

Linked Data: Publishing and Consuming on the Semantic Web

Tsinghua-Southampton Web Science Laboratory at Shenzhen

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Ian Millard

19th August 2009

<http://eprints.ecs.soton.ac.uk/17788/>





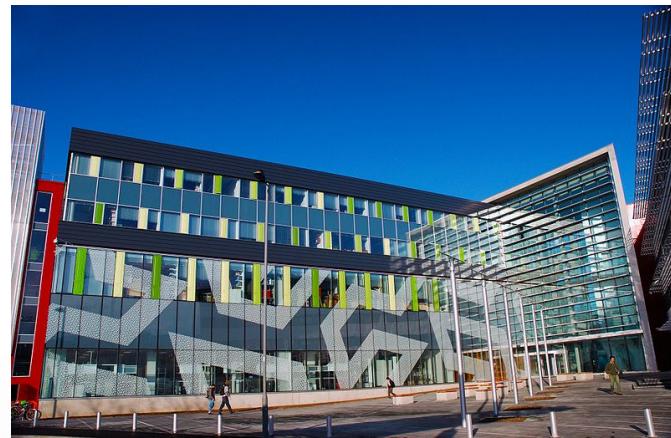
University of Southampton

- Since 1862 (Hartley Institution)
- Multi-discipline University
 - Arts, Science, Law, Medicine, Engineering, ...
- 25,000 Students
- 5,000 Staff
- “Russell Group”



ECS

- 100+ Faculty
- 1000+ Students (300 Graduate)
- Highly-rated
 - Teaching and Research



Research Groups

- Communication
- Dependable Systems & Software Engineering
- Electrical Power Engineering
- Electronic Systems & Devices
- Information: Signals, Images, Systems
- Intelligence, Agents, Multimedia
- Learning Societies Lab
- Nano
- Optoelectronics Research Centre
- Pervasive Systems Centre
- Science & Engineering of Natural Systems

Semantic Web

- w3.org FAQ:
 - The **Semantic Web** provides a common framework that allows **data** to be shared and reused across application, enterprise, and community boundaries.
- Exposing data for agents to use
 - Including databases
- Interoperable
 - Naming schemes
 - Vocabularies
 - Protocols

RDF (Resource Description Framework)

“Hugh Glaser works for the University of Southampton”

person-00021

name

“Hugh Glaser”

person-00021

works-for

Southampton_University

Southampton_University

label

“The University of Southampton”

RDF (Resource Description Framework)

“Hugh Glaser works for the University of Southampton”

```
<http://southampton.rkbexplorer.com/id/person-00021>
  <http://xmlns.com/foaf/0.1/name>
    "Hugh Glaser" .

<http://southampton.rkbexplorer.com/id/person-00021>
  <http://aktors.org/ontology/portal#works-for>
    <http://dbpedia.org/resource/Southampton_University> .

<http://dbpedia.org/resource/Southampton_University>
  <http://www.w3.org/2000/01/rdf-schema#label>
    "The University of Southampton" .
```

RDF (Resource Description Framework)

- RDF Triples constitute a graph
 - <subject-uri> <predicate-uri> <object-uri>
 - <subject-uri> <predicate-uri> “String”
- *ontologies* define vocabularies, types and relationships
- Agreed URIs facilitate linkage between datasets

Linked Data

- Tim Berners-Lee

Tim Berners-Lee speaks on Linked Data

This slide set was presented at the TED 2009 conference, "The Great Unveiling" in Long Beach, CA. USA, 4, Feb 2009.

- <http://www.w3.org/2009/Talks/0204-ted-tbl/>
- “the Semantic Web done right, and the Web done right”



Linked (Open) Data

- The “practical side” of the Semantic Web
- Move from a Web of Text to a Web of Data, where the meaning is specified using metadata (**RDF**)
- Machine to machine communication
 - “Silent revolution” (Tom Ilube @ G20 IdeasLab)
- Facilitates fusion of data sources
 - Maintaining distribution of the data at the providers and others
- Can provide powerful knowledge processing



The Calais initiative is about enabling semantic applications by providing a metadata generation web service, sample applications using that service to jumpstart development efforts, and support for developers.

Guardian opens APIs and 'Data Store'

The Guardian launched its Open Platform with APIs for all of its content and a sets of data collected by its editors.

BBC: <http://www.bbc.co.uk/music/artists/d4d17620-fd97-4574-92a8-a2cb7e72ce42.rdf>

web scale

- REST (ROA, WOA)
 - Web page = Web Service
 - XHTML+RDFa markup for people and machines
 - resource as public record
 - global visibility and persistence of URI's
- Atom as RESTful API
 - introspection service for feed resource *discovery*
 - HTTP *uniform interface*
 - CRUD analog - PUT/GET/POST/DELETE
 - <entry> as recordset </entry> resource state event
 - atom+xml and xhtml+xml *representations*
 - Caching, Crawling and Indexing
- Web = DB
 - Linked Open Data SPARQL endpoints, XHTML+RDFa

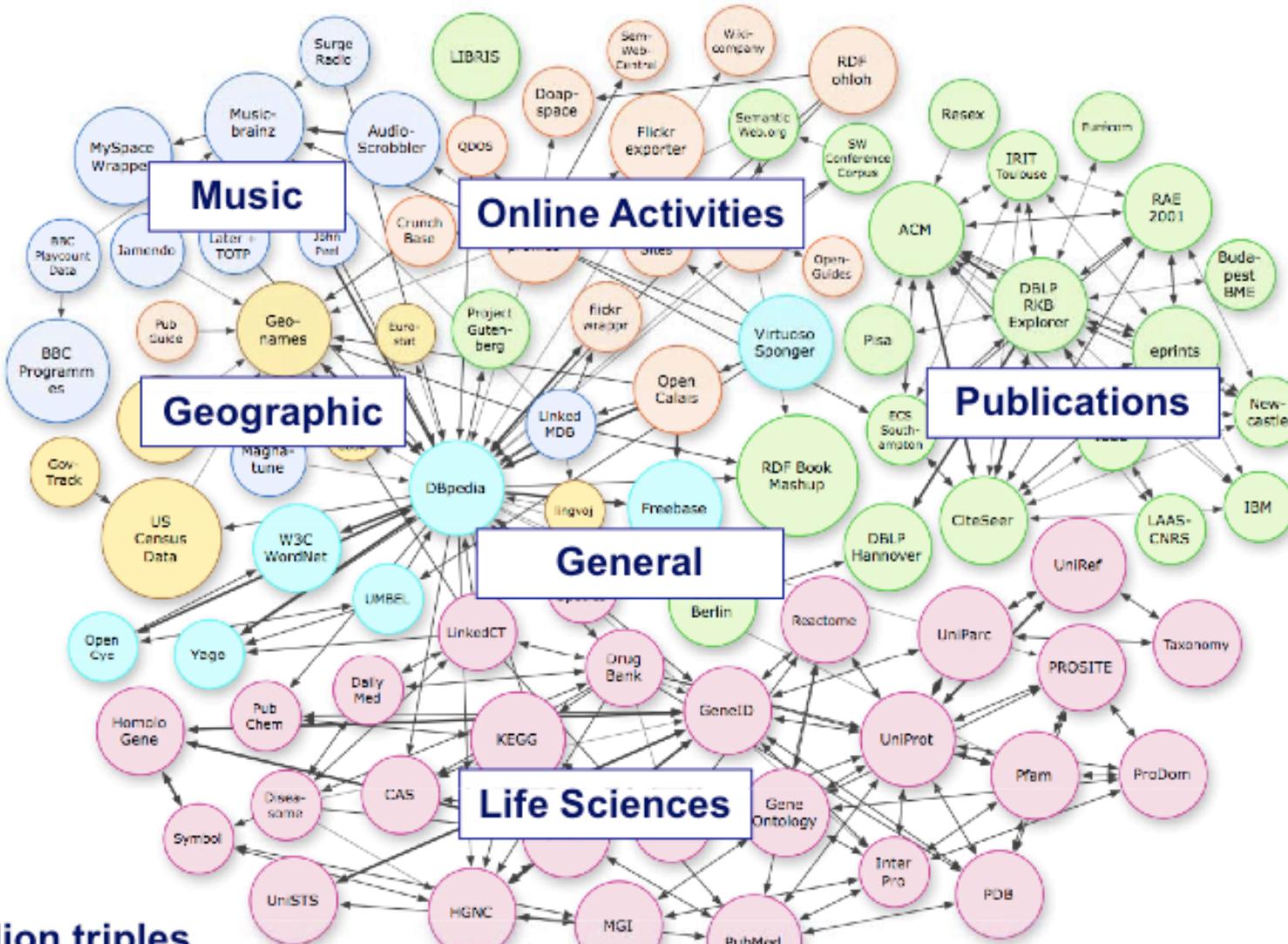
Bi2RDF.org

Semantic web atlas of postgenomic knowledge

UniProt protein, uniprot:P26838 uniprot:P26838 Submit

George Thomas
U.S. government's recovery.gov

LOD Datasets on the Web: March 2009



4.5 billion triples

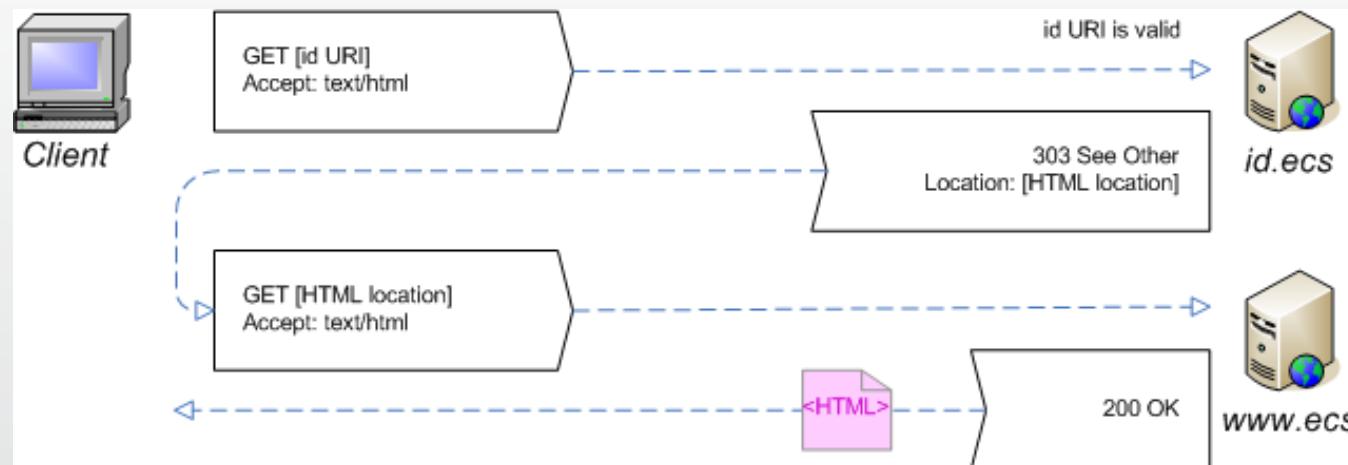
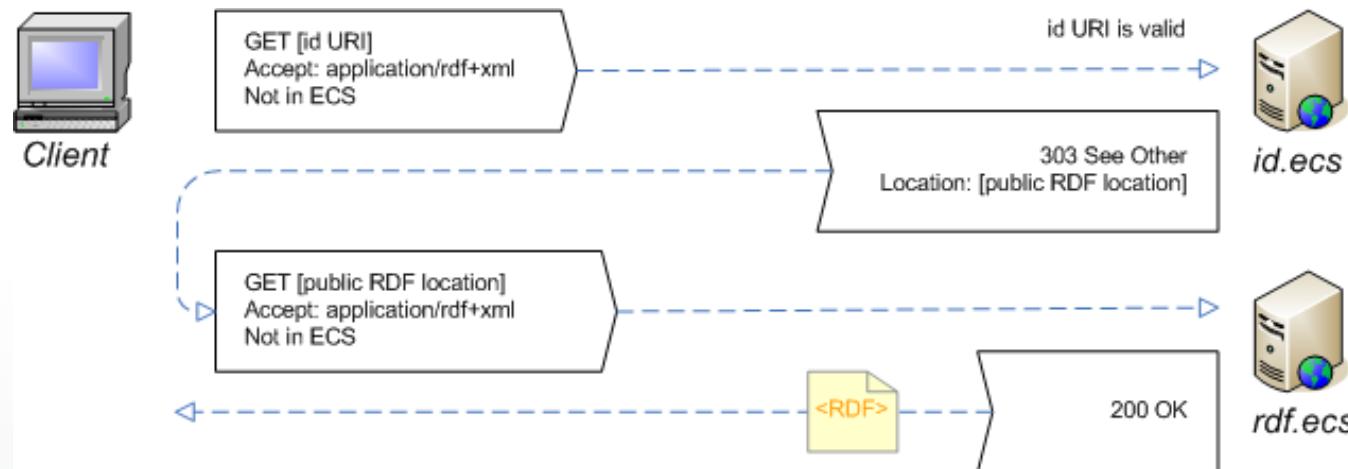
180 million data links

20 of March 2009

Linked Data Principles (Berners-Lee)

1. Use URIs as names for things
2. Use HTTP URIs so that people can look up those names
3. When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL)
4. Include links to other URIs, so that they can discover more things

Linked Data URI Resolution



ReSIST Project Knowledge Sources

- Partners
- Publications
- Funding Agencies
- Project Wiki
- Courseware
- Resilient-Explicit Computing
- Wide range, don't just look where you expect to find

Underlying Sources

acm.rkbexplorer.com
budapest.rkbexplorer.com
citeseer.rkbexplorer.com
cordis.rkbexplorer.com
courseware.rkbexplorer.com
darmstadt.rkbexplorer.com
dblp.rkbexplorer.com
dbpedia.org
deepblue.rkbexplorer.com
deploy.rkbexplorer.com
epsrc.rkbexplorer.com
eurecom.rkbexplorer.com
ft.rkbexplorer.com
ibm.rkbexplorer.com
ieee.rkbexplorer.com
irit.rkbexplorer.com

italy.rkbexplorer.com
kaunas.rkbexplorer.com
kisti.rkbexplorer.com
laas.rkbexplorer.com
lisbon.rkbexplorer.com
newcastle.rkbexplorer.com
nsf.rkbexplorer.com
pisa.rkbexplorer.com
rae2001.rkbexplorer.com
resex.rkbexplorer.com
semanticweb.org
southampton.rkbexplorer.com
ulm.rkbexplorer.com
unlocode.rkbexplorer.com
wiki.rkbexplorer.com
xxx.yyy.zzz

Range from a few 100 to more than 10,000,000 “facts”

For example

- Statistics for repository dblp.rkbexplorer.com
 - Last data assertion 2009-06-01 20:05:10
 - Number of triples 27186150
 - Number of symbols 7227252
 - Size of RDF dataset 2.1G

Co-Reference

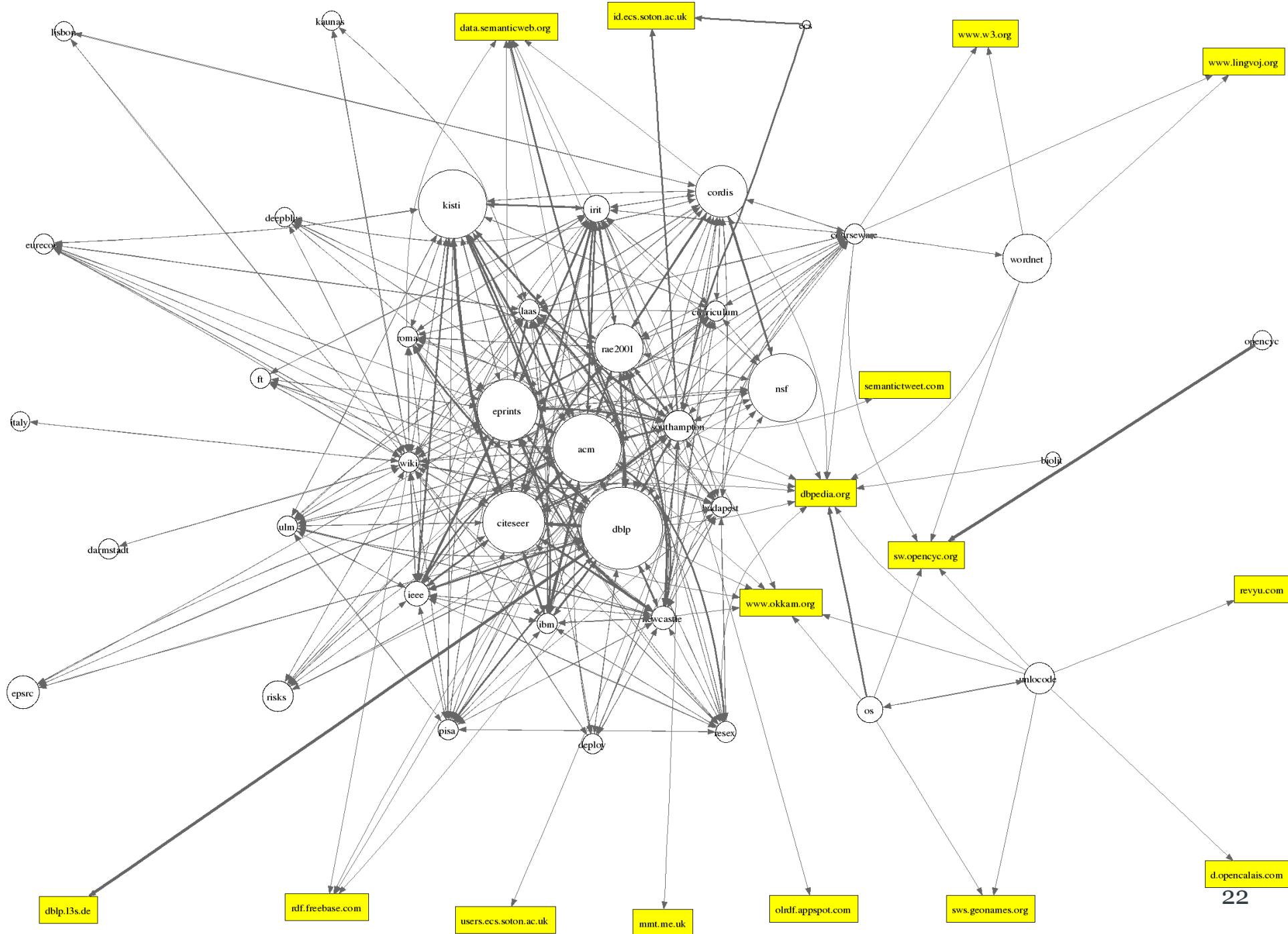
- Datasets have people, publications, etc. which also exist in other datasets
- And vice versa
- Co-Reference is a Big Problem
 - Everything is a URI (not title, name, number...)
 - Identifying multiple URIs for one resource
 - Rejecting incorrectly conflated resources
 - Publishing
 - Using
- Coldstart – a serious problem
 - Nothing is linked to anything
 - Not even (reliably) within most datasets

Co-Reference Service (CRS)

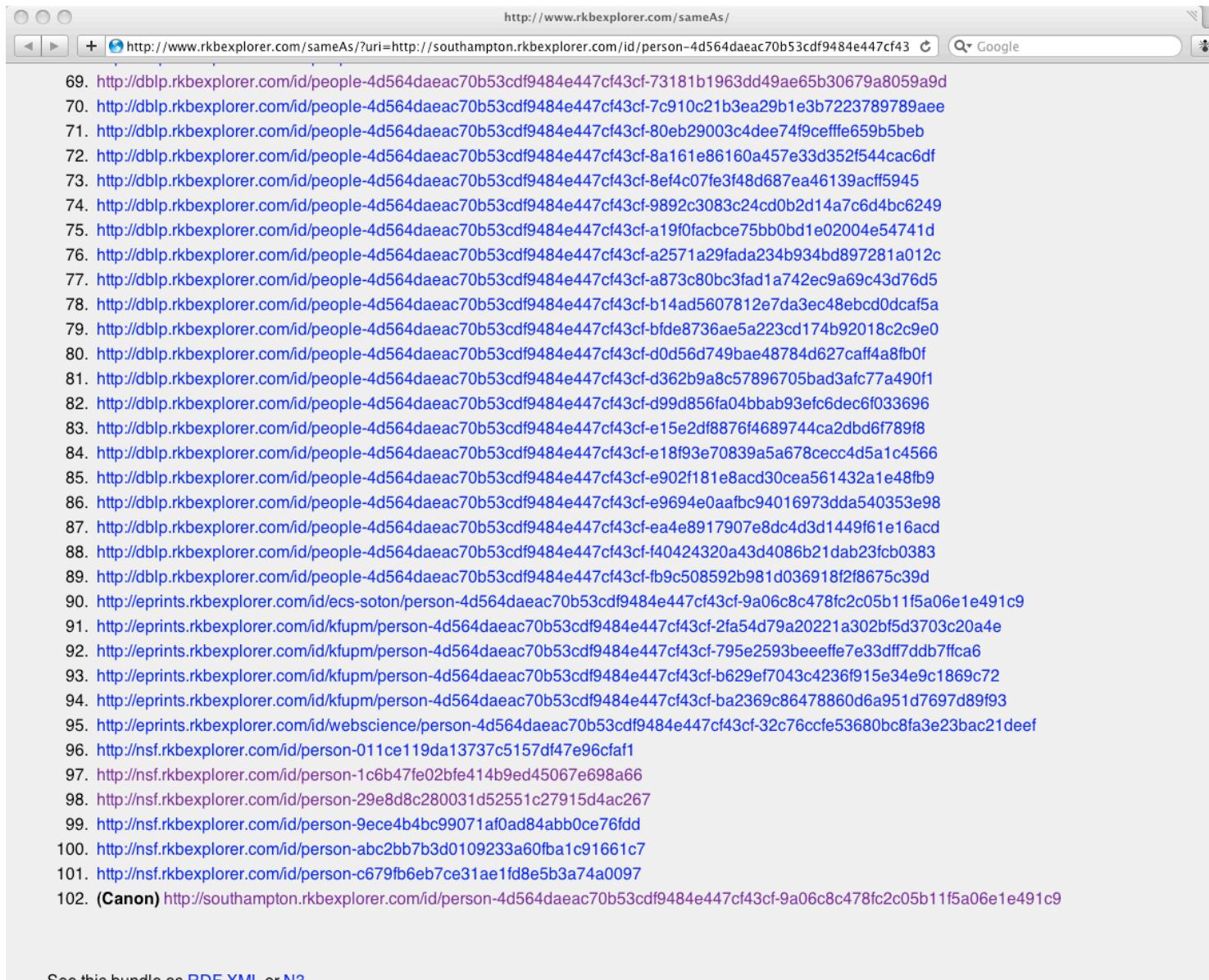
- CRS Subsystem
 - Find co-references
 - Store them
 - Publish them
 - Essentially:
 - $URI_i \rightarrow \{ URI_1, \dots, URI_i, \dots, URI_n \}$
 - Recommend a “Canon”
- Published by the Data Publisher
 - And possibly others
- Middleware aggregates co-references from recognised CRSEs

CRS continued

- CRS Policies are defined by context
 - Often one per Triplestore
 - Can be many per Triplestore for different purposes
 - May not be associated with a particular Triplestore
- Maintenance
 - Provenance
 - Rollback
- Can be used to infer owl:sameAs



Who is Carl Lagoze?



The screenshot shows a web browser window with the URL <http://www.rkbexplorer.com/sameAs/> in the address bar. The page content is a list of 102 RDF triples, each consisting of a subject and a predicate. The subjects are mostly URLs starting with <http://dblp.rkbexplorer.com/> or <http://eprints.rkbexplorer.com/>, and the predicates are mostly `sameAs`. The list is ordered by number, with the last item being a bolded **(Canon)** entry.

- 69. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-73181b1963dd49ae65b30679a8059a9d>
- 70. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-7c910c21b3ea29b1e3b7223789789aee>
- 71. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-80eb29003c4dee74f9ceffe659b5beb>
- 72. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-8a161e86160a457e33d352f544cac6df>
- 73. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-8ef4c07fe3f48d687ea46139acf5945>
- 74. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-9892c3083c24cd0b2d14a7c6d4bc6249>
- 75. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-a19f0facbce75bb0bd1e02004e54741d>
- 76. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-a2571a29fada234b934bd897281a012c>
- 77. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-a873c80bc3fad1a742ec9a69c43d76d5>
- 78. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-b14ad5607812e7da3ec48ebcd0dcfa5a>
- 79. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-bfde8736ae5a223cd174b92018c2c9e0>
- 80. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-d0d56d749bae48784d627caffa8fb0f>
- 81. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-d362b9a8c57896705bad3afc77a490f1>
- 82. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-d99d856fa04bbab93efc6dec6f033696>
- 83. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-e15e2df8876f4689744ca2dbd6f789f8>
- 84. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-e18f93e70839a5a678cecc4d5a1c4566>
- 85. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-e902f181e8acd30cea561432a1e48fb9>
- 86. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-e9694e0aafbc94016973dda540353e98>
- 87. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-ea4e8917907e8dc4d3d1449f61e16acd>
- 88. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-f40424320a43d4086b21dab23fc0383>
- 89. <http://dblp.rkbexplorer.com/id/people-4d564daeac70b53cdf9484e447cf43cf-fb9c508592b981d036918f218675c39d>
- 90. <http://eprints.rkbexplorer.com/id/ecs-soton/person-4d564daeac70b53cdf9484e447cf43cf-9a06c8c478fc2c05b115a06e1e491c9>
- 91. <http://eprints.rkbexplorer.com/id/kfupm/person-4d564daeac70b53cdf9484e447cf43cf-2fa54d79a20221a302bf5d3703c20a4e>
- 92. <http://eprints.rkbexplorer.com/id/kfupm/person-4d564daeac70b53cdf9484e447cf43cf-795e2593beeffe7e33dff7ddb7ffca6>
- 93. <http://eprints.rkbexplorer.com/id/kfupm/person-4d564daeac70b53cdf9484e447cf43cf-b629ef7043c4236f915e34e9c1869c72>
- 94. <http://eprints.rkbexplorer.com/id/kfupm/person-4d564daeac70b53cdf9484e447cf43cf-ba2369c86478860d6a951d7697d89f93>
- 95. <http://eprints.rkbexplorer.com/id/webscience/person-4d564daeac70b53cdf9484e447cf43cf-32c76ccfe53680bc8fa3e23bac21deef>
- 96. <http://nsf.rkbexplorer.com/id/person-011ce119da13737c5157df47e96cfa1>
- 97. <http://nsf.rkbexplorer.com/id/person-1c6b47fe02bfe414b9ed45067e698a66>
- 98. <http://nsf.rkbexplorer.com/id/person-29e8d8c280031d52551c27915d4ac267>
- 99. <http://nsf.rkbexplorer.com/id/person-9ece4b4bc99071af0ad84abb0ce76fd>
- 100. <http://nsf.rkbexplorer.com/id/person-abc2bb7b3d0109233a60fba1c91661c7>
- 101. <http://nsf.rkbexplorer.com/id/person-c679fb6eb7ce31ae1fd8e5b3a74a0097>
- 102. **(Canon)** <http://southampton.rkbexplorer.com/id/person-4d564daeac70b53cdf9484e447cf43cf-9a06c8c478fc2c05b115a06e1e491c9>

Co-Reference Closure

Complete Co-Reference Information

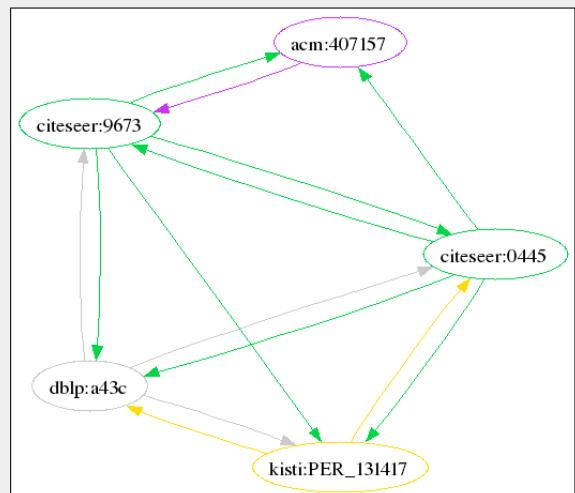
This service computes the equivalence class within the known URIs for a specified URI, by consulting all relevant CRS knowledge bases.

<http://kisti.rkbexplorer.com/id/PER_000000000000000131417>

Equivalent URIs...

1. (Canon) <http://acm.rkbexplorer.com/id/person-407157>
2. <http://citeseer.rkbexplorer.com/id/resource-CSP179673>
3. <http://citeseer.rkbexplorer.com/id/resource-CSP180445>
4. <http://dblp.rkbexplorer.com/id/people-1ec5a600299222dd6374695ef5214f05-90d423eb148125a6e5c573dc5a15a43c>
5. http://kisti.rkbexplorer.com/id/PER_000000000000000131417

The following diagram shows the interconnectivity between the CRS knowledge bases which maintain the context-dependent representation of coreference for each of the RKBExplorer domains.



Seungwoo Lee

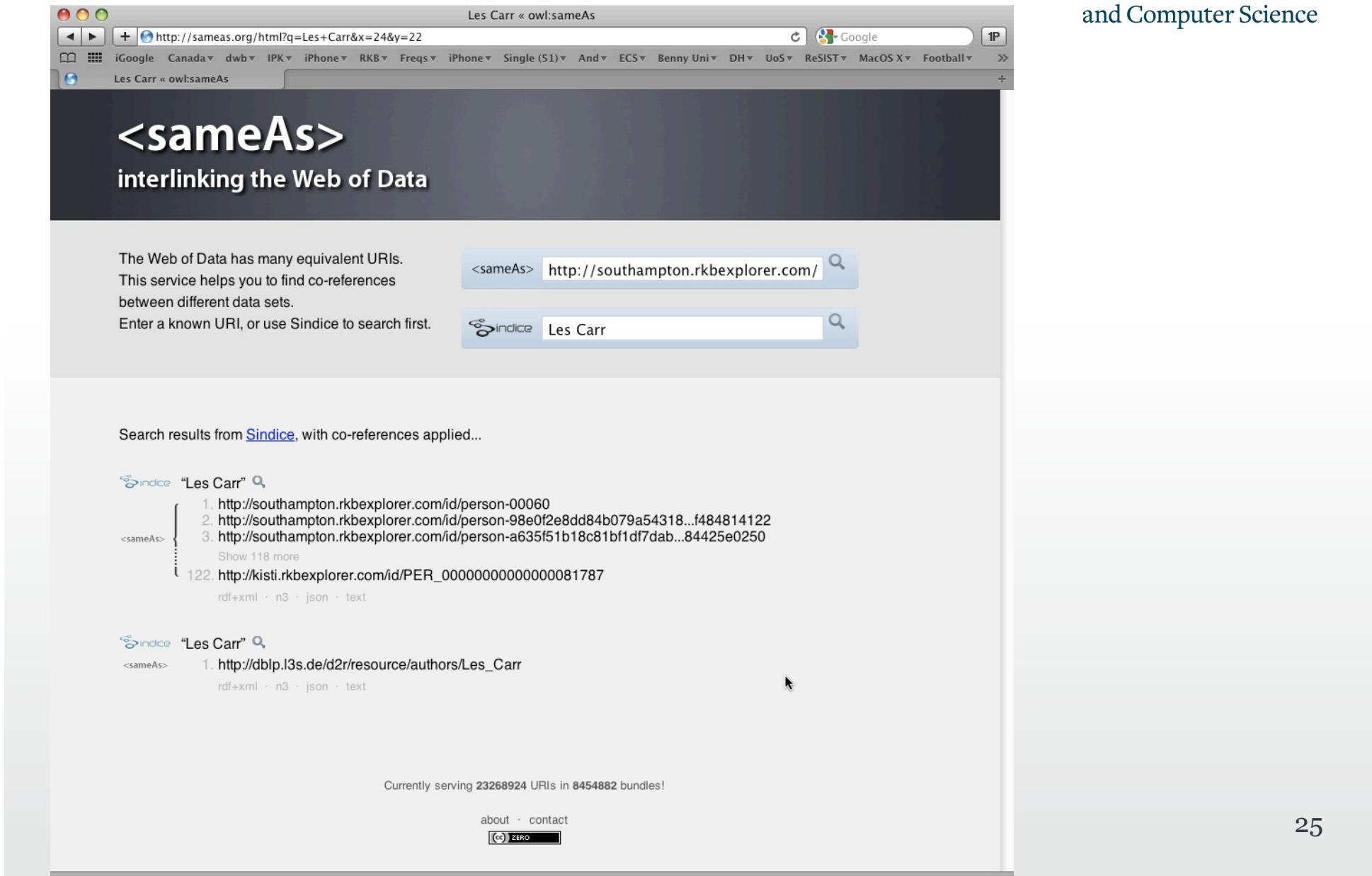
Showing information queried from all repositories ...

Showing information queried from all repositories ...

Subject	Property	Object/Value	Source
Seungwoo Lee	akt:full-name	Seungwoo Lee [Explore]	acm-periodicals.rdf >>
Seungwoo Lee	akt:full-name	Seungwoo Lee [Explore]	acm-proceedings.rdf >>
Seungwoo Lee	akt:full-name	Seungwoo Lee [Explore]	dblp-publications-2001.rdf >>
Seungwoo Lee		Electrical and Computer Engineering Division, Pohang University of Science & Technology (POSTECH), Pohang, South Korea. gblee@postech.ac.kr	
Seungwoo Lee	akt:has-affiliation	POSTECH, Pohang, Korea	acm-periodicals.rdf >>
Seungwoo Lee	kisti:engNameOfPerson	Seungwoo Lee [Explore]	datatypeproperties.ttl >>
Seungwoo Lee	rdf:type	akt:Affiliated-Person	acm-periodicals.rdf >>
Seungwoo Lee	rdf:type	akt:Affiliated-Person	acm-proceedings.rdf >>
Seungwoo Lee	rdf:type	Generic Agent	acm-periodicals.rdf >>
Seungwoo Lee	rdf:type	Generic Agent	acm-proceedings.rdf >>
Seungwoo Lee	rdf:type	Generic Agent	dblp-publications-2001.rdf >>
Seungwoo Lee	rdf:type	akt:Person	acm-periodicals.rdf >>
Seungwoo Lee	rdf:type	akt:Person	acm-proceedings.rdf >>
Seungwoo Lee	rdf:type	akt:Person	dblp-publications-2001.rdf >>
Seungwoo Lee	rdf:type	PER_char(20)^^^	datatypeproperties.ttl >>
Seungwoo Lee	rdf:type	PER_char(20)^^^	objectproperties.ttl >>
Seungwoo Lee	rdf:type	PER_char(20)^^^	resources.ttl >>

Subject	Property	Object	Source
Automatic acquisition of named entity tagged corpus from world wide web	akt:has-author	Seungwoo Lee	acm-proceedings.rdf >>
A Corpus-Based Learning Method of Compound Noun Indexing Rules for Korean	akt:has-author	Seungwoo Lee	acm-periodicals.rdf >>
SiteQ: Engineering High Performance QA System Using Lexico-Semantic Pattern Matching and Shallow NLP.	akt:has-author	Seungwoo Lee	dblp-publications-2001.rdf >>
A Corpus-Based Learning Method of Compound Noun			dblp-publications-

Finding Co-reference



The screenshot shows a web browser window with the title "Les Carr < owl:sameAs >". The address bar contains the URL "http://sameas.org/html?q=Les+Carr&x=24&y=22". The browser's toolbar includes links for iGoogle, Canada, dwb, IPK, iPhone, RKB, Freqs, Single (51), And, ECS, Benny Uni, DH, UoS, ReSIST, MacOS X, and Football.

The main content area displays the "sameAs" logo and the tagline "interlinking the Web of Data". Below this, a message states: "The Web of Data has many equivalent URIs. This service helps you to find co-references between different data sets. Enter a known URI, or use Sindice to search first." Two search boxes are shown: one for "sameAs" with the URL "http://southampton.rkbexplorer.com/" and a search button, and another for "Sindice" with the name "Les Carr" and a search button.

Search results from Sindice are displayed, showing a list of URIs related to "Les Carr". The results include:

- 1. <http://southampton.rkbexplorer.com/id/person-00060>
- 2. <http://southampton.rkbexplorer.com/id/person-98e0f2e8dd84b079a54318..f484814122>
- 3. <http://southampton.rkbexplorer.com/id/person-a635f51b18c81bf1df7dab..84425e0250>

There is a "Show 118 more" link and a "122." link. Below the results are download links for "rdf+xml", "n3", "json", and "text".

Another search result for "Les Carr" from Sindice shows:

- 1. http://dblp.l3s.de/d2r/resource/authors/Les_Carr

At the bottom of the page, a footer message states: "Currently serving 23268924 URIs in 8454882 bundles!" and includes links for "about", "contact", and a "ZERO" button.

RKBExplorer – the ReSIST Project

RKBExplorer » Projects » ReSIST Resilience for Survivability in IST

http://www.rkbexplorer.com/explorer/#display=project-%7Bhttp%3A//wiki.rkbexplorer.com/id/resist%7D

iPhone ▾ Single (50) ▾ And ▾ ECS ▾ UoS ▾ DH ▾ ReSIST ▾ MacOS X ▾ Football ▾ RKB ▾ iPhone App ▾ dwb ▾ Benny Uni ▾ Air ▾ Canada ▾ P ▾ SWC ▾ GPS ▾ IPK ▾ Freqs ▾

People » Tim Berners-Lee Projects » ReSIST Resilience for S...

RKBExplorer » Projects » ReSIST Resilience for Survivability in IST

Search... Search

Related projects

Details

Title: Resilience for survivability in IST

Other Names: ReSIST Resilience for Survivability in IST

Project Overview:

ReSIST is a NoE that addresses the strategic objective "Towards a global dependability and security framework" of the Work Programme, and responds to the stated "need for resilience, self-healing, dynamic, content and volatile environments". It will integrate leading researchers active in the multidisciplinary domains of Dependability, Security, and Human Factors, in order that Europe will have a well-focused coherent set of research activities aimed at ensuring that future "ubiquitous computing systems", the immense systems of ever-evolving networks of computers and mobile devices which are needed to support and provide Ambient Intelligence (AmI), have the necessary resilience and survivability, despite any residual development and physical faults, interaction mistakes, or malicious attacks and disruptions. The objectives of the Network are: 1) Integration of teams of researchers so that the fundamental topics

People

- Jean-Claude Laprie
- Aad van Moorsel
- Abdelmajid Khelil
- Achour Mostefaou
- Adnan Noon Mian
- Afraz Jaffri
- Agnan de Bonneval
- Alberto Pasquini
- Alessia Milani

Organisations

- The University of Newcastle upon Tyne
- LAAS-CNRS
- CITY UNIVERSITY LONDON
- Laboratoire d'Analyse et d'Architecture des Systèmes
- The University of Pisa
- Institut Eurecom
- Technische Universität Darmstadt
- UNIVERSITÀ DEGLI STUDI DI ROMA "LA SAPIENZA" - UNIVERSITY OF ROME "LA SAPIENZA"

Publications

- Malicious- and Accidental-Fault Tolerance in Internet Applications: conceptual model and architecture
- Conceptual Model and Architecture
- Conceptual model and architecture of MAFTIA
- ASSERT Automated proof based system and software engineering for real-time applications
- Malicious- and Accidental-Fault Tolerance in Internet Applications: reference model and use cases
- Revised version in Predictably dependable computing systems

Research Areas

- Testing
- Safety
- Trust
- Human Made Fault
- Symbolic Execution
- Dependability And Security Provision
- Dependability, High Confidence, Survivability
- Development Fault
- Environment

Applet eu.resist.rkb.RKBExplorer2 started

A Paper

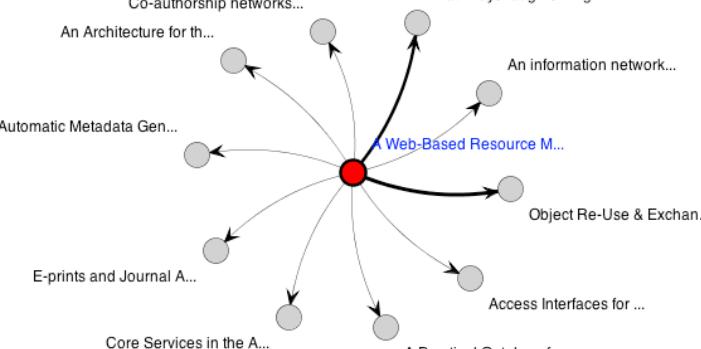
RKBExplorer » Publications » A Web-Based Resource Model for eScience: Object Reuse & Exchange

<http://www.rkbexplorer.com/explorer/#display=publication-%7Bhttp%3A//dblp.rkbexplorer.com/id/journals/corr/abs-0811-0573%7D>

RKBExplorer » Publications » A Web-Based Resource Model for eScience: Object Reuse & Exchange

Search... **Search**

Related publications



about → system requirements
help → data sources
contact → acknowledgements

Yosist

Details

Title: A Web-Based Resource Model for eScience: Object Reuse & Exchange

Author: [Herbert Van de Sompel](#) [Simeon Warner](#) [Michael Nelson](#) [Pete Johnston](#) [Robert Sanderson](#) [Carl Lagoze](#)

Web Address: <http://arxiv.org/abs/0811.0573>

Journal:

Volume: abs/0811.0573

<http://www.rkbexplorer.org/ontology/data#00000000000000000000000000000000>

People

- [Carl Lagoze](#)
- [Herbert Van de Sompel](#)
- [Michael Nelson](#)
- [Pete Johnston](#)
- [Robert Sanderson](#)
- [Simeon Warner](#)

Organisations

- [Cornell University](#)

Publications

- [Object Re-Use & Exchange: A Resource-Centric Approach](#)
- [Pathways: augmenting interoperability across scholarly repositories.](#)
- [A Practical Ontology for the Large-Scale Modeling of Scholarly Artifacts and their Usage](#)
- [Access Interfaces for Open Archival Information Systems based on the OAI-PMH and the OpenURL Framework for Context-Sensitive Services](#)
- [An Architecture for the Aggregation and Analysis of Scholarly Usage Data](#)

Research Areas

No results found

Now Look at an Author

RKBExplorer » People » Carl Lagoze

Search... Search

about system requirements
help data sources
contact acknowledgements

Osist

Related people

Full Name: [Carl Lagoze](#)
Email Address: lagoze@cs.cornell.edu

Raw Linked Data: [Resolvable URI](#) [All Known Co-reference Data](#)

View in external viewer: [Zitgist Data Viewer](#) [OpenLink Data Explorer](#) [Tabulator \(Firefox only\)](#)

People

- [Herbert Van de Sompel](#)
- [Dean Kraft](#)
- [Donna Bergmark](#)
- [James R. Davis](#)
- [John Saylor](#)
- [Pavel Dmitriev](#)
- [Simeon Warner](#)
- [Carol Terrizzi](#)
- [Jane Hunter](#)
- [Diane Hillmann](#)

Research Areas

- [H.3.7. Digital Libraries](#)
- [H.3.5. Online Information Services](#)
- [H.3.3. Information Search and Retrieval](#)
- [H.3.4. Systems and Software](#)
- [H.3.6. Library Automation](#)
- [H.5.3. Group and Organization Interfaces](#)
- [I.7. DOCUMENT AND TEXT PROCESSING](#)
- [C.2.1. Network Architecture and Protocols](#)

Publications

- [The oreChem Project: Integrating Chemistry Scholarship with the Semantic Web](#)
- [A Web-Based Resource Model for eScience: Object Reuse & Exchange](#)
- [Object Re-Use & Exchange: A Resource-Centric Approach](#)
- [Detecting research topics via the correlation between graphs and texts.](#)
- [The OAI-ORE effort: progress, challenges, synergies.](#)
- [Augmenting interoperability across scholarly repositories.](#)
- [Automatically Constructing](#)

Projects

- [DLI-2: Security and Reliability in Component-based Digital Libraries](#)
- [DLI-International: Integrating and Navigating Eprint Archives through Citation-Linking](#)
- [DLI-International: Metadata for Resource Discovery of Multimedia Digital Objects](#)
- [SGER: Advancing the State of eChemistry: Workshop and Pilot Study](#)
- [Collaborative Project: Core Integration - Leading NSDL Toward Long-Term Success](#)
- [NSDL Technical Network Services: A Cyberinfrastructure Platform for STEM](#)

Or a Couple of People

RKBExplorer » People » Carl Lagoze

RKBExplorer » People » Carl Lagoze

Search... Search

Related people

Details

Full Name: [Carl Lagoze](#)
Email Address: lagoze@cs.cornell.edu

Raw Linked Data:
[Resolvable URI](#)
[All Known Co-reference Data](#)

View in external viewer:
[Zitgeist Data Viewer](#)
[OpenLink Data Explorer](#)
[Tabulator \(Firefox only\)](#)

People

- [Herbert Van de Sompel](#)
- [Dean Kraft](#)
- [Donna Bergmark](#)
- [James R. Davis](#)
- [John Saylor](#)
- [Pavel Dmitriev](#)
- [Simeon Warner](#)
- [Carol Terrizzi](#)
- [Diane Hillmann](#)
- [Jane Hunter](#)

Research Areas

- [H.3.7. Digital Libraries](#)
- [H.3.5. Online Information Services](#)
- [H.3.3. Information Search and Retrieval](#)
- [H.3.4. Systems and Software](#)
- [H.3.6. Library Automation](#)
- [H.5.3. Group and Organization Interfaces](#)
- [I.7. DOCUMENT AND TEXT PROCESSING](#)
- [C.2.1. Network Architecture and](#)

Publications

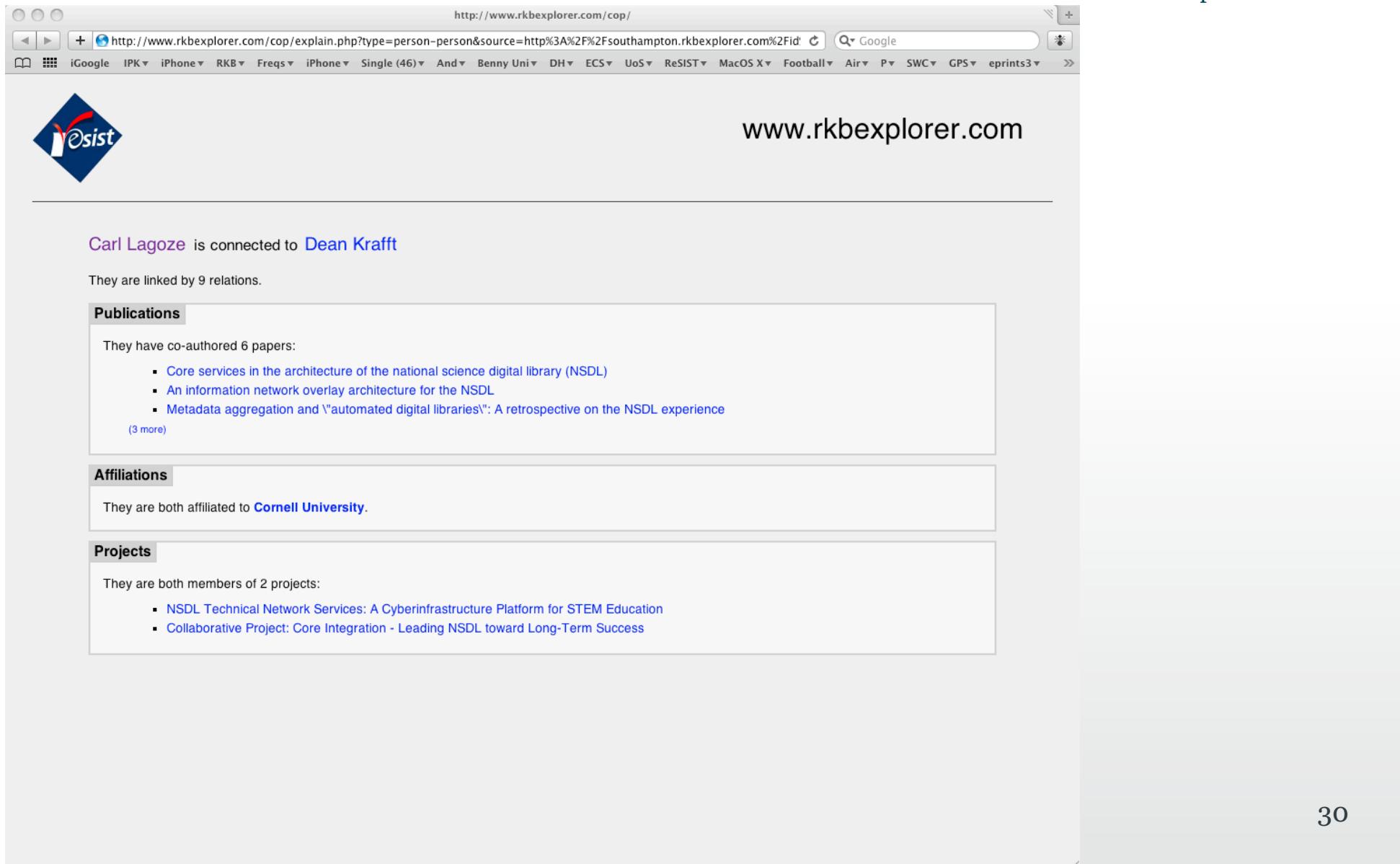
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Projects

- [DLI-2: Security and Reliability in Component-based Digital Libraries](#)
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- [NSDL Technical Network Services: A Cyberinfrastructure Platform for STEM](#)

And how
they are
linked

And Why they are Linked?



The screenshot shows a web browser window with the URL <http://www.rkbexplorer.com/cop/> in the address bar. The page displays information about the connection between Carl Lagoze and Dean Krafft, connected by 9 relations. The page is organized into sections: Publications, Affiliations, and Projects. The Publications section lists 6 co-authored papers. The Affiliations section shows they are both affiliated with Cornell University. The Projects section lists 2 projects they are members of. The top of the page features the ReSIST logo and the URL www.rkbexplorer.com.

Carl Lagoze is connected to Dean Krafft

They are linked by 9 relations.

Publications

They have co-authored 6 papers:

- Core services in the architecture of the national science digital library (NSDL)
- An information network overlay architecture for the NSDL
- Metadata aggregation and "automated digital libraries": A retrospective on the NSDL experience

(3 more)

Affiliations

They are both affiliated to [Cornell University](#).

Projects

They are both members of 2 projects:

- NSDL Technical Network Services: A Cyberinfrastructure Platform for STEM Education
- Collaborative Project: Core Integration - Leading NSDL toward Long-Term Success

Open System

- RKBExplorer is only one interface
 - And not a required part
- Other Interfaces (using the services)
 - Either as RDF, or JSON, csv, etc.
- Services

Cross-Dataset Services

- Search
- Aggregated summary view
 - <http://www.rkbexplorer.com/detail/?uri=http://southampton.rkbexplorer.com/id/eprints-12614>
- Networks of related URIs
 - <http://www.rkbexplorer.com/network/?uri=http://southampton.rkbexplorer.com/id/eprints-12614&type=publication-person>
- Co-reference
- ...

Where are Courses Taught?

The screenshot shows a web browser window with the URL <http://resist.ecs.soton.ac.uk/gmap/resist-courses.php>. The map of Europe displays several red location markers. A callout box for the 'Budapest University of Technology and Economics' is open, listing courses taught there: 'Software Verification and Validation' and 'Management of Computing Infrastructure'. The browser interface includes a zoom control, a search bar with 'Google', and tabs for 'Map', 'Satellite', and 'Hybrid'.

http://resist.ecs.soton.ac.uk/gmap/resist-courses.php

Budapest University of Technology and Economics

Courses taught at [Budapest University of Technology and Economics](#), Budapest:

- [Software Verification and Validation](#) [hide]
- [Management of Computing Infrastructure](#) [show instructors...]

Istvan Majzik

Go to the ReSIST Partners Map

Gadget – find out about people

iGoogle

The image displays three separate windows of the RKBExplorer application, each showing search results for specific names:

- Left Window (Carl Lagoze):** Shows a search for "Carl Lagoze". The results list "Carl Lagoze" and a list of associated names: James Allan, Massoud Amin, Ross Anderson, William Arms, Jeroen Bekaert, Donna Bergmark, Les Carr, Tim Cornwell, Lorrie Cranor, James R. Davis, Pavel Dmitriev, Naomi Dushay, Doug Dyer, Dea Eckstrom, Adam Finkelstein, J. French, Stone.
- Middle Window (Les Carr):** Shows a search for "Les Carr". The results list "Les Carr" and a "Display Metadata" link. Below this is a list of names: Christopher Bailey, David Barron, Sean Bechhofer, Donna Bergmark, Tim Brody, Grainne Conole, Hugh Davis, David De Roure, Samhaa El-Beltagy, Quintin Gee, Nicholas Gibbins, Lester Gilbert, Yves Gingras, Hugh Glaser, Carole Goble, Simon Grange, Christopher Gutteridge, Wendy Hall, Stevan Harnad, Stephen Harris, Jessie Hey, G Hill, Steve Hitchcock, Neil Jefferies, Zhuoan Jiao, Simon Kamps, Carl Lagoze, Timothy.
- Right Window (Les Carr):** Shows a search for "Les Carr". The results list "Les Carr" and a "Display Metadata" link. Below this is a list of names: Christopher Bailey, David Barron, Sean Bechhofer, Donna Bergmark, Tim Brody, Grainne Conole, Hugh Davis, David De Roure, Samhaa El-Beltagy, Quintin Gee, Nicholas Gibbins, Lester Gilbert, Yves Gingras, Hugh Glaser, Carole Goble, Simon Grange, Christopher Gutteridge, Wendy Hall, Stevan Harnad, Stephen Harris, Jessie Hey, G Hill, Steve Hitchcock, Neil Jefferies, Zhuoan Jiao, Simon Kamps, Carl Lagoze, Timothy.

Mark Borkum did this

iGoogle

http://www.google.com/ig?refresh=1

iPhone ▾ Single (50) ▾ And ▾ ECS ▾ UoS ▾ DH ▾ ReSIST ▾ MacOS X ▾ Football ▾ RKB ▾ iPhone App ▾ dwb ▾ Benny Univ ▾ Air ▾ Canada ▾ P ▾ SWC ▾ GPS ▾ IPK ▾

iGoogle

Web Images Videos Maps News Shopping Gmail more ▾

hugh.glasner@gmail.com | Classic Home | My Account | Sign out

iGoogle™

Advanced Search
Search Preferences
Language Tools

Google Search I'm Feeling Lucky

New! Add social gadgets to post updates and play games with friends.

Change theme from Classic | Add stuff »

Home

- Weather
- Gmail
- My Gadgets
- BBC News | News F...
- Slashdot
- Search YouTube
- RKBGadget » People
- RKBGadget » Project
- Google Translate

RKBGadgets

- Updates
- Friends

Chat

- Search, add, or invite
- Hugh Glaser Set status here ▾

Chat with friends in undefined!

Rather stay offline? Sign out of chat.

- Christopher Gutte new splashurl.net f
- Valanto Kousetti
- Andrew Landells
- Joyce Lewis

Options ▾ Add friends

Google Translate

Enter text to translate here

Detect langu » English Translate

Translate Homepage | Dictionary Homepage

RKBGadget » Project

KNOWLEDGE WEB

Title: Realizing the semantic web

Other Names: KNOWLEDGE WEB

Project Overview: The current World Wide Web (WWW) is, by its function, the syntactic web where structure of the content has been presented while the content itself is inaccessible to computers. The next generation of the Web (the Semantic Web) aims to alleviate such problem and provide specific solutions targeted to the needs of machines.

RKBGadget » People

Berners-Lee

Search Reset

Found 3 results for "Berners-Lee"

[M Berners-Lee](#) [Mary Lee Berners-Lee](#) [Tim Berners-Lee](#)

Tim Berners-Lee

Full Name: [Tim Berners-Lee](#)

Email Address: timbl@w3.org

Web Address: http://en.wikipedia.org/wiki/Tim_Berners-Lee

My Gadgets

Gadget [dictionary.xml](#) Inlined Cached [person.xml](#)

Weather

Southampton, England

13°C Current: Clear Wind: SE at 3 km/h Humidity: 94%

Tue 21° | 13° Wed 24° | 16° Thu 20° | 11° Fri 18° | 9°

Search YouTube

YouTube

Best Silverlight Apps

Zingals uses Silverlight apps to enhance user experience. READ Ads by Google

Confucius Quotes **Zytu**

Gmail

Loading "http://www.google.com/ig?refresh=1", completed 20 of 22 items

iPhone App



IPK

- New collaboration
 - Tsinghua/Southampton
- IP Knowledge Base
 - Facilitate IP take-up by SMEs
- Augment planned portal with Linked Data capabilities

“The” IPK

- In fact many sub-IPKs
 - Every source published separately
 - IP owners and SMEs (cf the LOD diagram)
 - Supported by the Project
 - As a service
 - Can be pushed out to stakeholders
- Central added value of knowledge processing for recommendation
- “Push”, not just search
 - Represent knowledge about customers

Concluding Remarks

- Linked Data is not hard
 - Producing - easy
 - Publishing – not quite so easy
 - Using - easy
- Powerful data integration technology
- Major adoption now happening
 - Eg US & UK governments

RKBExplorer.com – Try it!

RKBExplorer » People » Tim Berners-Lee

http://www.rkbexplorer.com/explorer/#display=person-%7Bhttp%3A//southampton.rkbexplorer.com/id/person-2f876940347fe251382724b34%7D

RKBExplorer » People » Tim Berners-Lee

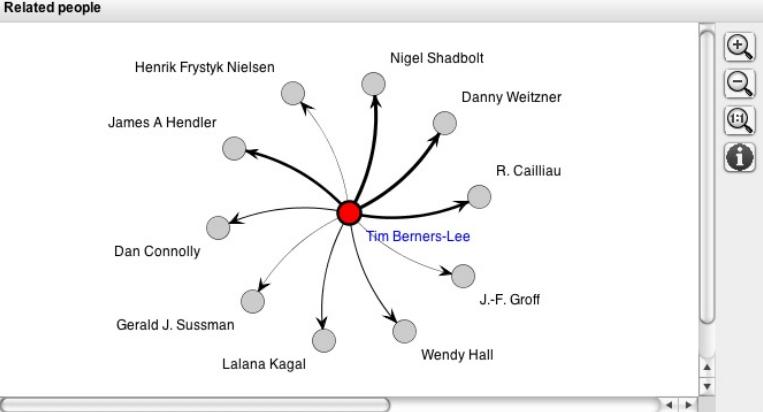
RKBExplorer » People » Tim Berners-Lee

Search... Search

+ about + system requirements
+ help + data sources
+ contact + acknowledgements

iesist

Related people



Henrik Frystyk Nielsen
Nigel Shadbolt
Danny Weitzner
R. Cailliau
J.-F. Groff
Wendy Hall
Lalana Kagal
Gerald J. Sussman
Dan Connolly
James A. Hendler

Details

Full Name: [Tim Berners-Lee](#)
Email Address: timbl@w3.org
Web Address: http://en.wikipedia.org/wiki/Tim_Berners-Lee
Description: Sir Timothy John Berners-Lee OM KBE FRS FREng FRSA (born 8 June 1955) is an English computer scientist, who is credited with inventing the World Wide Web. On 25 December 1990 he implemented the first successful communication between an HTTP client and server via the Internet with the help of Robert Cailliau and a young student staff at CERN. He was ranked Joint First alongside Albert Hofmann in The Telegraph's list of 100 greatest living geniuses. Berners-Lee is the director of the World Wide Web Consortium, which oversees the Web's continued development, the founder of the World Wide Web Foundation and he is a senior researcher and holder of the 3Com Founders Chair at the MIT

People

- [Danny Weitzner](#)
- [Nigel Shadbolt](#)
- [R. Cailliau](#)
- [James A. Hendler](#)
- [Dan Connolly](#)
- [Lalana Kagal](#)
- [Wendy Hall](#)
- [J.-F. Groff](#)
- [Gerald J. Sussman](#)

Organisations

- [MASSACHUSETTS INSTITUTE OF TECHNOLOGY](#)
- [World Wide Web Consortium](#)

Publications

- [Interacting with eHealth: towards grand challenges for HCl.](#)
- [Twenty Years: Looking Forward, Looking Back](#)
- [Information accountability.](#)
- [Linked data on the web \(LDOW2008\)](#)
- [N3Logic: A Logical Framework For the World Wide Web](#)
- [Web Science Emerges](#)
- [Web Science: An Interdisciplinary Approach to Understanding the Web](#)

Research Areas

- [H.3.4. Systems and Software](#)
- [C.2.1. Network Architecture and Design](#)
- [C.2.1.6. Network communications](#)
- [C.2.2. Network Protocols](#)
- [C.2.m. Miscellaneous](#)
- [H.1.2. User/Machine Systems](#)
- [H.1.2.0. Human factors](#)
- [H.4.3. Communications Applications](#)
- [H.5.0. General](#)

Applet eu.resist.rkb.RKBExplorer2 started

<http://eprints.ecs.soton.ac.uk/17788/>

