Tipping the Sacred Cow

herbert van de sompel

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@hvdsomp

http://newsletters.creativecow.net/newsletters/cowtippingheaders/COW_Tipping_630pixels.jpg

Cow tipping - Wikipedia, the free encyclopedia

http://en.wikipedia.org/wiki/Cow_tipping

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Search

Cow tipping

From Wikipedia, the free encyclopedia

Cow tipping or **cow pushing** is the purported activity of sneaking up on a sleeping, upright cow and pushing it over for fun.

A cow lying on its side

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- Contents
- Featured content
- Current events
- Random article
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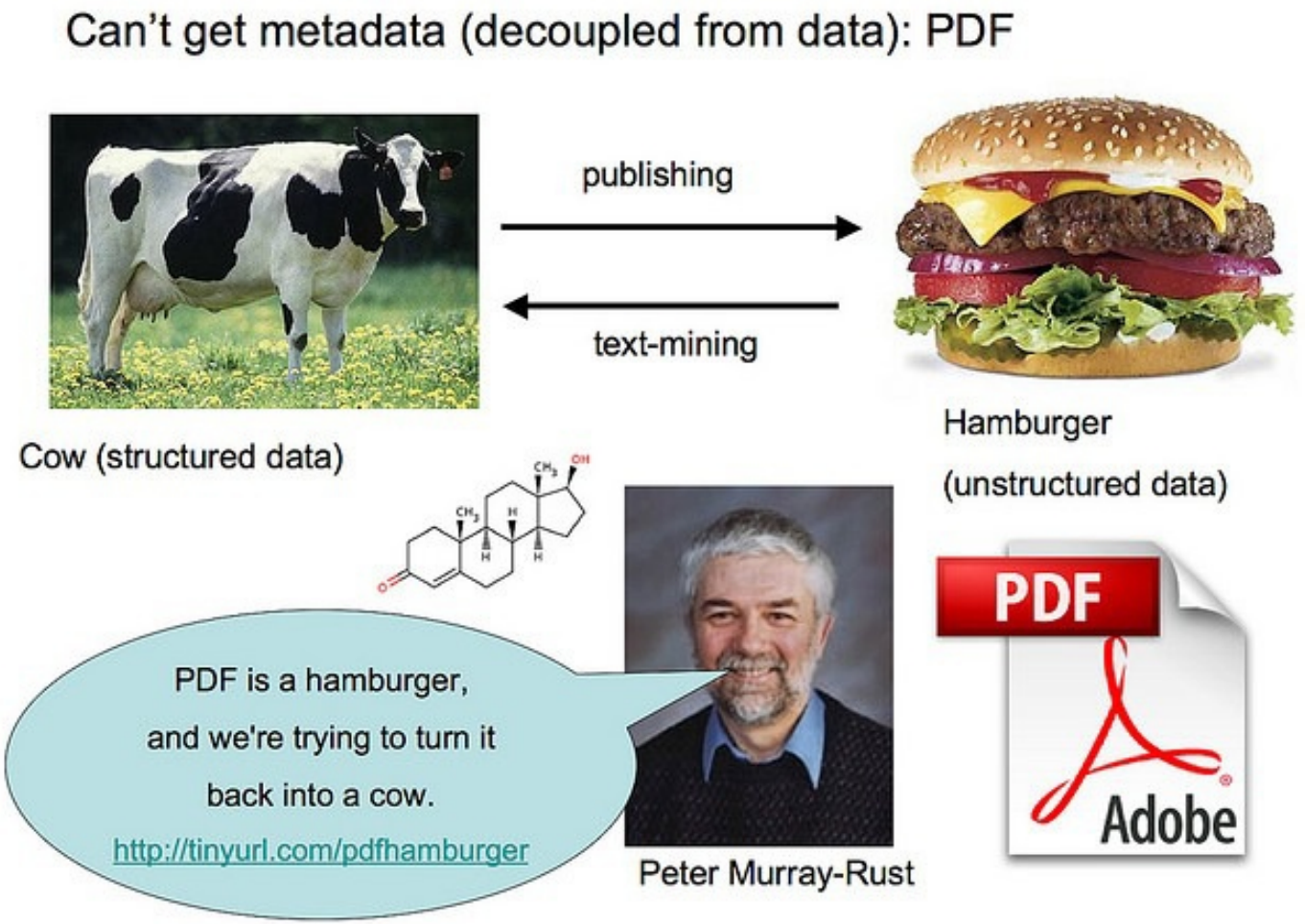
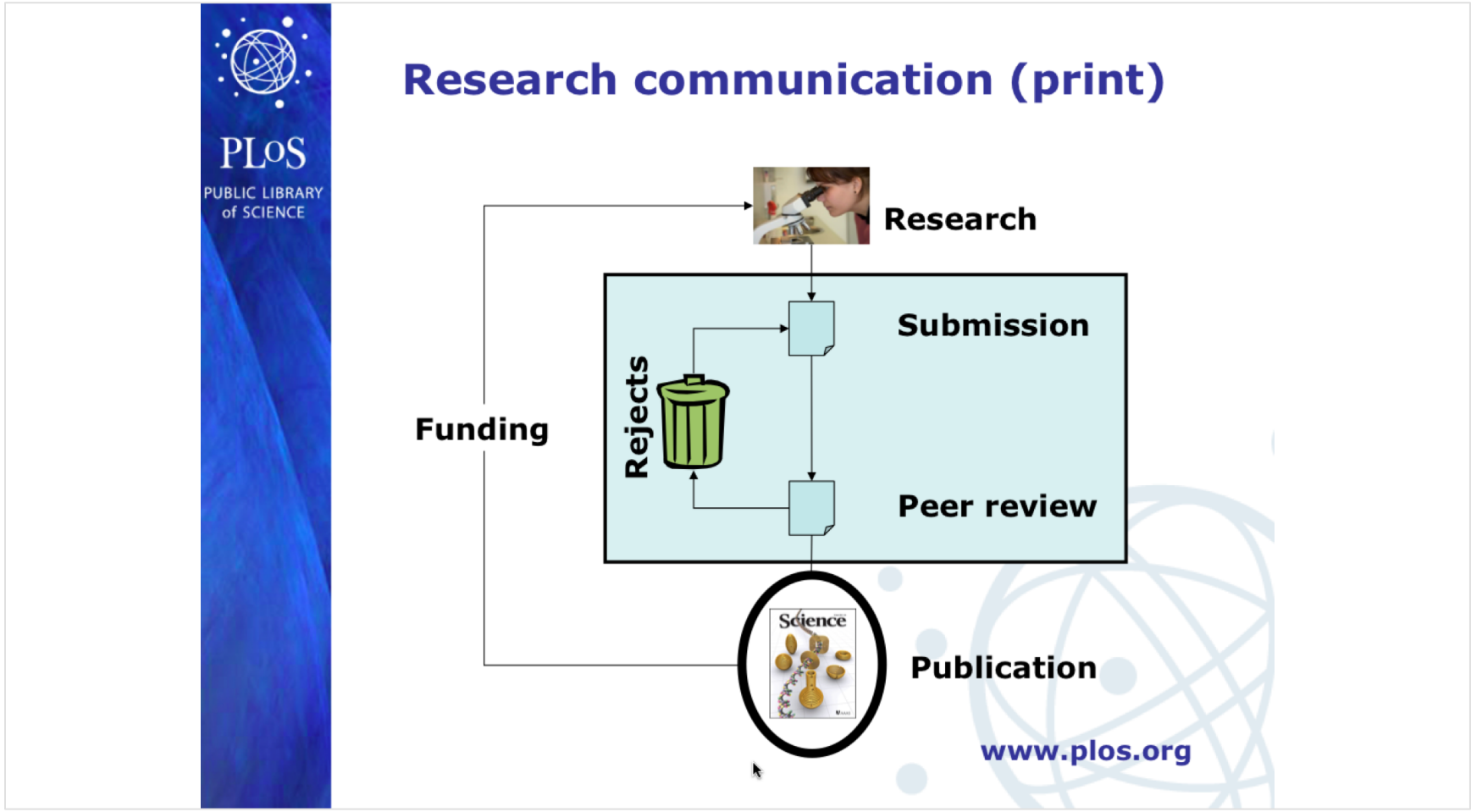
http://en.wikipedia.org/wiki/Cow_tipping



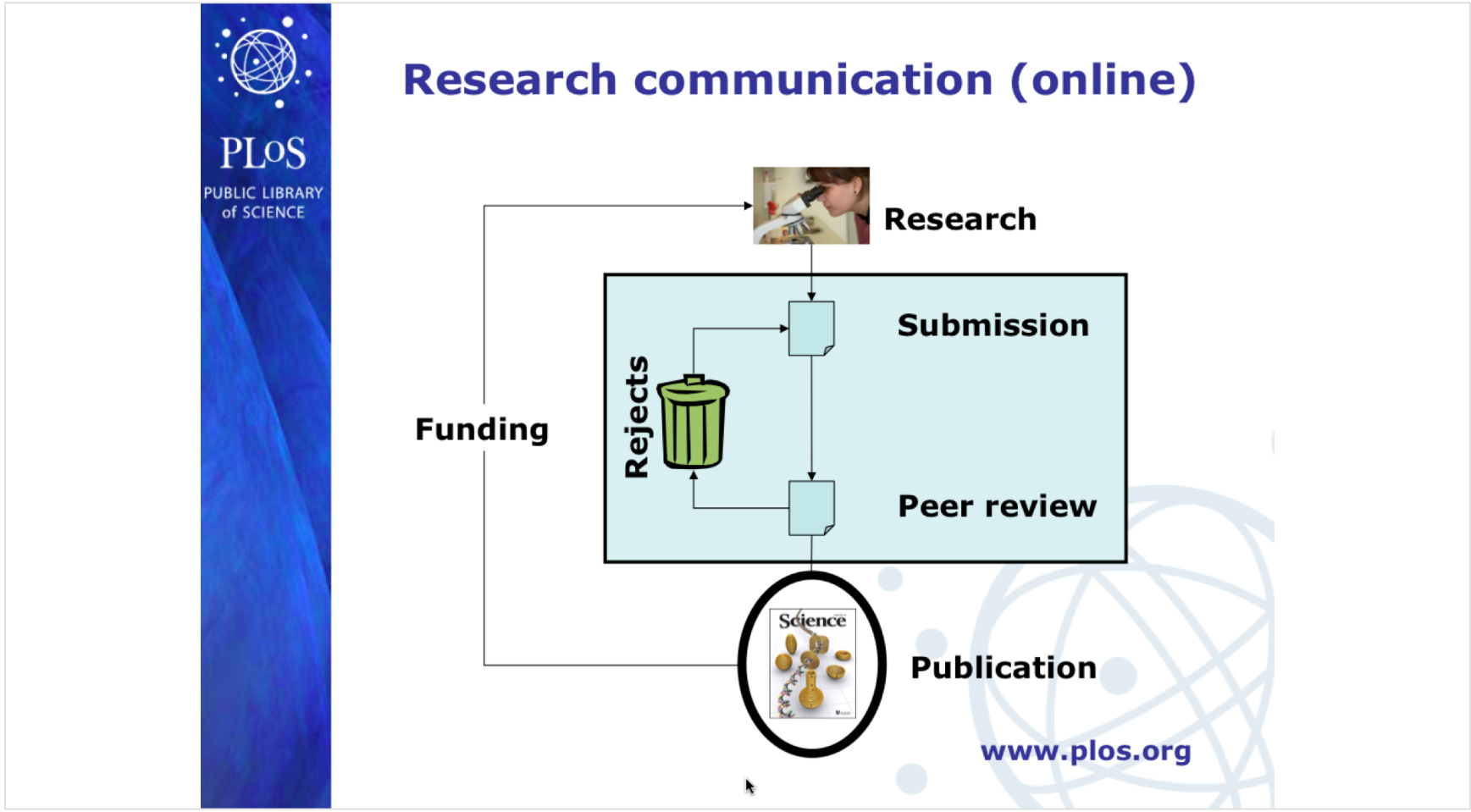
Peter Murray-Rust (2008) **PDF is a hamburger, and we're trying to turn it back into a cow** http://tinyurl.com/pdfhamburger

Tipping the Sacred Cow

Overthrowing the Journal System



Mark Patterson. **Re-engineering the functions of journals** *OAI7 Workshop presentation* http://indico.cern.ch/contributionDisplay.py?sessionId=8&contribId=20&confId=103325



Mark Patterson. **Re-engineering the functions of journals** *OAI7 Workshop presentation* http://indico.cern.ch/contributionDisplay.py?sessionId=8&contribId=20&confId=103325

Forces and functions in scientific communication: an analysis of their interplay

Hans E. Roosendaal [1)] and Peter A. Th. M. Geurts [2)]

Dans la vie, il n'y a pas de solutions.
Il y a des forces en marche: il faut les créer et les solutions suivent. *
(Vol de nuit, Antoine de Saint-Exupéry, Ch. 19)

Hans Roosendaal, Peter Geurts (1997) Forces and functions in scientific communication. http://www.physik.uni-oldenburg.de/conferences/crisp97/roosendaal.html

- ***Registration**, which allows claims of precedence for a scholarly finding.*
- ***Certification**, which establishes the validity of a registered scholarly claim.*
- ***Awareness**, which allows actors in the scholarly system to remain aware of new claims and findings.*
- ***Archiving**, which preserves the scholarly record over time.*
- ***Rewarding**, which rewards actors for their performance in the communication system based on metrics derived from that system.*

Hans Roosendaal, Peter Geurts (1998) Forces and functions in scientific communication. http://www.physik.uni-oldenburg.de/conferences/crisp97/roosendaal.html

Registration

- We're still adding to the scholarly record by publishing papers (a lot of them!) that find their way in the journal system.

- But the scholarly record is expanding in many dimensions:
  - Integration of datasets, workflows, software, etc. into the scholarly record;
  - Augmentation of the scholarly record with a machine actionable substrate.

Van de Sompel & Lagoze **All Aboard: Toward a Machine-Friendly Scholarly Communication System**. In: The Fourth Paradigm. http://research.microsoft.com/en-us/collaboration/fourthparadigm/

The Paper Deluge

- Too many scholarly publications to consume
- Too hard to make cross-discipline connections, to combine existing disparate findings to arrive at new insights

Palmer et. al. (2007) **Weak information work in scientific discovery** *Inf. Process. Manage*. 43(3) 808–820 http://dx.doi.org/10.1016/j.ipm.2006.06.003

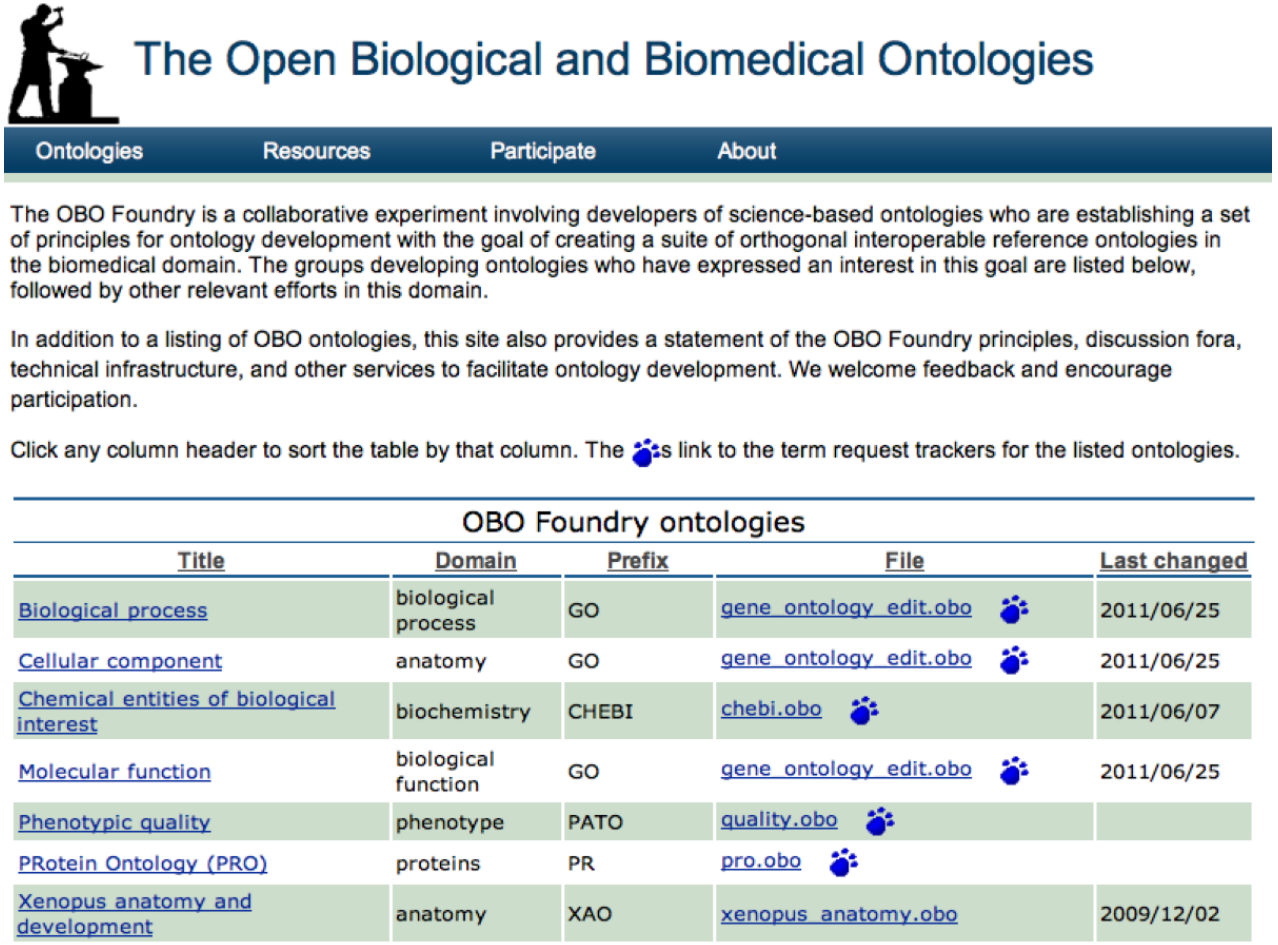
Ruttenberg et. al. **Advancing translational research with the Semantic Web** *BMC Bioinf.* 8(suppl. 3) S2 http://dx.doi.org/10.1186/1471-2105-8-S3-S2

Literature Mining

The significance of the interaction between DAZAP1 and DAZL/DAZ remains to be defined. These proteins may act together to facilitate the expression of a set of genes in germ cells. For example, DAZAP1 could be involved in the transport of the mRNAs of the target genes of DAZL. Alternatively, DAZL and DAZAP1 may act antagonistically to regulate the timing and the level of expression. Such an antagonistic interaction between two interacting RNA-binding proteins is exemplified by the neuron-specific nuclear RNA-binding protein, Nova-1. Nova-1 regulates the alternative splicing of the pre-mRNAs encoding neuronal inhibitory glycine receptor α2 (GlyR α2) [23]. The ability of Nova-1 to activate exon selection in neurons is antagonized by a second RNA-binding protein, brPTB (brain-enriched polypyrimidine tract-binding protein), which interacts with Nova-1 and inhibits its function [24]. DAZAP1 could function in a similar manner by binding to DAZL and inhibiting its function. Comparing the phenotypes of Dazl1 and Dazap1 single and double knock-out mice may provide some clues to the significance of their interaction. Dazl1 knock-out mice have already been generated and studied [6]. The spermatogenic defect in the male becomes apparent only after day 7 post partum when the germ cells are committing to meiosis (H. Cooke, personal communication). The genomic structure of Dazap1, delineated here, should facilitate the generating of Dazap1 null mutation.

Verspoor et. al. **The textual characteristics of traditional and Open Access scientific journals are similar.** *BMC Bioinformatics 2009,* 10:183 http://dx.doi.org/10.1186/1471-2105-10-183

Entity Identifiers & Ontologies



The Open Biological and Biomedical Ontologies

Ontologies | Resources | Participate | About

The OBO Foundry is a collaborative experiment involving developers of science-based ontologies who are establishing a set of principles for ontology development with the goal of creating a suite of orthogonal interoperable reference ontologies in the biomedical domain. The groups developing ontologies who have expressed an interest in this goal are listed below, followed by other relevant efforts in this domain.

In addition to a listing of OBO ontologies, this site also provides a statement of the OBO Foundry principles, discussion fora, technical infrastructure, and other services to facilitate ontology development. We welcome feedback and encourage participation.

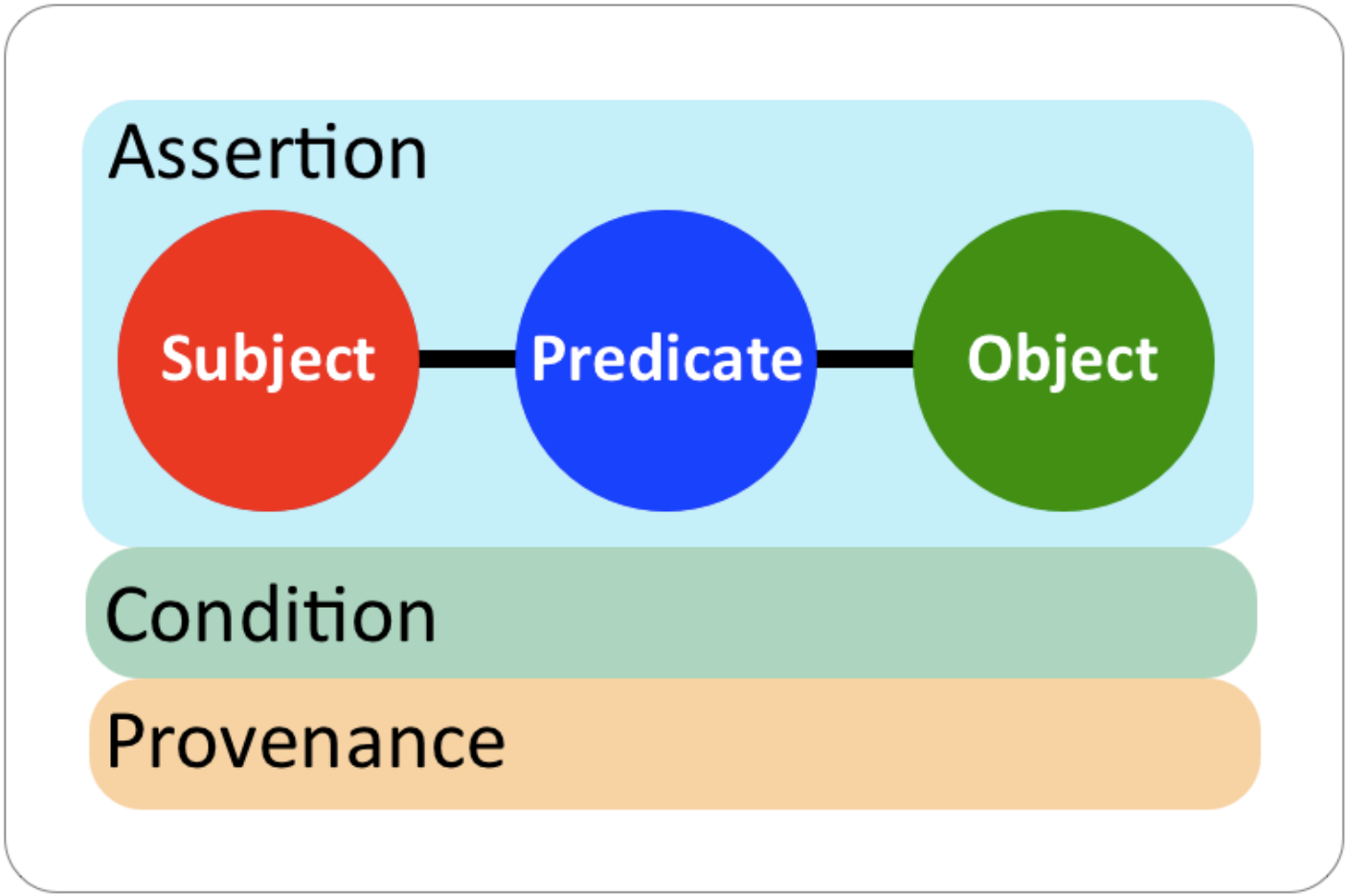
Click any column header to sort the table by that column. The s link to the term request trackers for the listed ontologies.

OBO Foundry ontologies

Title	Domain	Prefix	File	Last changed
Biological process	biological process	GO	gene_ontology_edit.obo	2011/06/25
Cellular component	anatomy	GO	gene_ontology_edit.obo	2011/06/25
Chemical entities of biological interest	biochemistry	CHEBI	chebi.obo	2011/06/07
Molecular function	biological function	GO	gene_ontology_edit.obo	2011/06/25
Phenotypic quality	phenotype	PATO	quality.obo	
PRotein Ontology (PRO)	proteins	PR	pro.obo	
Xenopus anatomy and development	anatomy	XAO	xenopus_anatomy.obo	2009/12/02

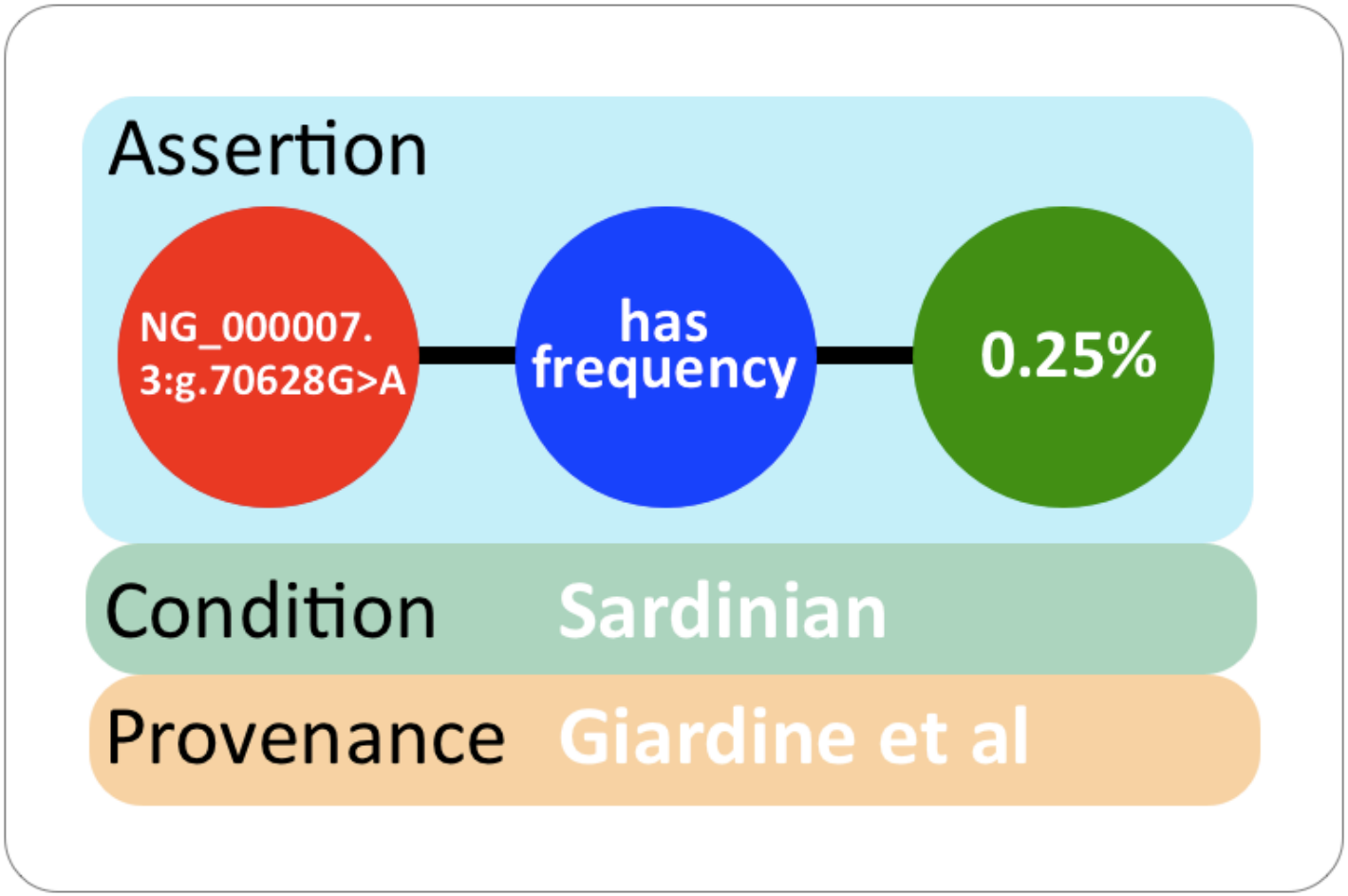
http://www.obofoundry.org/

Nanopublication



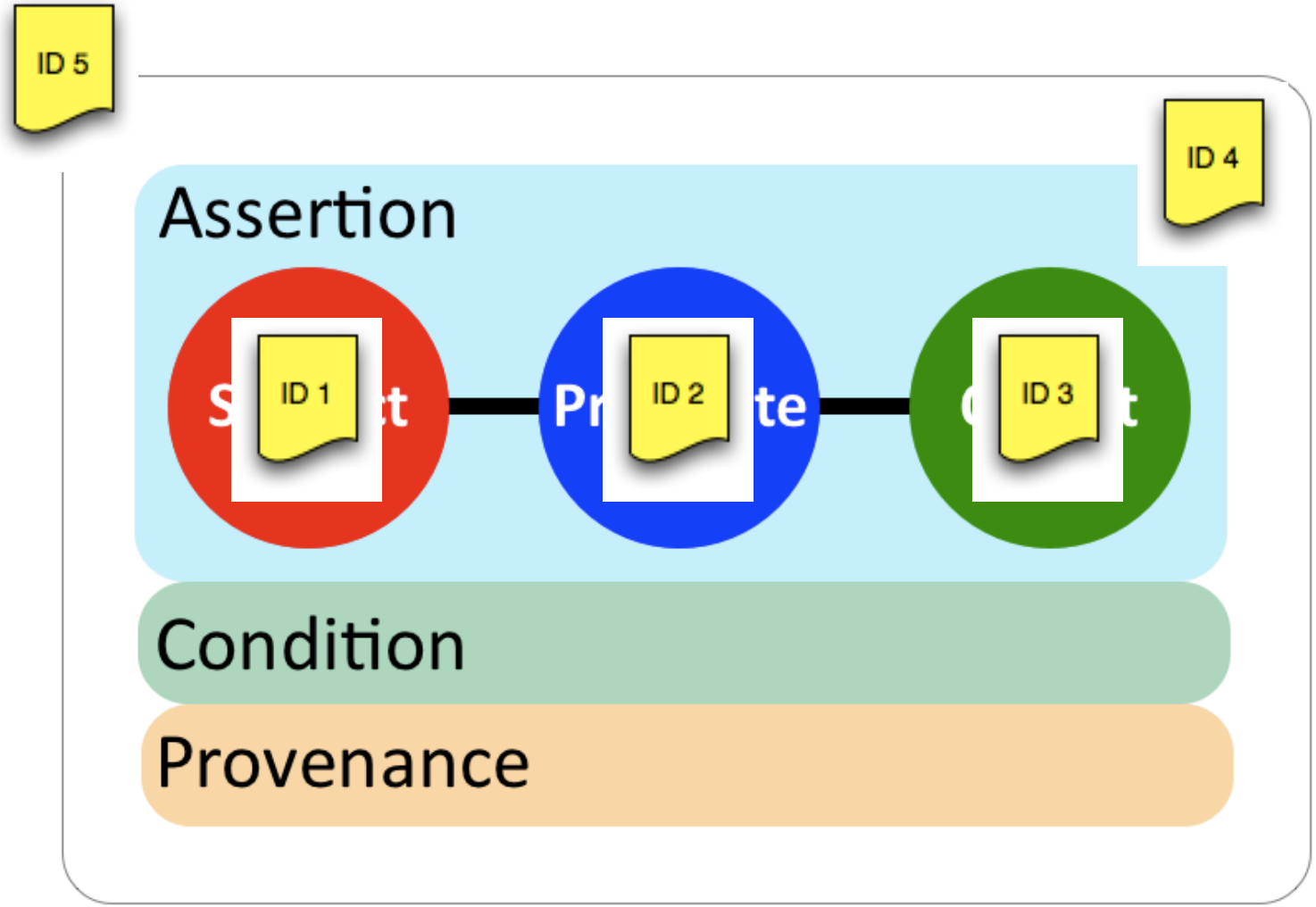
http://www.nanopub.org/

Nanopublication



http://www.nanopub.org/

Nanopublication



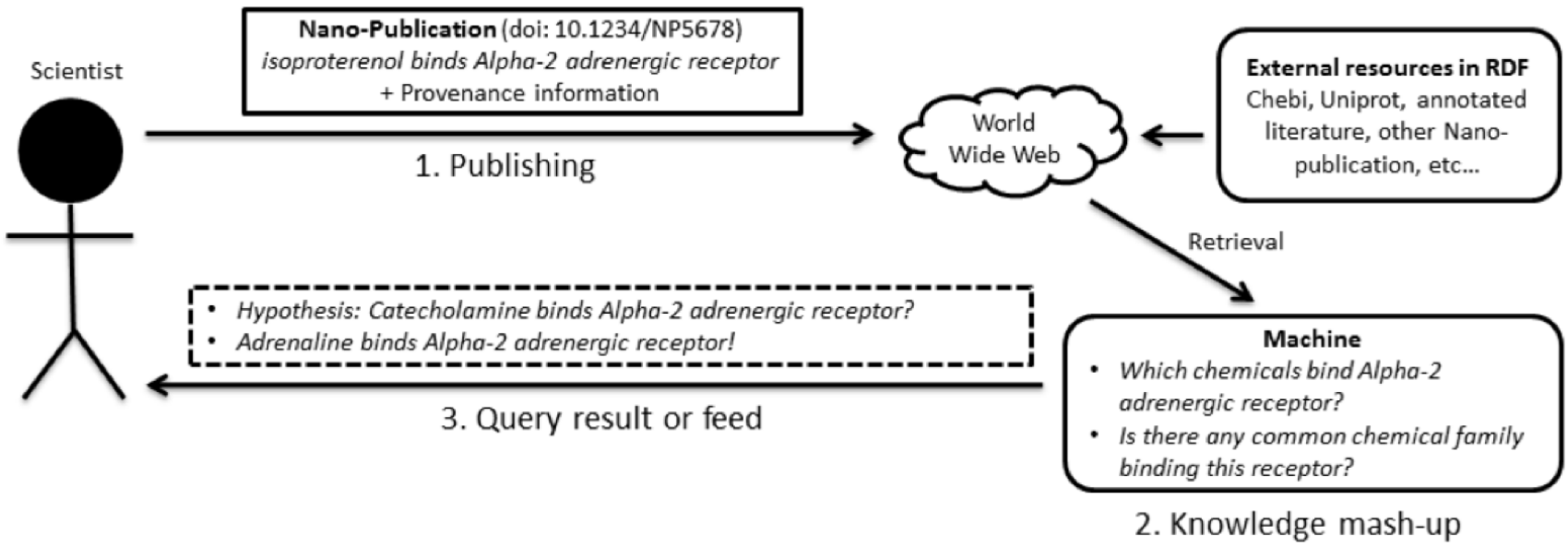
http://www.nanopub.org/

A Fix for the Nerds

```
@prefix swan: <http://swan.mindinformatics.org/ontologies/1.2/pav.owl>
@prefix cw:   <http://conceptwiki.org/index.php/Concept>.
@prefix swp:  <http://www.w3.org/2004/03/trix/swp-1/>.
@prefix : <http://www.example.org/thisDocument#> .

:G1  = { cw:malaria cw:isTransmittedBy cw:mosquitoes }

:G2  = { :G1 swan:importedBy cw:TextExtractor,
         :G1 swan:createdOn "2009-09-03"^^xsd:date,
         :G1 swan:authoredBy cw:BobSmith }

:G3  = { :G2 ann:assertedBy cw:SomeOrganization }


:G9  = { :G1 ann:isApprovedBy cw:JohnSmith }
:G10 = { :G9 ann:isAssertedBy cw:ApprovalTrackingSystem }
```

Groth et. al. **The Anatomy of a Nano-publication** *Information Services and Use* 30(1), p.51-56, 2010 http://iospress.metapress.com/index/FTKH21Q50T521WM2.pdf

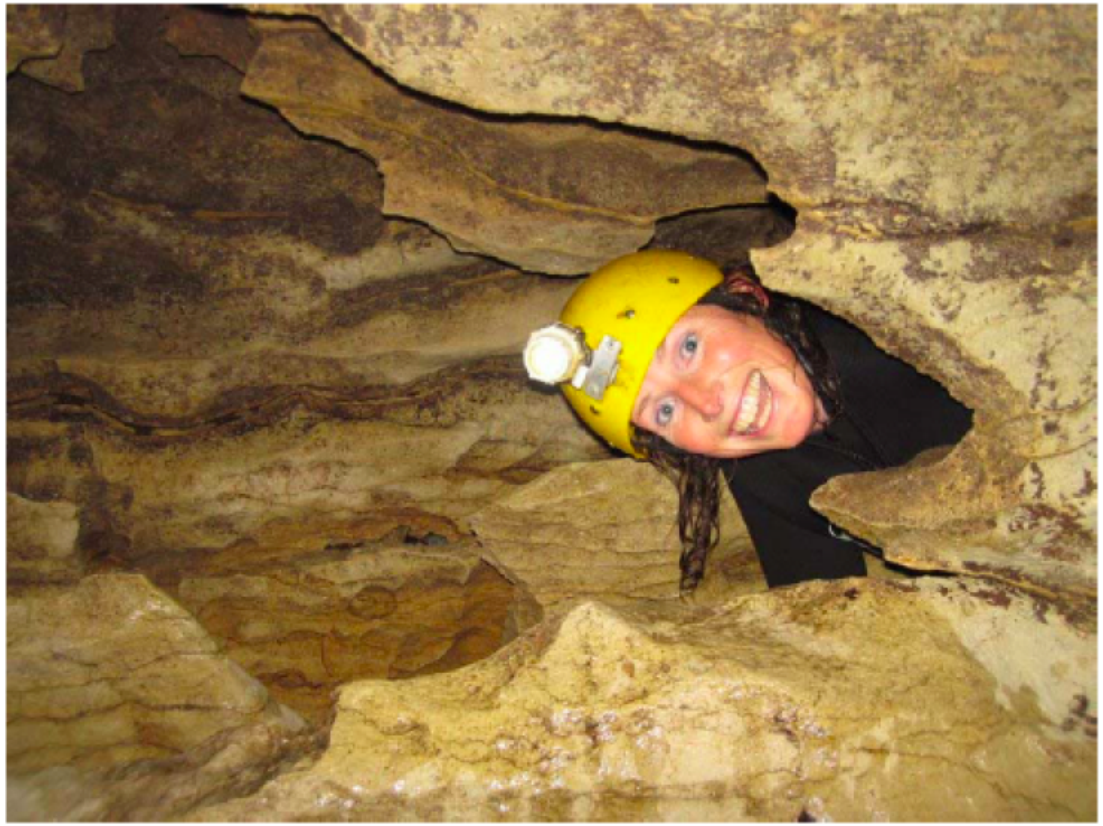
Publish, Merge, Search, Reason, Predict, Integrate



Clare et. al. **Exploring the Generation and Integration of Publishable Scientific Facts Using the Concept of Nano-publications** *ESWC 2011* https://svn.kwarc.info/repos/clange/conferences/eswc2011/sepublica/proceedings/999990013/999990013.pdf

Mons (2011) **Nanopublications** *OAI7 Workshop presentation* http://indico.cern.ch/contributionDisplay.py?sessionId=13&contribId=38&confId=103325

JOURNAL ARTICLE MINING



A research study into Practices, Policies, Plans.....and Promises.

Commissioned by the Publishing Research Consortium

Smit & van der Graaf (2011) **Journal Article Mining** http://www.publishingresearch.net/documents/PRCSmitJAMreport20June2011VersionofRecord.pdf

Certification

- Certification in the journal system is implemented via the peer-review process.

- Registration and Certification are coupled in the journal system.

it is NOT junk

a blog about genomes, DNA, evolution, open science, baseball and other important things

Peer review is f***ed up – let's fix it

By *Michael Eisen* | October 28, 2011

Peer review is ostensibly one of the central pillars of modern science. A paper is not taken seriously by other scientists unless it is published in a "peer reviewed" journal. Jobs, grants and tenure are parceled out, in no small part, on the basis of lists of "peer reviewed" papers. The public has been trained to accept as established truth any science that has gone through the gauntlet of "peer review". And any attempt to upend, reform or even tinker with it is regarded as an apostasy.

But the truth is that peer review as practiced in the 21st century biomedical research poisons science. It is conservative, cumbersome, capricious and intrusive. It slows down the communication of new ideas and discoveries, while failing to accomplish most of what it purports to do. And, worst of all, the mythical veneer of peer review has created the perception that a handful of journals stand as gatekeepers of success in science, ceding undue power to them, and thereby stifling innovation in scientific communication.

Subscribe

Michael Eisen

I'm an evolutionary biologist at UC Berkeley and an Investigator of the Howard Hughes Medical Institute. My research focuses on the evolution and population genomics of gene regulation in flies, and on the ways that microbes control animal behavior. I am a strong proponent of open science, and a co-founder of the Public Library of Science. And most importantly, I am a Red Sox fan.

http://www.michaeleisen.org/blog/?p=694

Learned Publishing (1999) 12, 79–91

The deconstructed journal – a new model for academic publishing

John W T Smith,
The Templeman Library,
University of Kent at Canterbury.

Introduction

The proposed publishing model described in the latter half of this article has been developing in my mind for over five years. The beginnings of this model can be traced back to an idea for network-based scholarly publishing which I described at a meeting held at the Royal Society in 1993[1]. I also described variations of this early model to other meetings in the UK[2] and India[3].This article itself is an extended and updated version of a short paper given at the ICCC/IFIP Conference on Electronic Publishing in 1997, Smith

John Smith (1993) The deconstructed journal. http://eprints.rclis.org/bitstream/10760/5841/1/DJpaper.pdf

theory | o1. main conclusions

- decouple registration and certification:
  - create free information layer of non-certified information
  - promote - commercial - overlay services, amongst others addressing certification
- free layer via institutional involvement through libraries; libraries can add value to the digital information chain by
  - repositioning in the information chain,
  - becoming archivers of non-certified information authored by institutional authors

Van de Sompel (1999) The Universal Preprint Service Initiative.

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September 2004

Volume 10 Number 9

ISSN 1082-9873

Rethinking Scholarly Communication

Building the System that Scholars Deserve

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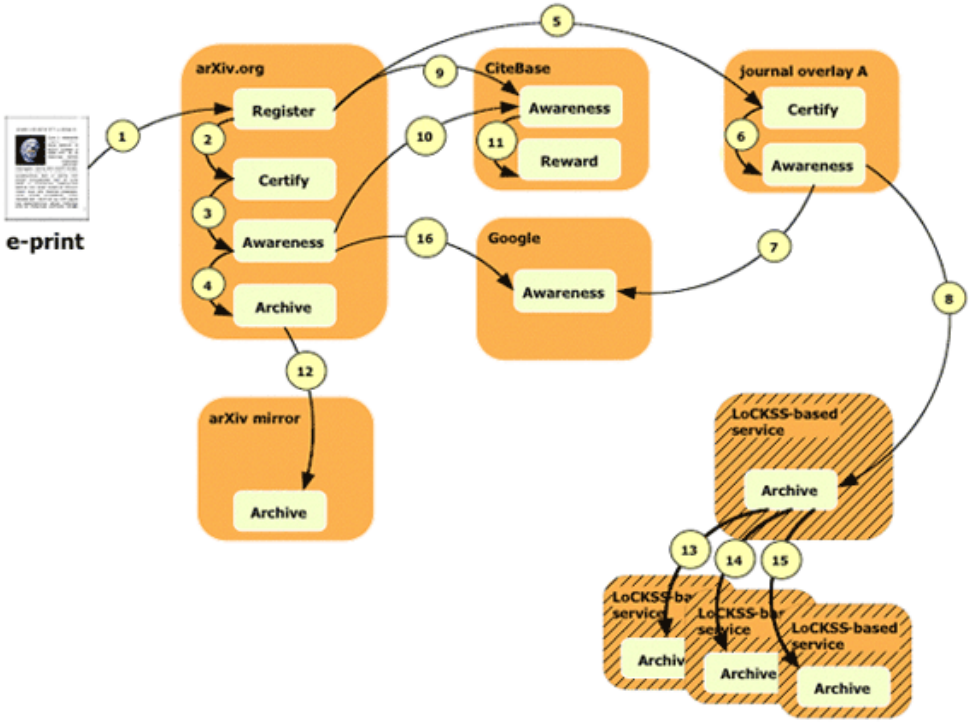
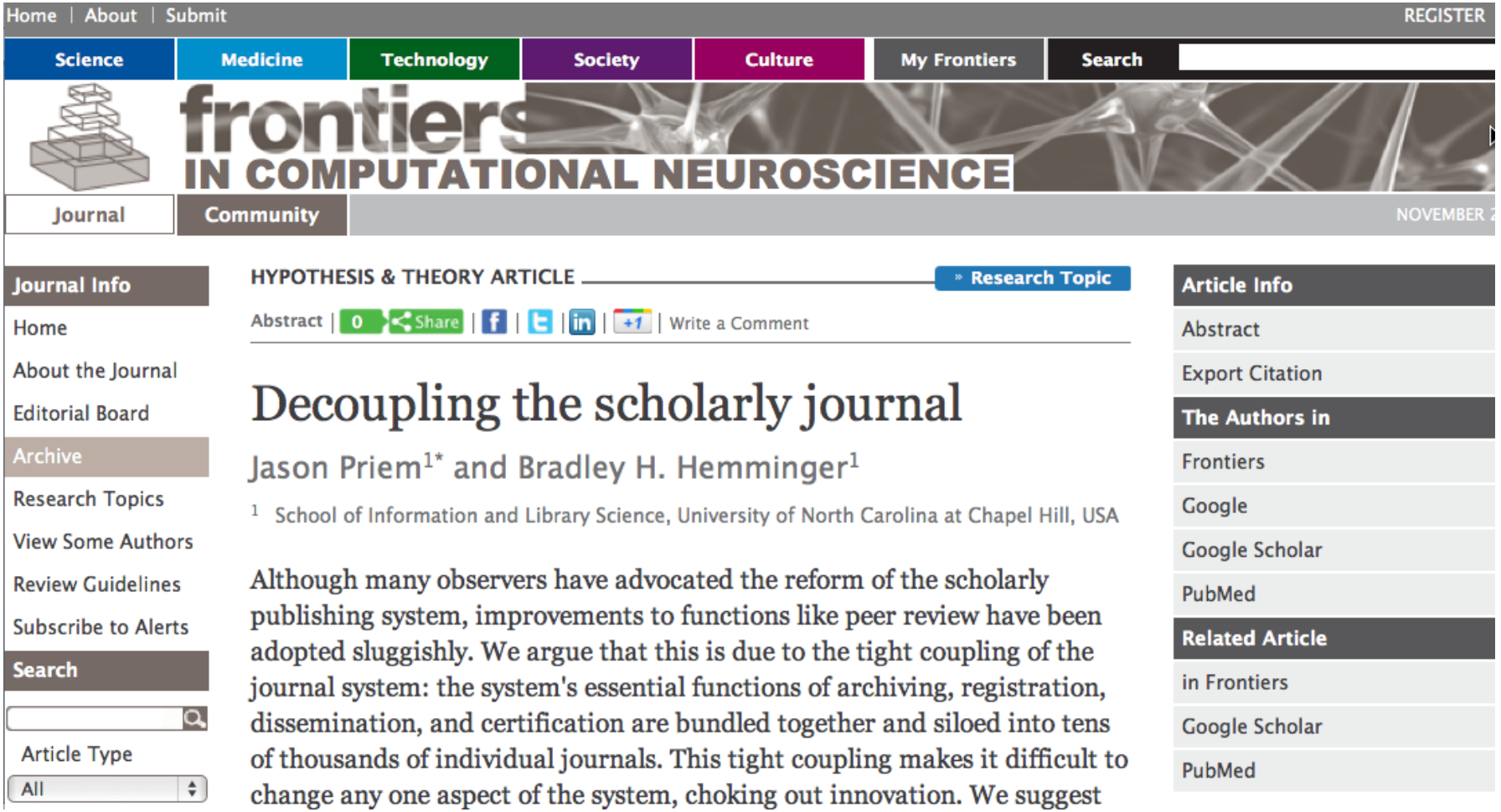
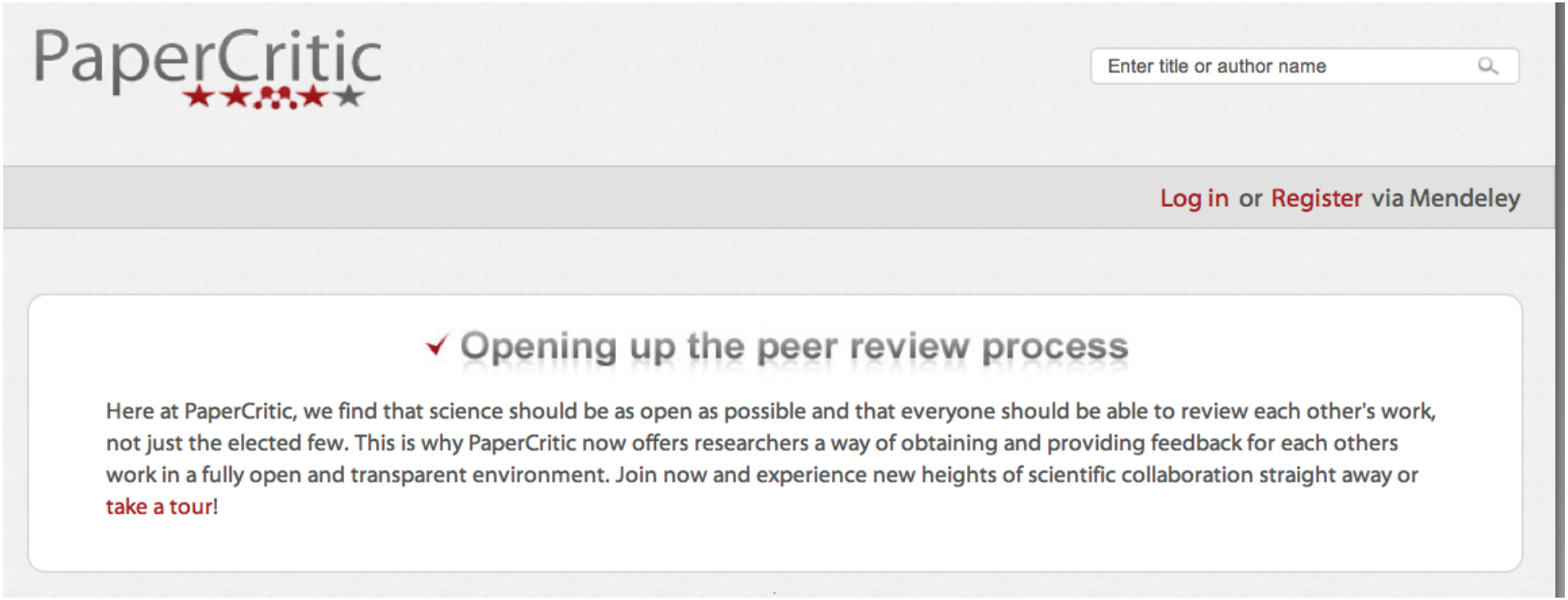


Van de Sompel et al. (2004) Rethinking scholarly communication http://dx.doi.org/10.1045/september2004-vandesompel



Jason Priem & Bradley Hemminger (2011) Decoupling the scholarly journal http://www.frontiersin.org/computational_neuroscience/abstract/14455



http://papercritic.com

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- What is it?
- Press
- 12 Principles
- FAQ
- Advisors

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- Press
- 12 Principles
- FAQ
- Advisors

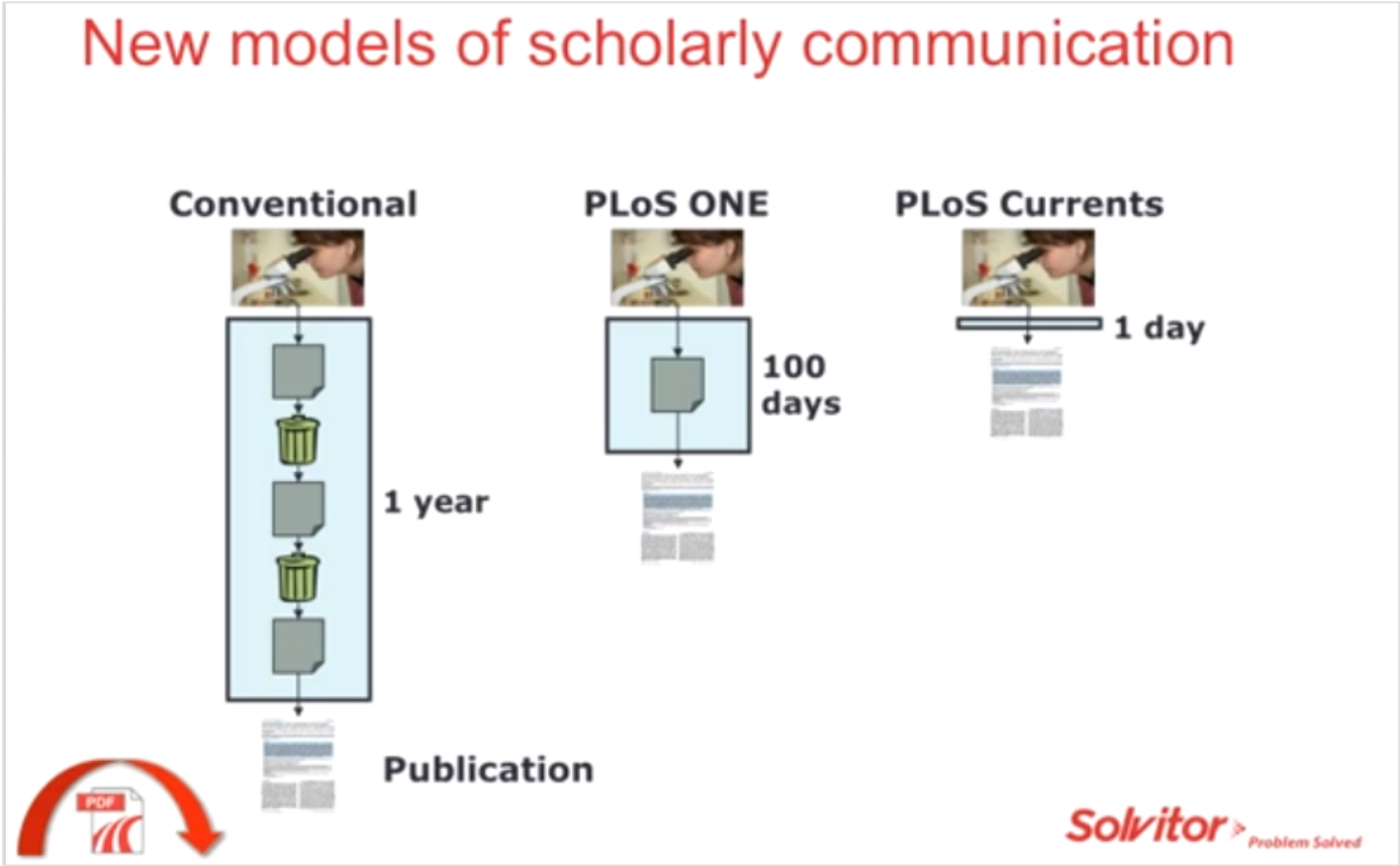
http://hypothes.is/

Awareness

Open Access

http://de.wikipedia.org/wiki/Datei:Open_Access_logo_PLoS.svg

Speed



Excerpt from http://youtu.be/isVrAKcx5TM

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About

Introduction and Background

Despite significant advances in most forms of publishing, from blogs to news sites and other user-generated web content, the process of authoring scholarly articles remains an expensive, time-consuming process that can require significant up-front investment and technical expertise. While a number of electronic publishing and workflow management systems exist, those intended for the scientific publishing (SP) community provide at best only rudimentary authoring tools – and in many cases simply provide a repository for document files created in other formats. It is as if the entire revolution in online, web-based content authoring tools has passed by the SP community. And despite the development of advanced document formats such as the National Library of Medicine's (NLM) journal article publishing tag set, virtually no current system allows scientific authors to easily create structured XML documents using simple web-based tools.

http://annotum.org/

annotum

Home | About | Support | Contact | Credits

- Simple editorial workflow for authoring and reviewer/editor approval
- Features specific to scholarly publishing:
  - Equations, figures, tables
  - References including citation search features
  - Auto-generation and registration of CrossRef DOIs

http://annotum.org/

- Awareness significantly enhanced via Open Access, improved communication speed, novel discovery tools, etc.

- But:
  - Metadata still not generally open (the biggest failure of the Open Access movement?);
  - Exact right regime that applies to Open Access publications remains unclear in many cases (e.g. SOAP project results – Salvatore Mele).

Archiving

- Built substantial infrastructure to preserve journal system assets.

- But the scholarly record now extends far beyond the journal system …

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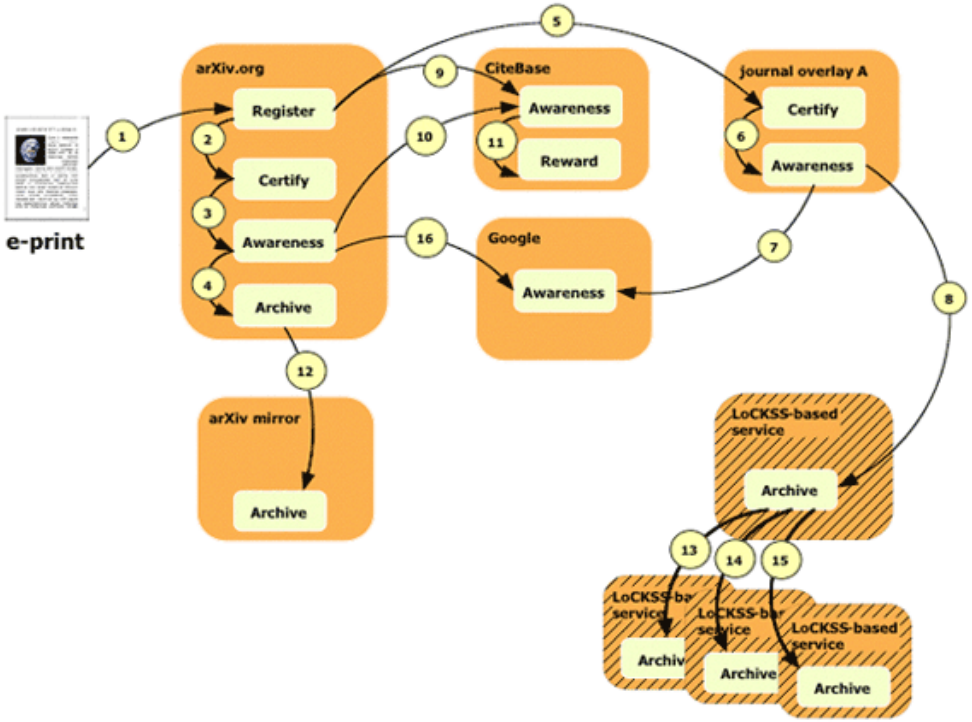

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Frey, J., De Roure, D. and Carr, L. 2002. *Publication at Source: Scientific Communication from a Publication Web to a Data Grid*. <http://eprints.ecs.soton.ac.uk/archive/00007852/>.

Henry, G. 2003. On-line publishing in the 21-st Century: Challenges and Opportunities. *D-Lib Magazine*, Volume 9, Issue 10. <doi:10.1045/october2003-henry>.

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Pöschl, U. 2004. Interactive Journal Concept for Improved Scientific Publishing and Quality Assurance. *Learned Information*, Volume 17, Number 2, pp 105-113. <doi:10.1087/095315104322958481>.

Reich, V. and Rosenthal, D. 2001. LOCKSS: A Permanent Web Publishing and Access System. *D-Lib Magazine*, Volume 7, Issue 6. <doi:10.1045/june2001-reich>.

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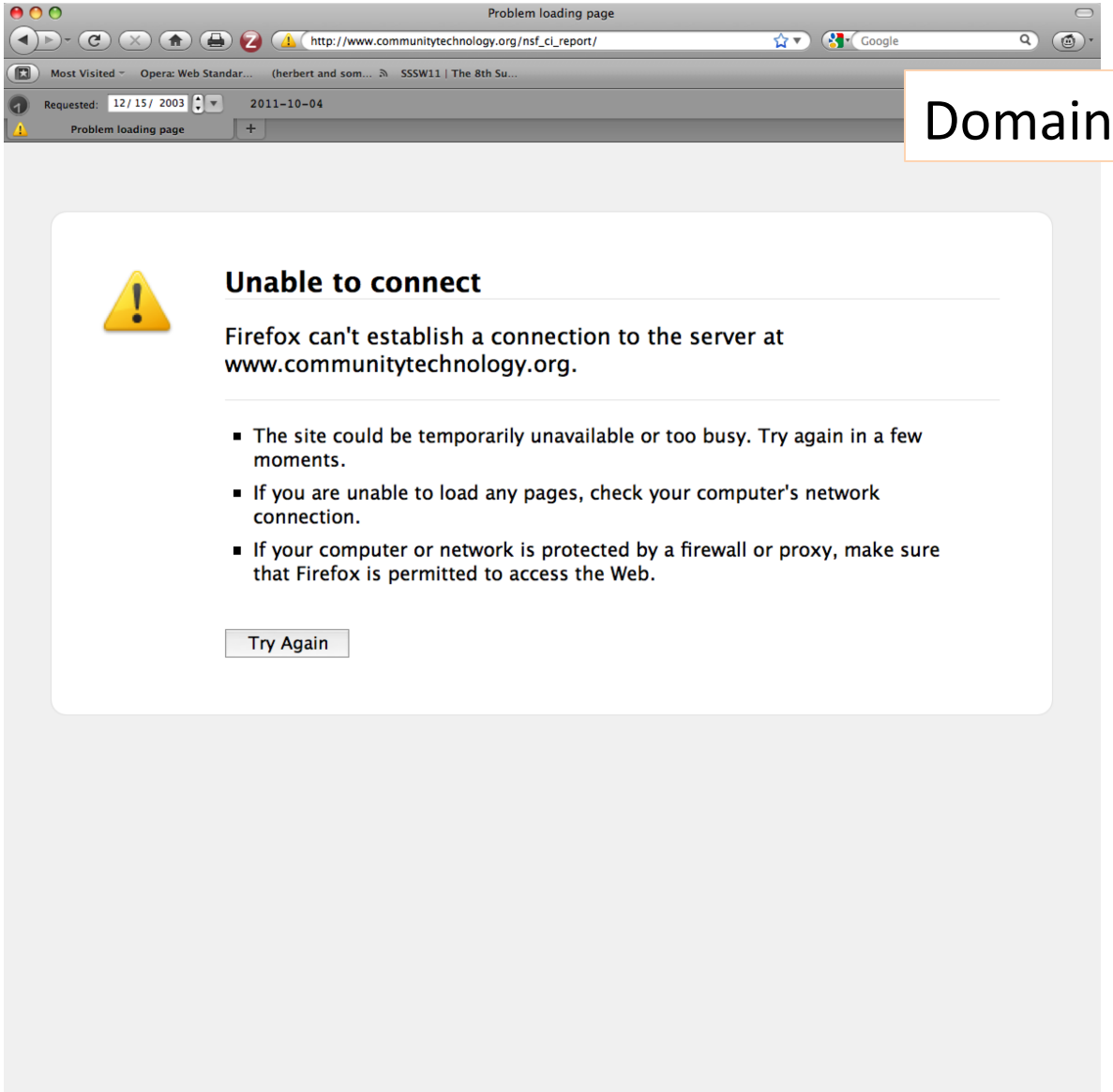
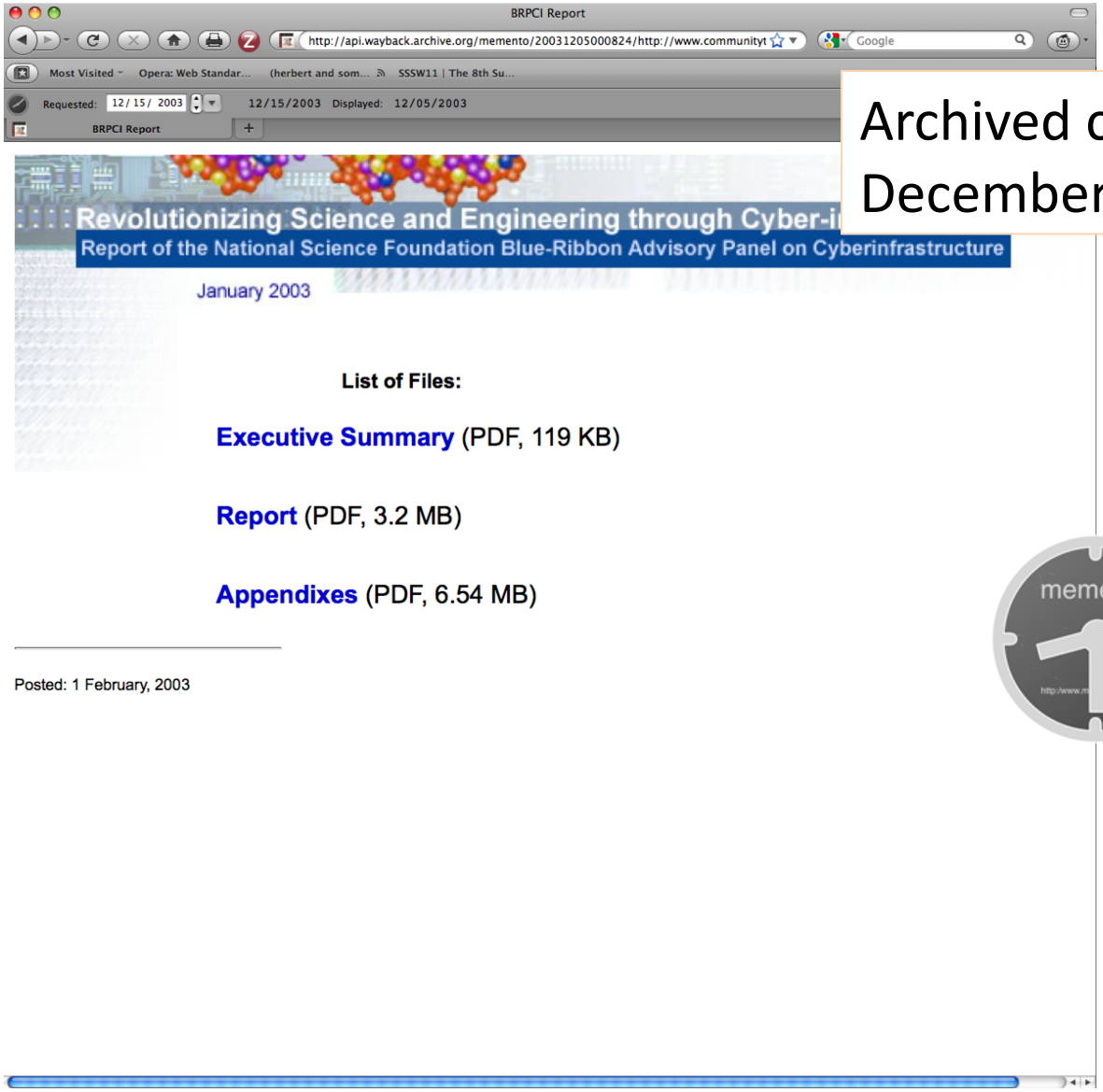

Problem loading page
http://www.communitytechnology.org/nsf_ci_report/
Google
Most Visited
Opera: Web Standar...
(herbert and som...
SSSW11 | The 8th Su...
Requested:
12/15/2003
2011-10-04
Problem loading page
Unable to connect
Firefox can't establish a connection to the server at www.communitytechnology.org.
The site could be temporarily unavailable or too busy. Try again in a few moments.
If you are unable to load any pages, check your computer's network connection.
If your computer or network is protected by a firewall or proxy, make sure that Firefox is permitted to access the Web.
Try Again

Domain Gone



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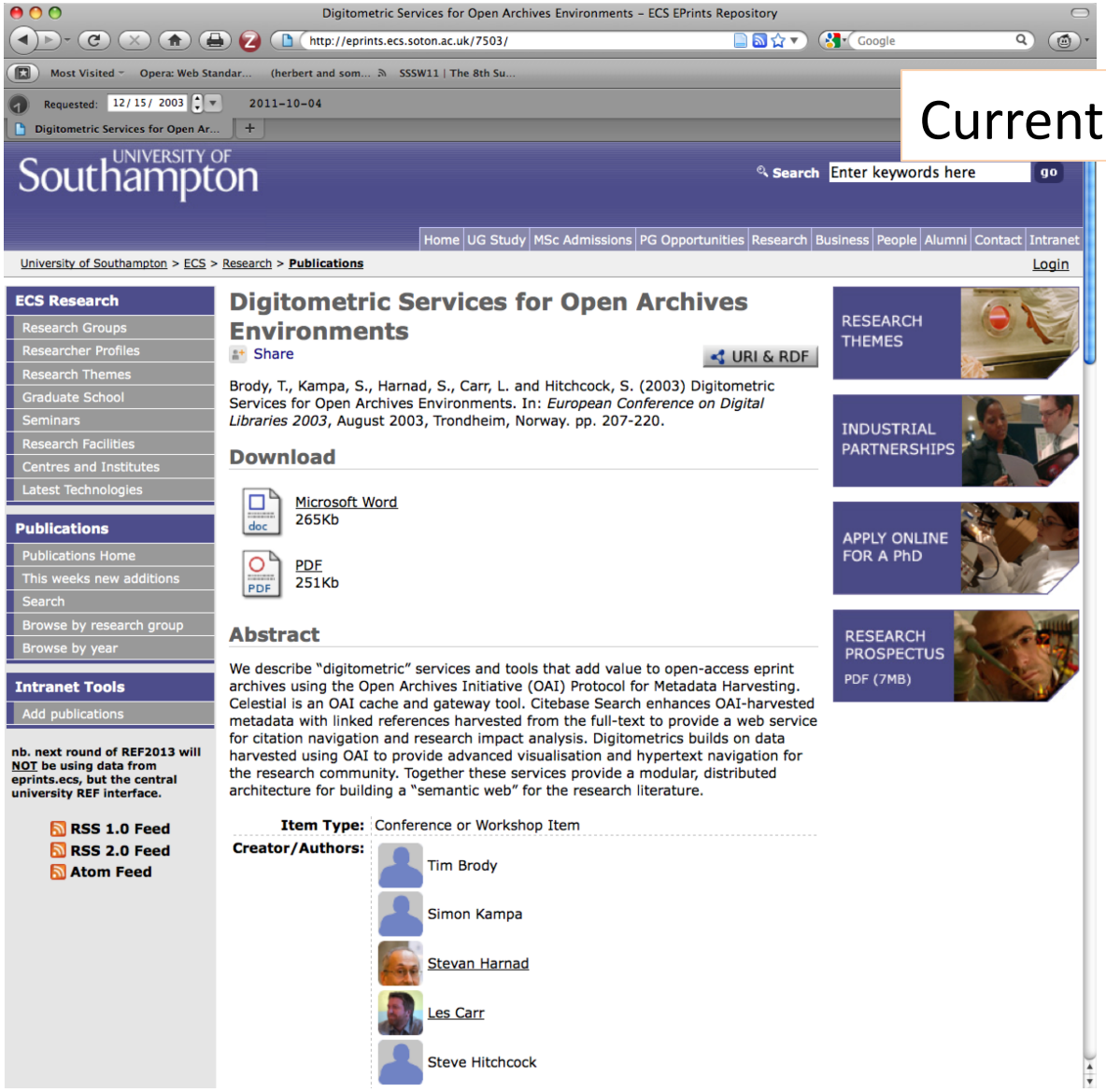

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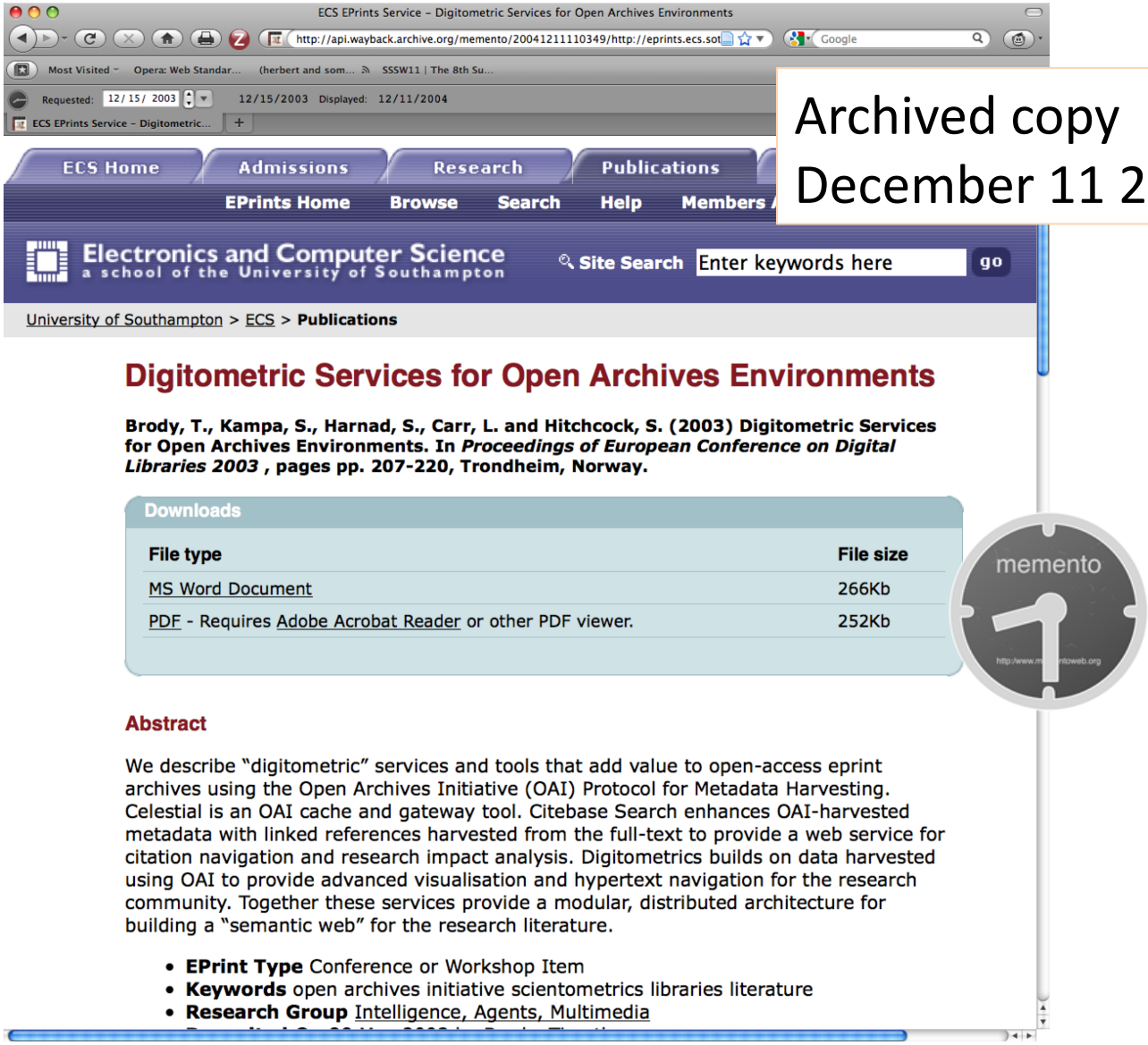

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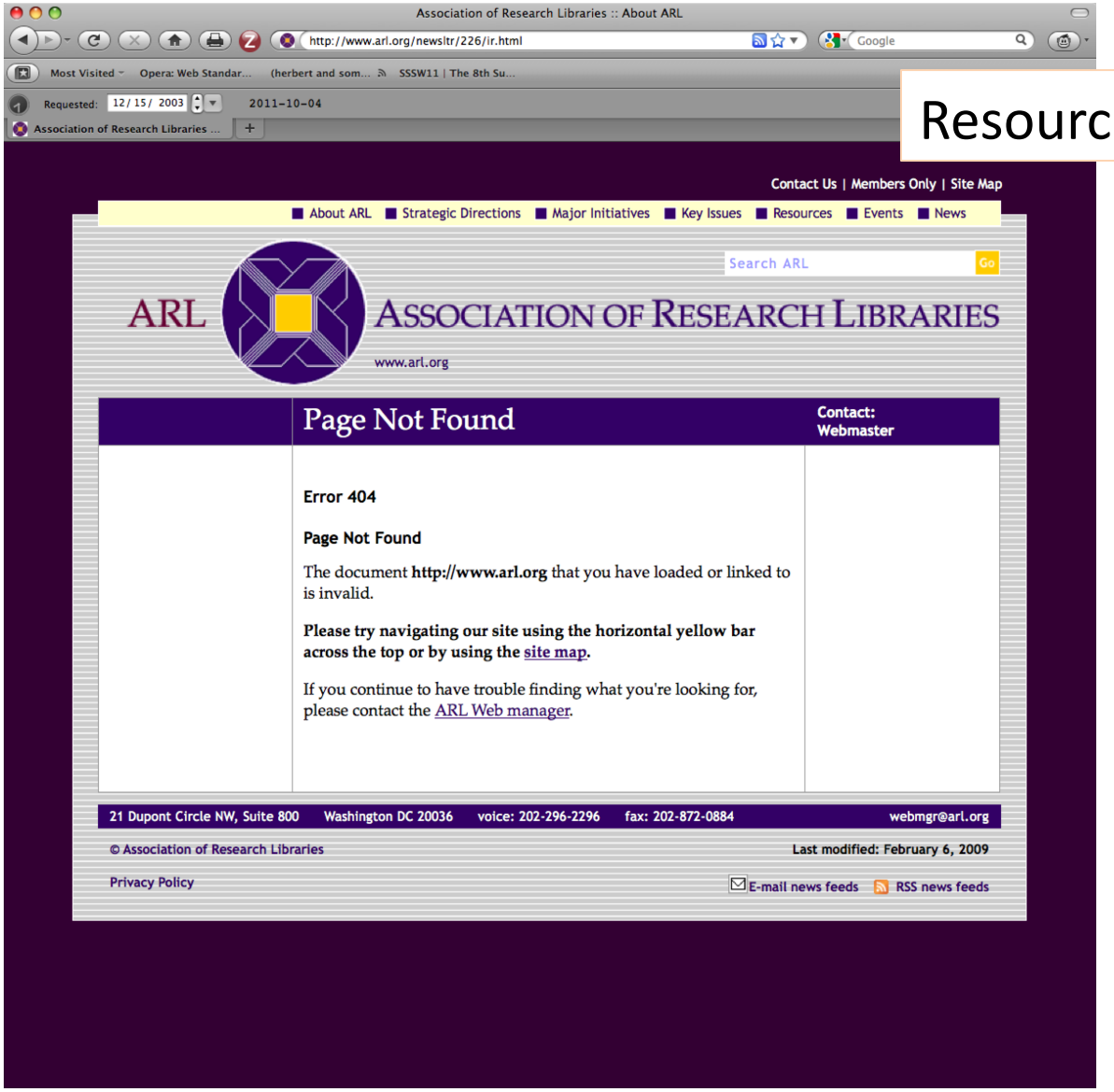

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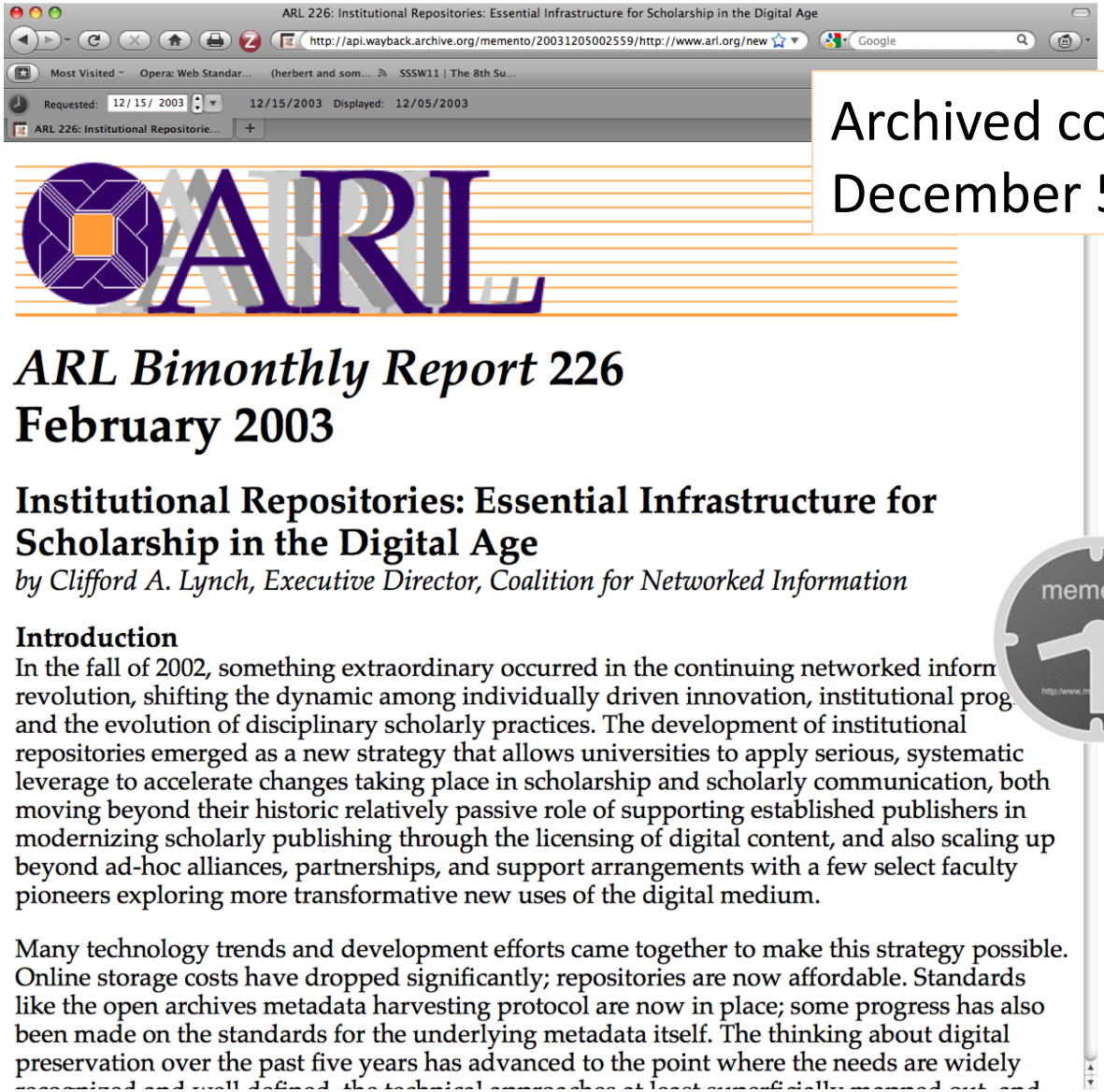

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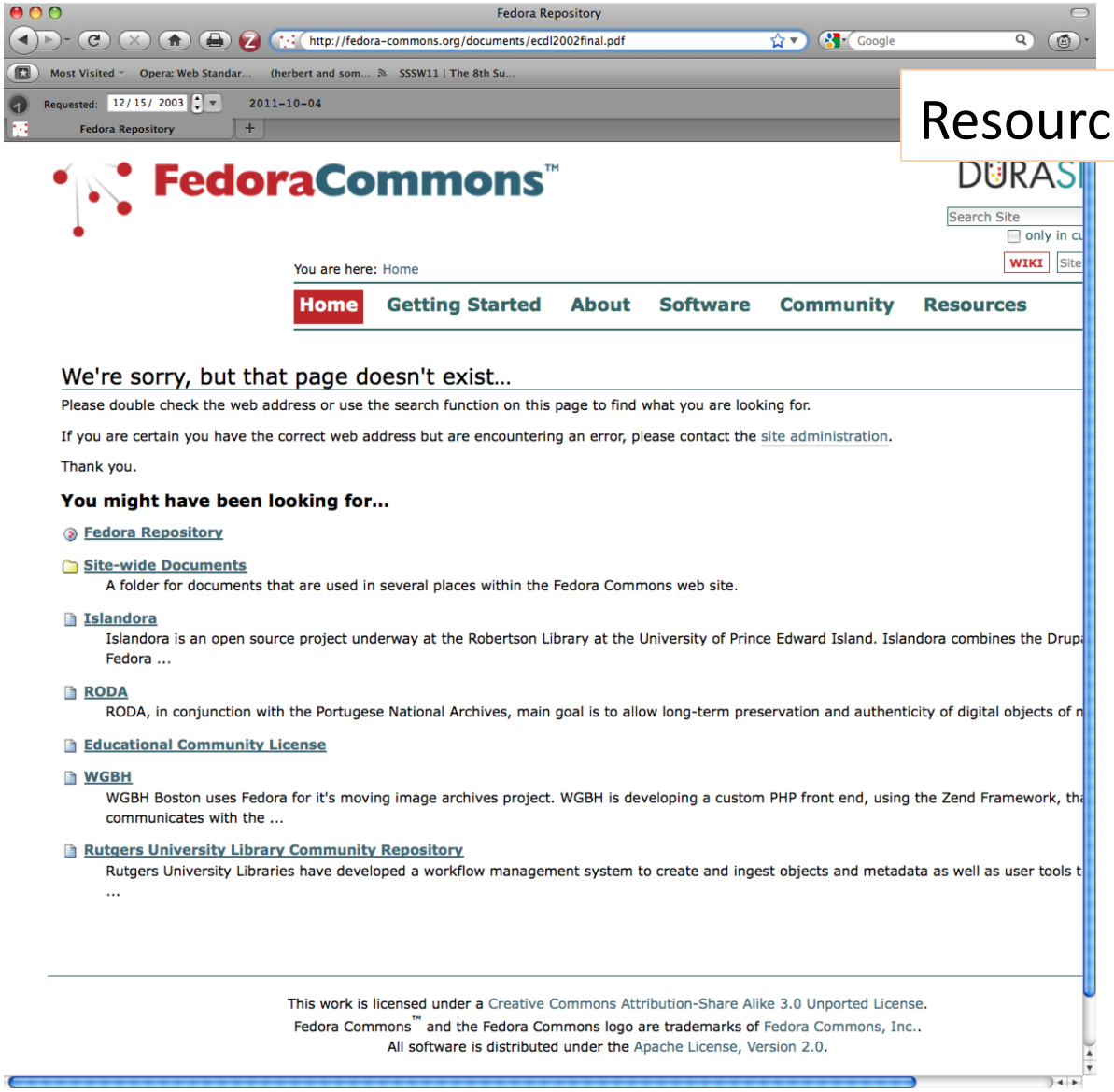

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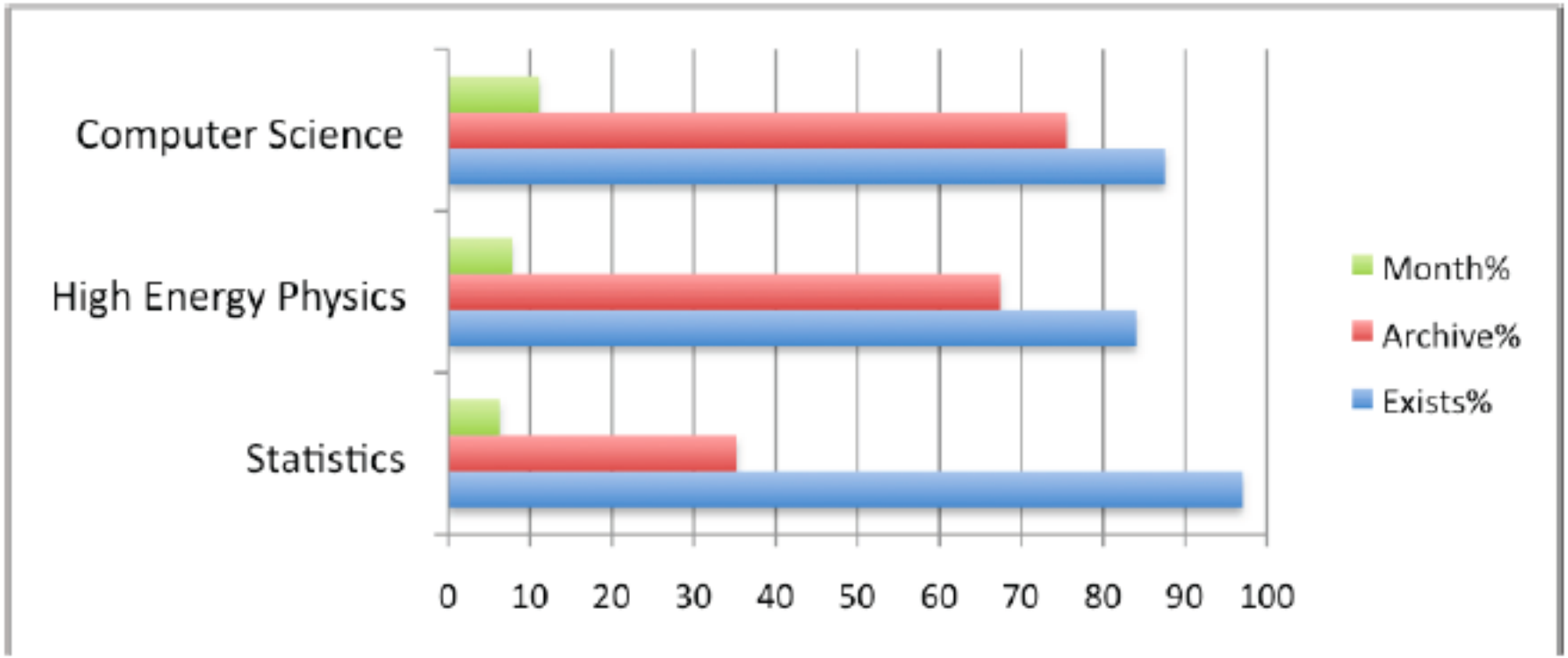

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- Built substantial infrastructure to preserve journal system assets.

- But infrastructure to adequately archive Web-native scholarly assets is lacking.

Rewarding

Expanding Scholarly Record

- Papers
- Datasets
- Nanopublications
- Workflows
- Software
- …

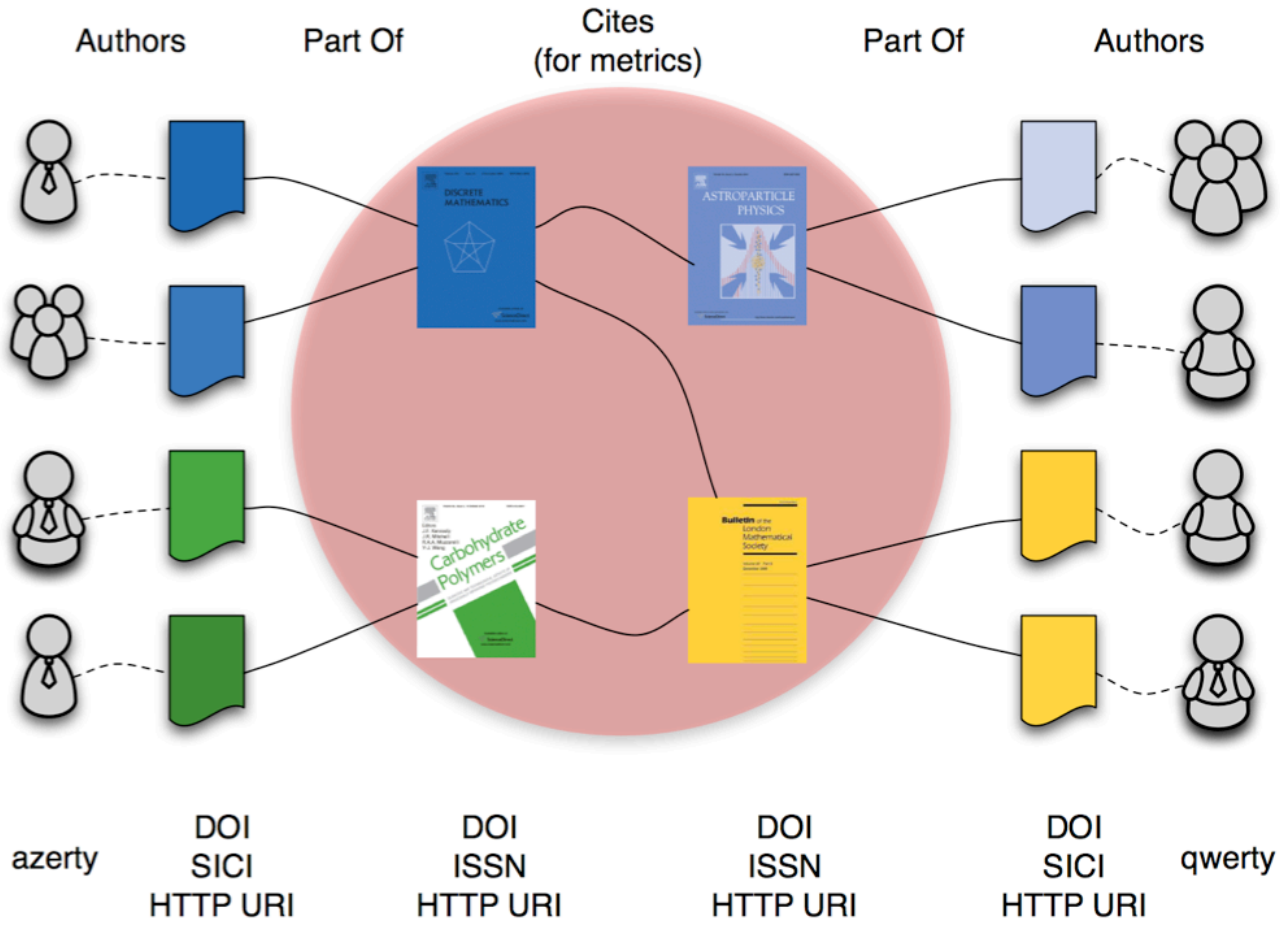
- More assets to get credit for

Expanding Impact Metrics

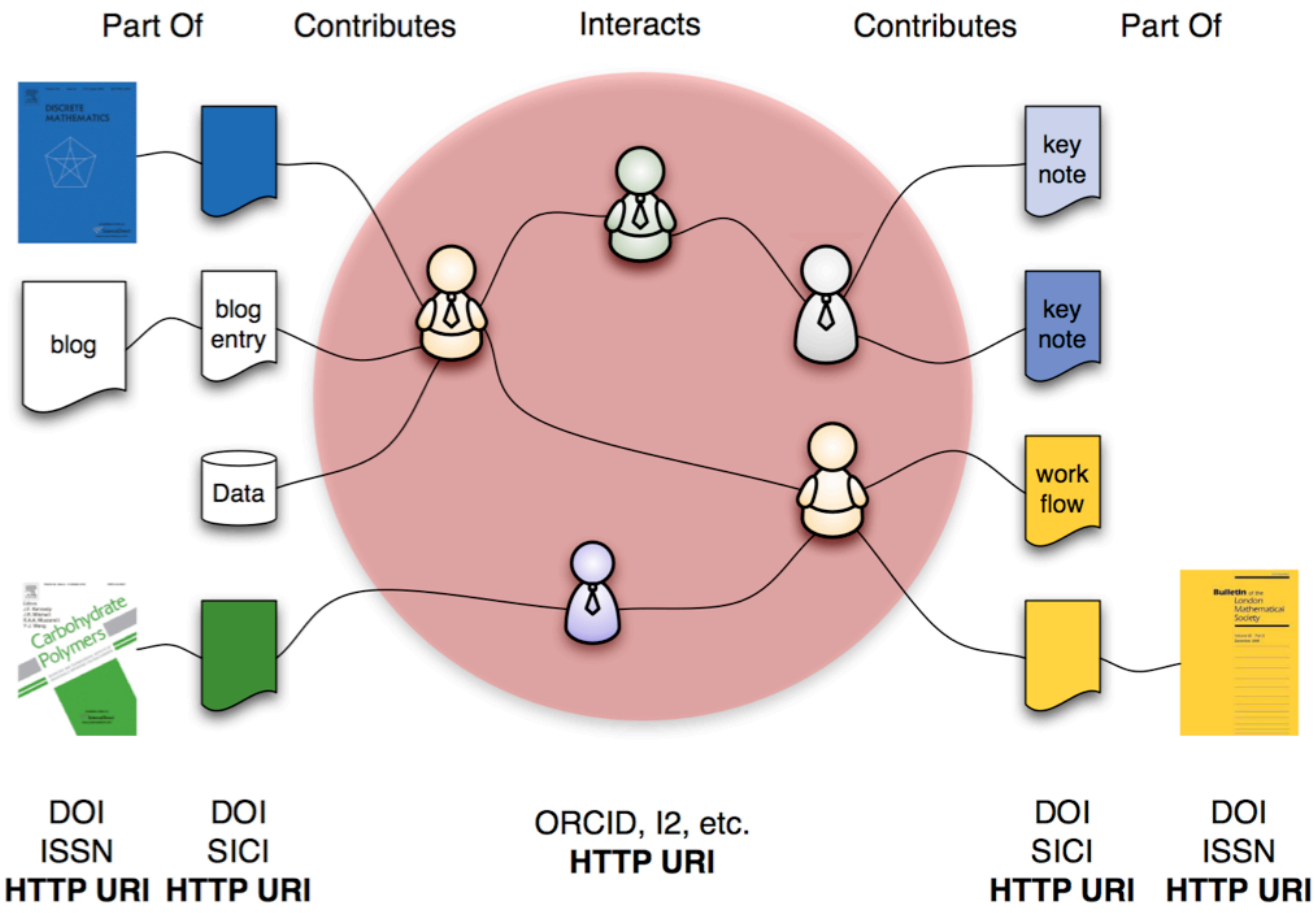
- Other ways to get credit

http://altmetrics.org/manifesto/

Move from Journal centric …



… to Contributor centric



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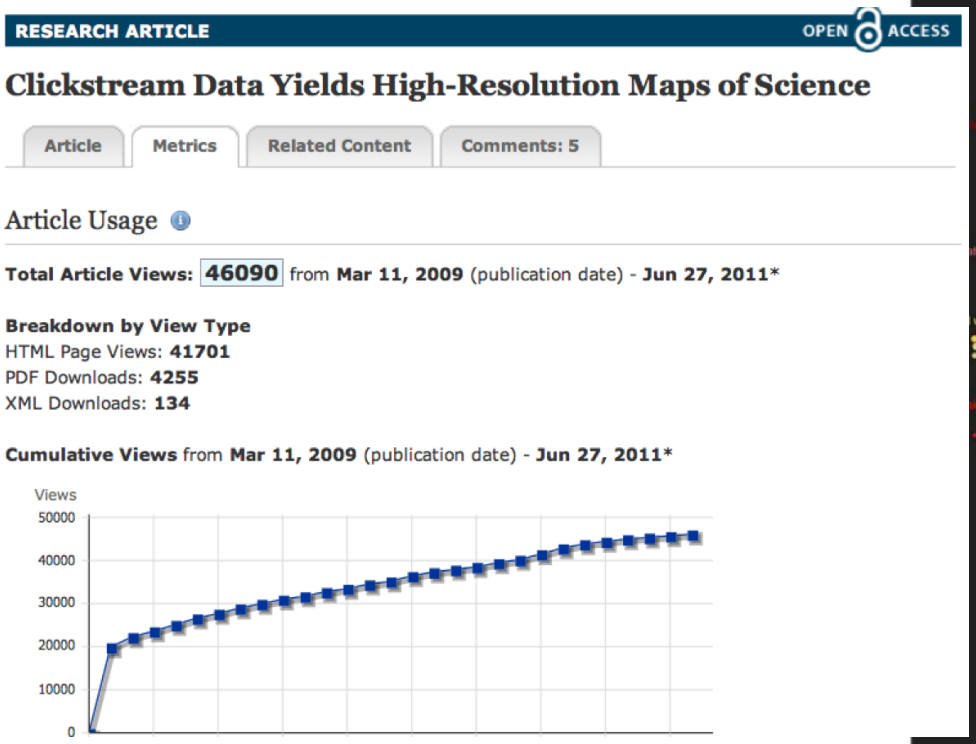

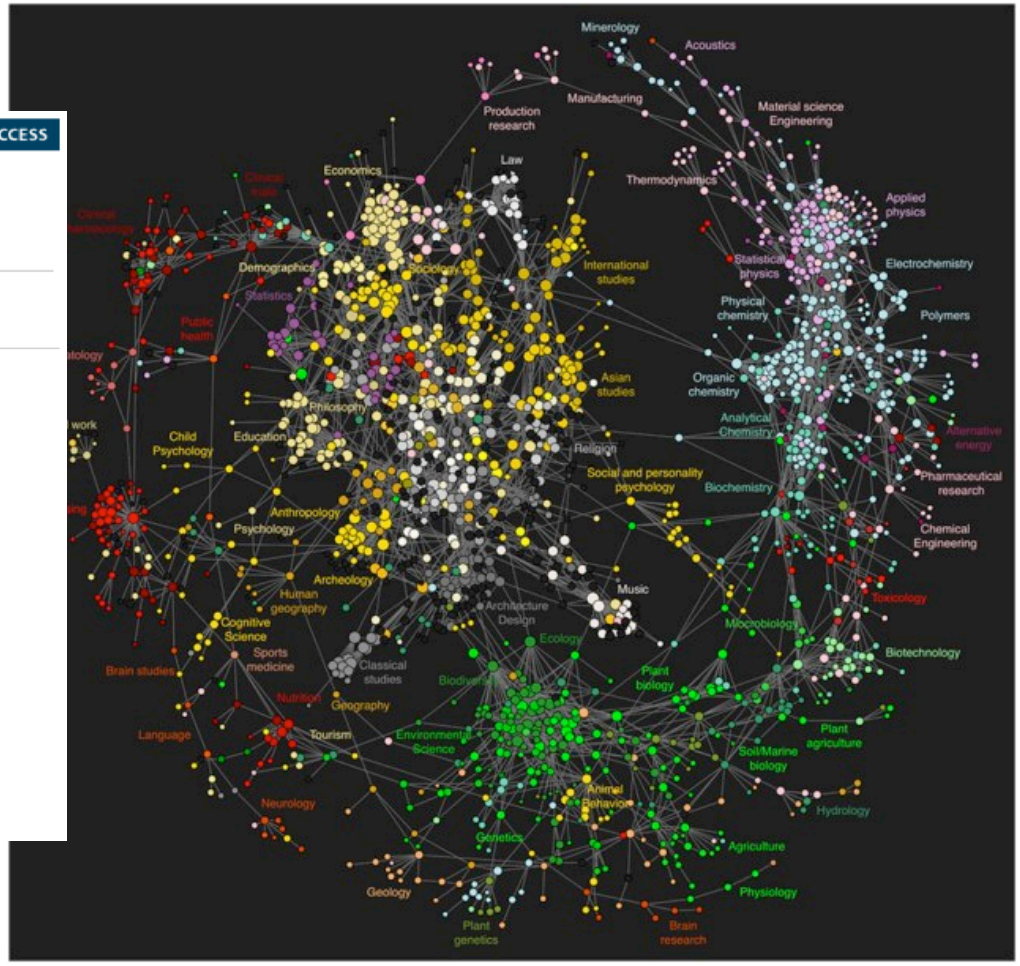

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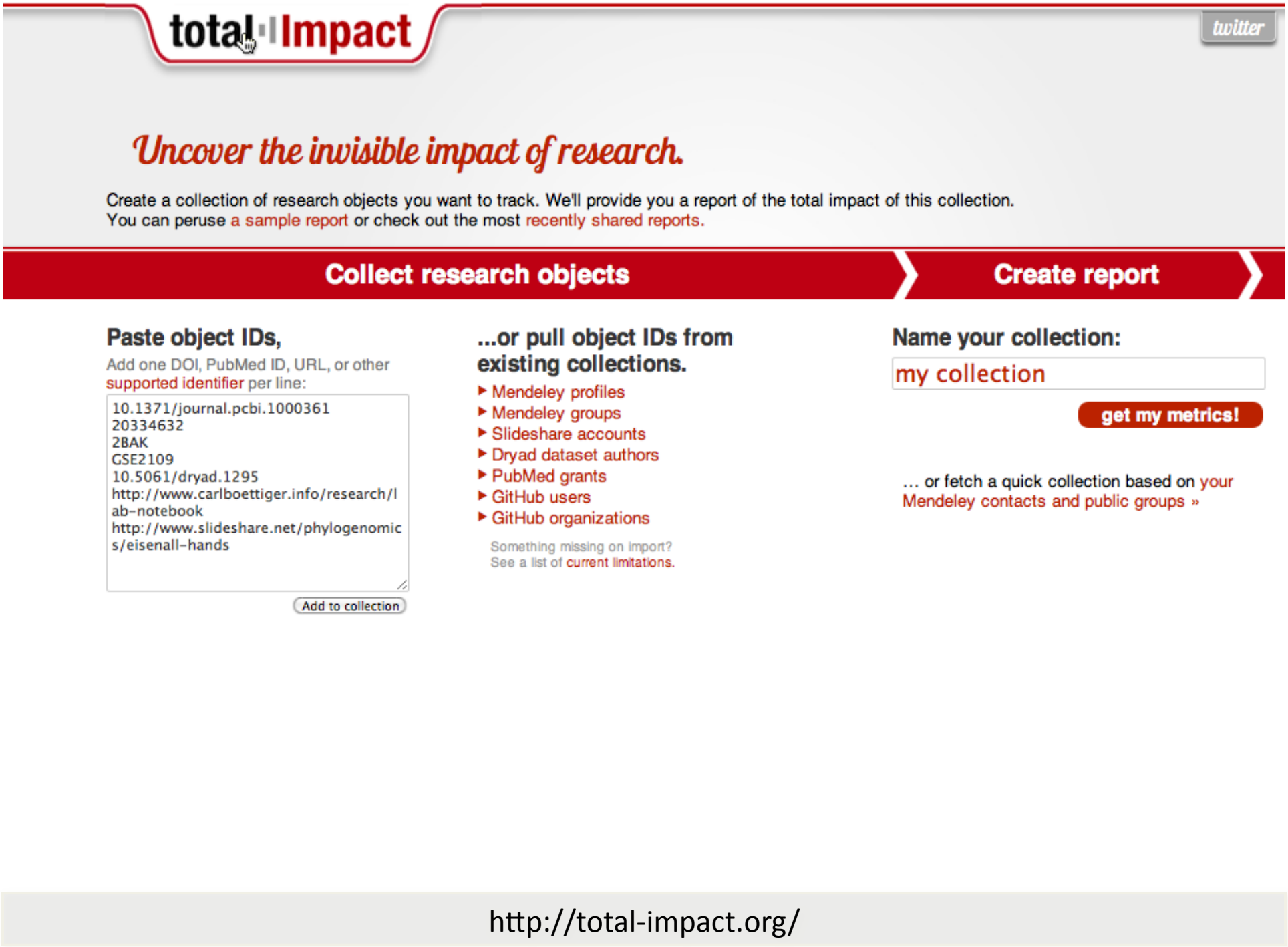

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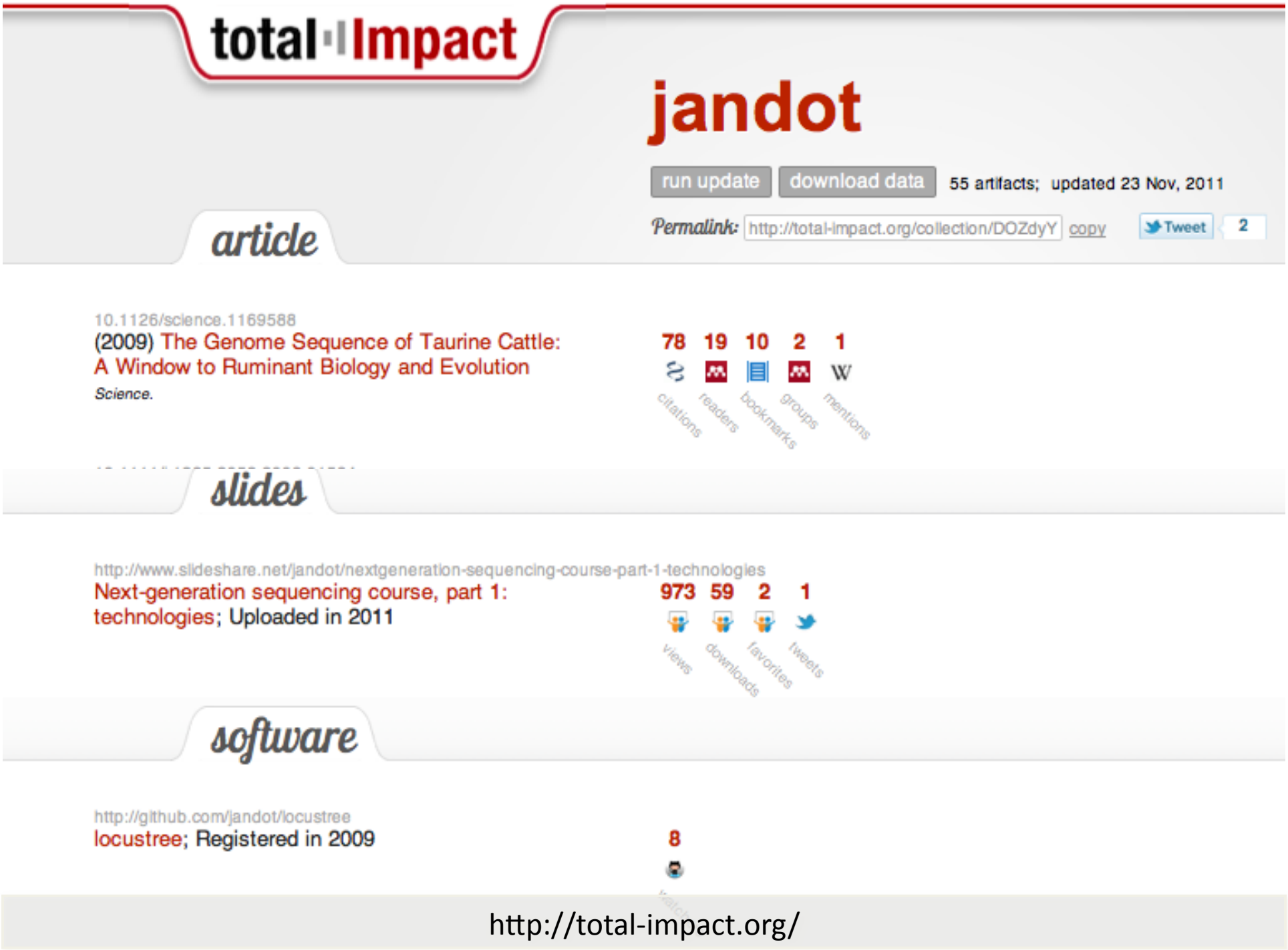

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Awareness
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Exciting evolution and challenges beyond the journal system

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Cow tipping

From Wikipedia, the free encyclopedia

Cow tipping or **cow pushing** is the purported activity of sneaking up on a sleeping, upright cow and pushing it over for fun. As cattle do not sleep standing up, cow tipping is a myth.[1]

A cow lying on its side

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