a few big companies which does not follow the principles of net neutrality.

I have been self-hosting my email since I got my first broadband connection at home in 1999. I absolutely loved having a personal web+email server at home, paid extra for a static IP and a real router so people could connect from the outside. I felt like a first-class citizen of the Internet and I learned so much.

Over time I realized that residential IP blocks were banned on most servers. I moved my email server to a VPS. No luck. I quickly understood that self-hosting email was a lost cause. Nevertheless, I have been fighting back out of pure spite, obstinacy, and activism. In other words, because it was the right thing to do.

But my emails are just not delivered anymore. I might as well not have an email server.

So, starting today, the MX records of my personal domain no longer point to the IP of my personal server.

Fenollosa Carlos (2022) After self-hosting my email for twenty-three years I have thrown in the towel. https://cfenollosa.com/blog/after-self-hosting-my-email-for-twenty-three-years-i-have-thrown-in-the-towel-the-oligopoly-has-won.html

My Involvement in Standardization/Specification Efforts

OAI-PMH

Memento

OpenURL

Linkset

info URI

cite-as

OAI-ORE

Event Notifications

Robust Links

Open/Web Annotation

Signposting

ResourceSync

Shared Canvas

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Data Archiving and Networked Services DANS

Anecdote 1: OpenURL

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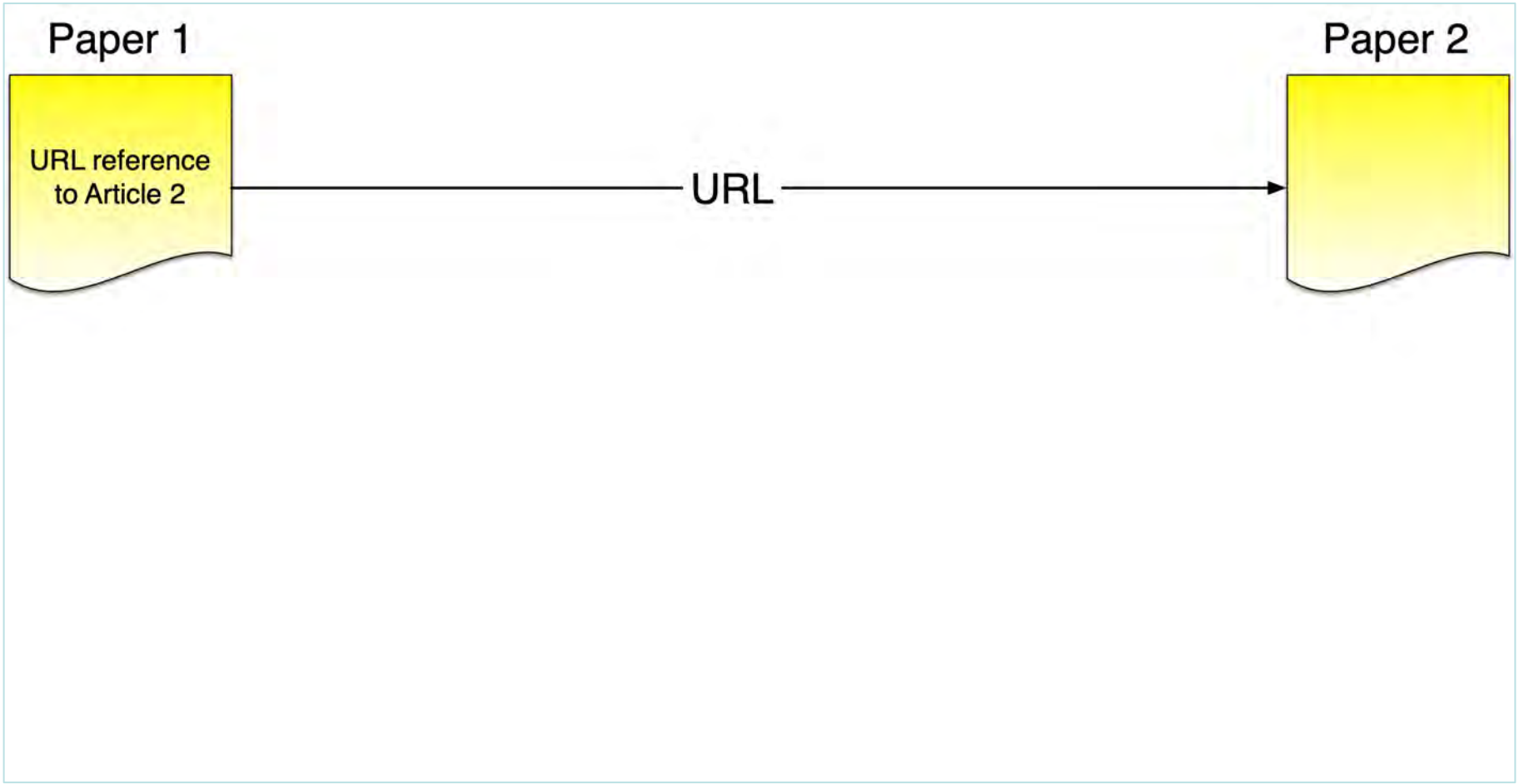
URL Reference to a Paper



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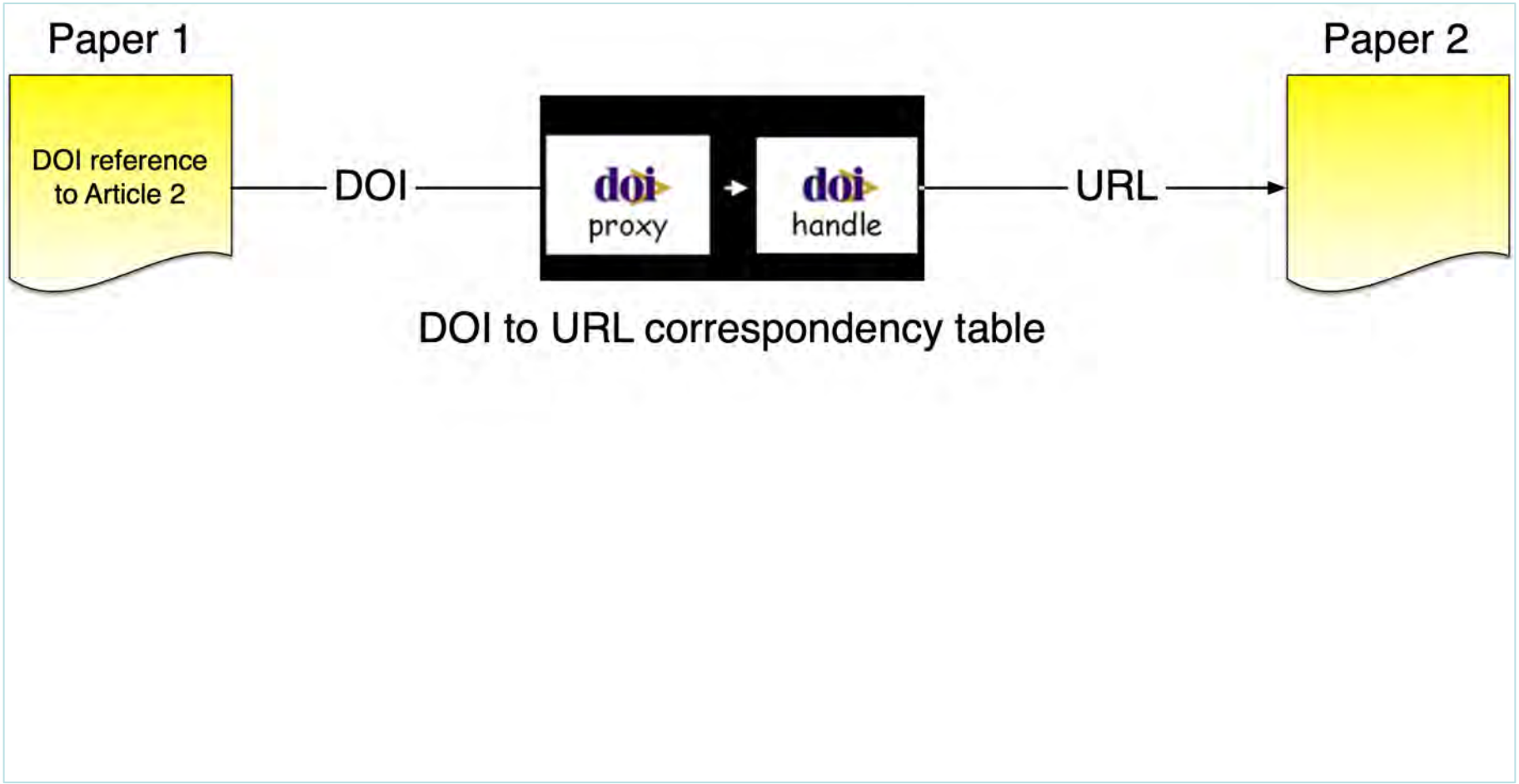
Data Archiving and Networked Services
DANS

DOI Reference to a Paper



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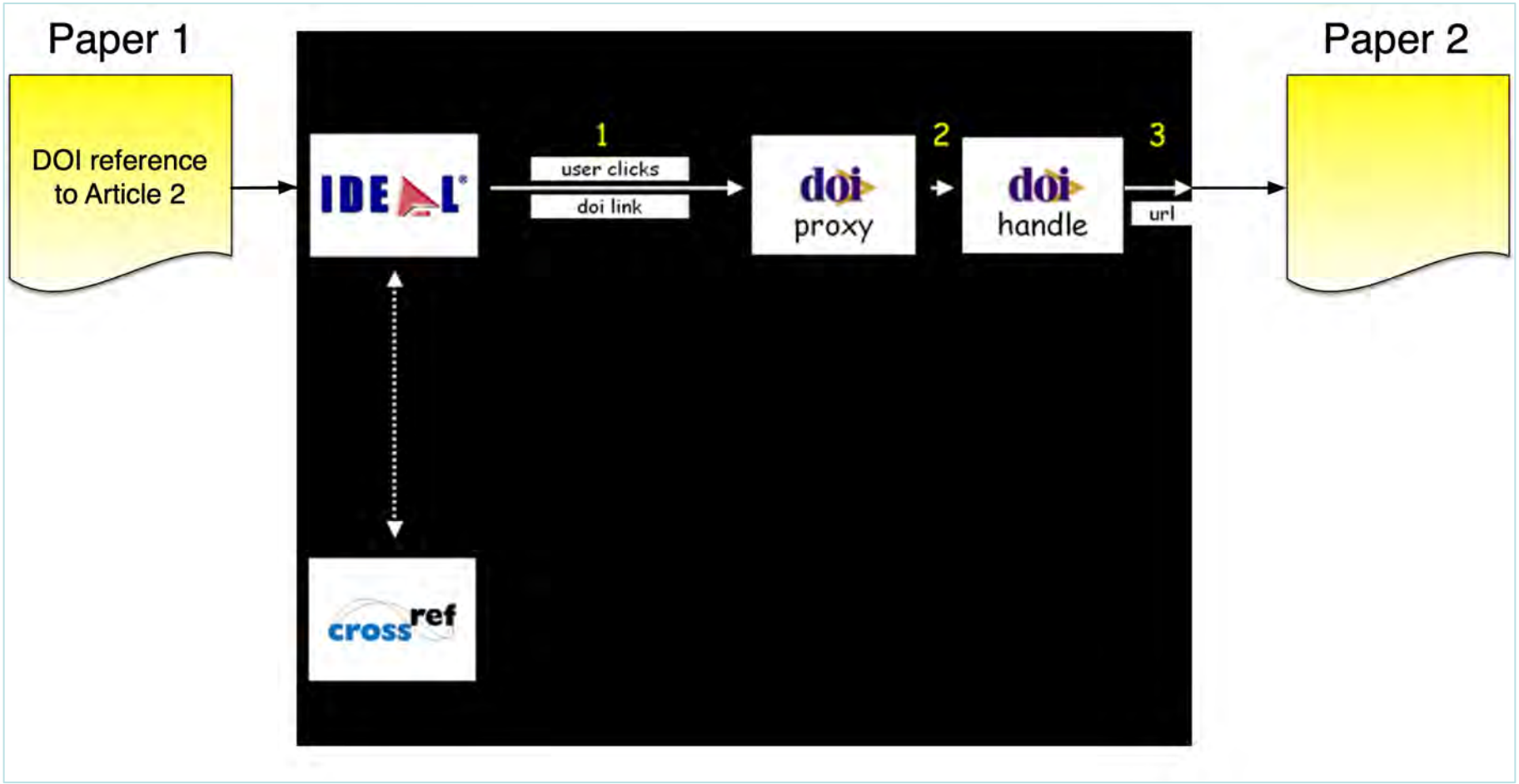
Data Archiving and Networked Services
DANS

Resolving a DOI Reference to a Paper



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DOI Dereferences to a Landing Page

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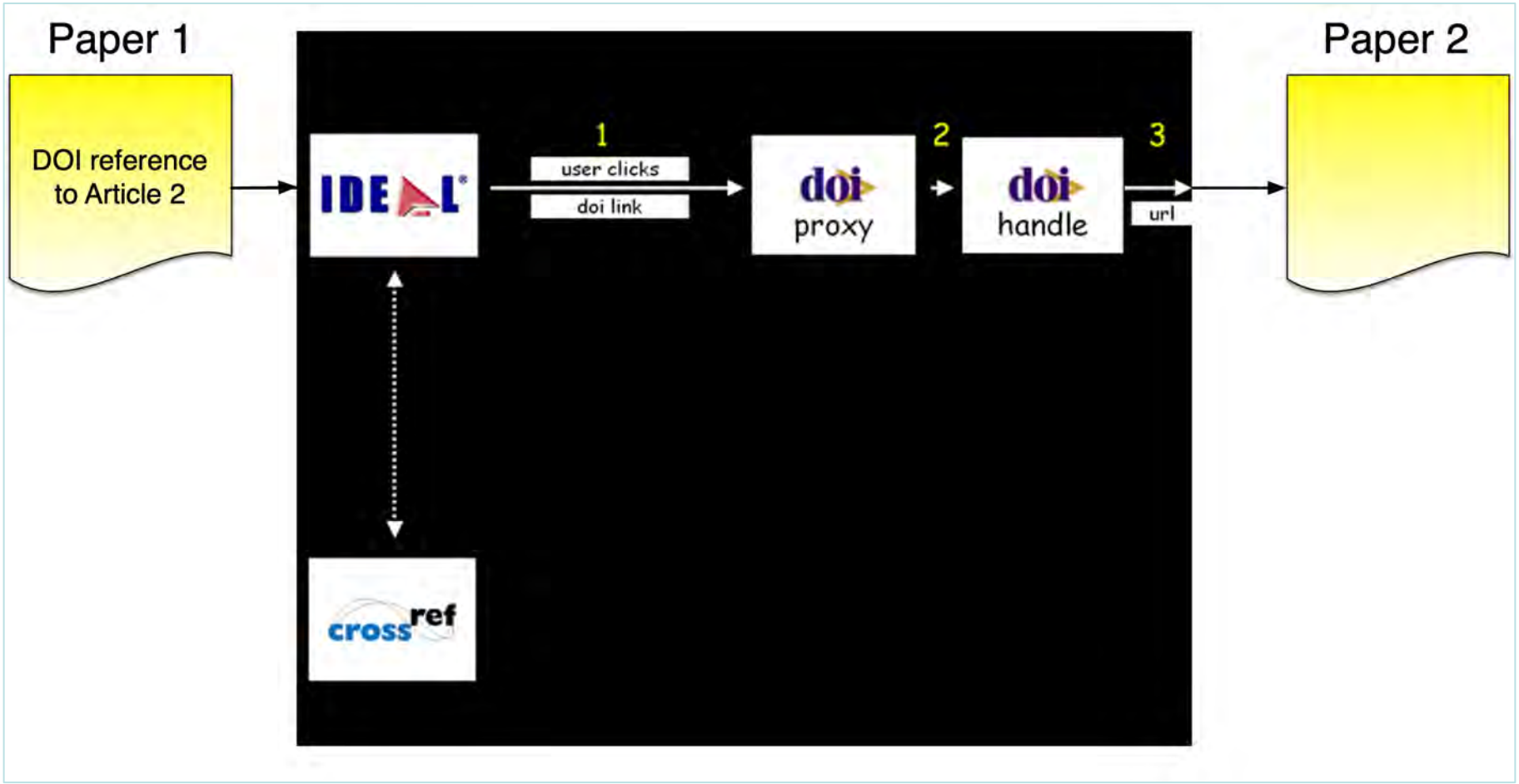
Resolving a DOI Reference to a Paper



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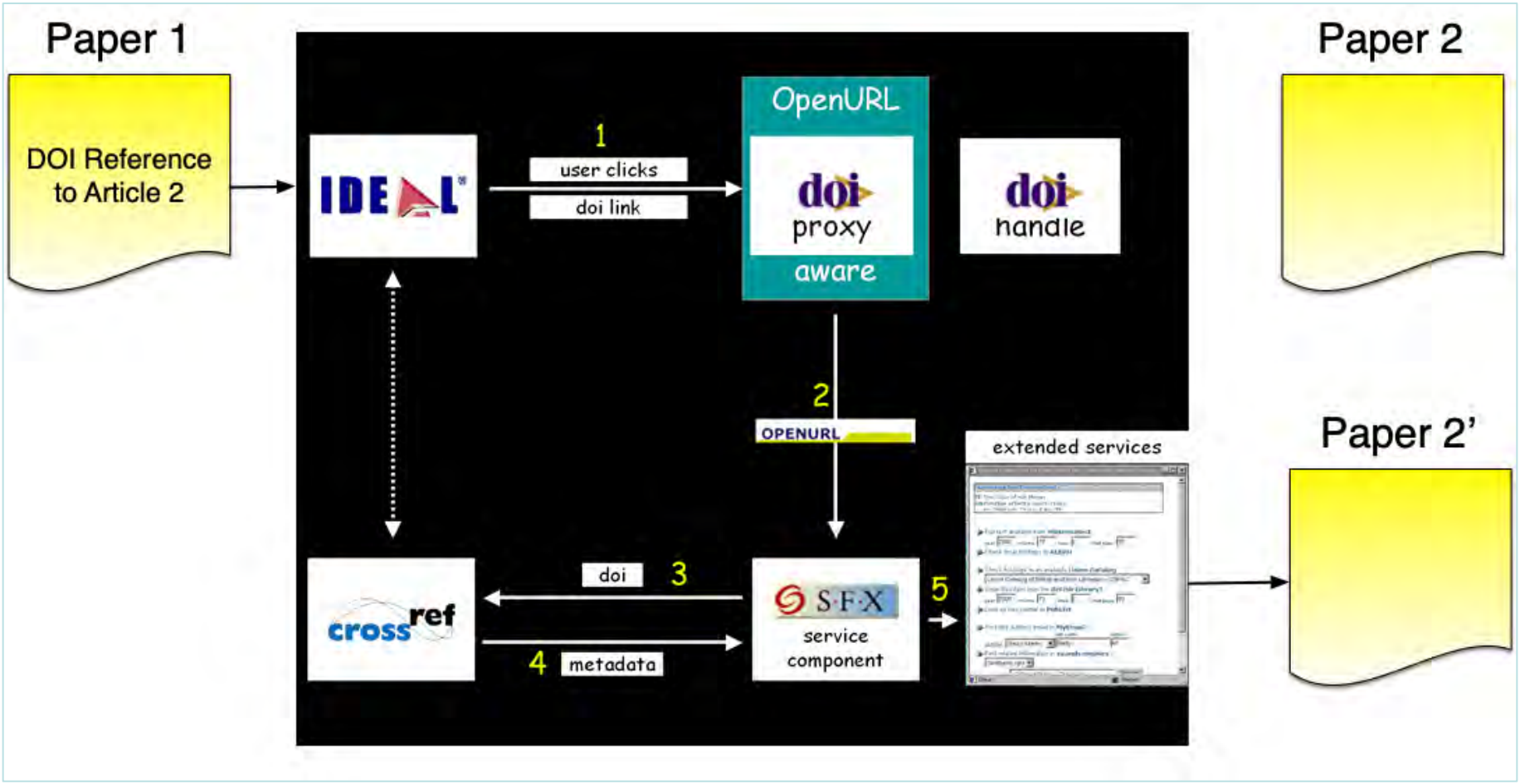
Resolving a DOI Reference to an Institutional Linking Server



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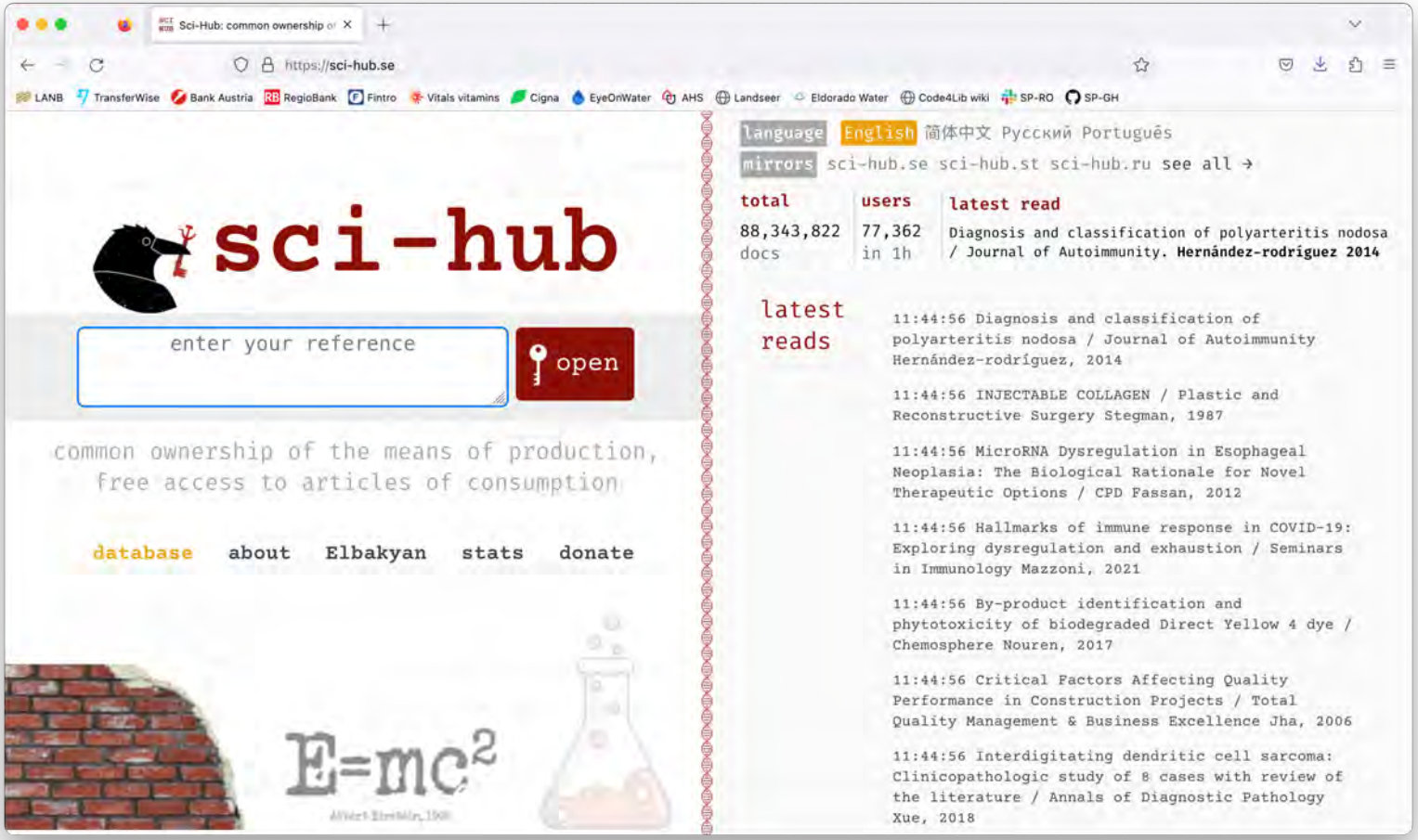
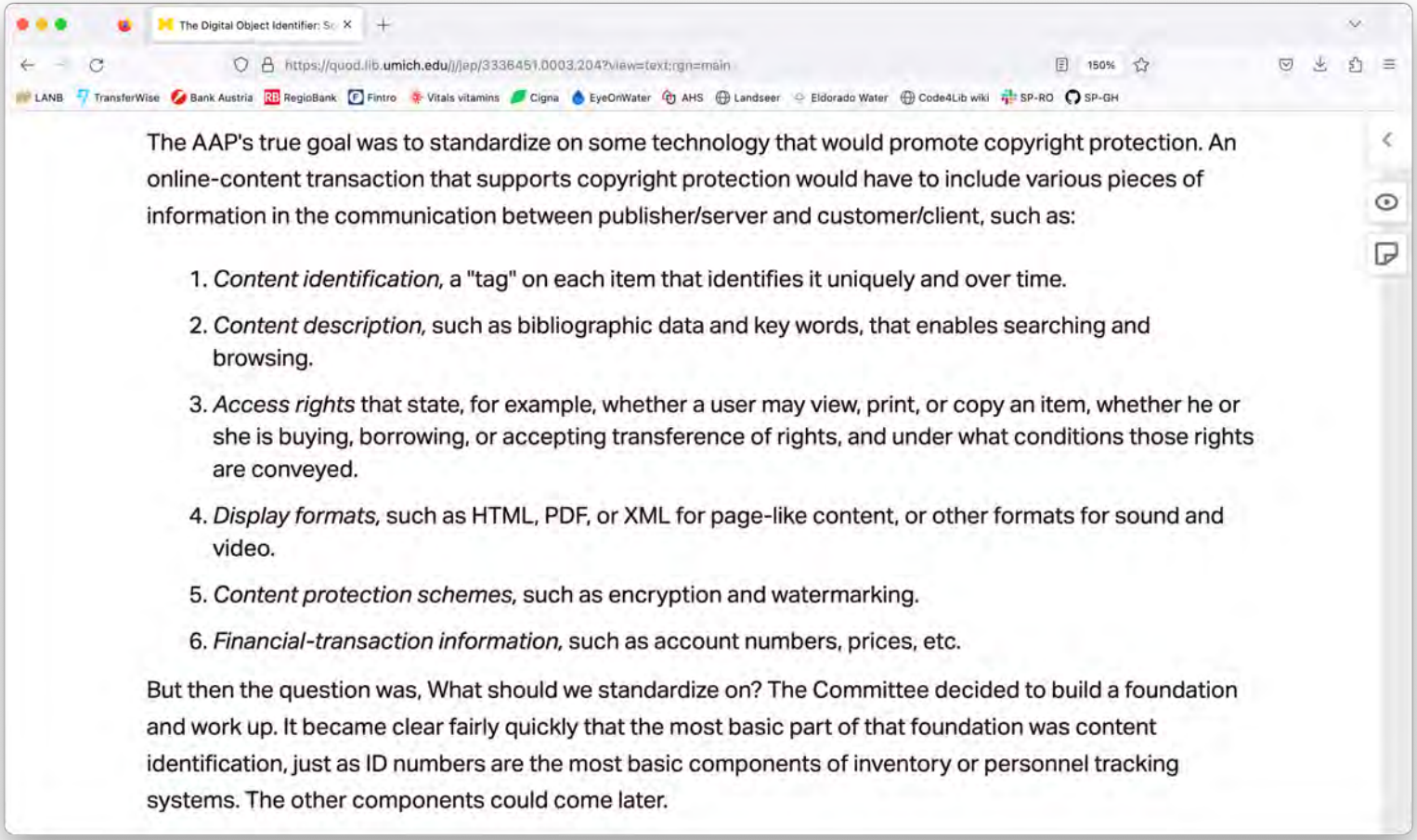
Data Archiving and Networked Services
DANS

sci-hub as an Extended Service



sci-hub
https://sci-hub.se/

The Origins of the DOI: Copyright Protection



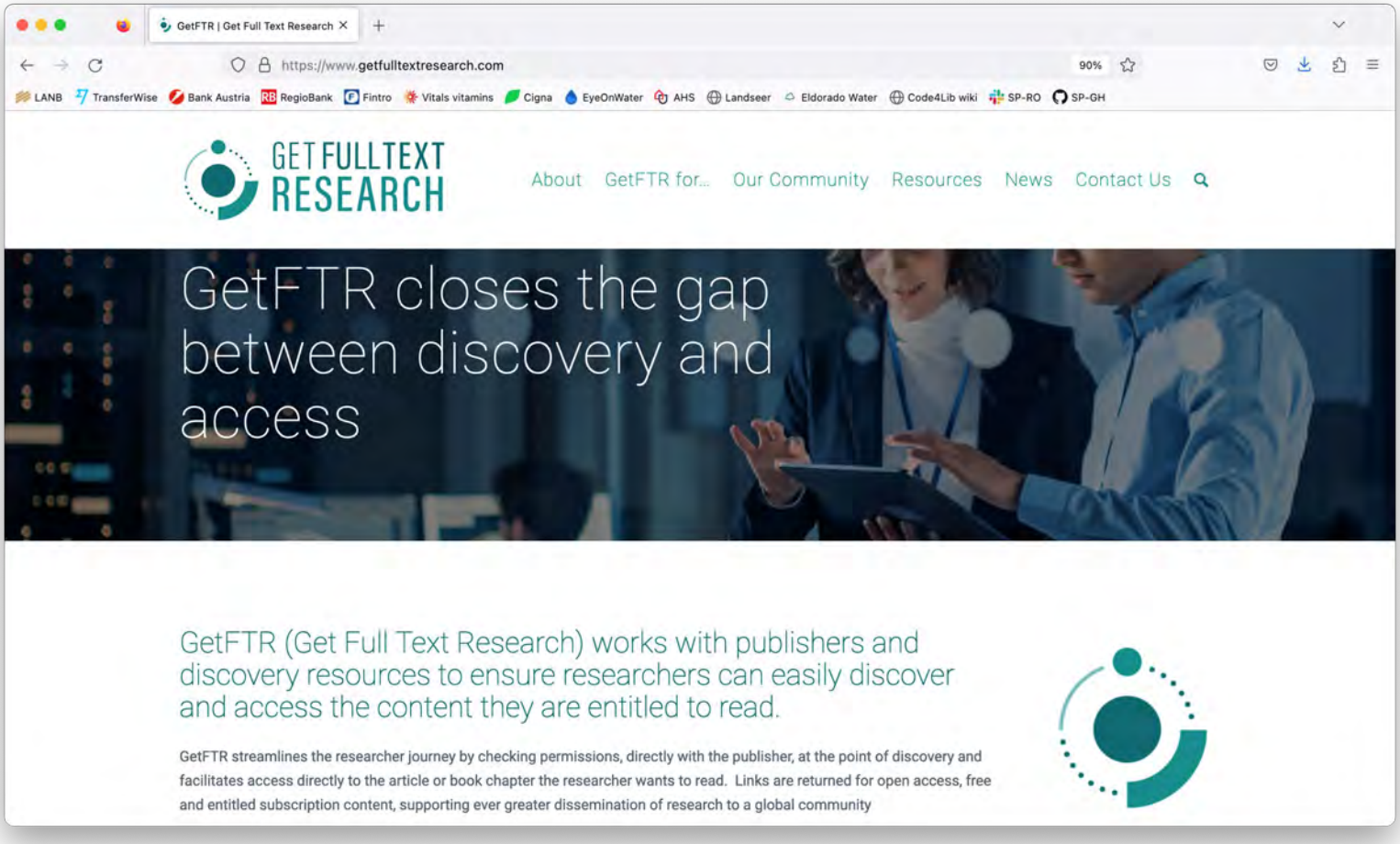
The AAP's true goal was to standardize on some technology that would promote copyright protection. An online-content transaction that supports copyright protection would have to include various pieces of information in the communication between publisher/server and customer/client, such as:

1. *Content identification,* a "tag" on each item that identifies it uniquely and over time.
2. *Content description,* such as bibliographic data and key words, that enables searching and browsing.
3. *Access rights* that state, for example, whether a user may view, print, or copy an item, whether he or she is buying, borrowing, or accepting transference of rights, and under what conditions those rights are conveyed.
4. *Display formats,* such as HTML, PDF, or XML for page-like content, or other formats for sound and video.
5. *Content protection schemes,* such as encryption and watermarking.
6. *Financial-transaction information,* such as account numbers, prices, etc.

But then the question was, What should we standardize on? The Committee decided to build a foundation and work up. It became clear fairly quickly that the most basic part of that foundation was content identification, just as ID numbers are the most basic components of inventory or personnel tracking systems. The other components could come later.

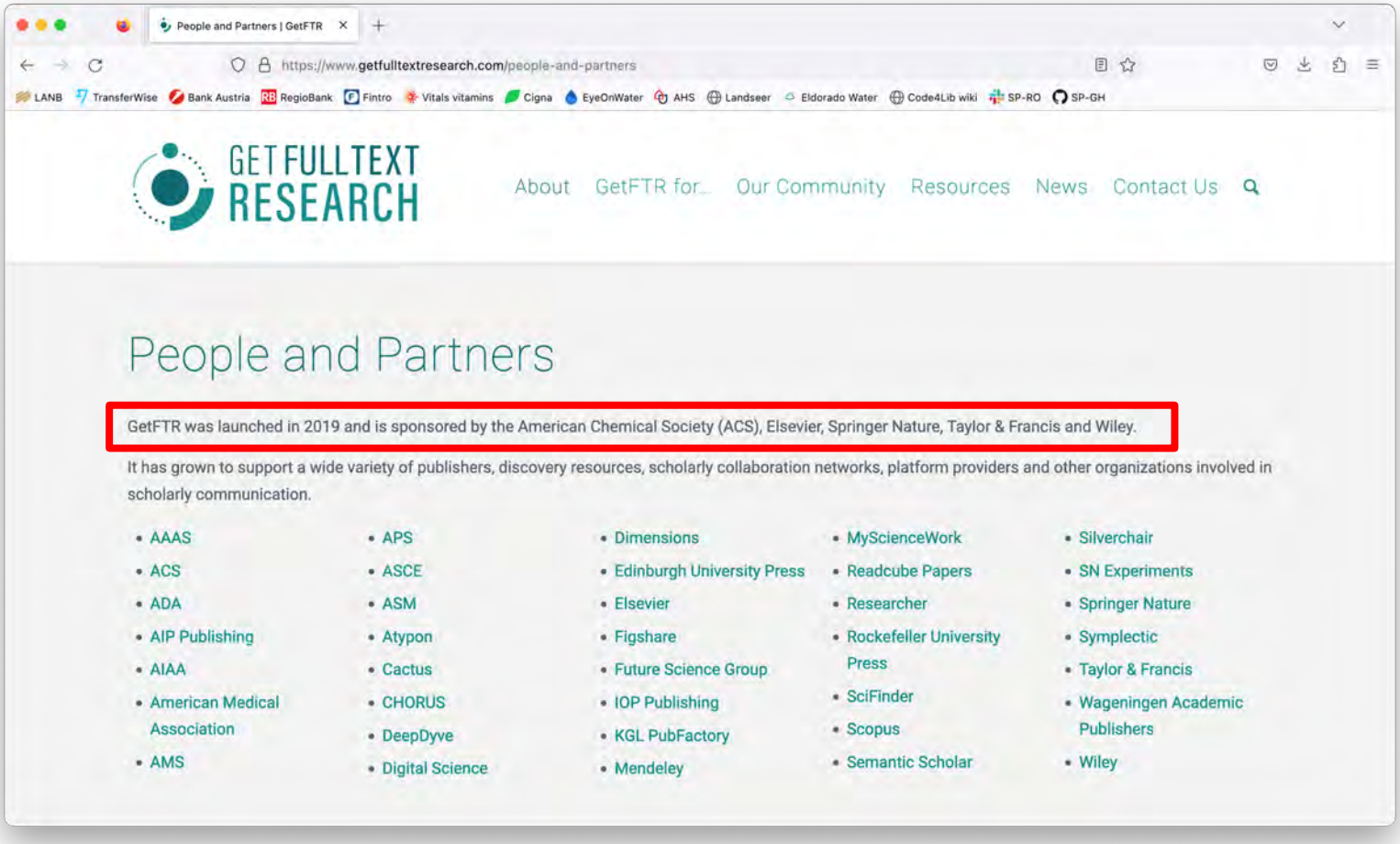
Rosenblatt, B. (1997) The Digital Object Identifier: Solving the Dilemma of Copyright Protection Online https://doi.org/10.3998/3336451.0003.204

GetFTR: Easy Access to Content Researchers are Entitled to Read



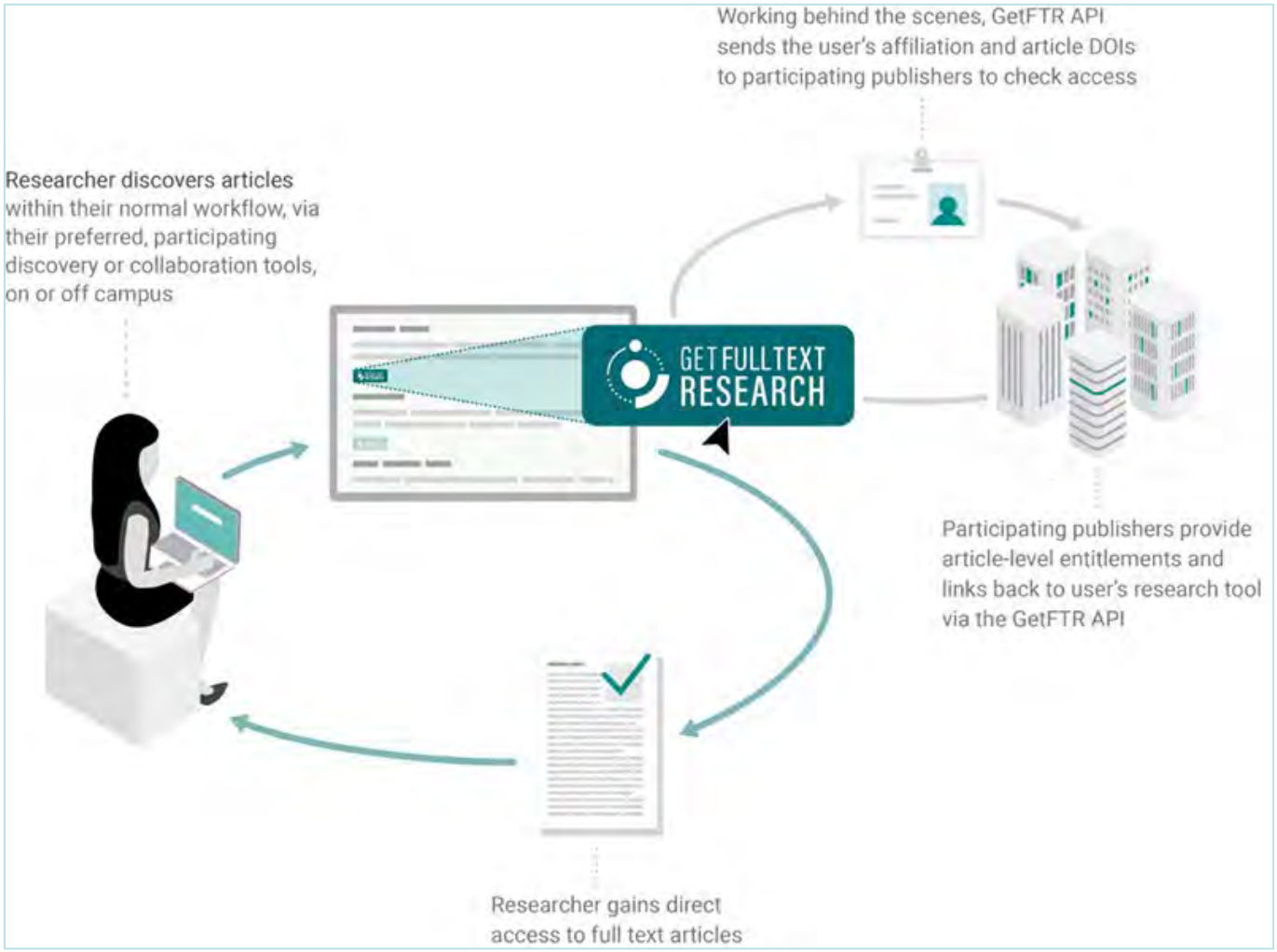
GetFTR (2019)
https://www.getfulltextresearch.com/

GetFTR: Easy Access to Content Researchers are Entitled to Read



GetFTR (2019)
https://www.getfulltextresearch.com/people-and-partners

GetFTR: Leverages DOIs for Entitlement Checks



GetFTR Dataflows and User Privacy
https://www.getfulltextresearch.com/getftr-dataflows-and-user-privacy

Anecdote 2: Signposting

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DOI Dereferences to a Landing Page

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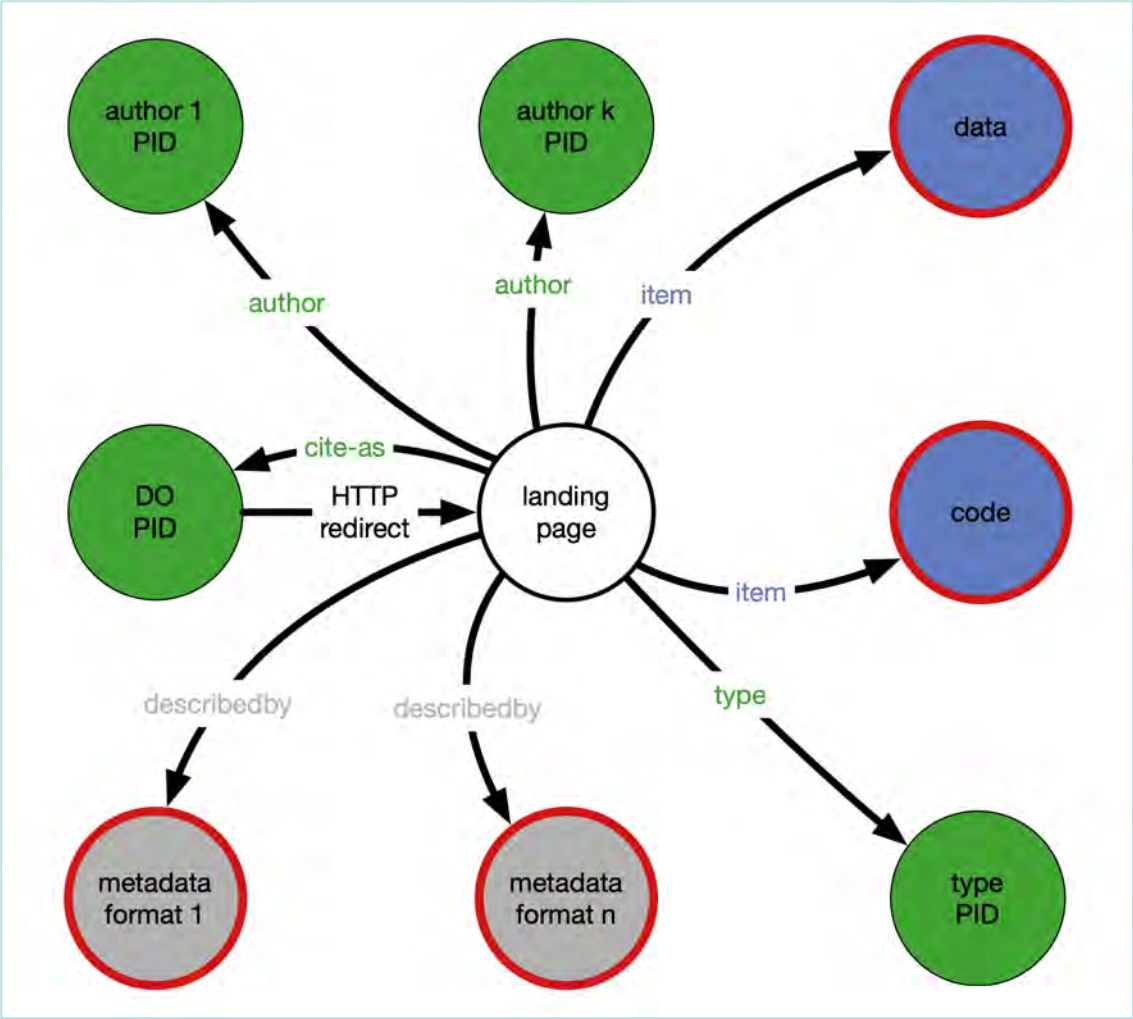
Signposting Provides Map of a Digital Object on the Web



A Signposting Pattern for PIDs

http://signposting.org

Cartoon by Patrick Hochstenbach

Herbert Van de Sompel
LANL & DANS
@hvdsomp

Acknowledgments: Geoff Bilder, Shawn Jones, Martin Klein, Michael L. Nelson, David Rosenthal, Harihar Shankar, Simeon Warner, Karl Ward, Joe Wass

Signposting is funded by the Andrew W. Mellon Foundation

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Herbert Van de Sompel
PIDapalooza, Reykjavik, Iceland, 10 Nov 2016

DANS Los Alamos

Herbert Van de Sompel (2016) A Signposting Pattern for PIDs
https://www.slideshare.net/hvdsomp/pid-signposting-pattern

A Signposting Pattern for PIDs

http://signposting.org

Cartoon by Patric Hochstenbach

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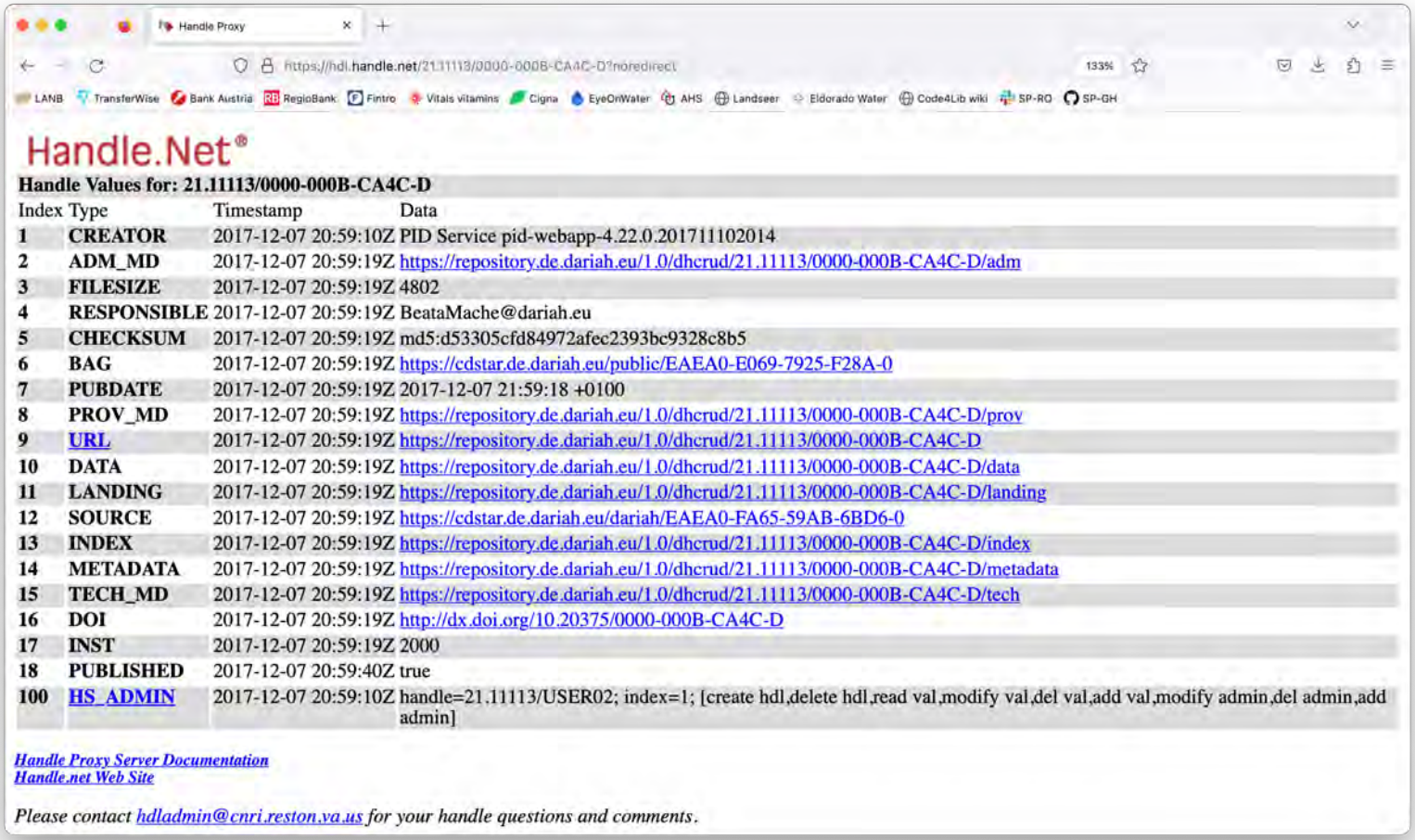
Herbert Van de Sompel
PIDapalooza, Reykjavik, Iceland, 10 Nov 2016

DANS Los Alamos

publisher says no

Herbert Van de Sompel (2016) A Signposting Pattern for PIDs
https://www.slideshare.net/hvdsomp/pid-signposting-pattern

All Eggs in the PID Basket



Handle.Net®

Handle Values for: 21.11113/0000-000B-CA4C-D

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6	BAG	2017-12-07 20:59:19Z	https://cdstar.de.dariah.eu/public/EAEA0-E069-7925-F28A-0
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8	PROV_MD	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/prov
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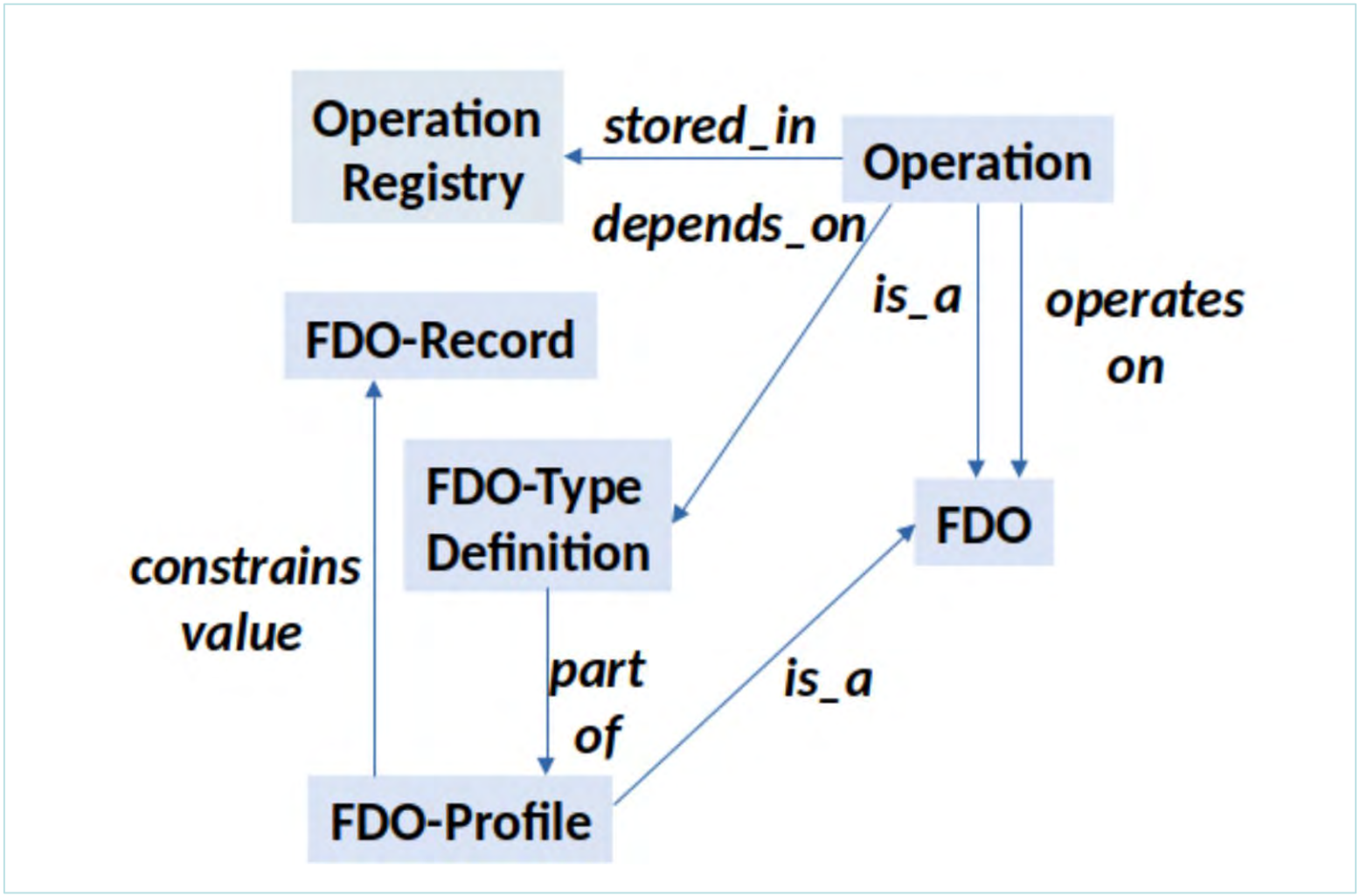
10	DATA	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/data
11	LANDING	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/landing
12	SOURCE	2017-12-07 20:59:19Z	https://cdstar.de.dariah.eu/dariah/EAEA0-FA65-59AB-6BD6-0
13	INDEX	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/index
14	METADATA	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/metadata
15	TECH_MD	2017-12-07 20:59:19Z	https://repository.de.dariah.eu/1.0/dhcrud/21.11113/0000-000B-CA4C-D/tech
16	DOI	2017-12-07 20:59:19Z	http://dx.doi.org/10.20375/0000-000B-CA4C-D
17	INST	2017-12-07 20:59:19Z	2000
18	PUBLISHED	2017-12-07 20:59:40Z	true
100	HS_ADMIN	2017-12-07 20:59:10Z	handle=21.11113/USER02; index=1; [create hdl,delete hdl,read val,modify val,del val,add val,modify admin,del admin,add admin]

Handle Proxy Server Documentation
Handle.net Web Site

Please contact hdladmin@cnri.reston.va.us for your handle questions and comments.

Resolution of PID to PID Record
https://hdl.handle.net/21.11113/0000-000B-CA4C-D?noredirect

All Eggs in the PID Basket: Including Affordances for Processing



Christophe, Blanchi, Maggie, Hellström, Larry, Lannom, Andreas, Pfeil, Ulrich, Schwardmann, & Peter, Wittenburg. (2023) Implementation of Attributes, Types, Profiles and Registries https://doi.org/10.5281/zenodo.7825573

Anecdote 3: Web Annotation

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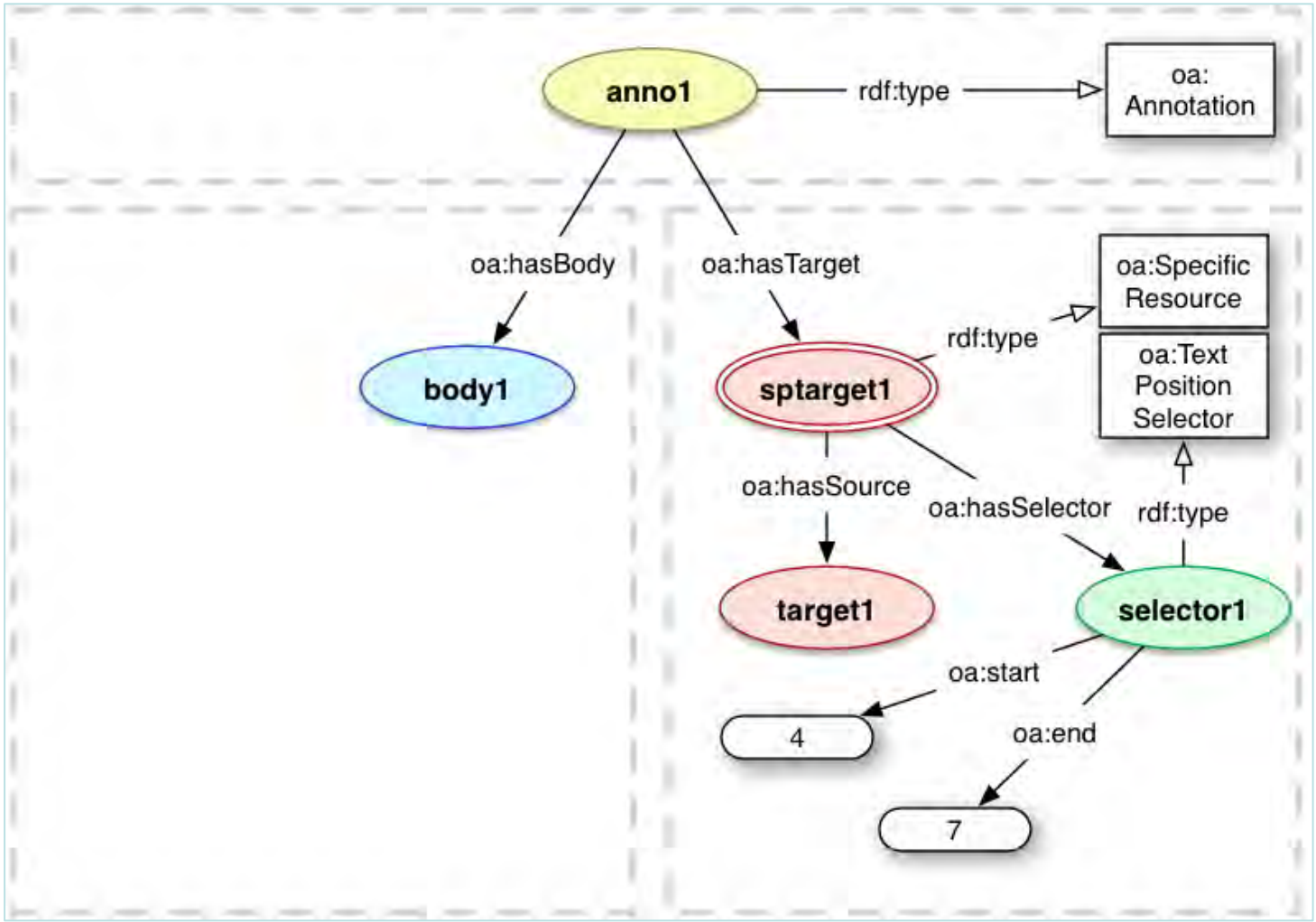
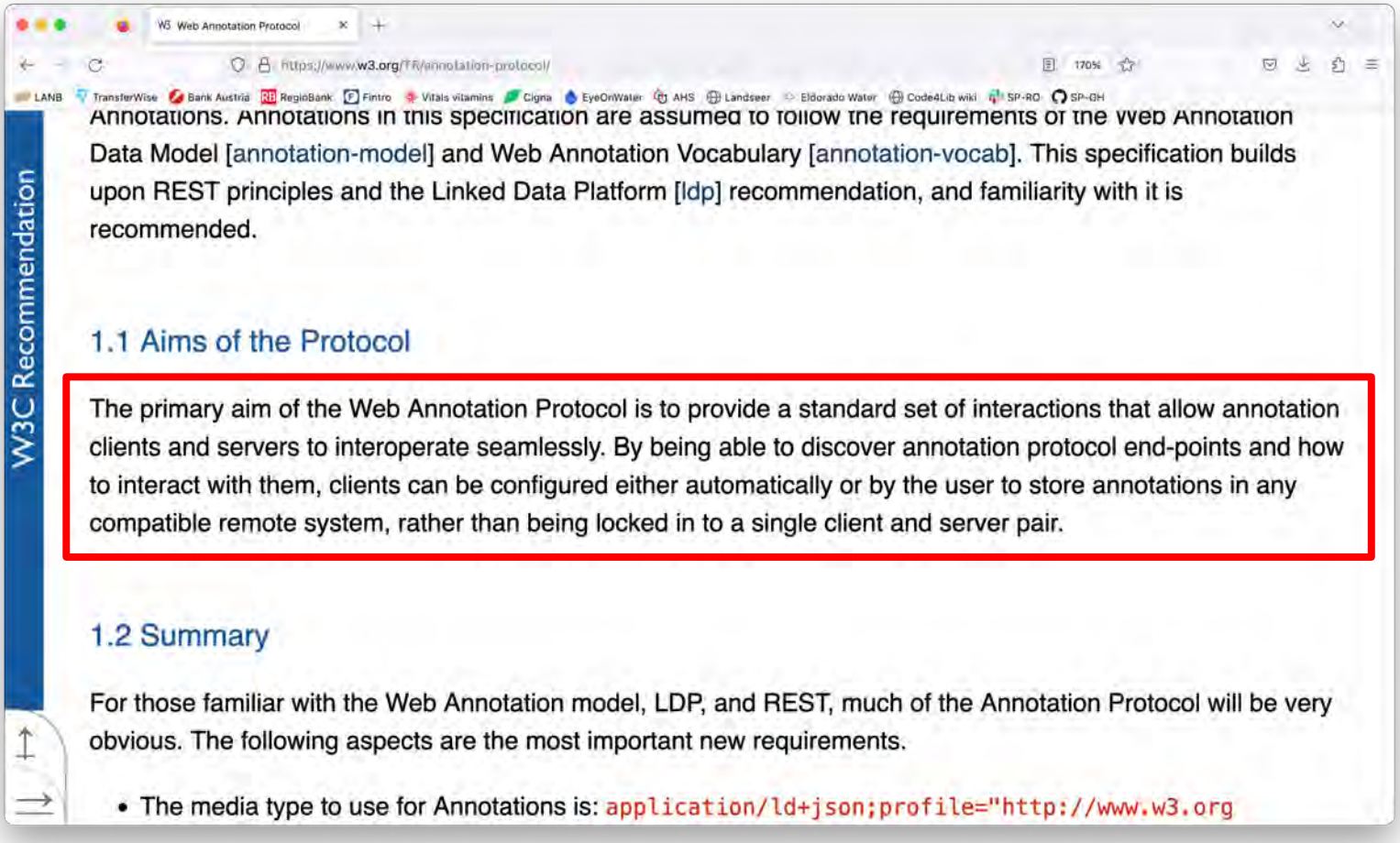
Web Annotation RDF-Based Data Model



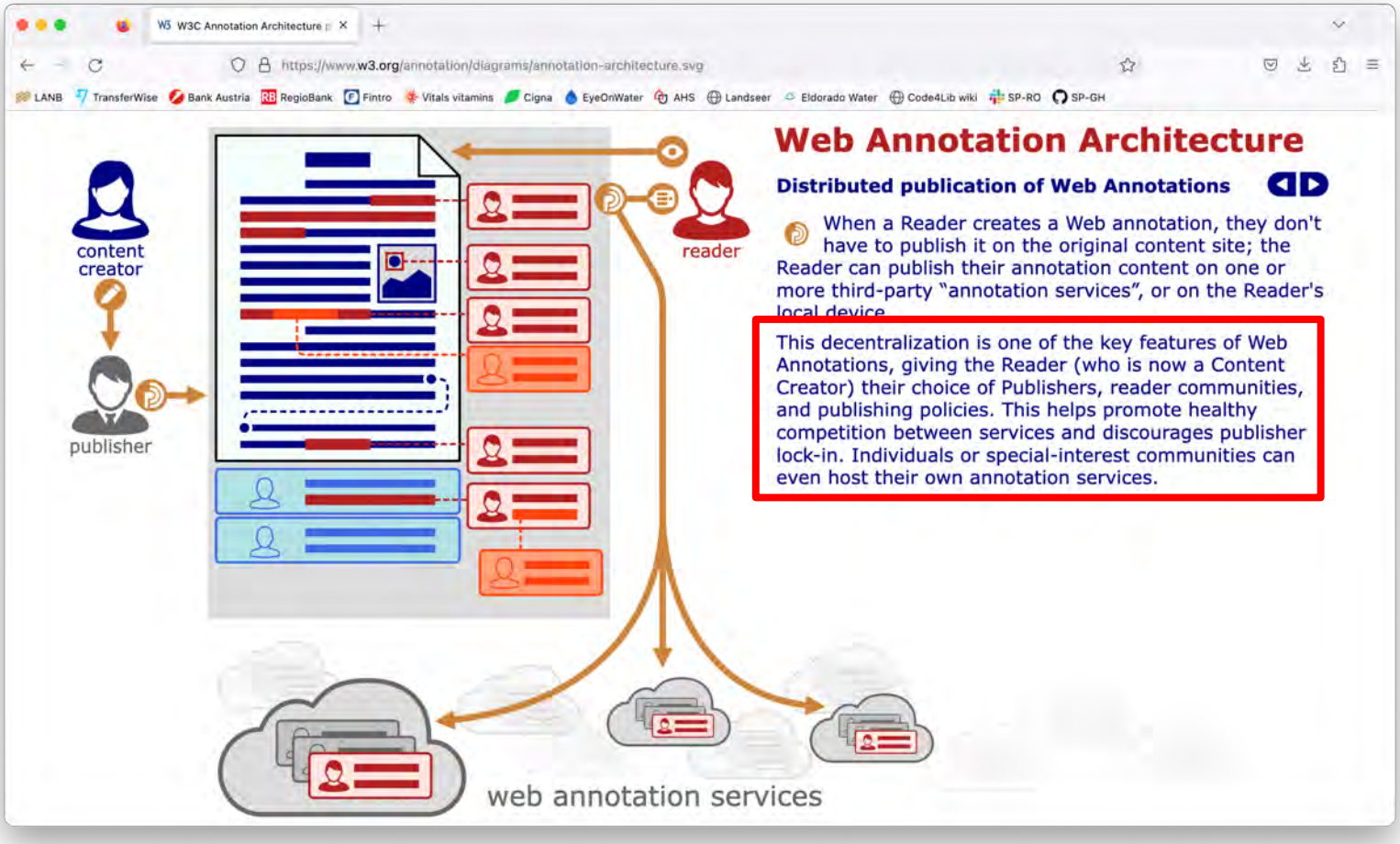
Robert Sanderson, Paolo Ciccarese, Benjamin Young (2017) W3C Web Annotation Data Model
https://www.w3.org/TR/annotation-model/

Web Annotation Clients/Servers: Pick the Ones that Suit You



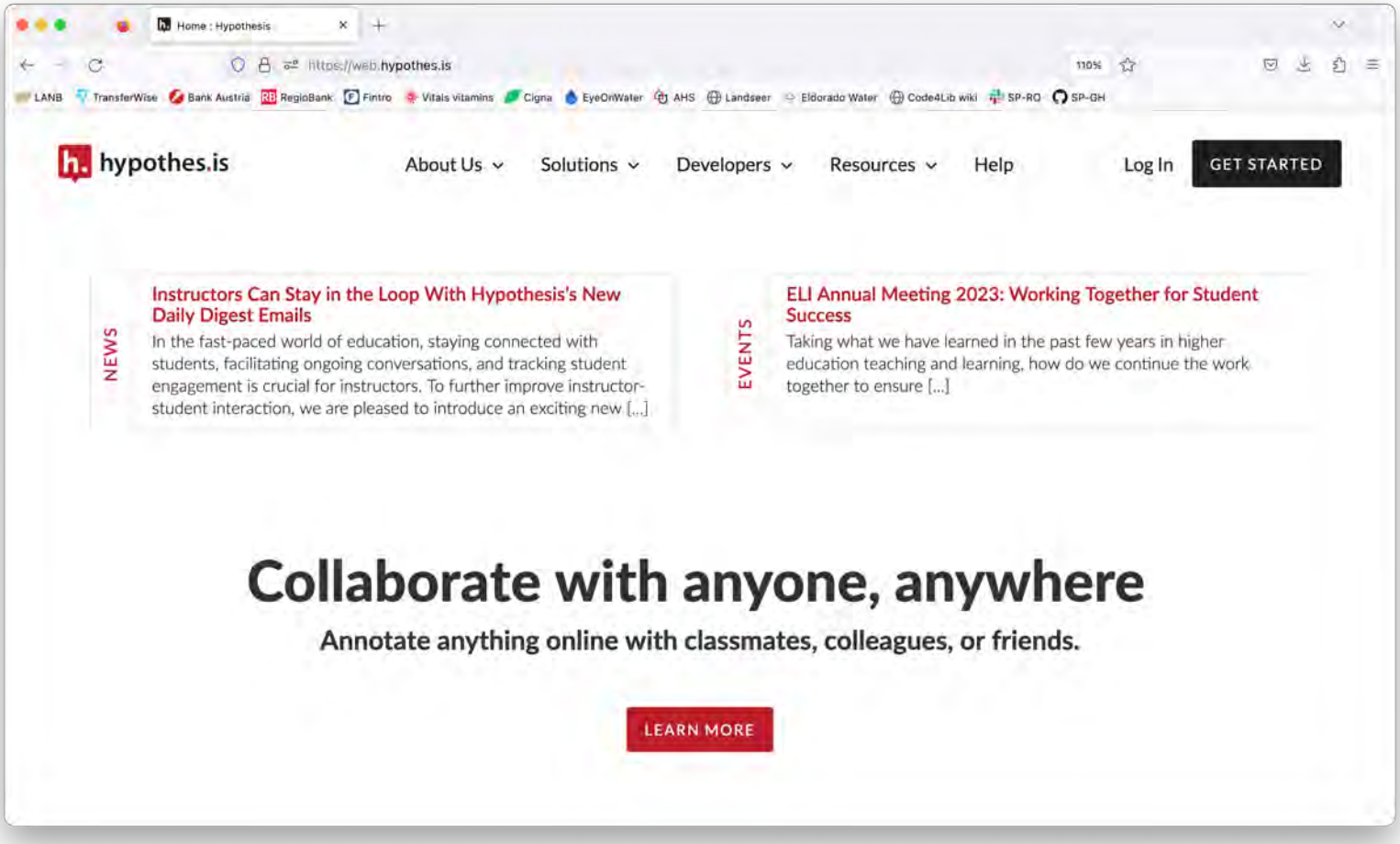
Robert Sanderson (2017) W3C Web Annotation Protocol
https://www.w3.org/TR/annotation-protocol/

Web Annotation Servers: Distributed



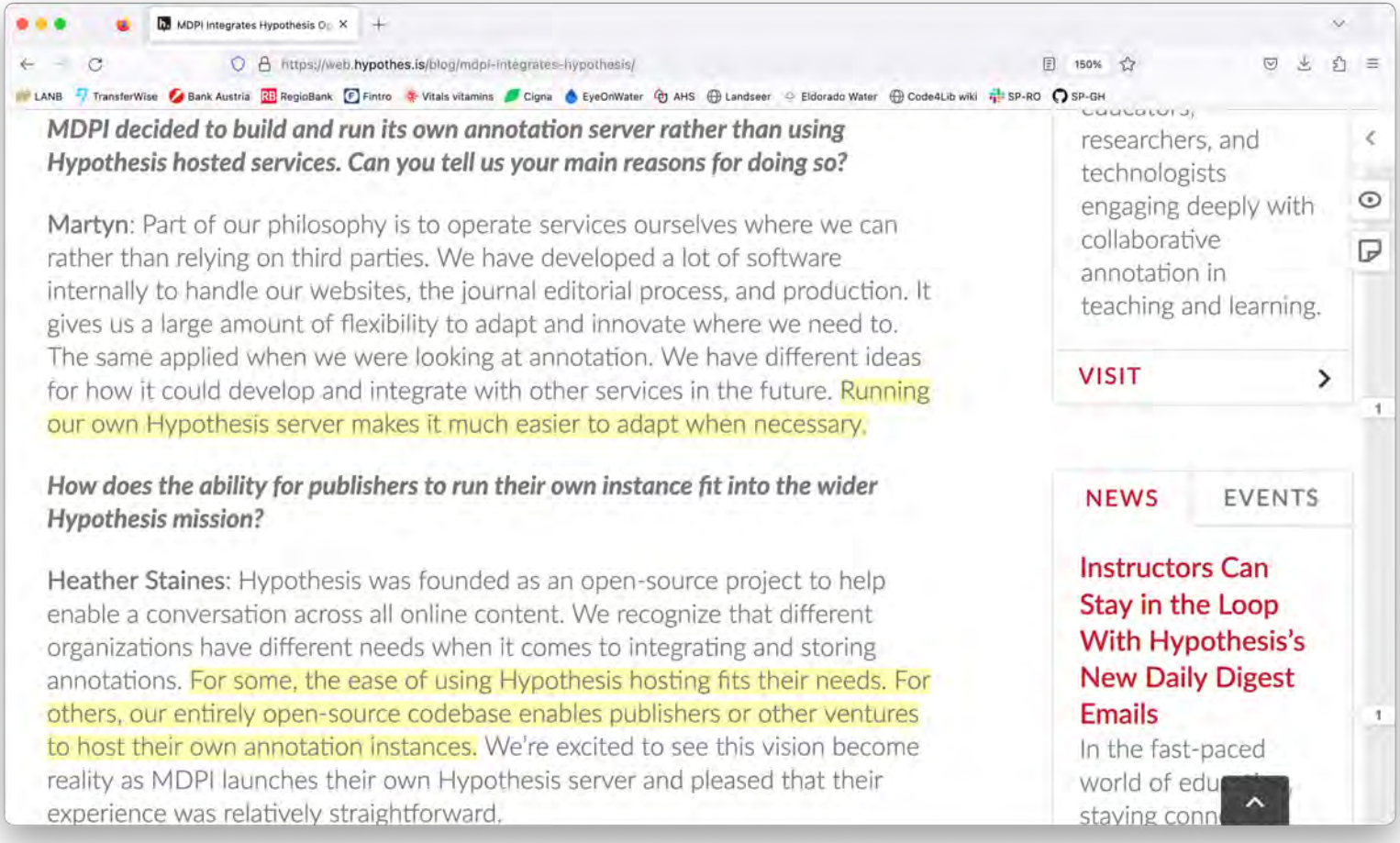
Web Annotation Architecture
https://www.w3.org/annotation/diagrams/annotation-architecture.svg

hypothes.is Annotation Solution



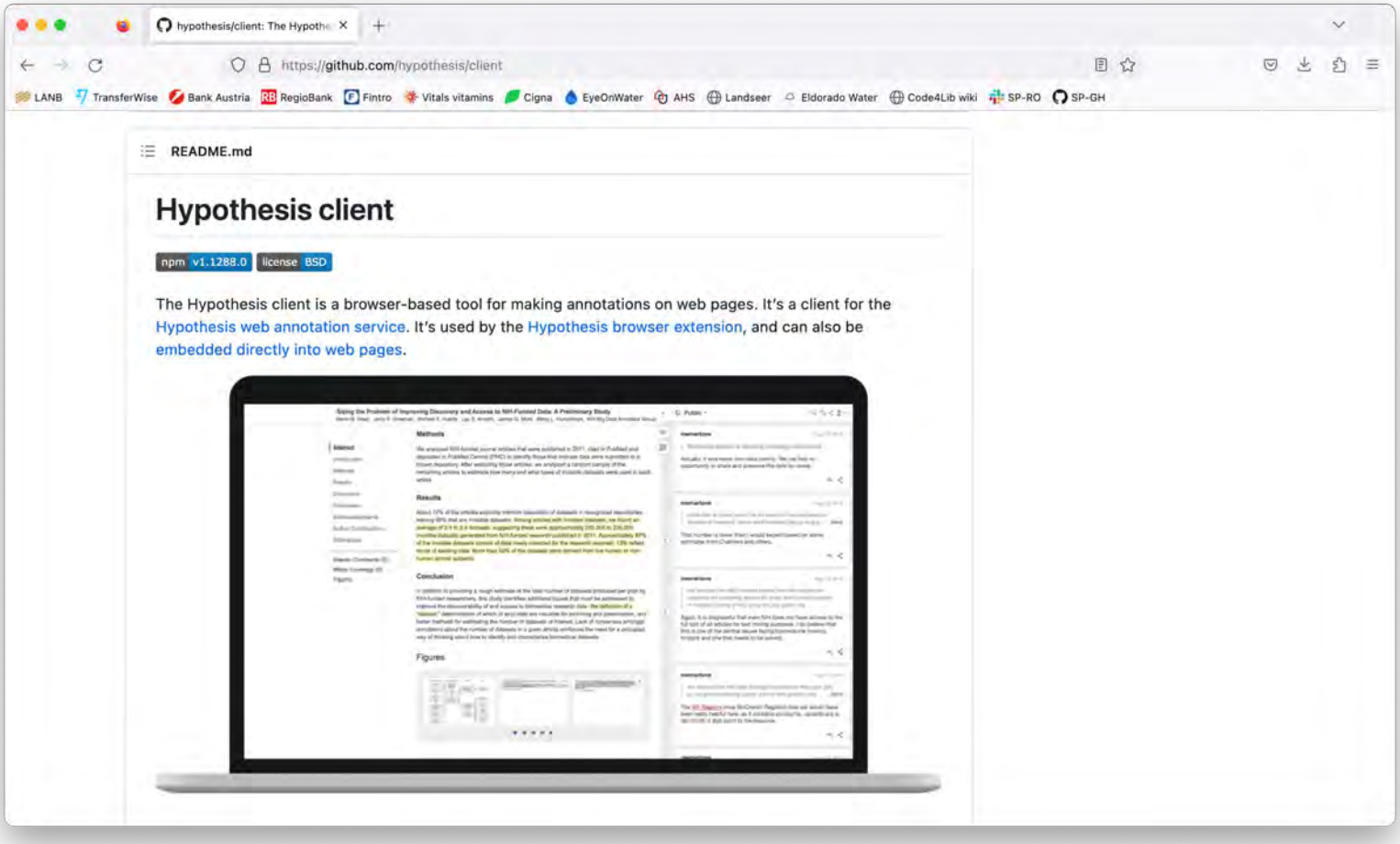
Hypothesis
https://web.hypothes.is/

Works with: Hypothes.is Open Source Annotation Servers



Nate Angell (2018) MDPI Integrates Hypothesis Open Source Annotation https://web.hypothes.is/blog/mdpi-integrates-hypothesis/

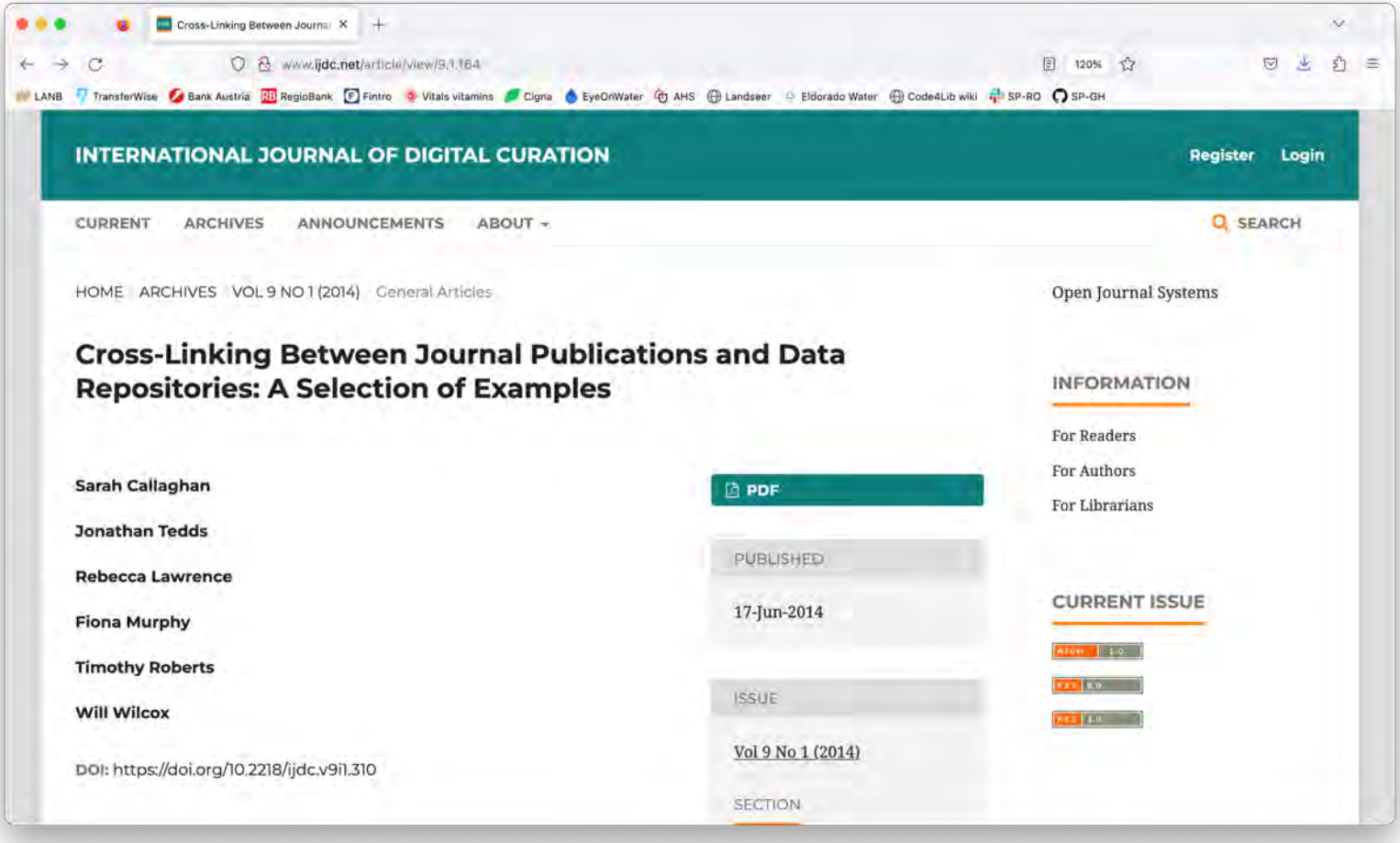
Works with: Hypothes.is Open Source Annotation Client



Alejandro Celaya (2018) Hypothesis Client
https://github.com/hypothesis/client

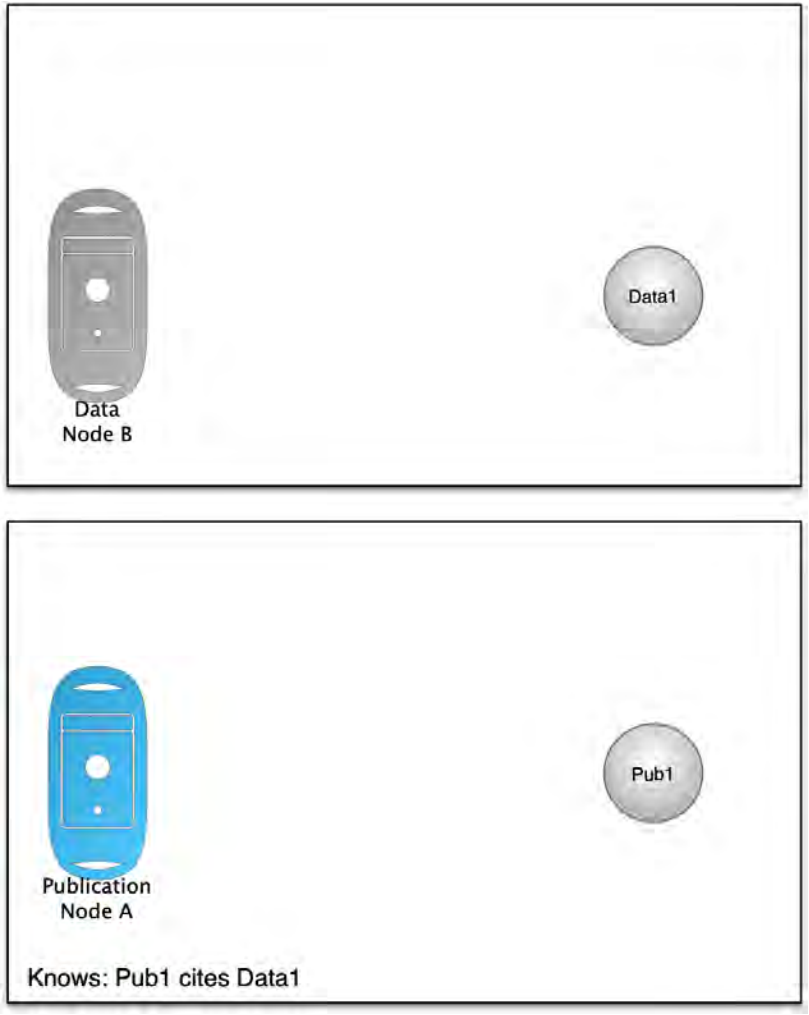
Anecdote 4: Literature-Data Links

Exposing Data-Literature Links



Callaghan, S., Tedds, J., Lawrence, R., Murphy, F., Roberts, F., Wilcox, W. (2014)
Cross-Linking Between Journal Publications and Data Repositories: A Selection of Examples
https://doi.org/10.2218/ijdc.v9i1.310

Webmention for Exposing of Data-Literature Links



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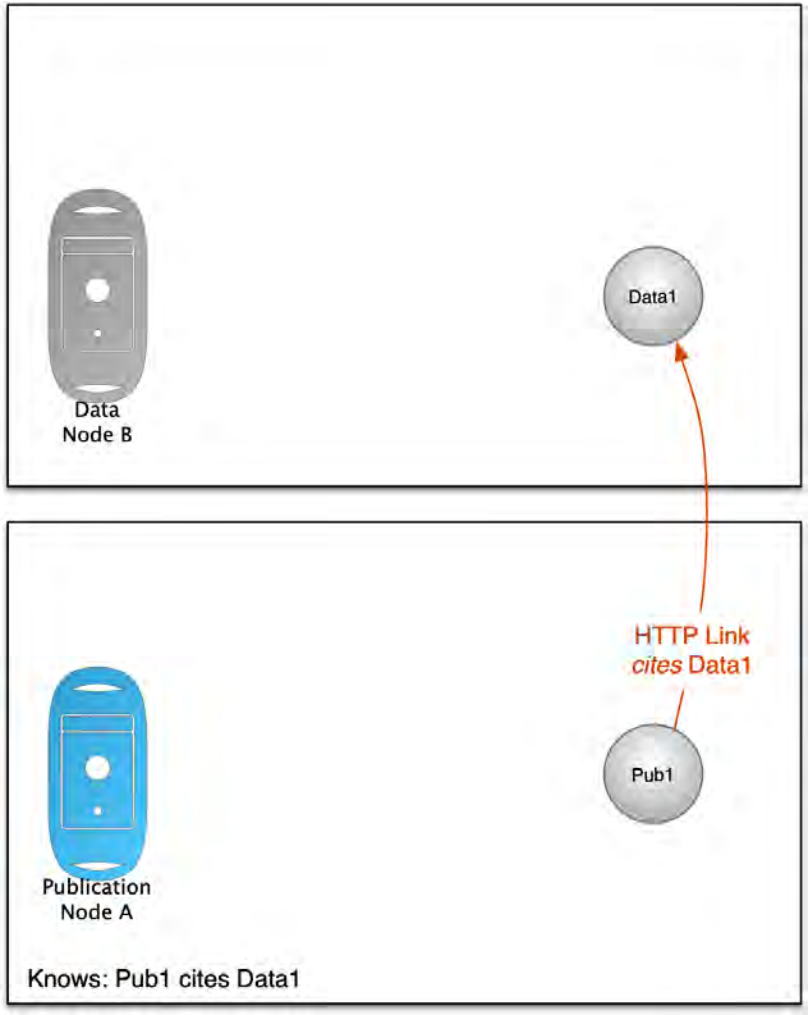
Webmention for Exposing of Data-Literature Links



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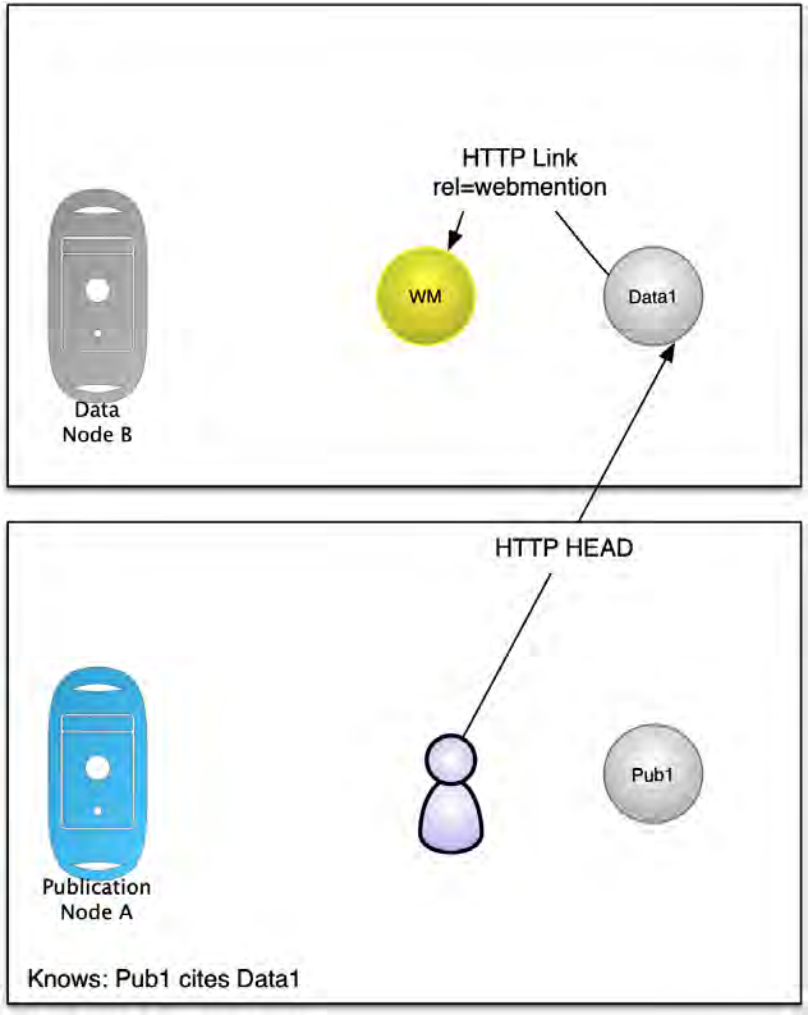
Webmention for Exposing of Data-Literature Links



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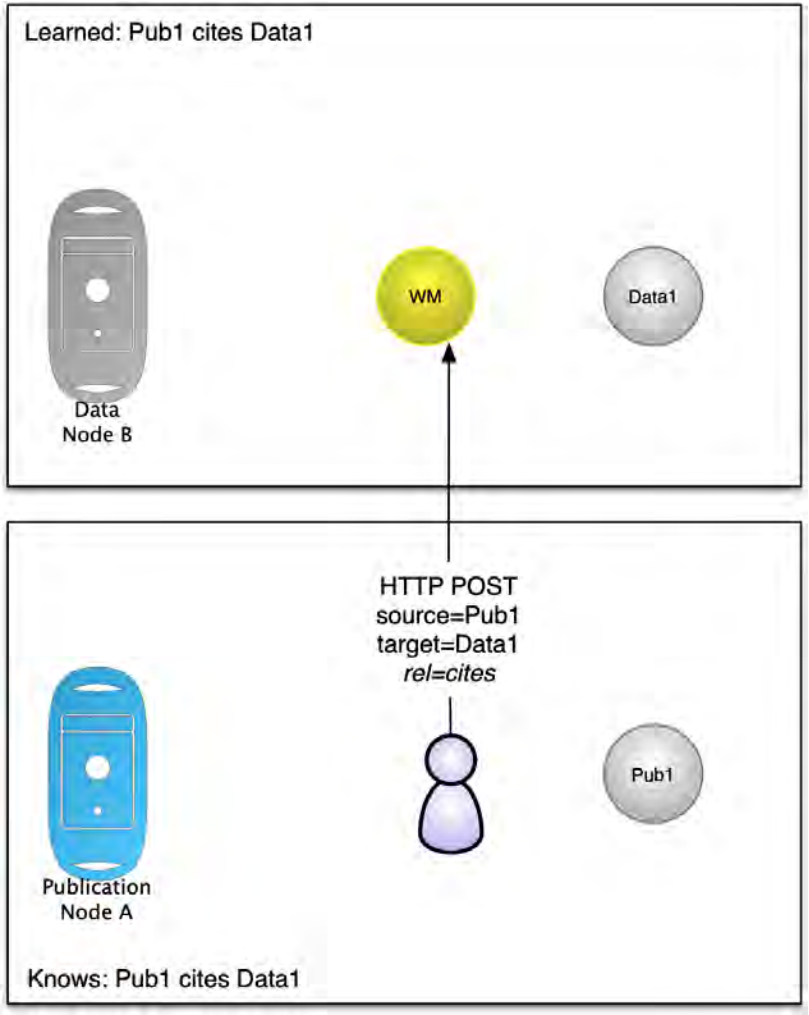
Webmention for Exposing of Data-Literature Links



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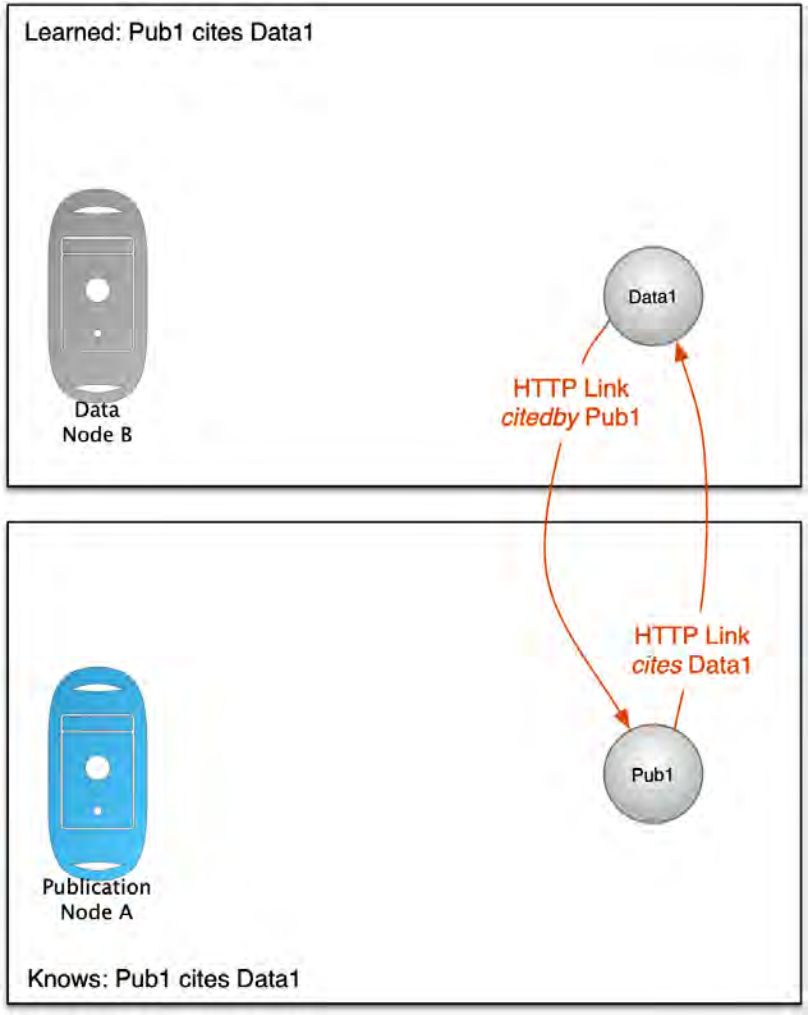

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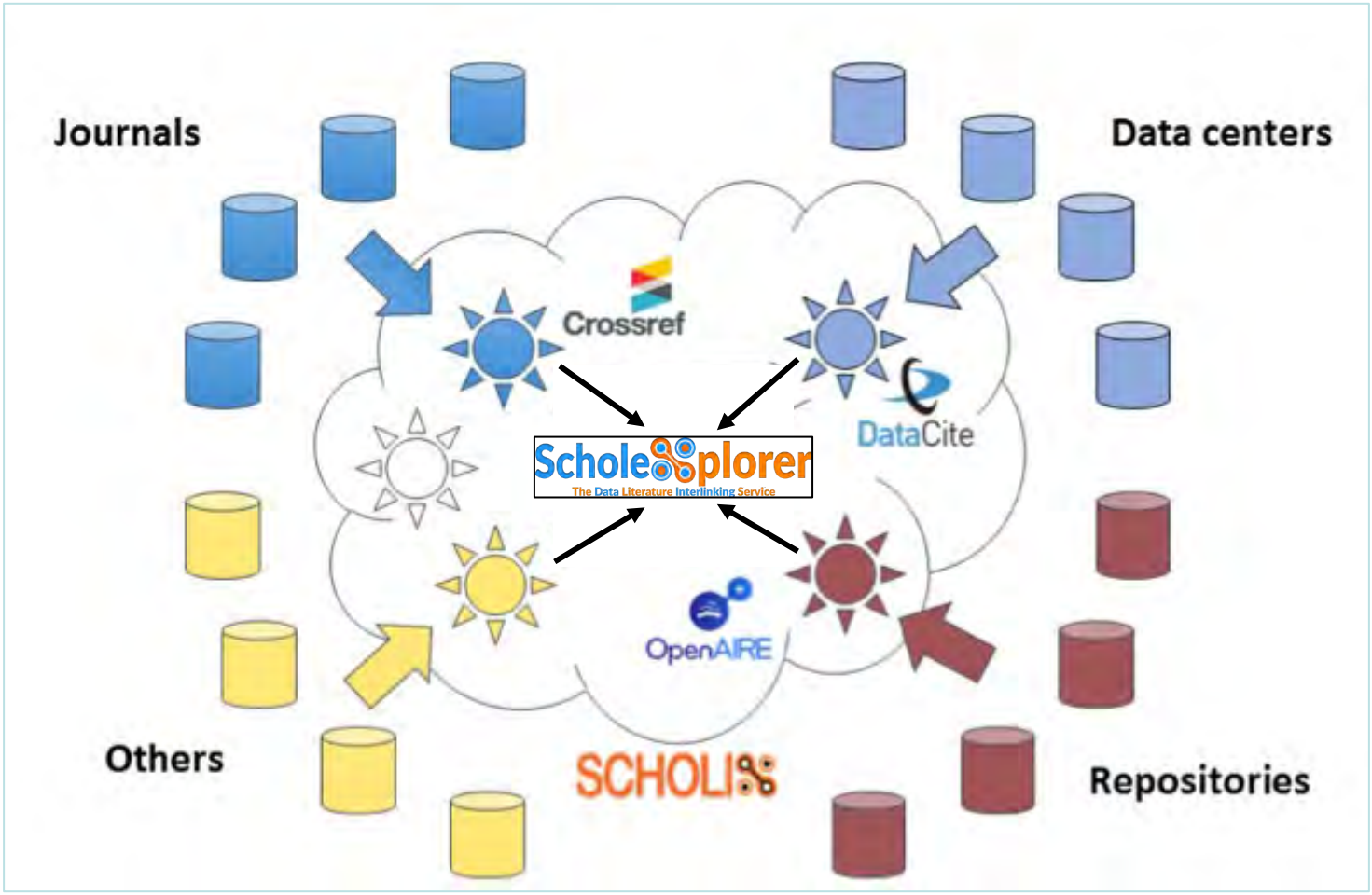
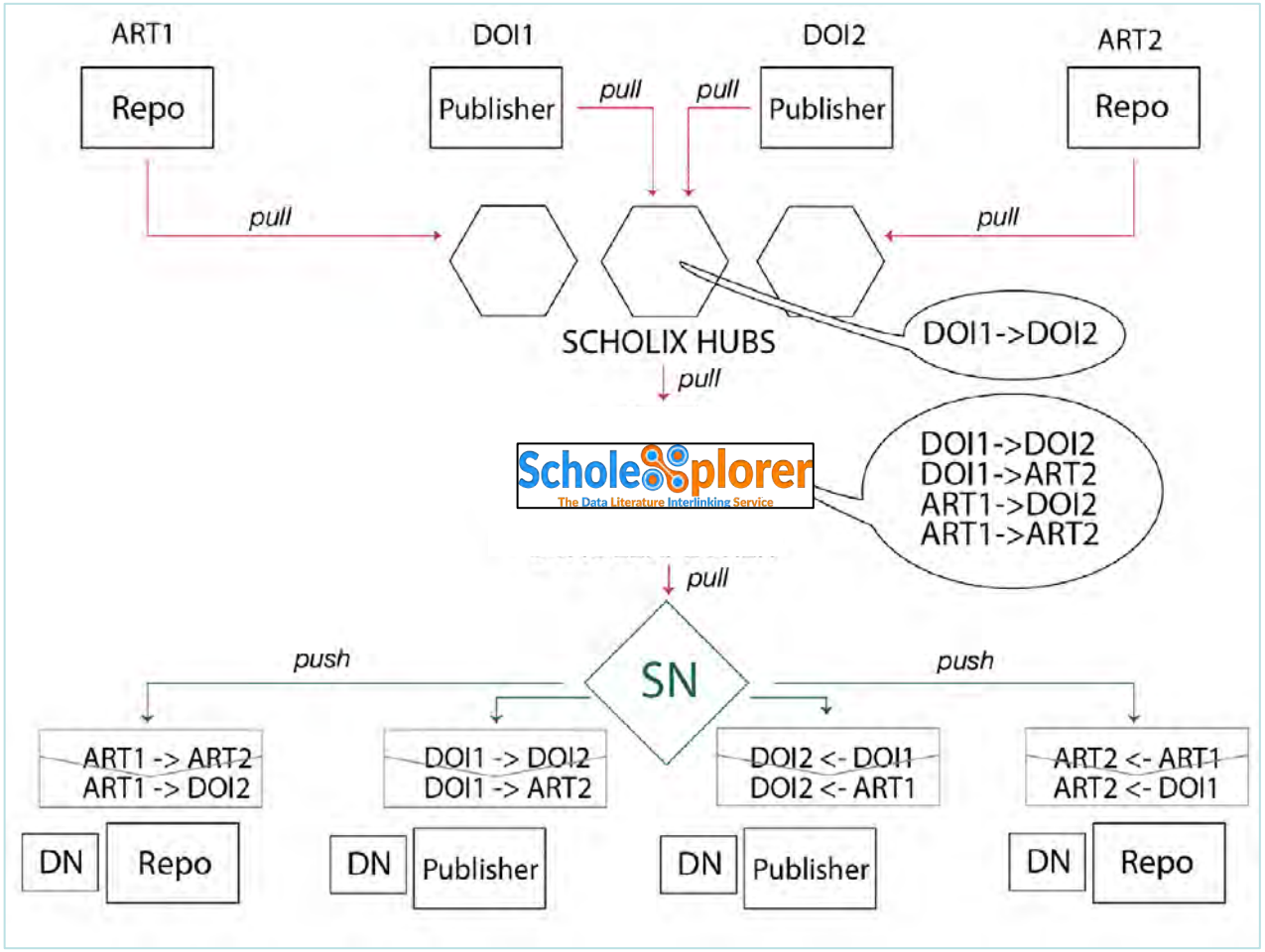
Data Archiving and Networked Services
DANS

Scholix Framework: Centralized Exposing of Data-Literature Links



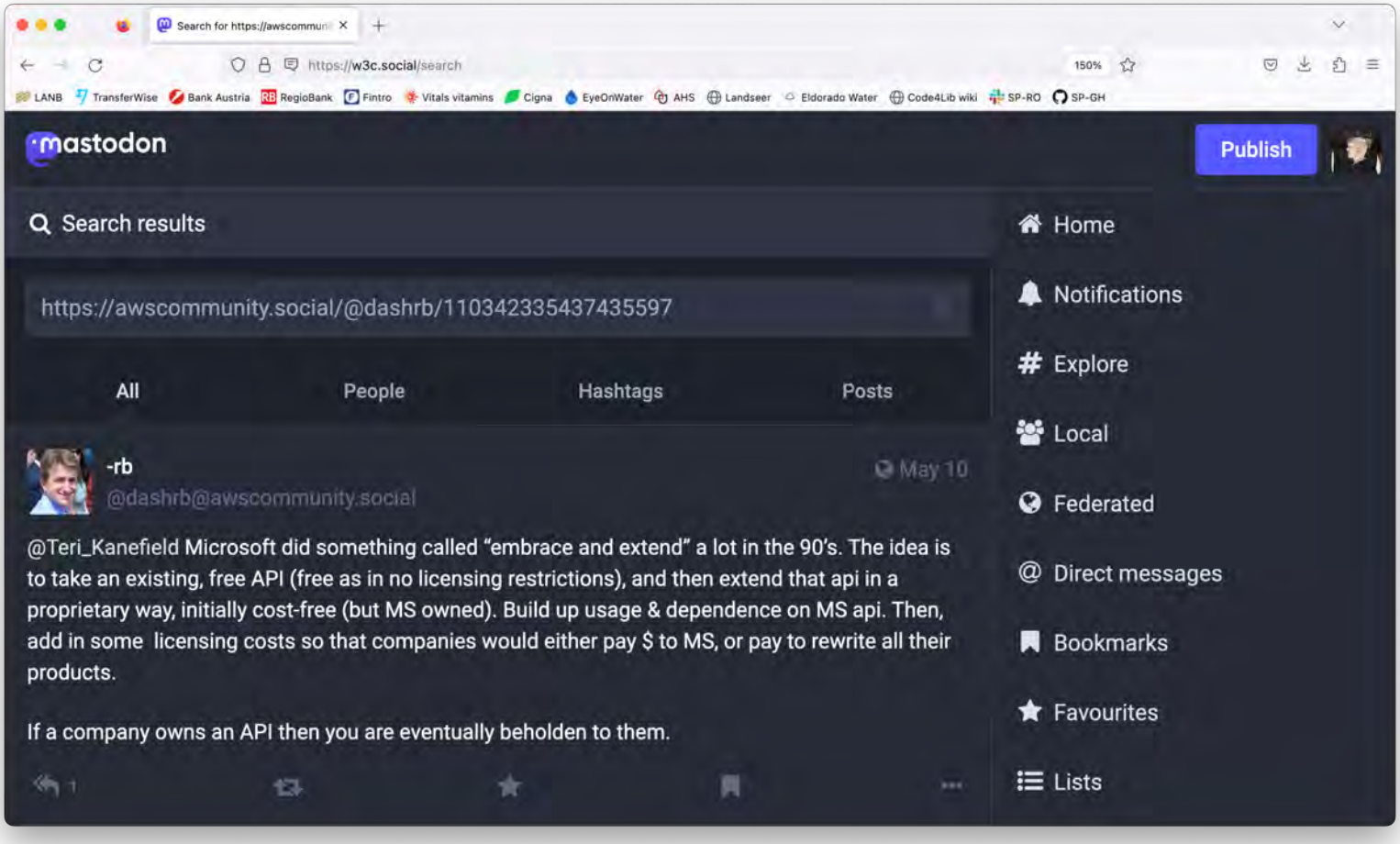
Burton, A., Koers, H., Manghi, P., Stocker, M., Fenner, M., Aryani, A., La Bruzzo, S., Diepenbroek, M., Schindler, U. (2017) The Scholix framework for interoperability in data-literature information exchange. https://doi.org/10.1045/january2017-burton

Event Notifications for Exposing of Data-Literature Links



Hochstenbach, P., Van de Sompel, H., Vander Sande, M., Dedecker, R., and Verborgh, R. (2022)
Event Notifications in Value-Adding Networks
https://doi.org/10.1007/978-3-031-16802-4_11

Centralization Lurking around Every Corner



@dashrb@awscommunity.social (May 10 2023)
https://awscommunity.social/@dashrb/110342335437435597

the central in decentral

Herbert Van de Sompel
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